

Estudio para análisis de falla EAF 274/2021

“Desconexión forzada de barra 13.2 kV de S/E Bollenar”

Fecha de Emisión: 04-10-2021

1. Descripción general de la interrupción

a. Fecha y Hora de la falla

Fecha	11/09/2021
Hora	23:34
Consumos desconectados (MW)	5.30
Demanda previa del sistema (MW)	9272.00
Porcentaje de desconexión	0.057 %
Calificación Apagón	No aplica (porcentaje de desconexión < 10%)

b. Identificación instalación afectada

Nombre de la instalación	S/E Bollenar / SE167T005
Tipo de instalación	Subestación
Tensión nominal	13.2 kV
Segmento	Transmisión zonal
Propietario instalación afectada	Compañía General de Electricidad S.A.
RUT	76.411.321-7
Representante Legal	Iván Quezada Escobar
Dirección	Av. Presidente Riesco N°5561, piso 14, Las Condes

c. Identificación del elemento fallado

Nombre del elemento fallado	Protección SEL 351S del paño C2 de S/E Bollenar / SP005T005SE167T005 Protección SEL 351S del paño CT1 de S/E Bollenar / SP002T005SE167T005
Propietario elemento fallado	Compañía General de Electricidad S.A.
RUT	76.411.321-7
Representante Legal	Iván Quezada Escobar
Dirección	Av. Presidente Riesco N°5561, piso 14, Las Condes

d.1 Origen y causa de la falla

Se produjo la desconexión forzada de la barra de 13.2 kV de S/E Bollenar, debido a la operación de la protección de sobrecorriente residual del interruptor general de barra (52CT1), ante una falla monofásica en la fase C.

La causa de lo anterior fue una falla ocurrida en redes de distribución, específicamente en el alimentador San José (52C2), la cual fue despejada por la protección del alimentador en un tiempo similar al tiempo de operación de la protección del interruptor general de barra, debido a que, en la protección del alimentador, no se encontraban cargados los ajustes correctos de acuerdo con el último estudio de protecciones de la zona.

d.2 Fenómeno Físico

OPE22: Error en programación de elementos de protección o control.

d.3 Reiteración

Reiteración Fenómeno Físico en la instalación afectada: Esta instalación no ha sido afectada por el mismo fenómeno físico, durante los últimos 24 meses móviles.

Reiteración Fenómeno Físico en instalaciones del mismo propietario: Se han producido 8 fallas en instalaciones del mismo propietario con un fenómeno físico similar (homologado), durante los últimos 24 meses móviles, correspondiente a los Estudios para Análisis de Falla de la siguiente tabla:

FALLA-ID	ACCIONES_CORRECTIVAS_CP	ACCIONES_CORRECTIVAS_LP
EAF 002-2020	No se indican.	No se indican.
EAF 081-2020	La empresa CGE S.A. indica que el mismo día se solicita intervención por curso forzoso, con el propósito de intervenir el sistema de protecciones, verificando y corrigiendo grupo de ajuste para topología en modo paralelo del TR1 y TR2 de S/E Malloa.	No se indican.

FALLA-ID	ACCIONES_CORRECTIVAS_CP	ACCIONES_CORRECTIVAS_LP
EAF 313-2020	<p>1. Durante las actividades de la atención de emergencia se realiza lo siguiente:</p> <p>a. Se reestablece el cargador de baterías, se verifica su normal funcionamiento y se supervisa la carga completa del banco de baterías.</p> <p>b. Se revisa el sistema de control sin encontrar anomalías que expliquen la causa de la operación del interruptor.</p> <p>2. El día 30 de septiembre, por medio de la solicitud de curso forzoso 2020075422, se realizó una revisión exhaustiva de Cargador de Baterías por parte del proveedor. Se detectó lo siguiente: Se detectó que el interruptor termomagnético de alimentación interno del cargador de baterías operaba por corriente de inrush frente a desconexiones repentinas de la alimentación alterna, por lo que se procedió con el remplazo de dicho interruptor termomagnético. Cabe señalar el cargador de baterías actual de la subestación fue puesto en servicio el día 11 de junio del 2020, bajo la solicitud 2020043092.</p> <p>3. El día 4 de octubre, por medio de la solicitud de desconexión 2020074454, se sometieron a pruebas los 3 equipos que tienen contactos de apertura en el circuito de control del interruptor 52H1, siendo estos los siguientes:</p> <ul style="list-style-type: none"> ▪ Protección diferencial del transformador N°1 - SEL387. ▪ Protección de impedancia de transformador N°1 - SEL311C. ▪ RTU OPTO, encargada del automatismo de transferencia automática. <p>En dichas pruebas, se determinó que los relés de protección SEL 387 y SEL 311C no generaban orden de apertura, producto del decaimiento en la magnitud de la tensión de CC de SSAA de la subestación, sin embargo, se observa que la lógica de transferencia automática implementada en la RTU de dicha subestación se activaba producto de la caída en la tensión CC de servicios auxiliares de la subestación.</p> <p>4. Mediante la SD 20200076904, se programa para el día 11 de octubre de 2020 la implementación de mejoras en la estrategia de la RTU y pruebas del automatismo de transferencia automática, en donde se implementará un bloqueo del automatismo cuando la tensión de alimentación auxiliar descienda de los 110 Vcc, además se implementará un registro de eventos del automatismo de transferencia automática con el objetivo de registrar todas las acciones del automatismo implementado.</p>	No se indican.
EAF 065-2021	<p>La empresa CGE S.A. señala que el día 5 de marzo se realizaron pruebas al transformador de poder a fin de descartar una posible falla interna, lo que fue descartado de acuerdo con el resultado de las pruebas. El sábado 6 de marzo se realizaron pruebas a los transformadores de corriente, asociados a la protección diferencial, y también la revisión de la parametrización del relé diferencial TPU T450, con apoyo de personal especialista en montaje equipos control y protecciones.</p>	No se indican.
EAF 091-2021	No se indican.	No se indican.
EAF 125-2021	<p>La empresa CGE S.A. indica que el día 07-05-2021 se realiza la revisión local de las protecciones, revisión de ajustes y descarga de eventos. El día 14-05-2021 se realiza la desconexión, mediante curso forzoso, de paño C1 para reconfiguración y verificación mediante pruebas eléctricas de equipo de protección. Se reconfigura relé permitiendo la operación adireccional de las funciones de sobrecorriente de fase, de acuerdo con último estudio EAP 01-2019 (7643-01-ES-IF003_3) SE Portezuelo T2 75MVA.</p>	No se indican.

FALLA-ID	ACCIONES_CORRECTIVAS_CP	ACCIONES_CORRECTIVAS_LP
EAF 245-2021	La empresa Frontel S.A. indica que, con fecha 29 de agosto de 2021, bajo curso forzoso N° 202101391, se modifica el parámetro Ph Prf mode Lo Z GFC de los relés sistema 1 y sistema 2 ABB-REX640 del paño B1 de S/E Llaima, seleccionando la opción PP Only. (SD 2021075401). Con fecha 31 de agosto de 2021, bajo el curso forzoso N°202101396, se reproduce el evento de falla a través de inyección de archivos COMTRADE.	La empresa Comasa SpA indica que realiza verificación de ajustes en control de velocidad de la turbina para rechazo de carga.
EAF 248-2021	La empresa CGE S.A. indica que, mediante la solicitud de curso forzoso 2021076564, el día 01-09-2021 se realiza la modificación de la función de reset en funciones de sobrecorriente del paño CT2, reajustando el reset a instantáneo. Cabe señalar que el reset de funciones de sobrecorriente ajustado para emular disco de inducción electromecánico fue la causa de la operación anticipada del paño CT2.	No se indican.

Cantidad de fallas (sin importar Fenómeno Físico) en la misma instalación: No se han producido fallas en la misma instalación afectada, durante los últimos 24 meses móviles.

d.4 Fenómeno eléctrico

PR51N: Protección de sobrecorriente temporizada residual.

e. Detalles de la instalación, equipo o elemento donde se produjo la falla

La instalación donde se originó la falla corresponde a los relés SEL 351S asociados a los paños C2 y CT1 de S/E Bollenar, los cuales tienen ajustados elementos de sobrecorriente de fase y residual, según lo señalado en el Anexo N°6 de este informe.

Al respecto, la empresa CGE S.A. no remite información de los mantenimientos de estos relés durante los últimos 24 meses.

f. Ubicación urbana o rural según DS 327/1997

CGE S.A. indica ubicación rural para los alimentadores afectados producto de este evento.

g. Proposición del propietario respecto del origen de la falla

Interna.

h. Comuna donde se presenta la falla

13501: Melipilla

i. Fecha de entrega de la información al Coordinador

Coordinado	Informe de 48 horas (13-09-2021)	Informe de 5 días (20-09-2021)
CGE S.A.	12-09-2021	27-09-2021

2. Descripción del equipamiento afectado

a. Sistema de Generación

b. Sistema de Transmisión

Elemento Afectado	Segmento	Tramo	Hora Desc.	Hora Norm.
S/E Bollenar	ST Zonal	Barra de 13.2 kV	23:34	23:36

- Las horas indicadas corresponden a lo informado por la empresa CGE S.A.

c. Consumos

Subestación	Alimentador /Paño	Comuna	Pérdida de Consumo (MW)	% consumo pre-falla	Clientes afectados	H. Desc.	H. Dispon.	H. Norm.
S/E Bollenar	Mallarauco / C1	Melipilla	1.80	0.019	1949	23:34	23:36	23:37
S/E Bollenar	María Pinto / C3	María Pinto, Curacaví	1.60	0.017	1891	23:34	23:36	23:37
S/E Bollenar	Chorombo / C4	María Pinto	1.30	0.014	1740	23:34	23:36	23:37
S/E Bollenar	San José / C2	Melipilla	0.60	0.006	1271	23:34	23:36	02:19 (12-09-2021)

Total: 5.30 MW 0.057% 6851

- Los montos y horarios señalados corresponden a lo informado por la empresa CGE S.A.

3. Estimación de la energía no suministrada

Subestación	Alimentador /Paño	Empresa	Tipo de cliente	Pérdida de Consumo (MW)	Tiempo Indispon. (h)	Tiempo Desc. (h)	ENS (MWh)
S/E Bollenar	Mallarauco / C1	CGED	Regulado	1.80	0.03	0.05	0.1
S/E Bollenar	María Pinto / C3	CGED	Regulado	1.60	0.03	0.05	0.1
S/E Bollenar	Chorombo / C4	CGED	Regulado	1.30	0.03	0.05	0.1
S/E Bollenar	San José / C2	CGED	Regulado	0.60	0.03	2.75	1.7

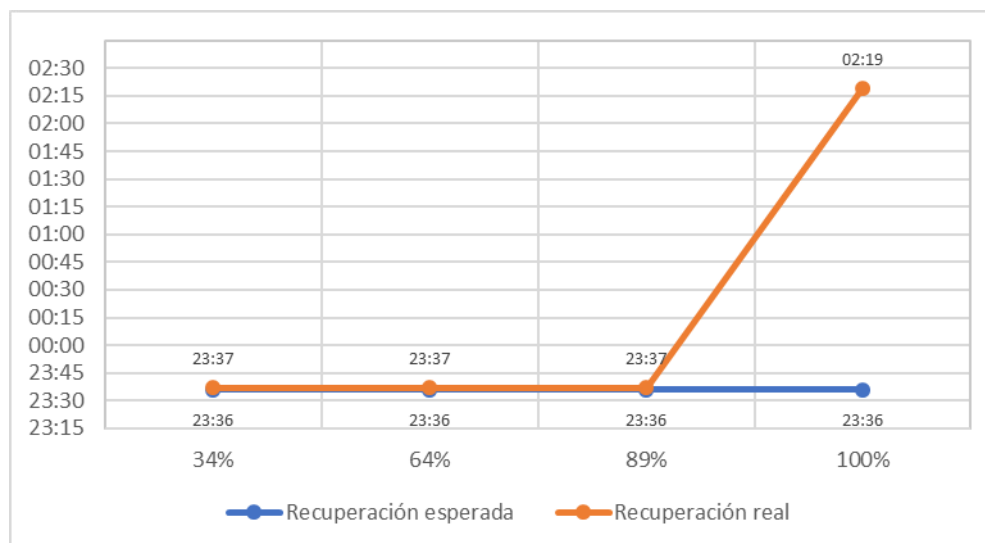
Clientes Regulados : 1.9 MWh

Clientes Libres : 0.0 MWh

Total : 1.9 MWh

- Los montos y horarios señalados corresponden a lo informado por la empresa CGE S.A.

Curva de recuperación esperada v/s recuperación real.



No se aprecian diferencias significativas entre los horarios de recuperación real respecto de los horarios de disponibilidad de la barra primaria respectiva, con excepción del último 11%, correspondiente al alimentador San José de S/E Bollenar.

- Velocidad promedio de recuperación.

Rango	Potencia (MW)	Tiempo recuperación (h)	Velocidad de recuperación (MW/h)
Primer 80 %	7.36	11.60	0.63
Último 20 %	1.84	11.60	0.16
100 % Total	9.20	11.60	0.79

4. Descripción de las configuraciones en los momentos previo y posterior a la falla

Demanda del sistema previo a la falla: 9272.00 MW

Regulación de Frecuencia

Control distribuido de frecuencia en el SEN previo a la falla, mediante las centrales Andina (CTA), Angamos (ANG1 y ANG2), Candelaria (U1 y U2), Cochrane (CCH1 y CCH2), Hornitos (CTH), Kelar (TG2), Mejillones (CTM1 y CTM3), Norgener (NTO1 y NTO2), Quintero (U2), Tocopilla (U14) y Tocopilla (U15).

Operación Programada

En Anexo N°1 se adjunta el detalle de la generación programada para el día 11 de septiembre de 2021.

Operación Real

En Anexo N°2 se adjunta el detalle de la generación real del día 11 de septiembre de 2021.

Movimiento de centrales e informe diario del CDC

En Anexo N°3 se presenta el detalle del Movimiento de Centrales e Informe Diario del CDC para el día 11 de septiembre de 2021.

Mantenimientos

En Anexo N°4 se presenta el detalle de los mantenimientos programados y forzados para el día 11 de septiembre de 2021.

Estado y configuración previo a la falla

Las instalaciones de transmisión se encontraban en servicio normal en los momentos previos a la desconexión forzada.

Otros antecedentes relevantes

Según lo señalado por CGE S.A.:

"Siendo las 11:34 hrs. del día 11.09.2021, se produce la desconexión forzada de Interruptor 52CT1 y la reconexión automática exitosa de Interruptor 52C2 (Alimentador San José) de SE Bollenar, a consecuencia de falla en redes MT de distribución.

A continuación, el Centro de control de CGE identifica a través del SCADA que ambos interruptores, 52CT1 y 52C2, habían registrado una operación simultánea, lo que dio paso a ejecutar el Procedimiento de Recuperación de Barra MT, realizando la apertura de los alimentadores de SE Bollenar aprox. a las 11:35 hrs, recuperando la Barra MT y los consumos de los alimentadores C1, C3 y C4.

Posteriormente, personal de CGE Distribución da cuenta que la falla (en cercanías de SE Bollenar) ya había sido identificada y que se procedería a realizar las reparaciones correspondientes en el alimentador San José.

Por parte de CGE Tx, se procede con la lectura de ajustes de protecciones para identificar los elementos operados.

Finalmente, a solicitud del COZ de Distribución se procede a realizar el cierre de Alimentador San José a las 02:19 hrs."

"Descoordinación entre el paño C2 y CT1, se produce por error en carga de nuevos ajustes en Paño C2, realizados el día 3 de agosto de 2021, mediante la solicitud de intervención N°2021064711, para permitir la inyección plena del PMGD Los Molinos 9 MW."

Cabe destacar que, con fecha 6 de agosto, el Coordinador Eléctrico Nacional realizó observaciones al documento Print Out de la protección del paño C2 de S/E Bollenar, en las cuales se evidenciaban diferencias entre el estudio aprobado y los ajustes cargados en la protección, particularmente en el elemento instantáneo de sobrecorriente residual propuesto.

Acciones preventivas y/o correctivas

a) La instalación afectada no cuenta con un plan de acción en curso.

b) Acciones correctivas a corto plazo:

CGE S.A. indica lo siguiente:

"Mediante la solicitud de curso forzoso 2021082892 se realiza la corrección del ajuste de protecciones de la cabecera del alimentador San José, 52C2 SE Bollenar, conforme al estudio ECP 4363/2021.

- *Se corrige la ecuación de Trip del 52C2 para el cual se implementa el elemento de*

protección de sobrecorriente residual instantáneo

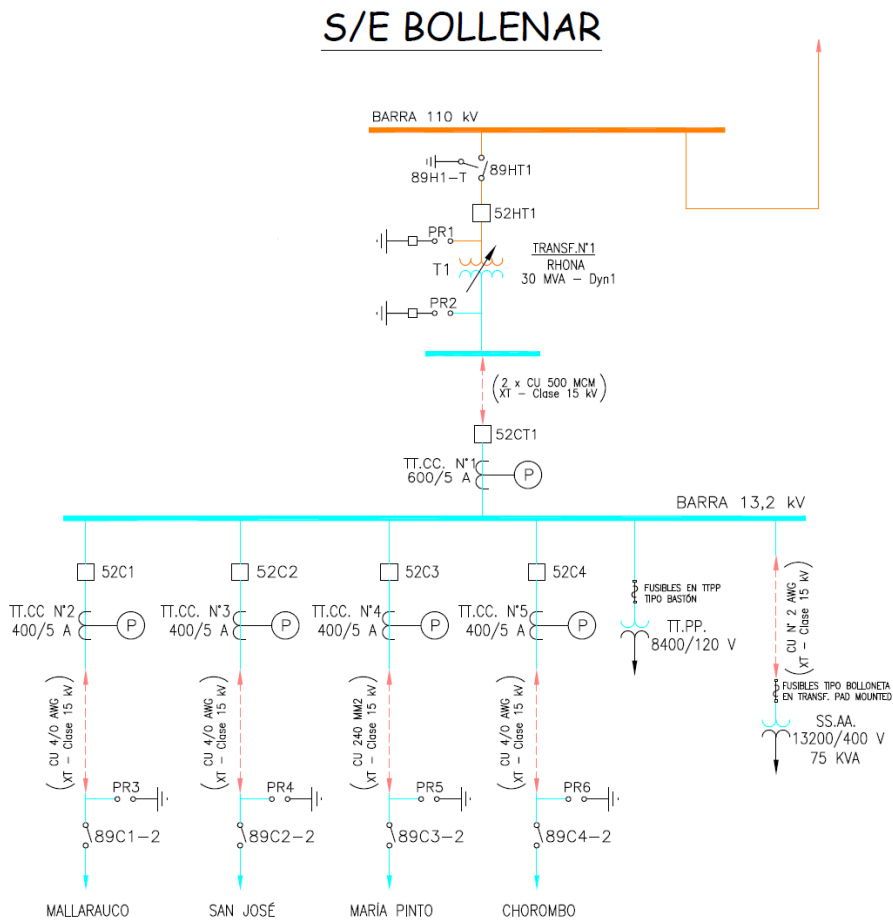
- *En el paño CT1 se deshabilita la funciones de tiempo definido 67G1 y 67N1 (En conformidad a lo indicado en el EAP 4363/2021.)”*

Cabe destacar que el EAP 4363/2021, aprobado por el Coordinador Eléctrico Nacional con fecha 27 de julio de 2021, no indicaba modificaciones en los ajustes de la protección asociada al paño CT1 de S/E Bollenar.

c) Acciones correctivas a largo plazo:

CGE S.A. indica que “no aplica” ejecutar acciones correctivas a largo plazo.

Diagrama simplificado de las instalaciones previo a la falla



5. Cronología de eventos y la descripción de las causas de los eventos

Hora	Involucrado	Evento
23:34	CGE	Apertura automática del interruptor 52C2 de S/E Bollenar, correspondiente al alimentador San José, por operación de su protección de sobrecorriente residual de tiempo definido.
23:34	CGE	Apertura automática del interruptor 52CT1 de S/E Bollenar, correspondiente al interruptor general de barra de 13.2 kV, por operación de su protección de sobrecorriente residual.
23:34+	CGE	Reconexión automática exitosa del interruptor 52C2 de S/E Bollenar, correspondiente al alimentador San José.

- Las horas indicadas corresponden a lo informado por la empresa CGE S.A.

6. Normalización del servicio

Fecha	Involucrado	Hora	Acción
11/09/2021	CGE	23:35	Apertura manual del interruptor 52C1 (alimentador Mallarauco) de S/E Bollenar.
11/09/2021	CGE	23:35	Apertura manual del interruptor 52C2 (alimentador San José) de S/E Bollenar.
11/09/2021	CGE	23:35	Apertura manual del interruptor 52C3 (alimentador María Pinto) de S/E Bollenar.
11/09/2021	CGE	23:35	Apertura manual del interruptor 52C4 (alimentador Chorombo) de S/E Bollenar.
11/09/2021	CGE	23:36	Cierre manual del interruptor 52CT1 de S/E Bollenar, correspondiente al interruptor general de barra de 13.2 kV, energizándola en vacío.
11/09/2021	CGE	23:37	Cierre manual del interruptor 52C1 (alimentador Mallarauco) de S/E Bollenar, recuperando sus consumos.
11/09/2021	CGE	23:37	Cierre manual del interruptor 52C3 (alimentador María Pinto) de S/E Bollenar, recuperando sus consumos.
11/09/2021	CGE	23:37	Cierre manual del interruptor 52C4 (alimentador Chorombo) de S/E Bollenar, recuperando sus consumos.
12/09/2021	CGE	02:19	Cierre manual del interruptor 52C2 (alimentador San José) de S/E Bollenar, recuperando sus consumos.

- Las fechas y las horas indicadas corresponden a lo informado por la empresa CGE S.A.

7. Análisis de las causas de la falla y de la actuación de los dispositivos de protección y control

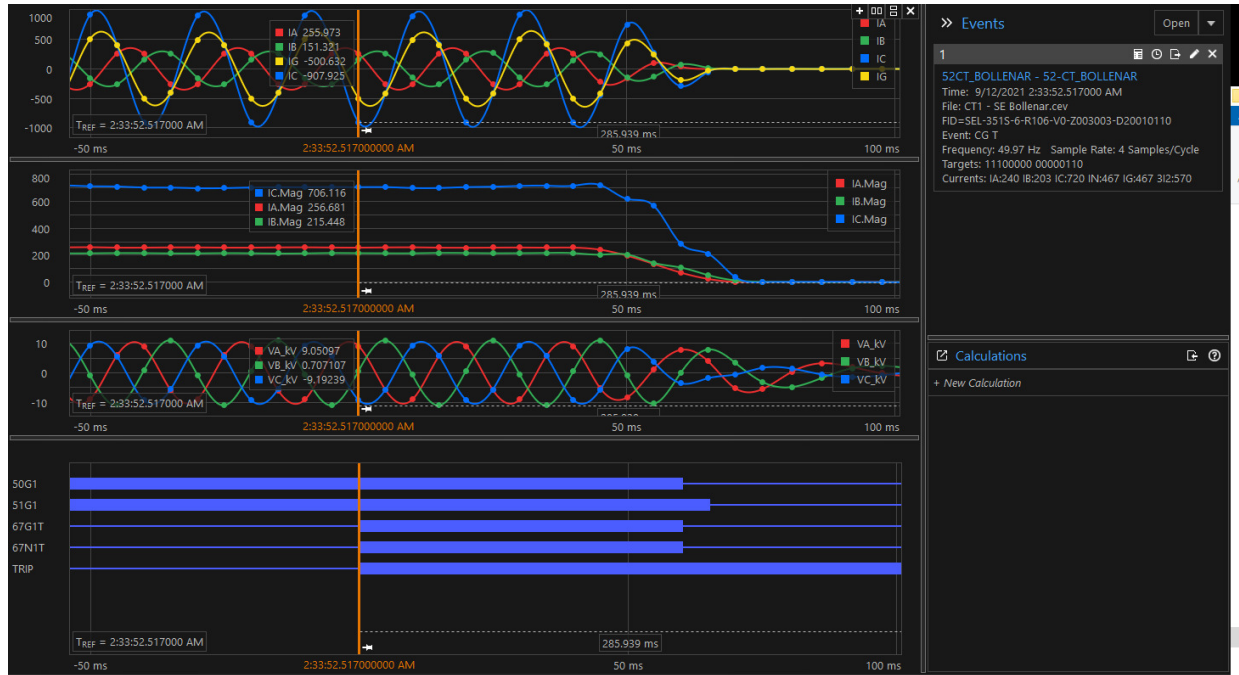
Se produjo la desconexión forzada de la barra de 13.2 kV de S/E Bollenar, debido a la operación de la protección de sobrecorriente residual del interruptor general de barra (52CT1), ante la detección de una falla monofásica en la fase C.

Dicha falla ocurrió en redes de distribución, específicamente en el alimentador San José (52C2), la cual fue despejada por la protección del alimentador en un tiempo similar al tiempo de operación de la protección del interruptor general de barra, debido a que, en la protección del alimentador, se cargaron erróneamente los ajustes detallados en el último estudio de protecciones de la zona. En particular, no se encontraba ajustado correctamente el elemento instantáneo de sobrecorriente residual, y en su lugar, se encontraba ajustado un elemento con idéntico pickup, pero con una temporización de 2.2 segundos.

Como consecuencia de lo descrito anteriormente, se produjo la pérdida de 5.3 MW de consumos en S/E Bollenar.

Apertura automática del interruptor 52CT1 de S/E Bollenar

A continuación, se presentan los registros de la protección SEL 351S asociada al paño CT1 de S/E Bollenar:



#	DATE	TIME	ELEMENT	STATE	OBSERVACIONES
64	09-12-2021	02:23:04.726	51G1	Asserted	
63	09-12-2021	02:23:04.736	51P1	Asserted	
62	09-12-2021	02:23:05.580	51P1	Deasserted	
61	09-12-2021	02:23:05.595	51G1	Deasserted	
60	09-12-2021	02:33:50.014	51G1	Asserted	detección de condiciones de falla
59	09-12-2021	02:33:50.029	51P1	Asserted	
58	09-12-2021	02:33:50.339	51P1	Deasserted	
57	09-12-2021	02:33:50.369	51P1	Asserted	
56	09-12-2021	02:33:50.444	51P1	Deasserted	
55	09-12-2021	02:33:52.517	67G1T	Asserted	Se cumple tiempo definido para función 51G1
54	09-12-2021	02:33:52.517	67N1T	Asserted	Se cumple tiempo definido para función 51N1
53	09-12-2021	02:33:52.517	OUT101	Asserted	
52	09-12-2021	02:33:52.517	OUT104	Asserted	
51	09-12-2021	02:33:52.517	TRIP	Asserted	Orden de trip
50	09-12-2021	02:33:52.567	IN101	Deasserted	Señal de apertura
49	09-12-2021	02:33:52.572	IN104	Asserted	
48	09-12-2021	02:33:52.577	67G1T	Deasserted	
47	09-12-2021	02:33:52.577	67N1T	Deasserted	
46	09-12-2021	02:33:52.577	52A	Deasserted	Interruptor abierto
45	09-12-2021	02:33:52.582	51G1	Deasserted	
44	09-12-2021	02:33:52.697	OUT101	Deasserted	
43	09-12-2021	02:33:52.697	OUT104	Deasserted	
42	09-12-2021	02:33:52.697	TRIP	Deasserted	
41	09-12-2021	02:36:00.935	SV7T	Asserted	
40	09-12-2021	02:36:00.935	OUT102	Asserted	
39	09-12-2021	02:36:00.935	CC	Asserted	Cierre remoto para recuperación de barra MT
38	09-12-2021	02:36:00.940	CC	Deasserted	
37	09-12-2021	02:36:01.000	IN104	Deasserted	
36	09-12-2021	02:36:01.005	IN101	Asserted	
35	09-12-2021	02:36:01.005	52A	Asserted	Interruptor cerrado
34	09-12-2021	02:36:01.340	SV7T	Deasserted	
33	09-12-2021	02:36:01.340	OUT102	Deasserted	

En el registro oscilográfico anterior, se observa una sobrecorriente por la fase C, además de la presencia de una corriente residual, por lo que se concluye la presencia de una falla monofásica en la mencionada fase.

Tanto en el registro de eventos como en el registro de señales digitales, se observa la activación del elemento de sobrecorriente residual (51G1, evento N°60) y su posterior operación (67G1T, evento N°55) luego de 2.5 s, de acuerdo con sus ajustes. El tiempo de apertura del interruptor fue de 60 ms (diferencia entre eventos N°46 y N°51).

Comportamiento de la protección del paño C2 de S/E Bollenar

A continuación, se presenta el registro de eventos de la protección SEL 351S asociada al paño C2 de S/E Bollenar:

#	DATE	TIME	ELEMENT	STATE	OBSERVACIONES
102	09-12-2021	02:33:50.016	51G2T	Asserted	
101	09-12-2021	02:33:50.021	51P2T	Asserted	
100	09-12-2021	02:33:52.526	51G1T	Asserted	Se cumple el tiempo de operación para función 51G1
99	09-12-2021	02:33:52.526	79CY	Asserted	Inicio de ciclo de reconexión
98	09-12-2021	02:33:52.526	79RS	Deasserted	
97	09-12-2021	02:33:52.526	OUT101	Asserted	
96	09-12-2021	02:33:52.526	OUT104	Asserted	
95	09-12-2021	02:33:52.526	TRIP	Asserted	Orden de trip
94	09-12-2021	02:33:52.575	IN101	Deasserted	
93	09-12-2021	02:33:52.575	IN102	Asserted	
92	09-12-2021	02:33:52.585	52A	Deasserted	interruptor abierto
91	09-12-2021	02:33:52.600	51P2T	Deasserted	
90	09-12-2021	02:33:52.610	51G2T	Deasserted	
89	09-12-2021	02:33:52.610	51G1T	Deasserted	
88	09-12-2021	02:33:52.705	OUT101	Deasserted	
87	09-12-2021	02:33:52.705	OUT104	Deasserted	
86	09-12-2021	02:33:52.705	TRIP	Deasserted	
85	09-12-2021	02:33:57.699	CLOSE	Asserted	Cierre
84	09-12-2021	02:33:57.699	SH1	Asserted	
83	09-12-2021	02:33:57.699	SH0	Deasserted	
82	09-12-2021	02:33:57.699	OUT102	Asserted	
81	09-12-2021	02:33:57.764	IN101	Asserted	
80	09-12-2021	02:33:57.764	IN102	Deasserted	
79	09-12-2021	02:33:57.764	52A	Asserted	interruptor cerrado

En el registro de eventos anterior, se observa la operación del elemento instantáneo de sobrecorriente residual (51G2T, evento N°102), el cual se encontraba ajustado con un pickup de 2.7 kA-prim y tiempo instantáneo, en concordancia con el estudio de protecciones aprobado. Sin embargo, de forma errónea, este elemento no se encontraba ajustado en la ecuación de trip de la protección, por lo que no se produjo la orden de apertura sobre el interruptor 52C2. En forma posterior, se observa la operación del elemento 51G1T (evento N°100), el cual se encontraba ajustado con idéntico pickup que el elemento 51G2, pero con un tiempo de operación de 2.2 s. Adicionalmente, se puede concluir que la orden de apertura sobre el interruptor se produjo aproximadamente 2.5 s, después del inicio de la falla (diferencia entre los eventos N°95 y N°102), tiempo similar al de operación de la protección asociada al paño CT1.

8. Detalle de toda la información utilizada en la evaluación de la falla

- Detalle de la generación programada para el día 11 de septiembre de 2021 (Anexo N°1).
- Detalle de la generación real del día 11 de septiembre de 2021 (Anexo N°2).
- Detalle del Movimiento de Centrales e Informe Diario del CDC correspondientes al día 11 de septiembre de 2021 (Anexo N°3).
- Detalle de los mantenimientos programados y forzados para el día 11 de septiembre de 2021 (Anexo N°4).
- Informe de falla de instalaciones ingresado en el sistema del Coordinador Eléctrico Nacional por la empresa CGE S.A. (Anexo N°5).
- Otros antecedentes aportados por la empresa CGE S.A. (Anexo N°6).

9. Análisis de las actuaciones de protecciones

9.1 Incumplimiento Normativo

Los incumplimientos normativos detectados en el desarrollo de la falla, por parte de los involucrados son:

CGE S.A.

- Completitud de la información correspondiente al Informe de Falla de 5 días, de acuerdo con lo indicado en las Resoluciones Exentas de la SEC N°30891-2019 y N°30989-2019.
- Plazo de envío del informe de falla de 5 días, de acuerdo con lo indicado en el Título 6-7 de la NTSyCS vigente.

9.2 Estándares Normativos Art. 1-14 NTSyCS

Los incumplimientos del propietario del elemento afectado, reportados en la versión vigente del "Informe Anual de Cumplimientos, Artículo 1-14 Norma Técnica de Seguridad y Calidad de Servicio", no incidieron en el origen y causa de la falla, ni en el desarrollo de las maniobras que permitieron la normalización de servicio.

9.3 Desempeño de Protecciones Eléctricas y Modo de operación de interruptores

Según los antecedentes proporcionados por la empresa CGE S.A. y el respectivo análisis realizado por el Coordinador:

- Se concluye correcta operación de las protecciones del paño CT1 de S/E Bollenar, de acuerdo con sus ajustes.
Se concluye correcto modo de operación del interruptor 52CT1 de S/E Bollenar de propiedad de CGE S.A.
- Se concluye incorrecto el desempeño de las protecciones asociadas al paño C2 de S/E Bollenar, por error en sus parámetros de ajuste.
Se concluye correcto modo de operación del interruptor 52C2 de S/E Bollenar de propiedad de CGE S.A.

9.4 Desempeño EDAC

No aplica pronunciarse sobre el desempeño de EDAC ante este evento.

9.5 Desempeño EDAG

No aplica pronunciarse sobre el desempeño de EDAG ante este evento.

10. Pronunciamiento Técnico del Coordinador Eléctrico Nacional

De acuerdo con el análisis realizado por el Coordinador:

- a) Se produjo la desconexión forzada de la barra de 13.2 kV de S/E Bollenar, debido a la operación de la protección de sobrecorriente residual del interruptor general de barra (52CT1), ante la detección de una falla monofásica en la fase C.

Dicha falla ocurrió en redes de distribución, específicamente en el alimentador San José (52C2), la cual fue despejada por la protección del alimentador en un tiempo similar al tiempo de operación de la protección del interruptor general de barra, debido a que, en la protección del alimentador, se cargaron erróneamente los ajustes detallados en el último estudio de protecciones de la zona. En particular, no se encontraba ajustado correctamente el elemento instantáneo de sobrecorriente residual, y en su lugar, se encontraba ajustado un elemento con idéntico pickup, pero con una temporización de 2.2 segundos.

Al respecto, en base al análisis realizado en el punto 7 de este informe, es posible indicar que se produjo un desempeño correcto, en respaldo, de las protecciones del paño CT1 de S/E Bollenar durante el desarrollo de este evento, ante un desempeño incorrecto de la protección del paño C2 (alimentador San José), debido a que no se encontraban cargados los ajustes correctos de acuerdo con el último estudio de protecciones aprobado en la mencionada subestación. Esta situación impidió el despeje selectivo de la falla ocurrida en redes de distribución, causando una pérdida de consumos mayor a la esperada ante este evento.

- b) Se evidenciaron incumplimientos normativos en el desarrollo del evento que provocó la falla, en particular el desempeño incorrecto de la protección asociada al paño C2 de S/E Bollenar.
- c) No se evidenciaron incumplimientos asociados al elemento afectado por la falla, reportados en la versión vigente del "Informe Anual de Cumplimientos, Artículo 1-14 Norma Técnica de Seguridad y Calidad de Servicio".
- d) Para el desarrollo de la falla no hay observaciones respecto de la aplicación de los Planes de Recuperación de servicio asociados a las instalaciones involucradas, ni de las actuaciones del CDC y los respectivos CC durante la falla del día 11 de septiembre de 2021.

11. Recomendación respecto de las instalaciones a las cuales el Coordinador Eléctrico Nacional debería solicitar una auditoría

a) Auditorías, planes de acción, instrucciones de acciones correctivas de largo y/o corto plazo.

No se solicitará información adicional.

b) Solicitudes de ampliación de información.

Se solicitará a la empresa CGE S.A. lo siguiente:

- Información faltante de acuerdo con lo indicado en las Resoluciones Exentas de la SEC N°30891-2019 y N°30989-2019, en función del Fenómeno Físico identificado (OPE22: Error en programación de elementos de protección o control), en particular:
 - Características de la instalación donde se produjo la falla en este evento (sistema de protecciones asociado al paño C2 de S/E Bollenar). En particular, se debe indicar: plan de mantenimiento, vida útil del equipo, y si al momento de la falla existía algún retraso en inversiones pactadas en dicho equipo.
 - Mantenciones o pruebas de los últimos 24 meses realizadas en el equipo o elemento donde existió el error de programación (sistema de protecciones asociado al paño C2 de S/E Bollenar).
 - Informe de por qué no fue detectado dicho Fenómeno Físico en las mantenciones o pruebas realizadas.
- Print Out de la protección SEL 351S asociada al paño CT1 de S/E Bollenar, cuyos ajustes fueron modificados en forma posterior a este evento.
- Aclaración sobre las modificaciones realizadas en los ajustes de la protección asociada al paño CT1 de S/E Bollenar, indicada como acción correctiva a corto plazo, debido a que el EAP 4363/2021 no señalaba modificaciones en esta protección, y por otra parte, la solicitud de curso forzoso N°2021082892 solo indicaba una modificación de ajustes en la protección del paño C2.
- Análisis de la coordinación entre las protecciones del paño CT1, cuyos ajustes se modificaron en forma posterior a este evento, y los paños de cabecera de los alimentadores conectados a la barra de 13.2 kV de S/E Bollenar.

ANEXO N°1

Detalle de la generación programada para el día 11 de septiembre de 2021

Table with 25 columns (1-24) and 10 rows. Header: COORDINADOR ELECTRIC NACIONAL. Rows include: sábado, 11 de septiembre de 2021; Costos Operación; Costos Encendido/Detención; Costos Totales [KUSD]; Marginal Quilota 220 kv; Pérdidas [MWh]; Consumos Propios [MWh]; Demanda Total [MWh]; Generación Total [MWh].

Table with 25 columns (1-24) and 25 rows. Header: Hidroeléctricas de Pasada. Rows list various hydroelectric plants such as CHIAPUQUINA, COSAVILLA, ELTORON2, CAVANCHA, ALTOHOSPICIO, SANFAROSA, RIOHUASCO, PUCIARAO, LOSMOLLES, LAPALOMA, ELTARTARO, CH-HORNITOS, JUNICAL, JUNICALTO, JUNICALTO COMPANIA-2, BLANCO, LOSQUILLOS, CHACABUQUITO, SAUCEANDRES, CAREÑA, ALPAPAL, ALPAPAL MAITENES, QUELTHUES, VOLCAN, GUAYACAN, FLORIDA-1, FLORIDA-2, FLORIDA-3, PUNTILLA, EYZAGUIRRE, LASVERTIENTES, ELLANAO, ELRINCÓN, MALLARAUO, LOSBAJOS, AUKDELPAIPO, LOSCORROS, COYA, SAUZAL, SAUZAL CHACAYES, CHACAYES, SANANDES, CONVENTOVIEJO, LAHIGUERA, LACONFLUENCIA, ELPASO, DOSVALLES, PALACIOS, LIRICAY, MARIPOSAS, PROVIDENCIA, RIOCOLORADO, ROBLERIA, ANCOA, ITATA, ELDIUTO, MUNIQUE-1, MUNIQUE-2, ELATAJO, BURBARGADA, CALIBORO, RENICO, ALTORONAUO, RIOPICHIQUEN, BOQUIAMARGO, ELMIRADOR, PEUCHEIN, MAMPIL, LOSPADRES, LLAUQUERO, ELINIELLO, DONGUIL, ALLIPEN, RIOTRUENO, ELMANZANO, TRUFUL-TRUFUL, MOLINERAVILLARRICA, TRALIEFU, CARILAFQUEN, MALCALHUELLO, QUILLALEO, BUREO, LAVINA, MULCHEN, ELAGRIO, SANTAELENA, PILLINQUE, RECA, SANTAISABEL, HIDROCOCHO, LOSCORRALES-1, LOSCORRALES-2, RINIHAJUE, NSA-1, MAISAN, LAMONTANA-1, LAMONTANA-2, PURUISMA, ELGALPON, CUMPEO, DONWALTERIO, DIGUA, MELO, LICAN, DONAHILDA, MARIBALENA, CHANILEFU, TRANQUIL, PEHU, PICHILCONO, PILMAIQUEN, RUCATAYO, CUMBRES, PILELEFU, CAPULLO, MUCHI, LASFLORES, PALMAR, CORRENTOSO, NALCAS, CALLAO, HIDROBONITO-MC1, HIDROBONITO-MC2, ENSENADA, LAARENA, ELCOLORADO, COLLIL, DONGO.

Table with 25 columns (1-24) and 25 rows. Header: Edificios. Rows list various buildings such as PE-CHAMMA, PE-SERRAGORDA, PE-VALLEDELOSVENTOS, PE-CALAMA, PE-TALTAL, PE-SARCO, PE-CABOLES-1, PE-CABOLES-2, PE-SANJUAN, PE-PUNTAOLORADA, PE-ELARRAYAN, PE-TALINAYPONIENTE, PE-TALINAYORIENTE, PE-PUNTAISIERRA, PE-LOSUCURIOS, PE-MONTERECONDONDO, PE-PUNTA PALMERAS, PE-CANELA, PE-CANALA-2, PE-TOTAL.

ANEXO N°2

Detalle de la generación real para el día 11 de septiembre de 2021

Table with columns for station names (e.g., CHAPIQUINA, COSAPILLA) and 24 columns of numerical data, plus summary columns for TOT.DIA, DMAX, and DMED.

ANEXO N°3

Detalle del Movimiento de Centrales e Informe Diario del Sistema Eléctrico Nacional
correspondientes al día 11 de septiembre de 2021

INFORME DIARIO

Sábado 11 de Septiembre del 2021



DESVIACIONES DE LA PROGRAMACION

1.1. Centrales

Centrales	Prog.	Real	Desv %	Estado	Centrales	Prog.	Real	Desv %	Estado
AILLIN	-	40.7	-	PMG, P	Masisa	163.2	146.7	-10.10 %	LF
ATACAMA SOLAR S.A.	-	0.0	-	P	Maule	0.0	0.0	-	-
Abanico	676.9	687.5	+1.56 %	RO	Mejillones IEM	5335.8	5193.2	-2.67 %	LF
Aguas Blancas Diésel	0.0	0.0	-	-	Mejillones-CTM1	1909.0	2055.6	+7.68 %	LF
Alena	1085.1	949.6	-12.49 %	P	Mejillones-CTM1 Fuel Oil	-	0.0	-	-
Alfalfal	826.3	867.3	+4.96 %	-	Mejillones-CTM2	0.0	0.0	-	LF, DF
Alhué	0.0	0.0	-	-	Mejillones-CTM3 Diésel	0.0	0.0	-	-
Alto Renaico	25.9	15.8	-39.07 %	PMG	Mejillones-CTM3 GNL	3788.6	3694.3	-2.49 %	-
Ancoa	26.4	249.3	+844.39 %	-	Mejillones-CTM3 Gas Arg	0.0	-	-	-
Andes Diésel	0.0	0.0	-	-	Mejillones-PAM	528.0	502.2	-4.88 %	-
Andes FO6	0.0	0.0	-	-	Mercurio Sur	17.5	3.1	-82.28 %	P
Andina-CTA	2892.3	2703.6	-6.53 %	LF	Mocho	201.4	259.5	+28.80 %	-
Angamos-ANG1	4809.4	4676.5	-2.76 %	-	NEGRETE	486.1	468.0	-3.73 %	P
Angamos-ANG2	4889.7	4898.3	+0.18 %	-	Nalcas	77.4	72.5	-6.34 %	PMG
Angostura	2845.3	2811.0	-1.21 %	RO	Nehuenco 1 Diésel	0.0	0.0	-	-
Antihue	0.0	0.0	-	-	Nehuenco 1 GNL	2945.1	2607.0	-11.48 %	RO
Antuco	3025.4	3130.4	+3.47 %	RO	Nehuenco 1 Gas Arg	0.0	0.0	-	-
Arauco	0.0	5.1	GNP	LF	Nehuenco 2 Diésel	0.0	0.0	-	-
Arica-GMAR	0.0	0.0	-	-	Nehuenco 2 GNL	8429.2	7442.0	-11.71 %	-
Arica-M1AR	0.0	0.0	-	MM	Nehuenco 2 Gas Arg	0.0	0.0	-	-
Arica-M2AR	0.0	0.0	-	-	Nehuenco 9B Diésel	0.0	0.0	-	-
Atacama-1 Diésel	0.0	0.0	-	-	Nehuenco 9B GNL	0.0	0.0	-	-
Atacama-1 GNL	109.0	0.0	-100.00 %	RO	Nehuenco 9B Gas Arg	0.0	0.0	-	-
Atacama-2 Diésel	0.0	0.0	-	-	Newen Diésel	0.0	0.0	-	-
Atacama-2 GNL	654.0	0.0	-100.00 %	RO	Newen Gas	0.0	0.0	-	-
Bess Andes	-	10.4	GNP	-	Newen Gas Arg	0.0	0.0	-	-
Bess Angamos	-	9.9	GNP	-	Newen Propano	0.0	-	-	-
Bess Cochrane	-	0.5	GNP	-	Norgener-NT01	2246.1	2411.9	+7.38 %	LF
Blanco	136.0	172.5	+26.84 %	-	Norgener-NT02	2451.0	2545.0	+3.83 %	-
Bocamina 2	7238.6	7125.0	-1.57 %	-	Norgener-NT02 Fuel Oil	-	0.0	-	-
CALAMA	1531.9	1219.1	-20.42 %	P	Nueva Aldea 1	0.0	0.0	-	MM
CAMPOS DEL SOL	150.2	156.8	+4.35 %	P	Nueva Aldea 2	0.0	0.8	GNP	DF
CERRO DOMINADOR CSP	1850.8	22.6	(*) -98.78 %	P	Nueva Aldea 3	888.0	915.4	+3.09 %	-
CMPC Cordillera	0.0	0.0	-	RO	Nueva Renca Diésel	0.0	0.0	-	-
CMPC Laja	476.2	526.1	+10.47 %	-	Nueva Renca GNL	0.0	0.0	-	MM
CMPC Pacífico	0.0	6.3	GNP	MM	Nueva Renca Gas Arg	0.0	0.0	-	-
CMPC Santa Fe	0.0	0.0	-	MM	Nueva Ventanas	3768.6	3897.0	+3.41 %	LF
CMPC Tissue	-	31.7	-	PMG	Ojos de Agua	93.2	94.3	+1.17 %	PMG
COMBARBALA	-	44.5	GNP	P	Olivos	0.0	0.0	-	-
Callao	18.8	13.9	-26.37 %	PMG	PFV AZABACHE	35.3	20.4	-42.27 %	P
Calle Calle	0.0	0.0	-	DRO	PFV Del Desierto	-	0.0	-	PMG, P
Campiche	3049.2	3797.0	+24.52 %	-	PFV Diego de Almagro Sur	-	0.0	-	P

Centrales	Prog.	Real	Desv %	Estado
Candelaria 1 Diésel	0.0	0.0	-	
Candelaria 1 GNL	1880.8	1155.0	-38.59 %	
Candelaria 1 Gas Arg	0.0	0.0	-	
Candelaria 2 Diésel	0.0	0.0	-	
Candelaria 2 GNL	2548.3	1825.0	-28.38 %	
Candelaria 2 Gas Arg	0.0	0.0	-	
Candelaria Solar	20.1	3.0	-85.14 %	
Canutillar	174.1	717.0	+311.73 %	
Capullo	184.0	185.1	+0.60 %	
Cardones	0.0	0.0	-	DRO
Carena	6.0	75.2	+1153.33 %	PMG, MM
Carilafquén	120.0	107.6	-10.35 %	FE
Celco	0.0	14.9	GNP	LF
Cementos Bío Bío	0.0	0.0	-	LF, RO
Cenizas	0.0	0.0	-	
Cerro Tigre	-	4.9	GNP	P
Chacabuquito	164.0	215.5	+31.40 %	
Chacayes	866.7	600.0	-30.77 %	
Chagual	0.0	0.0	-	
Chapiquiña	102.4	120.0	+17.14 %	
Chiburgo	24.0	24.0	-	PMG
Chillan	-	0.0	-	
Chiloé	0.0	0.0	-	PMG
Cholguán	176.3	93.5	-47.00 %	
Cholguán IFO	-	0.0	-	
Chuyaca	2.5	4.6	+85.20 %	
Cipreses	0.0	9.8	GNP	
Cipresillos	-	0.0	-	PMG
Cochrane-CCH1	5073.4	4987.1	-1.70 %	
Cochrane-CCH2	4818.3	4523.6	-6.12 %	
Cogen. Aconcagua	631.0	532.1	-15.67 %	RO
Cogen. Biobío	492.0	1228.0	+149.59 %	
Colbún	593.4	1434.0	+141.64 %	RO
Colihues Diésel	-	0.0	-	DF, LF
Colihues HFO	0.0	0.0	-	DF, RO
Colmito Diésel	0.0	0.0	-	LF
Colmito GNL	0.0	0.0	-	
Concón	0.0	0.0	-	PMG
Constitución	0.0	0.0	-	PMG
Convento Viejo	199.2	200.6	+0.72 %	DF
Coronel Diésel	0.0	0.0	-	
Coronel GNL	0.0	0.0	-	
Coronel Gas Arg	0.0	0.0	-	
Coya	0.0	0.0	-	
Cumbres	180.0	251.2	+39.53 %	
Curillinque	674.4	592.6	-12.13 %	RO
Dadinco	12.1	2.1	-82.68 %	
Degañ	0.0	0.0	-	LF
Degañ 2	0.0	0.0	-	DF
Deuco	-	0.0	-	
Diego de Almagro	0.0	0.0	-	

Centrales	Prog.	Real	Desv %	Estado
PFV EL SALITRAL	28.0	11.7	-58.17 %	P
PFV Las Majadas	15.9	15.7	-1.03 %	P
PFV PLAYERITO	19.8	1.8	-90.73 %	P
PFV PLAYERO	19.9	1.9	-90.61 %	P
PFV PMGD Esfena	-	0.0	-	
PFV RÍO ESCONDIDO	925.5	1311.8	+41.74 %	P
PFV SANTA ISABEL	1339.5	1388.0	+3.62 %	
PFV Sol de LILA	62.2	83.0	+33.48 %	P
PFV Sol de los Andes	-	0.0	-	P
PFV Sol del Desierto	161.0	0.0	-100.00 %	P
PFV Sol del Norte	-	0.0	-	PMG, P
PFV de los Andes	-	0.0	-	PMG, P
PMG CH Corrales	-	35.6	-	PMG, P
PMGD PFV Kaufmann	0.0	0.0	-	P
Pajonales	0.0	0.0	-	
Palacios	0.0	1.0	-	PMG
Palmucho	558.7	622.7	+11.44 %	
Pangue	1920.0	3582.3	(*) +86.58 %	RO
Parque Eólico Mesamávida	-	0.0	-	P
Pehuenche	4452.0	2873.7	(*) -35.45 %	
Peuchén	613.5	598.0	-2.53 %	
Pilmaiquén	804.0	751.4	-6.54 %	RO
Placilla	0.0	0.0	-	PMG
Planta Valdivia	0.0	335.7	GNP	LF
Pretty Field	21.9	3.4	-84.30 %	P
Providencia	168.0	161.4	-3.93 %	
Puente Solar	20.1	3.7	-81.68 %	P
Pulefu	130.0	130.4	+0.31 %	PMG
Pullinque	565.9	548.2	-3.14 %	
Punta Colorada Diésel	0.0	0.0	-	
Punta Colorada IFO	0.0	0.0	-	
Puntilla	109.5	131.1	+19.73 %	
Queltehues	571.0	631.0	+10.51 %	DF
Quilleco	770.8	764.0	-0.88 %	
Quintay	0.0	0.0	-	PMG
Quintero 1A Diésel	0.0	0.0	-	RO
Quintero 1A GNL	0.0	0.0	-	
Quintero 1A Gas Arg	0.0	0.0	-	
Quintero 1B Diésel	0.0	0.0	-	RO
Quintero 1B GNL	472.4	548.0	+15.99 %	
Quintero 1B Gas Arg	0.0	0.0	-	
RENAICO 2	-	0.0	-	
Ralco	402.8	4226.6	(*) +949.25 %	RO
Rapel	0.0	76.7	GNP	
Rauquén	56.4	8.3	-85.35 %	
Renaico	102.0	74.5	-26.98 %	PMG
Renca	0.0	0.0	-	
Rinconada	66.2	7.7	-88.38 %	
Rucatayo	886.0	807.9	-8.81 %	
Rucúe	1793.8	1854.0	+3.36 %	
Río Colorado	105.3	135.4	+28.58 %	

Centrales	Prog.	Real	Desv %	Estado	Centrales	Prog.	Real	Desv %	Estado
Digua	0.0	0.0	-		Río Huasco	19.7	15.5	-21.12 %	
Domeyko	27.5	26.8	-2.33 %	P	Río Picoquén	370.0	350.5	-5.28 %	
Don Jorge	23.7	2.2	-90.85 %		SF Energía	1143.4	430.9	-62.31 %	
Dos Valles	8.2	0.0	-100.00 %	PMG	San Andrés	115.8	71.9	-37.92 %	
El Paso	78.0	83.2	+6.67 %		San Clemente	0.0	0.0	-	PMG
El Peñón	5.2	0.0	-100.00 %		San Gregorio	0.0	0.0	-	PMG
El Pinar	-	0.0	-		San Ignacio	144.7	158.0	+9.19 %	
El Rincón	6.0	6.0	+0.67 %	PMG	San Isidro 1 Diésel	0.0	0.0	-	RO
El Salvador	0.0	0.0	-		San Isidro 1 GNL	5260.7	5527.0	+5.06 %	
El Toro	0.0	7.8	GNP	RO	San Isidro 1 Gas Arg	0.0	0.0	-	
El Totoral	0.0	0.0	-	PMG	San Isidro 2 Diésel	0.0	0.0	-	RO
Emelda 1	0.0	0.0	-		San Isidro 2 GNL	5287.6	6203.0	+17.31 %	
Emelda 2	0.0	0.0	-		San Isidro 2 Gas Arg	0.0	0.0	-	
Enaex-CUMMINS	0.0	0.0	-		San Javier	33.3	4.2	-87.38 %	
Enaex-DEUTZ	0.0	0.0	-		San Lorenzo 1	0.0	0.0	-	
Energía Pacífico	384.0	283.3	-26.22 %	RO, DF	San Lorenzo 2	0.0	0.0	-	
Escuadrón	145.2	9.9	-93.18 %		San Lorenzo 3	0.0	0.0	-	
Esperanza-DS1	0.0	0.0	-		San Ramiro	66.7	7.2	-89.19 %	
Esperanza-DS2	0.0	0.0	-		Santa Fe	62.3	6.0	-90.46 %	LF
Esperanza-TG1	0.0	0.0	-	LF	Santa Lidia	0.0	0.0	-	
Espinos	0.0	0.0	-		Santa Marta	238.8	115.5	-51.63 %	
Eólica Aurora	2089.1	1804.3	-13.63 %		Santa María	8359.9	5703.0	(*) -31.78 %	RO, DF
Eólica Cabo Leones 1	1110.4	1523.4	+37.20 %		Santa Rita	22.0	1.8	-91.69 %	
Eólica Cabo Leones 2	1527.0	2122.7	+39.02 %		Sauzal	552.0	675.2	+22.31 %	MM, RO
Eólica Cabo Leones 3	1191.2	1382.3	+16.04 %		Sauzal 60 Hz	-	0.0	-	
Eólica Canela	269.2	239.4	-11.09 %		Sauzalito	86.0	127.2	+47.93 %	
Eólica Canela 2	193.9	1013.2	+422.55 %		Solar Aguila 1	15.0	15.5	+3.33 %	
Eólica Cuel	453.9	437.6	-3.59 %		Solar Almeyda	453.5	463.1	+2.11 %	
Eólica El Arrayán	1039.5	1223.1	+17.66 %		Solar Andes	174.5	168.1	-3.67 %	LF
Eólica El Maitén	140.1	128.3	-8.46 %		Solar Andes 2A	621.5	511.4	-17.71 %	LF
Eólica La Esperanza	118.4	114.6	-3.23 %	PMG	Solar Antay	74.4	30.8	-58.64 %	PMG
Eólica La Estrella	749.0	830.7	+10.91 %		Solar Atacama 2	991.4	1320.7	+33.22 %	
Eólica La Flor	399.4	361.7	-9.46 %		Solar Carrera Pinto	683.6	645.5	-5.57 %	
Eólica Lebu	98.1	0.0	-100.00 %	PMG	Solar Cerro Dominador	888.0	902.6	+1.65 %	
Eólica Los Buenos Aires	351.0	339.3	-3.35 %		Solar Chañares	259.4	265.1	+2.19 %	
Eólica Los Cururos	1532.4	1728.1	+12.77 %		Solar Diego de Almagro	177.4	199.6	+12.51 %	
Eólica Monte Redondo	620.1	712.1	+14.83 %		Solar Doña Carmen	62.2	35.5	-42.94 %	
Eólica Punta Colorada	44.7	8.2	-81.66 %	DF	Solar El Pelicano	722.8	809.2	+11.96 %	
Eólica Punta Palmeras	630.9	749.7	+18.83 %		Solar El Pilar - Los Amarillos	0.0	0.0	-	PMG
Eólica Punta Sierra	1133.7	1440.4	+27.06 %	RO	Solar El Romero	1409.8	1429.0	+1.36 %	
Eólica Renaico	1160.9	1124.1	-3.17 %		Solar FV Bolero	964.4	987.9	+2.43 %	
Eólica San Gabriel	1550.1	1913.5	+23.45 %		Solar Finis Terrae	891.1	961.4	+7.89 %	LF
Eólica San Juan	819.8	2116.7	(*) +158.21 %		Solar GPG San Pedro	787.4	565.3	-28.20 %	
Eólica San Pedro	503.7	495.5	-1.62 %		Solar Huatacondo	714.5	677.3	-5.22 %	
Eólica San Pedro 2	935.6	954.6	+2.02 %	LF	Solar Jama	391.3	304.8	-22.11 %	
Eólica Sarco	1595.6	1769.5	+10.90 %		Solar Javieria	488.2	494.1	+1.20 %	
Eólica Sierra Gorda	1207.8	1134.8	-6.04 %		Solar La Huayca 2	155.4	172.7	+11.11 %	
Eólica Talinay Oriente	1100.4	1292.3	+17.44 %		Solar La Silla	7.2	12.0	+67.08 %	
Eólica Talinay Poniente	789.2	828.7	+5.01 %		Solar Lalackama	423.6	405.9	-4.18 %	
Eólica Taltal	1873.8	1901.4	+1.47 %	LF	Solar Lalackama 2	100.5	125.0	+24.43 %	

Centrales	Prog.	Real	Desv %	Estado	Centrales	Prog.	Real	Desv %	Estado
Eólica Tolpán Sur	935.1	1006.1	+7.59 %		Solar Llano de Llampos	720.5	727.2	+0.94 %	
Eólica Totoral	574.4	670.2	+16.68 %		Solar Loma Los Colorados	2.4	1.8	-25.00 %	PMG
Eólica Ucuquer 2	168.4	123.4	-26.72 %		Solar Los Loros	183.6	248.5	+35.36 %	LF
Eólica Valle de los Vientos	588.3	412.9	-29.81 %		Solar Los Tilos	29.5	4.1	-86.16 %	
Florida	0.0	0.0	-		Solar Luz del Norte	1129.0	624.7	-44.67 %	RO
Geo. Cerro Pabellón	921.4	957.9	+3.96 %		Solar María Elena	497.2	484.8	-2.50 %	
Guacolda 1	1308.0	855.0	-34.63 %	LF	Solar Nuevo Quillagua	870.7	850.3	-2.34 %	
Guacolda 2	1840.0	1642.0	-10.76 %	LF	Solar PFV Granja Solar	1012.8	992.8	-1.98 %	
Guacolda 3	0.0	0.0	-	MM	Solar PV Conejo	782.1	729.4	-6.73 %	LF
Guacolda 4	2758.2	2250.0	-18.42 %		Solar PV Salvador	493.0	486.3	-1.36 %	
Guacolda 5	0.0	696.0	GNP	LF	Solar Pampa Camarones	54.6	57.2	+4.73 %	
Guayacán	143.4	152.8	+6.52 %		Solar Pampa Solar Norte	521.6	429.0	-17.75 %	
HP EL ATAJO	7.6	7.5	-1.37 %		Solar Piloto Cardones	1.3	1.0	-22.56 %	PMG
HP FLORIDA II	147.0	195.9	+33.27 %		Solar Pozo Almonte 2	67.8	59.9	-11.69 %	
HP FLORIDA III	48.0	48.0	-		Solar Pozo Almonte 3	120.3	133.4	+10.86 %	
Hidroeléctrica Chilco	-	0.0	-		Solar Puerto Seco	76.5	62.1	-18.83 %	PMG
Horcones Diésel	0.0	0.0	-		Solar Quilapilún	350.1	228.9	-34.60 %	
Horcones TG	-	0.0	-		Solar SDGx01	2.9	0.7	-77.59 %	PMG
Hornitos	149.0	158.9	+6.64 %		Solar San Andrés	306.9	298.6	-2.71 %	
Hornitos-CTH	2868.7	2758.5	-3.84 %	LF	Solar Santiago	258.4	216.1	-16.39 %	
Huasco	0.0	0.0	-		Solar Uribe	378.6	378.1	-0.13 %	
Huasco TG IFO	0.0	-	-		Solar Usya	403.4	391.8	-2.87 %	LF
Inacal	0.0	0.0	-		TAMAYA SOLAR	-	0.0	-	P
Isla	599.2	607.9	+1.45 %		TER SAN JAVIER 1	-	0.0	-	
Itata	288.0	299.7	+4.06 %		TER SAN JAVIER 2	-	0.0	-	
Juncal	132.0	175.0	+32.58 %		Taltal 1 Diésel	0.0	0.0	-	RO
Kelar Diésel	0.0	0.0	-		Taltal 1 GNL	235.0	468.0	+99.15 %	RO
Kelar GNL	4489.6	4375.5	-2.54 %		Taltal 2 Diésel	0.0	0.0	-	
LA CRUZ SOLAR	-	0.0	-	P	Taltal 2 GNL	0.0	0.0	-	
LA HUELLA	604.3	461.6	-23.61 %		Tamaya-Suta	0.0	0.0	-	
LOS OLMOS	113.8	23.6	-79.26 %	P	Tarapacá-CTTAR	0.0	0.0	-	
La Confluencia	931.0	470.1	-49.51 %		Tarapacá-CTTAR Fuel Oil	-	0.0	-	
La Higuera	847.5	685.8	-19.08 %		Tarapacá-TGTAR	0.0	0.0	-	
La Mina	0.0	0.0	-	MM	Tchamma	0.0	3.0	GNP	
La Portada-TECNET	0.0	0.0	-		Teno	0.0	0.0	-	LF
Laja 1	323.8	353.8	+9.28 %		Teno Gas 50	0.0	0.0	-	
Laja Energía Verde	189.9	80.0	-57.86 %		Termopacífico	0.0	0.0	-	
Las Vegas	0.0	0.0	-	PMG	Tocopilla-TG1	10.0	0.0	-100.00 %	
Lautaro 1	577.0	520.1	-9.86 %		Tocopilla-TG2	0.0	0.0	-	
Lautaro 2	0.0	0.0	-	MM	Tocopilla-TG3 Diésel	0.0	0.0	-	
Lebu	-	0.0	-	PMG	Tocopilla-TG3 GNL	0.0	0.0	-	LF, DF
Licantén	130.9	51.6	-60.62 %		Tocopilla-U14	1200.0	1328.9	+10.74 %	LF
Licán	193.0	172.2	-10.78 %		Tocopilla-U14 Fuel Oil	-	0.0	-	
Linares Norte	0.0	0.0	-	PMG	Tocopilla-U15	1239.7	1379.7	+11.29 %	LF
Lircay	192.0	197.3	+2.76 %		Tocopilla-U15 Fuel Oil	-	0.0	-	
Llauquereo	42.1	43.0	+1.99 %	PMG	Tocopilla-U16 Diésel	0.0	0.0	-	
Loma Alta	262.7	226.5	-13.76 %		Tocopilla-U16 GNL	6135.5	4493.6	(*) -26.76 %	RO
Loma Los Colorados 1	0.0	0.0	-	PMG, DF	Tocopilla-U16 Gas Arg	0.0	-	-	
Loma Los Colorados 2	336.0	181.8	-45.89 %	DF	Trapén	7.8	0.0	-100.00 %	LF
Los Guindos TG1 Diésel	0.0	0.0	-		Trincao	8.7	0.0	-100.00 %	

Centrales	Prog.	Real	Desv %	Estado
Los Guindos TG2 Diésel	0.0	0.0	-	
Los Hierros	504.0	523.2	+3.81 %	MM
Los Hierros 2	96.0	97.2	+1.21 %	
Los Lagos Solar	0.0	0.0	-	P
Los Molles	41.9	40.0	-4.57 %	
Los Pinos	0.0	0.0	-	
Los Quilos	291.0	357.1	+22.71 %	MM
Los Vientos	0.0	0.0	-	
MALGARIDA	1827.2	1793.0	-1.87 %	P
MALGARIDA 1	0.0	-	-	
MALGARIDA 2	0.0	-	-	
MALLECO NORTE	239.4	256.3	+7.02 %	P
MALLECO SUR	2345.8	1964.8	-16.25 %	P
MECO CHILLAN	34.2	3.9	-88.65 %	P
Machicura	312.0	336.0	+7.69 %	LF
Maitenes	145.0	150.2	+3.59 %	
Malalcahuello	120.0	105.7	-11.93 %	FE
Mampil	469.1	450.7	-3.92 %	
Mantos Blancos-MIMB	0.0	0.0	-	
Mariposas	48.0	49.3	+2.71 %	PMG

Centrales	Prog.	Real	Desv %	Estado
Trongol	-	0.0	-	PMG
Ujina-1	0.0	0.0	-	
Ujina-2	0.0	0.0	-	
Ujina-3	0.0	0.0	-	
Ujina-4	0.0	0.0	-	
Ujina-5	0.0	0.0	-	MM
Ujina-6	0.0	0.0	-	
Ventanas 1	0.0	0.0	-	ERE
Ventanas 2	3814.4	3669.0	-3.81 %	LF
Villa Alegre	64.9	4.6	-92.97 %	
Villa Solar	15.9	0.0	-100.00 %	
Viñales	516.1	478.4	-7.30 %	
Volcán	166.0	178.8	+7.71 %	
Yungay 1 Diésel	0.0	0.0	-	
Yungay 1 GNL	0.0	0.0	-	
Yungay 2 Diésel	0.0	0.0	-	
Yungay 2 GNL	0.0	0.0	-	
Yungay 3 Diésel	0.0	0.0	-	
Yungay 3 GNL	0.0	0.0	-	
Yungay 4	0.0	0.0	-	
Total	215773.9	214539.9	-0.57 %	

1.2. PMGD

Centrales	Prog.	Real	Desv %
Agni	-	0.0	-
Alerce	-	0.0	-
Alicahue	19.5	5.1	-73.65 %
Allipén	58.2	41.0	-29.50 %
Almendrado	-	0.0	-
Ancalí	-	0.0	-
Argomedo	36.6	7.3	-79.96 %
Aromos	-	0.0	-
Arrayán	-	0.0	-
Auxiliar del Maipo	30.0	38.2	+27.25 %
Aviles	0.0	0.0	-
BERRUECO	28.1	7.1	-74.77 %
Bellavista 1	83.9	86.7	+3.31 %
Biocruz	-	5.0	-
Biomar	-	0.0	-
Bluegate	-	0.0	-
Boldos	-	0.0	-
Boquiamargo	0.0	0.0	-
Bureo	43.2	43.4	+0.41 %
CASABERMEJA	6.0	5.5	-7.91 %
Caimi	0.0	0.0	-
Calafate	-	0.0	-
Calfuco	-	0.0	-
Caliboro	23.5	24.7	+4.89 %
Campesina	-	0.0	-
Casablanca 1	-	0.0	-
Casablanca 2	-	0.0	-
Cavanca	40.6	40.0	-1.50 %
Cañete	-	0.0	-
Chacabuco	78.0	32.3	-58.57 %
Chanleufu	0.4	0.0	-100.00 %
Chifin	-	0.0	-
Chile Generación	-	0.0	-
Chorrillos	-	0.0	-
Chufkén (Traiguén)	-	0.0	-
Ciruelillo	-	0.0	-
Cocharcas	15.5	2.2	-86.06 %
Collil	63.4	158.5	+149.96 %
Conchali	-	0.0	-
Contra	-	0.0	-
Contulmo	-	0.0	-
Copiulemu	-	18.3	-
Correntoso	106.4	78.7	-26.10 %
Cortés	-	0.0	-
Cosapilla	8.7	9.6	+10.97 %
Curacautín	-	2.6	-
Curauma	-	0.0	-
Curileufu	-	0.0	-
DON ANDRÓNICO	19.7	3.7	-81.04 %

Centrales	Prog.	Real	Desv %
Ramadilla	-	0.0	-
Rapaco	-	0.0	-
Raso Power	-	0.0	-
Reca	34.6	30.0	-13.29 %
Rey	-	0.0	-
Riñinahue	0.2	0.0	-100.00 %
Roblería	1.7	0.0	-100.00 %
Río Azul	-	0.0	-
Río Mulchén	29.6	20.0	-32.37 %
SANTA CAROLINA	21.4	5.1	-76.38 %
Salmofood 1	-	0.0	-
Santa Elena	0.0	24.2	-
Santa Ester	7.8	1.9	-76.22 %
Santa Irene	-	0.0	-
Santa Isabel	14.5	16.0	+9.84 %
Santa Luisa	-	2.4	-
Saturno Norte	23.4	5.8	-75.35 %
Sauce Andes	7.5	7.2	-3.43 %
Sepultura	-	0.0	-
Skretting	-	0.0	-
Skretting Osorno	-	0.0	-
Sol de Septiembre	8.6	0.0	-100.00 %
Solar Alto	0.0	0.0	-
Solar Altos de Til Til	14.2	3.2	-77.78 %
Solar Altos del Paico	0.0	-	-
Solar Alturas de Ovalle	13.2	0.0	-100.00 %
Solar Amparo del Sol	13.4	12.0	-10.75 %
Solar Antonia	20.9	4.0	-80.81 %
Solar Ariztía	0.0	0.0	-
Solar Bellavista	8.6	7.5	-12.66 %
Solar Cabilsol	4.8	4.7	-3.12 %
Solar Cachiyuyo 2	83.0	13.8	-83.40 %
Solar Calama 1	83.9	86.9	+3.53 %
Solar Calle Larga	25.1	8.5	-66.20 %
Solar Canesa 1	24.2	22.9	-5.50 %
Solar Casuto	19.2	6.7	-64.91 %
Solar Catemu	15.4	5.8	-62.23 %
Solar Catán	4.4	7.3	+64.77 %
Solar Cernicalo 1	2.0	1.2	-42.22 %
Solar Cernicalo 2	2.0	1.1	-46.17 %
Solar Chalinga	21.1	14.0	-33.51 %
Solar Chancon	3.2	4.4	+37.50 %
Solar Chimbarongo	3.2	2.8	-13.13 %
Solar Chuchiñi	6.4	7.2	+13.93 %
Solar Citrino	19.7	4.8	-75.61 %
Solar Cordillerilla	3.7	0.0	-100.00 %
Solar Covadonga	67.8	68.3	+0.75 %
Solar Crucero	16.7	2.2	-87.10 %
Solar Cruz	25.2	9.0	-64.48 %

Centrales	Prog.	Real	Desv %
Danisco	-	0.0	-
Darlin	66.2	15.3	-76.86 %
Don Pedro	-	0.0	-
Don Walterio	70.8	55.0	-22.33 %
Dongo	55.9	110.3	+97.13 %
Donguil	0.3	0.0	-100.00 %
Doña Hilda	0.7	0.9	+37.38 %
Doña Javiera	-	2.6	-
Doñihue	60.7	12.5	-79.47 %
EL ROMERAL	48.3	12.7	-73.62 %
ETERSOL	-	0.0	-
Eagon	-	0.0	-
El Agrio	35.9	34.5	-4.14 %
El Arrayán	-	16.8	-
El Campesino 1	-	0.0	-
El Canelo	67.3	65.4	-2.73 %
El Canelo 1	-	0.0	-
El Colorado	17.6	24.5	+39.38 %
El Condor	7.6	1.4	-81.08 %
El Diuto	72.5	61.9	-14.55 %
El Faro	-	0.0	-
El Litre	71.3	25.5	-64.19 %
El Llano	0.9	5.8	+513.49 %
El Manzano	62.3	72.9	+16.90 %
El Mirador	4.2	16.8	+299.59 %
El Molle	-	41.8	-
El Nogal	-	0.0	-
El Piuquen	0.0	0.0	-
El Queltehue	-	6.7	-
El Resplandor	16.0	1.9	-88.11 %
El Tártaro	0.0	0.0	-
Energía León	-	0.0	-
Ensenada	0.0	0.0	-
Ermitaño	-	0.0	-
Estancilla	-	0.0	-
Estandartes	-	0.0	-
Eyzaguirre	5.5	5.8	+5.01 %
Eólica El Arrebol	157.9	44.2	-72.00 %
Eólica Huajache	63.0	70.7	+12.21 %
Eólica Las Peñas	84.0	103.0	+22.62 %
Eólica Lebu 3	55.1	0.0	-100.00 %
Eólica Raki	94.5	96.9	+2.47 %
Eólica Ucuquer	115.1	87.3	-24.15 %
Eólico El Nogal	191.5	75.4	-60.65 %
GR Pitao	0.0	0.0	-
Galpón	30.1	20.1	-33.26 %
Gami	-	0.0	-
Granada	47.9	15.5	-67.63 %
Guanaco Solar	22.2	6.1	-72.49 %
HBS	-	0.0	-
HBS-GNL	-	0.0	-

Centrales	Prog.	Real	Desv %
Solar Cuz Cuz	6.6	6.7	+1.52 %
Solar Don Eugenio	4.1	3.4	-17.76 %
Solar Don Mariano	20.1	3.1	-84.50 %
Solar Eclipse	57.3	7.4	-87.02 %
Solar El Boco	3.7	11.0	+196.22 %
Solar El Chincol	19.0	2.4	-87.20 %
Solar El Chucao	17.0	1.9	-88.71 %
Solar El Divisadero	8.6	10.4	+20.76 %
Solar El Estero	14.0	2.1	-84.80 %
Solar El Laurel	52.3	15.0	-71.31 %
Solar El Picurio	3.7	4.7	+26.22 %
Solar El Pilpen	4.1	6.6	+60.73 %
Solar El Pitio	3.7	2.9	-22.70 %
Solar El Queltehue	4.7	-	-
Solar El Quemado	24.9	23.2	-6.77 %
Solar El Queule	0.0	0.0	-
Solar El Roble	15.3	0.0	-100.00 %
Solar El Sauce	15.3	4.0	-73.79 %
Solar Encon	63.6	23.7	-62.68 %
Solar Esperanza	2.9	0.0	-100.00 %
Solar Filomena	19.2	6.8	-64.37 %
Solar Fotovolt	0.0	0.0	-
Solar Francisco	-	0.0	-
Solar GR Lemu	40.0	2.9	-92.69 %
Solar GR Pepa	68.1	16.4	-75.91 %
Solar GR Santa Rosa	20.3	0.0	-100.00 %
Solar Girasoles	18.9	7.7	-59.17 %
Solar Guadalao	19.4	3.6	-81.50 %
Solar Homero	4.3	-	-
Solar Hormiga	4.5	6.0	+33.68 %
Solar Hornitos	0.6	1.1	+73.37 %
Solar Illapel 5X	23.2	15.8	-31.70 %
Solar Jahuel	44.3	16.0	-63.76 %
Solar Jaururo	20.1	4.9	-75.62 %
Solar José Soler Mallafré	9.3	1.6	-82.30 %
Solar Konda	20.1	7.5	-62.81 %
Solar La Acacia	11.8	10.9	-7.61 %
Solar La Blanquina	65.9	13.9	-78.85 %
Solar La Chapeana	6.2	9.1	+46.74 %
Solar La Chimba Bis	18.4	6.0	-67.40 %
Solar La Esperanza 2	23.1	9.8	-57.44 %
Solar La Estancia	21.1	5.9	-72.05 %
Solar La Frontera	12.3	4.1	-67.02 %
Solar La Lajuela	62.4	10.2	-83.70 %
Solar La Manga	9.0	2.1	-76.75 %
Solar La Quinta	4.1	8.7	+109.97 %
Solar Lagunilla	6.5	9.7	+48.00 %
Solar Las Araucarias	0.0	0.0	-
Solar Las Codornices	20.0	2.3	-88.56 %
Solar Las Mercedes 1	20.0	3.8	-80.92 %
Solar Las Mollacas	6.2	4.7	-24.07 %

Centrales	Prog.	Real	Desv %	Centrales	Prog.	Real	Desv %
Hidrobonito MC1	115.1	96.6	-16.10 %	Solar Las Palomas	4.2	2.9	-30.80 %
Hidrobonito MC2	70.1	62.9	-10.26 %	Solar Las Perdices	18.8	3.1	-83.79 %
Hidroeléctrica Cumpeo	77.3	75.9	-1.72 %	Solar Las Rojas	16.2	2.8	-82.61 %
Homero	-	4.6	-	Solar Las Terrazas	2.9	13.9	+380.11 %
Huape	15.8	2.2	-85.89 %	Solar Las Torcasas	-	3.5	-
JCE	-	0.0	-	Solar Las Turcas	4.3	5.8	+34.40 %
Juncalito	0.0	0.0	-	Solar Lipangue	19.4	5.2	-73.18 %
LAS TORTOLAS	0.0	0.0	-	Solar Llanos de Potroso	0.0	52.8	-
LLAY LLAY	73.0	25.8	-64.69 %	Solar Lo Miranda	45.9	9.6	-79.18 %
LUMBRERAS	23.7	7.2	-69.49 %	Solar Lo Sierra	18.7	3.4	-81.66 %
La Arena	0.0	0.0	-	Solar Loreto	18.6	4.5	-76.02 %
La Bifurcada	0.9	1.5	+70.33 %	Solar Los Gorriones	4.1	2.6	-37.03 %
La Compañía 2	17.9	28.2	+57.70 %	Solar Los Libertadores	7.8	4.3	-45.01 %
La Ligua	21.5	4.0	-81.49 %	Solar Los Paltos	19.6	4.1	-78.95 %
La Montaña 1	46.4	39.8	-14.37 %	Solar Los Patos	3.9	4.4	+12.07 %
La Montaña 2	23.0	20.0	-13.15 %	Solar Los Puquios	20.6	7.7	-62.63 %
La Paloma	3.5	0.0	-100.00 %	Solar Luce	17.7	2.6	-85.06 %
La Viña - Alto la Viña	5.0	6.2	+25.34 %	Solar Luders	3.9	5.3	+35.64 %
Las Cabras	13.6	0.1	-99.43 %	Solar Luna	16.8	2.7	-83.85 %
Las Chacras	20.1	5.8	-71.16 %	Solar Luna del Norte	10.2	16.9	+66.44 %
Las Flores	38.4	44.8	+16.88 %	Solar Malaquita 2	66.1	85.0	+28.46 %
Las Lechuzas	18.3	2.1	-88.41 %	Solar Marchigue 2	23.1	10.6	-53.87 %
Las Pampas	-	0.0	-	Solar Marchigue 7	20.7	3.0	-85.44 %
Las Vertientes	0.0	0.7	-	Solar Marin	24.2	8.1	-66.77 %
Lepanto	-	0.0	-	Solar Montt	23.1	7.6	-67.00 %
Linares Solar	56.3	8.1	-85.54 %	Solar Norte Chico 1	12.5	0.0	-100.00 %
Lingue Solar	9.2	3.1	-66.11 %	Solar Ocoa	4.8	5.5	+14.91 %
Lipigas Concón	-	0.0	-	Solar Olivillo	60.3	17.9	-70.37 %
Lirio del campo	20.4	4.3	-78.86 %	Solar Ovejería	12.7	8.8	-30.85 %
Lonquimay	-	0.0	-	Solar PFV Mostazal	12.1	16.7	+38.16 %
Los Bajos	27.5	37.0	+34.42 %	Solar PMGD Diego de Almagro	0.0	0.0	-
Los Colonos	-	0.0	-	Solar PSF Lomas Coloradas	5.7	12.7	+122.44 %
Los Corrales	6.0	4.6	-23.12 %	Solar Pama	14.4	8.5	-41.35 %
Los Corrales 2	18.4	19.2	+4.09 %	Solar Panquehue 2	7.9	13.1	+66.96 %
Los Molinos	73.9	21.9	-70.29 %	Solar Paraguay	59.4	13.1	-78.02 %
Los Morros	7.4	4.9	-33.72 %	Solar Parque Bicentenario	17.5	8.9	-49.08 %
Los Negros	-	0.0	-	Solar Pedreros	23.5	8.3	-64.80 %
Los Padres	34.7	32.5	-6.42 %	Solar Peralillo	4.0	0.0	-100.00 %
Los Perales	8.1	3.7	-53.97 %	Solar Pica	0.0	0.0	-
Los Sauces	-	0.0	-	Solar Piquero	21.4	5.9	-72.48 %
Los Álamos	-	0.0	-	Solar Pirque	20.7	4.2	-79.65 %
Louisiana Pacific	-	0.0	-	Solar Placilla	0.0	0.0	-
Lousiana Pacific 2	-	0.0	-	Solar Población	10.5	2.6	-75.14 %
MCH-Dosal	-	0.0	-	Solar Portezuelo	7.7	3.6	-52.84 %
MSA-1	3.8	22.0	+477.79 %	Solar Pozo Almonte 1	0.0	0.0	-
Maisan	5.2	4.8	-8.28 %	Solar Pullalli	19.0	3.0	-83.95 %
Malinke	19.9	5.4	-73.06 %	Solar Punta Baja	17.2	13.2	-23.24 %
Mallarauco	70.9	69.8	-1.59 %	Solar Queltehue	11.5	4.3	-62.27 %
María Elena	2.3	2.2	-4.27 %	Solar RLA	18.9	2.1	-88.65 %
María Pinto	19.8	5.3	-73.24 %	Solar Ranguil	19.9	2.4	-87.80 %

Centrales	Prog.	Real	Desv %	Centrales	Prog.	Real	Desv %
Melo	51.3	51.7	+0.77 %	Solar Rodeo	9.8	5.9	-39.92 %
Membrillo	17.6	3.4	-80.54 %	Solar Rovián	36.9	10.0	-72.96 %
Mimbre	-	0.0	-	Solar San Francisco	9.0	10.2	+13.52 %
Minihidro Alto Hospicio	20.8	22.2	+7.06 %	Solar San Isidro	20.0	4.0	-80.24 %
Minihidro El Toro	21.0	23.6	+12.30 %	Solar San Pedro	3.3	2.1	-37.17 %
Minihidro Santa Rosa	9.1	11.4	+26.24 %	Solar Santa Adriana	18.8	4.9	-73.82 %
Molinera Villarrica	5.1	4.5	-12.38 %	Solar Santa Amelia	26.1	5.4	-79.36 %
Monte Patria	-	0.0	-	Solar Santa Cecilia	12.6	16.8	+33.40 %
Moya	39.9	9.0	-77.50 %	Solar Santa Clara	21.1	6.2	-70.71 %
Muchi	6.3	4.2	-33.99 %	Solar Santa Julia	4.8	6.8	+41.96 %
Multiexport 1	-	0.0	-	Solar Santa Laura	4.3	3.8	-10.85 %
Multiexport 2	-	0.0	-	Solar Santuario	4.6	13.4	+191.27 %
Munilque 1	1.3	1.9	+44.77 %	Solar Sol	10.2	17.0	+67.05 %
Munilque 2	11.5	11.5	+0.39 %	Solar Talca	57.2	9.4	-83.64 %
Mutupin	12.3	7.4	-39.90 %	Solar Talhuén	10.6	9.1	-13.80 %
Nahuen	73.8	18.2	-75.32 %	Solar Tambo Real	10.1	15.8	+56.81 %
OVALLE NORTE	61.3	25.0	-59.25 %	Solar Techos de Altamira	0.2	0.0	-100.00 %
Orafti	-	0.5	-	Solar Til Til	3.9	5.4	+37.16 %
Orion	17.5	2.3	-87.09 %	Solar Trebal	14.8	14.3	-3.26 %
PENCAHUE ESTE	9.3	3.0	-67.91 %	Solar Trica-Dos	12.8	1.8	-86.09 %
PFV Alcaldesa	0.0	0.0	-	Solar Tricahue 2	71.7	12.2	-82.98 %
PFV CANELILLO	21.3	7.1	-66.57 %	Solar Tucúquere	23.5	18.2	-22.36 %
PFV CIPRES	0.0	0.0	-	Solar UTFSM Valparaíso Valdés	0.1	0.0	-100.00 %
PFV COCINILLAS	22.1	8.7	-60.87 %	Solar UTFSM Viña del Mar	1.4	0.0	-99.89 %
PFV PITRA	21.6	2.6	-87.71 %	Solar Valle Este 2	70.1	59.2	-15.64 %
PFV PMGD Curacavi	0.0	2.5	-	Solar Valle Oeste 2	81.5	60.5	-25.72 %
PFV PMGD El Flamenco	4.7	0.8	-83.51 %	Solar Valle de la Luna 2	3.9	5.0	+27.95 %
PFV PMGD Pegasus Solar	14.7	2.2	-85.31 %	Solar Victoria	81.6	86.9	+6.46 %
PFV PMGD San Camilo	15.1	4.6	-69.32 %	Solar Villa Cruz	4.2	2.1	-50.24 %
PFV SANTA INES	37.8	11.2	-70.36 %	Solar Villa Prat	0.0	0.0	-
PINARES	-	0.0	-	Solar Villa Seca	12.0	2.9	-75.60 %
PMGD Camping	-	0.0	-	Solar Vituco 2B	20.8	8.1	-61.22 %
PMGD Diesel Cerezo	-	0.0	-	Solar Ñilhue	1.9	3.9	+103.84 %
PMGD PFV El Castaño	-	0.0	-	Solar Ñiquén	15.2	2.4	-83.99 %
PMGD PFV La Foresta	-	0.0	-	Southern	-	0.0	-
PMGD PFV La Muralla	3.9	3.9	+0.54 %	Tamarugo	16.0	18.2	+14.06 %
PMGD PFV Vicente	0.0	0.0	-	Tambores	-	0.0	-
PRP Las Quemas	-	0.0	-	Tamm	-	0.0	-
Paine	82.8	87.4	+5.48 %	Tapihue	-	0.0	-
Palmar	70.8	66.2	-6.38 %	Tirúa	-	0.0	-
Panguipulli	-	0.0	-	Tomaval	-	17.1	-
Pehui	16.4	11.5	-29.57 %	Trailelfú	26.6	21.4	-19.70 %
Pichilonco	18.6	14.6	-21.42 %	Tranquil	0.0	0.0	-
Picoltué	-	0.0	-	Trebal Mapocho	-	6.4	-
Pilpilen	21.6	2.8	-87.23 %	Trinidad Solar	21.6	3.3	-84.72 %
Pitotoy	17.4	4.3	-75.01 %	Trueno	128.6	75.0	-41.68 %
Puclaro	8.3	0.0	-100.00 %	Truful Truful	12.0	18.3	+52.11 %
Punitaqui	-	0.0	-	UTSFM Vitacura	0.0	0.0	-100.00 %
Purísima	3.4	0.0	-100.00 %	Venturada	51.3	6.8	-86.66 %
QUINANTU	70.8	11.0	-84.38 %	Watts 1	-	0.0	-

Centrales	Prog.	Real	Desv %
QUITRALMAN	-	0.0	-
Quillaileo	4.1	12.5	+202.21 %
Quillay	19.8	5.1	-74.09 %
RAULI	58.8	14.7	-74.92 %
RINCONADA NORTE	3.7	6.0	+63.82 %

Centrales	Prog.	Real	Desv %
Watts 2	-	0.0	-
Yumbel	-	0.0	-
Zapallar	-	0.0	-
Zofri	-	0.0	-
Total	7368.0	4625.1	-37.23 %

Abreviaturas:

CSE:Conectada a Sistema Externo
DF:Desconexión Forzada
DLC:Desconectada con Limitación de Combustible
DLF:Desconectada con Limitación Forzada
DLP:Desconectada con Limitación Programada
DRO:Desconectada con Restricción Operativa
ERE:Estado de Reserva Estratégica
FE:Falla Externa
GNP:Generación no programada
LC:Limitación de Combustible

LF:Limitación Forzada
LP:Limitación programada
MM:Mantenimiento Mayor
P:Prueba de Puesta en Servicio
PDO:Prueba DO
PMG:Pequeño Medio de Generación
PMGD:Pequeño Medio de Generación Distribuida
PO:Prueba Operacional
RO:Restricción Operativa
SI:Sin información

JUSTIFICACIÓN DE PRINCIPALES DESVIACIONES (*)

CERRO DOMINADOR CSP	GNP por pruebas de puesta en servicio.
Eólica San Juan	Mayor generación real por mayor carga Eólica.
Pangue	Mayor generación real por control cota.
Pehuenche	Menor generación real por declaración de Agotamiento.
Ralco	Mayor generación real por costo marginal.
Santa María	Menor generación real por indisponibilidad.
Tocopilla-U16 GNL	Menor generación real por costo marginal.

$$(*) \text{ si } \left\{ \begin{array}{l} |E_{real} - E_{programada}| > 12.5\% E_{programada} \\ y \\ |E_{real} - E_{programada}| > 0.5\% E_{total \text{ real}} \end{array} \right\}$$

ESTADO DE LAS CENTRALES

3.1. Desconexión Forzada

CENTRALES (≥100 MW)	Disponibilidad (%)	Observaciones
Mejillones-CTM2	0.0	Unidad indisponible por reparación de tubo roto de caldera, según SDCF 2021077240.
Santa María	79.0	Con solicitud de desconexión de curso forzoso. Causa informada: Tubo roto de caldera, según SDCF 2021079239.

3.2. Desconectada con Restricción Operativa

CENTRALES (≥100 MW)	Disponibilidad (%)	Observaciones
Cardones	100.0	Limitación de arranques seguidos dentro de 8 horas radica en que el transformador de Servicios Auxiliares tiene potencia nominal de 4 MVA con la capacidad de aumentar a 8 MVA por 1/2 hora cada 8 horas. La capacidad mayor a la nominal es requerida por el SFC (Convertidor Estático de Frecuencia), SEE (Sistema de Excitación) y bomba principal de combustible durante el arranque de la unidad, según IL 2017001231.

3.3. Estado de Reserva Estratégica

CENTRALES (≥100 MW)	Disponibilidad (%)	Observaciones
Ventanas 1	100.0	Ventanas 1 se encuentra en Estado de Reserva Estratégica. Por lo tanto, para solicitar su despacho se debe cumplir lo indicado en el "Reglamento de Potencia" (Decreto 62/2006, modificado por el Decreto 42 del 2020), específicamente lo señalado en el "Art. 25 quinquies"

3.4. Limitación Forzada

CENTRALES (≥100 MW)	Disponibilidad (%)	Observaciones
Andina-CTA	96.0	Limitada en 170 MW por control de emisiones NOx, según IL 2021001939.
Eólica Taltal	100.0	Parque eólico sin control de potencia reactiva, error de Scada, según IL 2021001225.
Guacolda 1	81.8	Limitada en 126 MW por máximo control de válvula de turbina, según IL 2021001247.
Guacolda 2	68.6	Limitada en 105 MW. Causa informada: Por parámetros del sistema de circulación, según IL 2021001973.
Guacolda 5	92.0	Limitada en 140 MW por control de parámetros del sistema de circulación, según IL 2021002046.
Hornitos-CTH	96.0	Limitada en 170 MW por control de emisiones NOx, según IL 2021002058.
Mejillones-CTM1	87.0	Limitada en 140 MW por temperatura en descarga agua de mar, según IL 202102011.
Mejillones-CTM2	0.0	Limitada en 60 MW por consumo excesivo de agua, según IL 2021002064.
Mejillones IEM	70.5	Limitada en 355 MW. Causa informada: Alta vibración en descanso N°1 TV, según IL 2021001155.
Norgener-NTO1	98.0	Límitada en 134 MW en revisión de la unidad se verifica que no está dando la Pmax declarada, según IL 2021000072.
Nueva Ventanas	98.0	Limitada en 250 MW. Causa informada: Control de parámetros del sistema de circulación, según IL 2021002079.
Solar Finis Terrae	80.0	Limitada en 110 MW por cabinas de inversores siniestradas, según IL 2021000247.
Solar PV Conejo	97.0	Limitada en 100 MW, según IL 2021001819.
Tocopilla-U14	62.5	Limitada en 85 MW por alta temperatura vapor recalentado, según IL 2021000609.
Tocopilla-U15	68.1	Limitada en 90 MW por filtración descarga del desaireador, según IL 2021000376.
Ventanas 2	93.0	Limitada a 165 MW con solicitud de intervención de curso forzoso. Causa informada: Revisión de equipo de molienda del pulverizador 2E por ruidos anormales, según SICF 2021079233.

3.5. Mantenimiento Mayor

CENTRALES (≥100 MW)	Disponibilidad (%)	Observaciones
Guacolda 3	0.0	Mantenimiento Mayor.
Nueva Renca GNL	0.0	Mantenimiento Mayor.

3.6. Prueba de Puesta en Servicio

CENTRALES (≥100 MW)	Disponibilidad (%)	Observaciones
ATACAMA SOLAR S.A.	0.0	En período de puesta en servicio.
CALAMA	0.0	En período de puesta en servicio.
CAMPOS DEL SOL	0.0	En período de puesta en servicio.
CERRO DOMINADOR CSP	0.0	En período de puesta en servicio.
Cerro Tigre	0.0	En período de puesta en servicio.
COMBARBALA	0.0	En período de puesta en servicio.
Domeyko	0.0	En período de puesta en servicio.
LOS OLMOS	0.0	En período de puesta en servicio.
MALGARIDA	0.0	En período de puesta en servicio.
MALLECO NORTE	0.0	En período de puesta en servicio.
MALLECO SUR	0.0	En período de puesta en servicio.
PFV Diego de Almagro Sur	0.0	En período de puesta en servicio.
PFV RÍO ESCONDIDO	0.0	En período de puesta en servicio.
PFV Sol del Desierto	0.0	En período de puesta en servicio.
PFV SOL DE LILA	0.0	En período de puesta en servicio.
PFV Sol de los Andes	0.0	En período de puesta en servicio.
TAMAYA SOLAR	0.0	En período de puesta en servicio.

3.7. Restricción Operativa

CENTRALES (≥100 MW)	Disponibilidad (%)	Observaciones
Abanico	100.0	Limitada a un mínimo técnico provisorio de 5 MW. Causa informada: Debe quedar una unidad en servicio para alimentar al cliente externo Frontel, que abastece la zona de Antuco, Abanico y Lago Laja,
Angostura	100.0	C. Angostura U1. Por condición de afluente, se requiere restringir la entrada en servicio de la UG1. La unidad está disponible, pero se debe restringir al máximo su operación, por eventuales fallas o demoras en la puesta en servicio, por lo mismo se requiere dar prioridad a la operación de la Unidad 2 y Unidad 3, solo utilizar la unidad en condición de emergencia por control Cota. No presta SSCC, según IL 2021001568.
Antuco	100.0	C. Antuco U-1 y 2 con informe de limitación. Causa informada: La tasa de toma de carga de la central se deberá limitar a 40 MW por cada hora, para no afectar con golpes de agua las obras hidráulicas de los canales de regadío (Zañartu, Collao, Ríos - Pinochet y Antuco), que se encuentran inmediatamente aguas abajo de la descarga de la central Antuco. La potencia mínima de operación de la Unidad N ° 2 es de 80 MW. Debido a la instalación de un sistema que permite inyectar aire en la zona del rodete, excepcionalmente, la unidad N ° 2 puede operar en forma extraordinaria y no permanente bajo el mínimo técnico con una carga de 60 MW (no se permite generar en zonas intermedias para evitar la alta vibración en turbina y corte de pernos en tubo intermedio). Para cargas mayores a 80 MW, la Unidad se debe mantener limitada debido al comportamiento anormal en lógica asociada al set-point del controlador SCADA 800M, por lo que en todo su rango de generación (0 a 160 MW) no participa en el control primario ni secundario de frecuencia (AGC), según IL 2021001197 y 2021001198.
Atacama-1 GNL	100.0	Control de emisiones diarias de NOx y CO, según IL 2021001953.
Atacama-2 GNL	100.0	Control de emisiones diarias de NOx y CO, según IL 2021001953.
Colbún	100.0	Limitada para partida autónoma de forma automática. Causa informada: Falla de medida de potencial de barra N°1 SS/AA 13.8 KV, según IL 2021000818.
El Toro	100.0	C. El Toro limitado para realizar AGC, según IL2021001180.

CENTRALES (≥100 MW)	Disponibilidad (%)	Observaciones
Nehuenco 1 GNL	59.0	Con limitación. Causa informada: Debido a la postergación del LTE + MM Nehuenco I desde 1 de septiembre de 2021 al 1 septiembre de 2022 se limitarán los arranques de esta unidad en el periodo de 12 meses a los siguientes valores como máximo a: Cuatro (4) arranques fríos en el periodo de 12 meses, este arranque se contabilizará cuando el tiempo que medie entre la detención del CC (TG y TV en virado) y el próximo arranque sea > 36 horas; Un (1) arranque tibio/caliente por semana, este arranque se contabilizará cuando el tiempo que medie entre la detención del CC (TG y TV en virado) y el próximo arranque sea < 36 horas. Lo anterior de acuerdo a carta: GM N° 122/2021 con fecha 8.9.2021 enviada al CEN, según IL 2021002083.
Pangué	100.0	Limitada al aumento en tiempo de partida. Causa informada: Unidad que se encuentre detenida y disponible, aumentará tiempo de arranque en un total de 40 minutos desde la solicitud de partida hasta la sincronización por maniobra de compuerta, según IL 2021002095.
Quintero 1A Diésel	0.0	Limitada a operar con diésel por restricciones ambientales, según IL 2020000259.
Quintero 1B Diésel	0.0	Limitada a operar con diésel por restricciones ambientales, según IL 2020000260.
Ralco	100.0	U-1 con limitación. Causa informada: Se requiere mantener unidad 1 en servicio siempre que el sistema lo requiera. Dicho requerimiento se debe a una condición técnica de válvula protección turbina la cual se encuentra trabajando en forma deficiente y por recomendación entregada por especialistas técnicos que indican disminuir los movimientos de apertura y cierre de dicha válvula y así evitar la degradación acelerada y una indisponibilidad de la unidad por un tiempo prolongado. Se solicita: En caso de que programa de generación requiera una sola unidad en servicio permanente, priorizar despacho de U-1. En caso de que programa de generación requiera una sola unidad y no de forma permanente, priorizar despacho de U-2. En caso de que programa de generación requiera ambas Unidades en servicio y por condiciones de sistema se deba detener una de las unidades, priorizar detención de U-2, según IL 2021001531.
San Isidro 1 Diésel	100.0	Limitación operación Combustible de Respaldo; Conforme a la Resolución de Calificación Ambiental (RCA) N° 2/97, de la Comisión Regional del Medio Ambiente (COREMA) de Valparaíso, y la RES. EXTA. N° 25/97, del Director Ejecutivo de la Comisión Nacional de Medio Ambiente (CONAMA), que aprueba la operación de la Unidad I de San Isidro, el uso del combustible de respaldo (Diésel) tiene lugar en caso de emergencia, originada en la falla del suministro de gas natural por una causa fortuita o de fuerza mayor que interrumpa el suministro desde los yacimientos de Argentina y que exista una alta demanda que no sea posible abastecer con centrales hidroeléctricas y térmicas a carbón. El Uso del Combustible no exime del cumplimiento de la Norma de emisión contenida en el RCA y en DS N° 13 Norma de emisión de Centrales Térmicas., según IL 2021000298.
San Isidro 2 Diésel	100.0	Limitación operación Combustible de Respaldo; Conforme a la Resolución de Calificación Ambiental (RCA) N° 340/2005, de la Comisión Regional del Medio Ambiente (COREMA) de Valparaíso, que aprueba la Operación de la Unidad II de San Isidro, el uso del combustible de respaldo (Diésel) tiene lugar en caso de emergencia. Las condiciones de emergencia considerarán, las posibles fallas en el sistema de transporte de gas y fallas operacionales. Las situaciones de emergencia producidas por fallas en el transporte de gas se definen como aquellas situaciones en que, estando temporalmente afectada la Central por problemas de abastecimiento de gas, los requerimientos del Coordinador Eléctrico Nacional demanden a la Central el uso de petróleo Diésel, con el objeto de suplir la demanda de energía eléctrica del sistema, por encontrarnos en esta condición. El Uso del Combustible no exime del cumplimiento de la Norma de emisión contenida en el RCA y en DS N° 13 Norma de emisión de Centrales Térmicas, según IL 2021000299.
Santa María	100.0	Tiempo de estabilización de 2 horas (solo para cambios en el sentido de la carga), según IL 20200001130. Control terciario de frecuencia CTF con limitación. Causa informada: No se puede aplicar CTF mientras este vigente la limitación 2020001130, según IL 2020001885.
Solar Luz del Norte	100.0	Indisponible para el AGC. Causa informada: No obedece consiga de bajada, según IL 2020001994.
Taltal 1 Diésel	100.0	Durante el Mantenimiento Mayor de Unidad TG1 se detectan grietas en carcaza, por lo cual se requiere limitar arranques de la misma por parte de especialistas. Por consiguiente, se solicita dar como prioridad de despachos a Unidad TG2. En caso de requerir despacho de ambas unidades, la unidad TG1 podrá operar sin restricciones, según IL 2021001458.
Taltal 1 GNL	100.0	Durante el Mantenimiento Mayor de Unidad TG1 se detectan grietas en carcaza, por lo cual se requiere limitar arranques de la misma por parte de especialistas. Por consiguiente, se solicita dar como prioridad de despachos a Unidad TG2. En caso de requerir despacho de ambas unidades, la unidad TG1 podrá operar sin restricciones, según IL 2021001458.
Tocopilla-U16 GNL	100.0	Con restricción a participar en CPF, según IL 2021001815.

ANTECEDENTES DE LA OPERACIÓN DIARIA SEN

4.1. Observaciones

Hora	Centro de Control	Observación
00:00	CDC	Cs. PFV Loma Los Colorados, PE Lebu (ampliación de 6,5 a 10 MW), Dos Valles, PFV Azabache, PFV Río Escondido, PFV Campos de Sol, PFV Sol de Lila, PFV Domeyko, PE Negrete 2, CSP Cerro Dominador, PE Malleco Sur/Norte, Aillín, Combarbalá, PE Calama, PE Alena, PFV Sol del Desierto, PE Los Olmos, PE Cerro Tigre y PFV Sol del Norte, continúan en período de puesta en servicio.
00:00	Enel Transmisión	C. Pehuenche se declara en condición de agotamiento con la cota 641.12 m.s.n.m. y un afluente de 180 MWh.
00:00	Colbún	C. Colbún se declara en condición de agotamiento con la cota 418.60 m.s.n.m. y un afluente de 284 MWh.
00:57	Transec	Línea de 220 kV Ciruelos - Valdivia 2 abierta para regular tensión.
00:59	Transec	Línea de 220 kV El Laurel - Nueva Pichirropulli 1 abierta para regular tensión.
01:58	Transec	Línea de 500 kV Entre Ríos - Ancoa 2 abierta para regular tensión.
03:03	Celeoredes	Línea de 500 kV Ancoa - Alto Jahuel 3 abierta para regular tensión.
03:21	Transec	Línea de 220 kV Canutillar - Puerto Montt 2 abierta para regular tensión.
04:00	Escuadrón	C. Escuadrón con solicitud de desconexión de curso forzoso. Causa informada: Problema en circuito de control, según SDCF 2021079225.
04:08	Colbún	C. Hornitos cancelada solicitud de desconexión de curso forzoso, según SDCF 2021079212.
06:07	AES Andes	C. Guacolda 5 sincronizada en pruebas.
06:58	AES Andes	C. Guacolda 5 disponible y cancelada solicitud de desconexión de curso forzoso, según SDCF 2021079051.
09:35	Transec	Línea de 500 kV Entre Ríos - Ancoa 2 cerrada.
09:38	Interchile	S/E Nueva Pan de Azúcar conectada CCSS de la línea de 500 kV Nueva Pan de Azúcar - Polpaico 1 y 2.
09:52	Celeoredes	Línea de 500 kV Ancoa - Alto Jahuel 3 cerrada.
09:54	Transec	Línea de 500 kV Ancoa - Alto Jahuel 2 cerrada.
10:00	Enap Refinería Aconcagua	C. Aconcagua limitada a 22 MW de inyección. Causa informada: Por estabilidad de los procesos de Refinería Aconcagua (ENAP), se limita a carga fija, según IL 2021002096.
10:29	Enor Chile	S/E Don Goyo interruptor JS abierto por Control de Transferencia línea de 220 kV Las Palmas - Los Vilos
11:11	Enor Chile	C. PE Cabo Leones II limitado a 189. Causa informada: Falla de alimentador 4, según IL 2021002097.
11:24	Transec	S/E Don Héctor interruptores J1, J4, J9 y J11 abiertos por control de transferencia línea de 220 kV Punta Colorada - Pan de Azúcar 1 y 2.
12:27	Gen. Metropolitana	C. Los Vientos cancelada limitación a una partida diaria, según IL 2021002073.
12:41	Enor Chile	C. PE Cabo Leones II cancelada limitación, según IL 2021002097.
12:50	AES Andes	S/E La Cebada abierto interruptores J4, JS y J1 por control transferencia línea de 220 kV Las Palmas - Los Vilos.
12:51	Enor Chile	C. PE Cabo Leones II limitado a 189 MW. Causa informada: Falla de alimentador 4, según IL 2021002099.
13:35	Enor Chile	C. PE Cabo Leones II cancelada limitación, según IL 2021002101.
13:51	Enor Chile	C. PE Cabo Leones II cancelada limitación, según IL 2021002099.
14:08	STS	C. Masisa sale del servicio en forma intempestiva con 5.26 MW, según IF 2021002546.
14:28	CGE	S/E Alonso de Ribera línea de 66 kV Alonso de Ribera - Chiguayante interrupción forzada por protecciones. 52 B2 se encontraba transferido. Se pierden 12 MW de consumos, según IF 2021002545.
14:37	STS	C. Masisa sincronizada en pruebas, según IF 2021002546.
14:53	CGE	Línea de 66 kV Temuco - Loncoche 1 interrupción forzada por protecciones con reconexión automática con éxito, según IF 2021002547.
15:04	Chilquinta	Línea de 44 kV Las Vegas - FFCC Andes 1 interrupción forzada por protecciones. Se pierden 9 MW de consumos de las SS/EE Catemu, Los Ángeles y Río Blanco, según IF 2021002563.
15:09	Chilquinta	SS/EE Catemu y Los Angeles normalizan sus consumos desde la línea de 44 kV Las Vegas - FFCC Andes 2.
15:11	CGE	Línea de 66 kV Los Peumos - Curacautín interrupción forzada por protecciones. Se pierden 2.4 MW de consumos. Causa informada: Árbol sobre la línea.

Centro de Control	Observación
15:23 Chilquinta	S/E Rio Blanco normaliza sus consumos desde el TR-3 de S/E San Felipe.
15:24 CGE	S/E Chiguayante inicia la recuperación parcial de sus consumos por redes de MT.
15:36 Transelec	Línea de 220 kV Ciruelos - Valdivia 2 cerrada.
15:42 Transelec	Línea de 220 kV El Laurel - Nueva Pichirropulli 1 cerrada.
15:45 Arauco	Línea de 66 kV Celco - Constitución interrupción forzada por protecciones. Causa informada: Rama sobre conductores por mal tiempo en la zona, según IF 2021002548. C. Celco queda en servicio en isla.
16:01 Potencia	Cs. Renaico y Alto Renaico salen del servicio en forma intempestiva con 4.7 y 1 MW respectivamente. Causa informada: Falla de línea de 23 kV Angol - Renaico, según IF 2021002553 - 2021002556.
16:11 CGE	Línea de 110 kV Vicuña - El Indio interrupción forzada por protecciones, se pierden 0.1 MW de consumos de Cía. Minera El Indio, según IF 2021002551.
16:38 Arauco	Línea de 66 kV Celco - Constitución cerrada, según IF 2021002548. C. Celco sincronizada y continúa limitada a 0 MW de inyección, según IL 2021002088.
16:48 CGE	Línea de 66 kV Victoria - Traiguén interrupción forzada por protecciones. Se pierden 4 MW de consumos, según IF 2021002552.
17:37 AES Andes	C. Ventanas 2 limitada a 165 MW con solicitud de intervención de curso forzoso. Causa informada: Revisión de equipo de molienda del pulverizador 2E por ruidos anormales, según SICF 2021079233.
17:40 CGE	S/E Alonso de Ribera línea de 66 kV Alonso de Ribera - Chiguayante reconexión manual sin éxito.
17:42 CGE	Línea de 66 kV Loncoche - Villarrica 1 interrupción forzada por protecciones. Se pierden 14 MW de consumos correspondientes a S/E Pucón, según IF 2021002589.
17:43 CGE	S/E Pucón normalizados sus consumos desde línea Temuco - Villarrica 2.
17:46 CGE	Línea de 110 kV Vicuña - El Indio cerrada, según IF 2021002551.
17:47 STS	C. Masisa disponible y en servicio, según IF 2021002546.
18:06 CGE	Línea de 66 kV Los Peumos - Curacautín cerrada, según IF 2021002549.
18:16 CGE	Línea de 66 kV Los Peumos - Curacautín interrupción forzada por protecciones, según IF 2021002555.
18:19 Transelec	S/E Don Héctor cerrado interruptores J1, J4, J9 y J11.
18:20 Escuadrón	C. Escuadrón sincronizada en pruebas, según SDCF 2021079225.
18:35 CGE	Línea de 66 kV Cocharcas - Hualte interrupción forzada por protecciones con reconexión automática con éxito, según IF 2021002573.
18:38 AES Andes	S/E La Cebada cerrado interruptores J4, JS y J1.
18:40 Colbún	C. Santa María con solicitud de desconexión de curso forzoso. Causa informada: Tubo roto de caldera, según SDCF 2021079239.
18:40 Enor Chile	S/E Don Goyo cerrado interruptor JS.
18:41 CGE	Línea de 66 kV Cocharcas - Hualte interrupción forzada por protecciones con reconexión automática con éxito, según IF 2021002574.
18:46 CGE	Línea de 66 kV Temuco - Loncoche 2 interrupción forzada por protecciones. Se pierden 17.3 MW de consumos correspondientes a las SS/EE Pitrufquén, Gorbea, según IF 2021002562.
18:46 CGE	Línea de 66 kV Temuco - Loncoche 1 interrupción forzada por protecciones con reconexión automática con éxito, según IF 2021002564.
18:50 Celeoredes	Línea de 500 kV Charrúa - Ancoa 3 interrupción forzada por protecciones, según IF 2021002568.
18:50 Besalco	S/E Digua 52JT1 interrupción forzada por protecciones.
18:50 CGE	S/E Pitrufquén normaliza sus consumos por la línea de 66 kV Temuco - Loncoche 1.
18:57 Puntilla	C. Puntilla U-3 sale de servicio en forma intempestiva con 6 MW, según IF 2021002557.
19:04 Energía Pacífico	C. Energía Pacífico con solicitud de desconexión de curso forzoso. Causa informada: Falla de control en el sistema de alimentación, según SDCF 20210079238.
19:04 Besalco	S/E Digua 52JT1 cerrado.
19:11 CGE	S/E Loncoche línea de 66 kV Pullinque - Loncoche 2 interrupción forzada por protecciones, con reconexión automática con éxito sólo en el extremo de S/E Pullinque, según IF 2021002567.
19:13 Chilquinta	Línea 110 kV Las Vegas - Cerro Navia 2 interrupción forzada por protecciones, según IF 2021002588.
19:13 CGE	S/E Pullinque línea de 66 kV Pullinque - Loncoche 2 interrupción forzada por protecciones con reconexión automática con éxito, según IF 2021002579.
19:13 KDM	C. Loma Los Colorados 2 sale del servicio en forma intempestiva con 12.7 MW. Causa informada: Falla en la línea 110 kV Las Vegas - Cerro Navia 2.
19:15 CGE	S/E Pullinque línea de 66 kV Pullinque - Loncoche 2 interrupción forzada por protecciones, según IF 2021002580.
19:19 LAP	Línea de 110 kV Río Toltén - Cunco interrupción forzada por protecciones, según IF 2021002570.
19:19 STS	S/E Cunco desconexión forzada por protecciones se pierden 4,5 MW. Causa informada: Falla en línea de 110 kV Río Toltén - Cunco, según IF 202102571.
19:19 CGE	S/E Gorbea normaliza sus consumos por la línea de 66 kV Temuco - Loncoche 1.
19:19 LAP	C. Malalcahuello U-1 y 2 y C. Carilafquen U-1 salen de servicio en forma intempestiva con 5 y 5,5 MW respectivamente. Causa informada: Falla Línea de 110 kV Río Tolten - Cunco, según IF 2021002560 y 2021002061.
19:30 Puntilla	C. Puntilla U-3 disponible y cancelado IF 2021002557.
19:41 CGE	Línea de 66 kV Villarrica - Pucón interrupción forzada por protecciones con reconexión automática con éxito, según IF 2021002565.

Hora	Centro de Control	Observación
19:43	CGE	S/E Pelequén 52CT general de media tensión interrupción forzada por protecciones, según IF 2021002569.
19:49	KDM	C. Loma Los Colorados 2 disponible y en servicio.
20:00	Escuadrón	C. Escuadrón cancelada solicitud de desconexión de curso forzoso SDCF 2021079225.
20:22	Orazul Energy	C. Mampil con solicitud de desconexión de cursos forzoso. Causa informada: Rechazo de carga con ambas unidades debido a obstrucción en aducción de tubería forzada, según SDCF 2021079237.
20:27	AES Andes	S/E La Cebada abiertos interruptores J4, J1 y JS por control de transferencia de los TTCC de S/E Don Goyo.
20:29	Enor Chile	S/E Don Goyo abierto interruptor JS por control transferencia de los TTCC de S/E Don Goyo.
20:30	CGE	Línea de 66 kV Temuco - Loncoche 1 interrupción forzada por protecciones. Se pierden 30.2 MW de consumos correspondientes a las SS/EE Licanco, Nueva Imperial, Pitrufquén y Gorbea, según IF 2021002583.
20:38	Interchile	S/E Nueva Pan de Azúcar desconectada CCSS de línea de 500 kV Nueva Pan de Azúcar - Polpaico 1 y 2.
21:02	Orazul Energy	C. Mampil cancelada solicitud de desconexión de cursos forzoso.
21:05	CGE	Línea de 66 kV Loncoche - Pullinque 1 interrupción forzada por protecciones se pierden 39 MW de consumos de SS/EE Villarrica, Pucón y Loncoche.
21:12	CGE	Línea de 66 kV Loncoche - Pullinque 1 cerrada, se recuperan consumos de SS/EE Loncoche.
21:12	CGE	S/E Pelequén 52CT general de media tensión cerrado, según IF 2021002569.
21:13	CGE	S/E Villarrica recuperados los consumos.
21:14	CGE	S/E Pucón recuperados los consumos.
22:45	CGE	Línea de 66 kV Temuco - Loncoche 1 cierre manual sin éxito, según IF 2021002583.
22:45	CGE	Línea de 66 kV Temuco - Loncoche 2 tramo de línea Temuco - Pitrufquén cerrado, queda indisponible tramo de línea Pitrufquén - Loncoche, según IF 2021002562.
22:45	CGE	S/E Chiguayante pierde sus consumos de aproximadamente 13 MW, estaba parcialmente recuperada por red de media tensión.
22:54	CGE	Línea de 66 kV Temuco - Loncoche 1 tramo de línea Temuco - Pitrufquén cerrado, se recuperan los consumos de S/E Pitrufquén. Queda indisponible tramo de línea Pitrufquén - Loncoche, según IF 2021002583.
22:55	Celeoredes	Línea de 500 kV Charrúa - Ancoa 3 cerrada y cancelado IF 2021002568.
22:58	STS	SS/EE Licanco y Nueva Imperial recuperan sus consumos y cancelado IF 2021002578.
22:59	Chilquinta	Línea 110 kV Las Vegas - Cerro Navía 2 cerrada y cancelado IF 2021002588.
23:07	Colbún	Línea de 220 kV Santa María - Charrúa 2 abierta para regular tensión.
23:10	CGE	Línea de 66 kV San Fernando - Pelequén interrupción forzada por protecciones, sin pérdida de consumos, según IF 2021002586.
23:26	Transec	Línea de 500 kV Ancoa - Alto Jahuel 2 abierta para regular tensión.
23:28	LAP	Línea de 110 kV Río Toltén - Cunco cerrada y cancelado IF 2021002570.
23:29	Codelco El Teniente	Línea de 110 kV Minero - Interconexión 1 con solicitud de desconexión de curso forzoso. Causa informada: Frente de mal tiempo, para evitar daño mayor y daños de infraestructuras, según SDCF 2021079115 - 2021079240.
23:29	STS	Se recupera el 100 % de los consumos de S/E Cunco. Cancelado IF 2021002571.
23:34	CGE	S/E Bollenar 52CT1 general de media tensión interrupción forzada por protecciones con 5.3 MW interrumpidos, según IF 2021002584.
23:36	CGE	S/E Bollenar 52CT1 general de media tensión cerrado y normalizados los consumos.
23:43	Engie Generación	C. Mejillones IEM sale de servicio en forma intempestiva con 195 MW, frecuencia baja a 49,91 Hz. Causa informada: Falla bomba agua alimentación, según IF 2021002572.
23:58	LAP	Línea de 110 kV Cunco - Melipeuco cerrada.

4.2. Otras Observaciones

Hora	Centro de Control	Observación
01:00	CDC	La mayor disminución de generación Bruta horaria fue de -463.3 [MW]
01:10	CDC	La mayor tasa de disminución de generación Bruta, calculada cada 5 minutos, fue de -15.6 [MW/m]
10:15	CDC	La mayor tasa de aumento de generación Bruta, calculada cada 5 minutos, fue de 29.1 [MW/m]
19:00	CDC	El mayor aumento de generación Bruta horaria fue de 502.2 [MW]

4.3. Primera Energización de Instalaciones

Hora	Control de Control	Empresa	Instalación
No hay registros para esta fecha.			

INDISPONIBILIDAD SCADA SEN

Centro de Control	Instalación	Fecha F/S	Hora F/S	Fecha E/S	Hora E/S
Cenizas	S/E Cenizas sin datos SCADA.	06/02/2017	18:50		
Elektragen	Cs. Constitución y Maule datos SCADA.	07/11/2017	08:00		
AES Andes	S/E Mantos Blancos sin datos SCADA.	18/11/2017	18:31		
Enel Generación	S/E Pilmaiquén interruptores B1 Osorno1 y B2 Osorno 2 datos SCADA F/S.	06/12/2018	11:59		
Collahuasi	S/E Collahuasi patio 2 sin datos SCADA.	10/12/2019	16:50		
Enor Chile	C. Ujina sin datos Scada	10/12/2019	16:50		
Enlasa	C. El Peñón sin datos SCADA.	18/12/2019	00:41		
Energía Pacífico	C. Energía Pacífico datos SCADA F/S.	23/06/2020	21:30		
Enlasa	S/E Diego de Almagro 220 kV paño J2 y C. San Lorenzo 2 y 3 datos SCADA F/S.	07/08/2020	18:00		
Codelco Ventanas	S/E Tap Off Codelco Ventanas	24/11/2020	11:46		
Engie Transmisión	S/E Tap Off Quiani 52B1 sin cambio de estado.	20/12/2020	00:00		
TEN	S/E Cumbre dato de T° erróneo.	05/01/2021	11:00		
Enel Generación	C. Ralco sin datos cota y temperatura.	04/06/2021	14:00		
Prime Energía	C. Emelda sin cambio de estado en Scada.	05/08/2021	07:30		
Colbún	S/E Zaldivar sin datos SCADA.	15/08/2021	07:30		
Engie Transmisión	S/E Chacaya 110 kV sin datos SCADA y telecontrol.	31/08/2021	00:00		
Cardones	C. Colmito sin datos SCADA.	02/09/2021	20:26		
Enel Green Power	C. PE Valle de los Vientos data SCADA congelada.	08/09/2021	00:00		
AES Andes	C. Guacolda sin datos SCADA.	08/09/2021	08:00		

COMUNICACIONES SEN

Centro de Control	Instalación	Fecha F/S	Hora F/S	Fecha E/S	Hora E/S
Cenizas	Hot line.	07/10/2018	11:50		
Mariposas	Hot line.	23/02/2019	05:00		
ENAP BioBio	Hot line.	31/10/2020	07:30		
SWC	TG Salvador Hot line.	28/02/2021	12:00		
Cenizas	No contestan el teléfono fijo.	06/08/2021	17:09		
Celeoredes	Hot line.	11/09/2021	09:48		

ANEXO N°4

Detalle de mantenimientos programados y forzados correspondientes al día 11 de
septiembre de 2021

Número	Tipo	Estado	Empresa	Tipo Solicitud	Origen	Tipo Programación	Línea	Tramo(s)	Tipo Trabajo	Potencia	Trabajos a Realizar	Descripción Nivel Riesgo	Comentarios Adicional	Consumo	Empresas Afectadas	Trabajo Requiere	Estado Operativo	Estado Operativo Efectivo	Fecha Inicio	Fecha Fin	Fecha Efectiva Inicio	Fecha Efectiva Fin
2021079115	Línea	Ejecución Entosa	CODECO CHILE - DIVISION EL TENIENTE	Desconexión	Origen Interno	Curso FORTOSO	MINERO - INTERCONDION MATEMES 110KV C1	MINERO - INTERCONDION MATEMES 110KV C1	Otro Tipo de Trabajo	0	Desconexión por frente de mal tiempo entre los días 11 y 14 de Septiembre	Desconexión por frente de mal tiempo el día 11 hasta el 14 de septiembre	Desconexión por frente de mal tiempo, para evitar disturbio mayor y daños de infraestructuras en el sistema eléctrico de División El Teniente	No tiene consumo afectado		ninguno			11-09-21 08:00	14-09-21 15:00	11-09-21 23:29	11-09-21 14:00
2021073368	Línea	Ejecución Entosa	COBURN S.A.	Intervención	Origen Interno	Programada	ESPERANZA - FUNCION CHAGRES 110KV C1	ESPERANZA - FUNCION CHAGRES 110KV C1	Otro Tipo de Trabajo	0	Restricción a la restricción L 110 KV Esperanza-Chagres C2E, por trabajos en circuito adyacente (L 110 KV Esperanza-Nueva Panquehue C1)	Bajo	Restricción a la reconexión L 110 KV Esperanza-Chagres C2E, por trabajos en circuito adyacente (L 110KV Esperanza-Nueva Panquehue C1) en caso de falta NO reconectar, coordinar con el jefe de faena la normalización.	No tiene consumo afectado		ninguno		11-09-21 07:00	11-09-21 19:30	11-09-21 07:18	11-09-21 18:55	
2021073386	Línea	Ejecución Entosa	COBURN TRANSMISION S.A	Intervención	Origen Interno	Programada	FUNCION CHAGRES - EST 200 110KV C1 [EN_REVISION]	FUNCION CHAGRES - EST 200 110KV C1 [EN_REVISION]	Otro Tipo de Trabajo	0	Restricción a la reconexión L 110 KV Chagres Nueva Panquehua C2, por trabajos en circuito adyacente (L 110 KV Esperanza-Nueva Panquehue C1), en caso de falta NO reconectar, coordinar normalización con el jefe de faena.	Riesgo bajo, trabajo con todas las medidas de seguridad	Restricción a la reconexión L 110 KV Chagres Nueva Panquehua C2, por trabajos en circuito adyacente (L 110 KV Esperanza-Nueva Panquehue C1) en caso de falta NO reconectar, coordinar normalización con el jefe de faena.	No tiene consumo afectado		ninguno		11-09-21 07:00	11-09-21 19:30	11-09-21 07:18	11-09-21 18:55	
2021073352	Línea	Ejecución Entosa	COBURN TRANSMISION S.A	Desconexión	Origen Interno	Programada	ESPERANZA - NUEVA PANQUEHUE 110KV [EN_REVISION]	TAP CHAGRES - EST 200 110KV C1 [EN_REVISION]	Otro Tipo de Trabajo	0	Desconexión Línea 110 KV Esperanza-Nueva Panquehue C1, por Mantenimiento preventivo básico (Limpieza manual de Accesorio [LAT 100KV, Cto. S, Mantenimiento Sistema de Control y protecciones, Mantenimiento preventivo y correctivo del BMS1.2T y Verificación de estado y presión del SPS del panel 15 de subestación Esperanza.	Riesgo Bajo, se bloqueara la SOB del panel 15 de S/E Esperanza hacia la 876barra de 110KV para evitar cualquier operación involuntaria sobre los equipos y paños que están en servicio.	Desconexión Línea 110 KV Esperanza-Nueva Panquehue C1, por Mantenimiento preventivo básico (Limpieza manual de Accesorio [LAT 100KV, Cto. S, Mantenimiento Sistema de Control y protecciones, Mantenimiento preventivo y correctivo del BMS1.2T y Verificación de estado y presión del SPS del panel 15 de subestación Esperanza.	No tiene consumo afectado		ninguno		11-09-21 07:00	11-09-21 19:30	11-09-21 07:18	11-09-21 18:55	
2021075132	Línea	Ejecución Entosa	COMPANIA MINERA GENTILENA	Intervención	Origen Interno	Programada	CHACAYA - MUELLE 110KV	CHACAYA - MUELLE 110KV C1	Lavado de Aislación	0	Lavado de aislación a línea energizada, a partir de la estructura N°55. (TRABAJO 3)	Riesgo bajo, se lava a distancia	S/E Chacaya: No reconectar 52H2 S/E Muelle: No reconectar 52H4	No tiene consumo afectado		ninguno		11-09-21 08:00	11-09-21 18:00	11-09-21 08:37	11-09-21 19:04	
2021072670	Línea	Ejecución Entosa	ENEL TRANSMISION CHILE S.A.	Intervención	Origen Interno	Programada	EL SALTO - CERRO NAVIA 110KV	TAP LO BOZA - LO BOZA 110KV C2 TAP LO BOZA - TAP QUILICURA 110KV C2 TAP QUILICURA - QUILICURA 110KV C2 TAP QUILICURA - TAP CHACABUCO 110KV C2 TAP RECOLETA - RECOLETA 110KV C2 TAP RECOLETA - TORRE 17 110KV C2 EL SALTO - TORRE 14 110KV C2 TORRE 14 - TORRE 28 110KV C2 TORRE 19 - TORRE 28 110KV C2 TORRE 28 - TORRE 33 110KV C2 TORRE 33 - TORRE 1 110KV C2 TORRE 33 - TORRE 17 110KV C2 TORRE 1 - SAN CRISTOBAL 110KV C2 CERRO NAVIA - TAP LO BOZA 110KV C2 TAP CHACABUCO - CHACABUCO 110KV C2 TAP CHACABUCO - TAP RECOLETA 110KV C2	Otro Tipo de Trabajo	0	Realiza retiro de cable de guardia y tendido de OPGW entre la Torre 12 y Torre 77 de la troncal, en cercanía al Circuito señalado	Trabajos en cercanía al circuito señalado	Entre a una operación sustantiva de circuito señalado, Enel solo reconectar previa coordinación con el CEN. Trabajos relacionados con SO 2030369352	No tiene consumo afectado		ninguno		11-09-21 06:00	11-09-21 19:00	11-09-21 08:47	11-09-21 14:58	
2021075809	Línea	Ejecución Entosa	INTERCHILE	Intervención	Origen Interno	Programada	ANA MARIA - LAGUNAS 220KV	EST 73 - L - LAGUNAS 220V C1 EST 73 - L - LAGUNAS 220V C2	Lavado de Aislación	0	Lavado de aislación de línea de transmisión Lagunas - Ana Maria 220KV.	Tomando las medidas de precaución y seguridad, no existen riesgos asociados a los trabajos.	Se requieren las siguientes condiciones en subestación Aguilas: Bloqueo de reconexión en paños 52B1 y 52B5. Se requieren las siguientes condiciones en subestación Ana Maria: Bloqueo de reconexión en paños 52L1, 52L2, 52L3 y 52L5. (condiciones solicitadas vía SO4 y EN46)	No tiene consumo afectado		ninguno		11-09-21 08:00	11-09-21 18:00	11-09-21 12:08	11-09-21 14:15	
2021071156	Línea	Ejecución Entosa	MINERA ESCONDIDA	Intervención	Origen Interno	Programada	ETTE 6 - HAMBURGO 69KV	EST 6 - HAMBURGO 69KV C1	Lavado de Aislación	0	Lavado de aislación de estructuras.	Riesgo bajo. Trabajo programado y bajo procedimientos respectivos.	Se requieren las siguientes condiciones: SE EST 6: No reconectar 52B3. SE Hamburgo: No reconectar 52B1 y 52B2.	No tiene consumo afectado		ninguno		11-09-21 08:00	11-09-21 19:00	11-09-21 09:22	11-09-21 10:55	
2021079215	Línea	Ejecución Entosa	MINERA ESCONDIDA SIDA	Intervención	Origen Interno	Curso FORTOSO	ESCONDIDA - 940 69KV	TAP OF HAMBURGO - HAMBURGO 69KV C1	Lavado de Aislación	0	Se requiere realizar en forma urgente lavado de aislación debido a alta contaminación del lugar y al alto riesgo que genera, para las instalaciones, el estado actual de	Se requiere realizar lavado de aislación debido a la alta contaminación del lugar y al alto riesgo para las instalaciones.	Condiciones requeridas: SE Escondida: No reconectar 52B1. SE 940: No reconectar 52B2. SE OROP: No reconectar 52B2.	No tiene consumo afectado		ninguno		11-09-21 09:30	11-09-21 11:00	11-09-21 09:23	11-09-21 10:55	
202107457	Línea	Ejecución Entosa	MINERA SPENCE	Intervención	Origen Interno	Programada	ENCUENTRO - SGO 220KV	ENCUENTRO SGO 220KV	Obras Civiles	0	Se realiza excavación bajo la línea de transmisión Encuentro - SGO excavación de aciantamiento	Bajo. Se programarán trabajos bajo la línea de transmisión de 220KV respetando la distancia de aproximación límite	Trabajos bajo la línea 220KV entre Encuentro y SGO. Dudas hacia a Christian Diaz y 6082185550 a trabajar con equipos bulldozer, camion pluma y excavadores. Los que se mantendrá a una distancia segura de la línea la cual fue medida con topografía. Se hará nueva revisión previa a los trabajos como parte de las revisiones antes de comenzar la faena. En SE Encuentro 52J10 Señalizar y no reconectar En SE SGO 52J1 Señalizar y no reconectar.	No tiene consumo afectado		ninguno		11-09-21 02:09	11-09-21 23:29	11-09-21 10:01	11-09-21 19:50	

Número	Tipo	Estado	Empresa	Tipo Solicitud	Origen	Tipo Programación	Central	Unidad(es)	Tipo Trabajo	Potencia	Trabajos a Realizar	Descripción Nivel Riesgo	Comentarios Adicional	Consumo	Empresas Afectadas	Trabajo Requiere	Estado Operativo	Estado Operativo Efectivo	Fecha Inicio	Fecha Fin	Fecha Efectiva Inicio	Fecha Efectiva Fin
2021079253	Central Generadora	Ejecución Entosa	AES ANDES	Intervención	Origen Interno	Curso FORTOSO	TER VENTANAS II	CENTRAL COMPLETA	Otro Tipo de Trabajo	166	Unidad limitada a 165 MW para realizar revisión de equipo de molinada de pulverizador 3P, por ruidos anormales en el equipo.	Riesgo bajo, intervención rutinaria, con supervisión presente y procedimientos		No tiene consumo afectado		ninguno			11-09-21 17:57	11-09-21 23:59	11-09-21 17:57	11-09-21 07:58
2021079239	Central Generadora	Ejecución Entosa	COBURN S.A.	Desconexión	Origen Interno	Curso FORTOSO	TER SANTA MARIA	TER SANTA MARIA U1	Otro Tipo de Trabajo	0	Retiro de Unidad por rotura de tubo en caldera	Bajo nivel de riesgo ya que se retira foradamente.	Retiro de Unidad por rotura de tubo en caldera	No tiene consumo afectado		ninguno			11-09-21 18:59	12-09-21 23:59	11-09-21 18:50	16-09-21 17:51
2021079237	Central Generadora	Ejecución Entosa	DUIQUECO SPA	Desconexión	Origen Interno	Curso FORTOSO	HP MAMPL	CENTRAL COMPLETA	Otro Tipo de Trabajo	0	Se realizará rechazo de carga con ambas unidades debido a obtención de riego aducción tubería forzada de la Central lo que ocasiona baja de presión y riesgo en la integridad de las instalaciones.	Riesgo bajo, trabajo programado y bajo procedimientos respectivos.	Operación anormal de arrones de transformador indican defectos en bobinas de la unidad.	No tiene consumo afectado		ninguno		11-09-21 20:30	11-09-21 21:30	11-09-21 20:22	11-09-21 21:02	
2021079225	Central Generadora	Ejecución Entosa	ELECTRICA NUA ENERJIA S.A.	Desconexión	Origen Interno	Curso FORTOSO	TER ESCLADRON U1	TER ESCLADRON U1	Alambrado de control	0	Inspección de alambrados de sensores de temperatura y controladores.	Revisión de sistemas de sensores y control de temperatura de unidades de generación.		No tiene consumo afectado		ninguno			11-09-21 14:00	11-09-21 17:30	11-09-21 14:00	11-09-21 20:02
2021078653	Central Generadora	Ejecución Entosa	EMPRESA ELECTRICA COCHANE SPA	Intervención	Origen Interno	Programada	TER COCHANE	TER COCHANE U1	Otro Tipo de Trabajo	133	Inspección y reparación de rejillas de cooling tower;	Trabajo rutinario con riesgo controlado	Regulación primaria, secundaria y AGC disponible de ser requerido.	No tiene consumo afectado		ninguno			11-09-21 11:00	11-09-21 14:00	11-09-21 11:06	11-09-21 14:29
2021079238	Central Generadora	Ejecución Entosa	ENERGIA PAFICHO S.A.	Desconexión	Origen Interno	Curso FORTOSO	TER ENERGIA PAFICHO	CENTRAL COMPLETA	Otro Tipo de Trabajo	0	Se entrega a mantenimiento para evaluación y revisión del equipo con problemas de comunicación	Se deja fuera de servicio el regenerador, por falta de comunicación y control en bomba de alimentación de agua a caldera	Inspección de sistemas de sensores y control de temperatura de unidades de generación.	No tiene consumo afectado		ninguno			11-09-21 19:04	11-09-21 22:00	11-09-21 19:04	11-09-21 14:46
2021078073	Central Generadora	Ejecución Entosa	ENGIE ENERGIA CHILE S.A.	Intervención	Origen Interno	Programada	TER EM	CENTRAL COMPLETA	Otro Tipo de Trabajo	220	Se realizó cambio de filtros mangas en sistema de abastecimiento de cenizas en salida de gas caldera.	Riesgos controlados, trabajos se realizarán por personal certificado y con unidad limitada en 220MW como máximo.	Unidad puede regular carga entre mínimo técnico y 220MW como máximo.	No tiene consumo afectado		ninguno			11-09-21 04:00	11-09-21 20:00	11-09-21 03:53	12-09-21 11:47
2021079237	Central Generadora	Ejecución Entosa	ENGIE ENERGIA CHILE S.A.	Intervención	Origen Interno	Programada	PE CALAMA [EN_REVISION]	CENTRAL COMPLETA	Otro Tipo de Trabajo	150	Inyección de energía a la red y verificación de los parámetros operacionales de la WTS, de acuerdo con el perfil de carga del pronóstico enviado con anterioridad al CEN.	El riesgo será el normal de acuerdo con el etapa de posicionamiento del proyecto. Estará controlado por los especialistas a cargo del trabajo.	Enfriado calderas de los aerogeneradores.	No tiene consumo afectado		ninguno			11-09-21 06:00	11-09-21 23:59	11-09-21 06:00	11-09-21 00:00
2021078889	Central Generadora	Ejecución Entosa	EDUCA MONTE REDONDO SPA	Intervención	Origen Interno	Programada	PE MONTE REDONDO	CENTRAL COMPLETA	Servicios Auxiliares	48	Pruebas de Enlace BCP.	Riesgo Bajo. Se tomarán todas las medidas de seguridad durante la ejecución de ENLACE ENTRA CHILE	Trabajos Posiblemente afectará servicios de Internet, pero serán monitoreados durante el procedimiento.	No tiene consumo afectado		ninguno			11-09-21 06:00	11-09-21 16:00	11-09-21 09:38	11-09-21 17:37
2021078740	Central Generadora	Ejecución Entosa	EDUCA MONTE REDONDO SPA	Intervención	Origen Interno	Programada	PE MONTE REDONDO	CENTRAL COMPLETA	Otro Tipo de Trabajo	48	Trabajos Programados Prueba DRP 2023, servicios virtuales Santiago, Prueba Recuperación ante desastres (MATERIA SANITARIA)	Riesgo bajo, trabajo analizado en la matriz de riesgo de la compañía	Trabajos en servidores posición protocolo intermitencias de comunicaciones al CEN.	No tiene consumo afectado		ninguno			11-09-21 14:00	11-09-21 22:00	10-09-21 21:12	11-09-21 07:09
2021075214	Central Generadora	Ejecución Entosa	GUACOLDA ENERGIA SPA	Intervención	Origen Interno	Programada	TER GUACOLDA	TER GUACOLDA U4	Otro Tipo de Trabajo	152	Mediciones sanitarias a plena carga	Trabajo rutinario, con riesgo controlado		No tiene consumo afectado		ninguno			11-09-21 18:00	12-09-21 08:00	11-09-21 18:46	11-09-21 06:15
2021077794	Central Generadora	Ejecución Entosa	PRIME ENERGIA QUICKSTART Spa	Intervención	Origen Interno	Programada	TER COMBARRALA [EN_REVISION]	CENTRAL COMPLETA	Puesta en servicio de nueva instalación	0	Trabajos de inyección de potencia variable hasta plena carga.	Los riesgos son bajos y se encuentran controlados, de acuerdo al procedimiento interno para el desarrollo de las pruebas.	Sin comentarios adicionales.	No tiene consumo afectado		ninguno			11-09-21 18:00	11-09-21 21:00	11-09-21 19:26	11-09-21 19:09

Número	Tipo	Estado	Empresa	Tipo Solicitud	Origen	Tipo Programación	SubEstación	Elemento(s)	Tipo Trabajo	Potencia	Trabajos a Realizar	Descripción Nivel Riesgo	Comentarios Adicional	Consumo	Empresas Afectadas	Trabajo Requiere	Estado Operativo	Estado Operativo Efectivo	Fecha Inicio	Fecha Fin	Fecha Efectiva Inicio	Fecha Efectiva Fin
2021079423	Subestación	Ejecución Entosa	DUIQUECO TRANSMISION S.A.	Desconexión	Origen Interno	Programada	S/E LA CALERA	LA CALERA 110/12KV 12.5MVA 2	Otro Tipo de Trabajo	0	Se realizará reparo de transformador N° 2 por normalización de equipos en S/E La Calera por trabajos de reemplazo desconectar 89H53. Coordina con aviso 3021079253.	Riesgo bajo, programado y controlado.		No tiene consumo afectado		ninguno			11-09-21 00:00	11-09-21 08:00	11-09-21 00:04	11-09-21 05:54
2021079240	Subestación	Ejecución Entosa	COBURN TRANSMISION S.A	Desconexión	Origen Externo	Curso FORTOSO	S/E MINERO	S/E MINERO H6	Otro Tipo de Trabajo	0	A solicitud de Código División El Teniente y por Operación Invierno solicitan abierto 52H6 (SO N° 2021079115)	A solicitud de Código División El Teniente y por Operación Invierno solicitan abierto 52H6 (SO N° 2021079115)	A solicitud de Código División El Teniente y por Operación Invierno solicitan abierto 52H6 (SO N° 2021079115)	No tiene consumo afectado		ninguno			11-09-21 08:00	14-09-21 15:00	11-09-21 23:29	14-09-21 12:54
2021079829	Subestación	Ejecución Entosa	COMPANIA DOÑA INES DE COLLAHUASI SCM	Desconexión	Origen Interno	Programada	S/E COLLAHUASI	S/E COLLAHUASI ACO	Relevo de SFE	0	RELEVO DE SFE A INTERRUPTOR ACAPLADOR DE BARRAS 220KV S100	SIN RIESGOS A LOS PROCESOS.	LAS CONDICIONES REQUERIDAS SERAN SIDW07 Y S100SW06 ABIERTO Y BLOCQUEADOS EN BARRA 220KV.	No tiene consumo afectado		ninguno			11-09-21 00:00	11-09-21 20:00	11-09-21 00:31	11-09-21 17:55
2021078644	Subestación	Ejecución Entosa	COMPANIA GENERAL DE ELECTRICIDAD S.A.	Intervención	Origen Interno	Programada	S/E ISLA DE MAIPO	Struc: tendido_cable	Alambrado de control	0	Acordada a Proyecto de Construcción de Futura LT 69kV Fátima - Isla de Maipo y Ampliación de SE Isla de Maipo (NUP 47). se realizarán trabajos de Alambrado de Control y montaje de elementos en paneles de gabinete disponible en Sala de Control, sin elementos en servicio.	Riesgo bajo, trabajos en zona sin equipos en servicio	Gabinete de Control disponible en Sala.	No tiene consumo afectado		ninguno			11-09-21 08:00	11-09-21 18:00	11-09-21 08:53	11-09-21 19:00
2021079963	Subestación	Ejecución Entosa	COOPERATIVA DE CONSUMO DE ENERGIA ELECTRICA CHILLAN SIDA	Desconexión	Origen Externo	Programada	S/E LOS TILOS BULNES	S/E LOS TILOS BULNES B1	Roca y podes fraija sursumbre	0	A SOLICITUD DE CGE SE REQUIERE DESCONEXION Y ATERRAMIENTO DEL PAÑO 89H1 DE SE LOS TILOS, POR DESCONEXION DEL TRAMO DE UNA 64KV LOS TILOS SIDA CARA, PARA MANTENIMIENTO PREVENTIVO Y TALA DE ARBOLOS.	Nivel de riesgo bajo, solo se contempla maniobras de apertura y cierre de desconector.	Se realiza a las siguientes maniobras en Subestación Tils en coordinación con CGE - S/ LOS TILOS: ABIERTO Y BLOCQUEADO DESCONECTOR 89H1, UNA A HACIA CHARRUA 3, S/ LOS TILOS CERRADO Y BLOCQUEADO DESCONECTOR DE PUESTA A TIERRA 89H1 T.	No tiene consumo afectado		ninguno		11-09-21 08:00	11-09-21 18:00	11-09-21 07:24	11-09-21 18:00	
2021078765	Subestación	Ejecución Entosa	ENEL TRANSMISION CHILE S.A.	Desconexión	Origen Interno	Programada	S/E PANAMERICANA	BA S/E PANAMERICANA 110V 89Z	Otro Tipo de Trabajo	0	Realiza conexión y puesta en servicio de nuevo TP 110 KV asociado a la Barra 110 KV señalada	Trabajos sin riesgos para el sistema	Trabajos enmarcados en proyecto Nuevo Tr N° 3 y Barras 12 KV, NUP 1224 el término de los trabajos se programan prueba de energización desde el INT 110V Cto N° 7 Chena-Bun - Ochoagua en S/E Bun y análisis con carga	No tiene consumo afectado		ninguno			11-09-21 09:00	11-09-21 22:00	11-09-21 10:33	11-09-21 17:16
2021078730	Subestación	Ejecución Entosa	ENEL TRANSMISION CHILE S.A.	Intervención	Origen Interno	Programada	S/E FLORIDA	BA S/E FLORIDA 110KV 8P1	Otro Tipo de Trabajo	0	Se realizaron labores de soldadura eléctrica en cercanía a los paneles de control correspondientes a SE Florida.	Trabajos sin riesgos para el sistema.	Mientras se estén ejecutando los trabajos, se debilitará la protección física interruptor de SE Florida, lo anterior para prevenir operaciones inesperadas a causa de vibraciones en el panel durante la ventana de trabajo.	No tiene consumo afectado		ninguno			11-09-21 12:00	11-09-21 20:00	11-09-21 12:23	11-09-21 17:39
2021078728	Subestación	Ejecución Entosa	ENEL TRANSMISION CHILE S.A.	Desconexión	Origen Interno	Programada	S/E LORD COCHANE	LORD COCHANE 110/12.5KV 50MVA 3R	Otro Tipo de Trabajo	0	Trabajos de obras civiles en cercanía al Transformador de Potencia N° 2.	Trabajos sin riesgos para el sistema	Trabajos relacionados con obras civiles en cercanía al transformador de poder señalado.	No tiene consumo afectado		ninguno			11-09-21 08:00	11-09-21 21:00	11-09-21 12:40	11-09-21 18:06
2021078727	Subestación	Ejecución Entosa	ENEL TRANSMISION CHILE S.A.	Intervención	Origen Interno	Programada	S/E LORD COCHANE		Otro Tipo de Trabajo	0	Relevo de sistema SDAC por cambio de BP en RTU de S/E Chacabuco	No presenta riesgos para el sistema	Trabajos provocan el Relevo de servidores por vez de manera controlada. No modifica configuración SDAC. Referenciado a SO 2021078724	No tiene consumo afectado		ninguno			11-09-21 09:00	11-09-21 19:00	11-09-21 09:14	11-09-21 13:15
2021078724	Subestación	Ejecución Entosa	ENEL TRANSMISION CHILE S.A.	Intervención	Origen Interno	Programada	S/E CHACABUCO		Otro Tipo de Trabajo	0	Se realizará cambio en las comunicaciones de UTE SDAC, se conecta a equipo de comunicaciones MPLS.	No presenta riesgos para el sistema	Trabajos provocan pérdidas de comunicaciones por 10 minutos en 3 oportunidades aproximadamente, durante la ventana de trabajo.	No tiene consumo afectado		ninguno			11-09-21 00:00	11-09-21 23:00	11-09-21 09:08	11-09-21 12:40
2021078382	Subestación	Ejecución Entosa	ENGIE	Intervención	Origen Interno	Programada	S/E CENTRAL DIESEL TAMAYA	BA S/E CENTRAL DIESEL TAMAYA 110KV 8P1 BA S/E CENTRAL DIESEL TAMAYA 110KV 8T	Otro Tipo de Trabajo	0	Pruebas de maniobras y operaciones, control y protecciones de panel 114 rmet 1, 1 y 2, para la integración del nuevo paño de 110 KV 8P1, análisis y protecciones. Este Solicitud reemplaza a S) 202106790 y S) 2021071883	Riesgo bajo según análisis	CONDICIONES REQUERIDAS: No reconectar 52H1, 52H2, 52H3, 52H4, 52H5, 52H6, 52H7, 52H8, 52H9, 52H4, 52H7A. INCARCADO MANOBRAS									

2022079367	Subestacion	Ejecución Exitosa	ENGIE ENERGÍA CHILE S.A.	Desconexión	Origen Interno	Programada	S/E CENTRAL DIESEL TAMAYA	S/E CENTRAL DIESEL TAMAYA HR S/E CENTRAL DIESEL TAMAYA HT4	Otro Tipo de Trabajo	Pruebas de maniobras, operaciones, control y protecciones de paño HT4 nivel 1 y 2, para la integración del nuevo paño de 110 kV HT4, señales y protecciones. Esta solicitud respalda a SO 202106789 y SO 202107850	Riesgo bajo, se toman todas las medidas de seguridad para un trabajo seguro	CONDICIONES REQUERIDAS: Los trabajos, consideran para su ejecución que los desconectados del paño HT4 BRHT4 L, HT4 B, BRHT4 2, BRHT 2T, BRHT 1 y BRHT 2, se encuentren desajustados mecánicamente entre el gabinete de control y el árbol de maniobras. Controles del Paño HT4 habilitados. • Interruptor de 110 kV S2HT4 disponible. • Barra de 110 kV Transferrida disponible. • Interruptor de 110 kV S2H4 a disposición de Jefe de Faena. Los Desconectables BRHT4 L, BRHT4 2, BRHT4 2T, BRHT4 3, BRHT 1 y BRHT 2 quedan a disposición del Jefe de Faena en las condiciones antes indicadas. Unidad Bahía HT4 BLOQUEADA. ENCARGADO MANIOBRAS: Operador transmisión.	No tiene consumo afectado				11-09-21 00:00	10-09-21 18:00	11-09-21 00:00	16-09-21 10:55			
2022077758	Subestacion	Ejecución Exitosa	ENGIE ENERGÍA CHILE S.A.	Intervención	Origen Interno	Programada	S/E ANTOFAGASTA		Otro Tipo de Trabajo	Pruebas de Etapas SCP	Riesgo bajo, se toman todas las medidas de seguridad para un trabajo seguro	Servicio posiblemente afectara a Internet, pero se respaldara por aplicación BAN	No tiene consumo afectado					11-09-21 09:00	11-09-21 16:00	11-09-21 09:16	11-09-21 17:39		
2022079234	Subestacion	Ejecución Exitosa	ESPINOS S.A.	Intervención	Origen Externo	Curso Forzoso	S/E LOS VILOS	otro: grupo_emergencia	Servicios Auxiliares	S/E Los Vilos, Durante aproximadamente 1.5 horas quedará sin energía la RED II de los servicios no esenciales, RED II quedará respaldada por el grupo de emergencia. Trabajos de terceros transienc. RED II quedará desconectada por un tiempo menor a 60 Minutos, cuando se proceda a conectar cables de fuerza. Trabajos de terceros Transienc	Riesgo bajo, se toman todas las medidas de seguridad para un trabajo seguro	Puede afectar equipos que conforman la S/E Los Vilos.	No tiene consumo afectado						11-09-21 17:40	11-09-21 21:00	11-09-21 17:40	11-09-21 22:22	
2022078638	Subestacion	Ejecución Exitosa	MINERA COLLAHUASI	Desconexión	Origen Interno	Programada	S/E COLLAHUASI	COLLAHUASI 220/23 KV N°1	Refrero de SFS	0	RELLENO DE GAS SF6 A INTERRUPTOR 220 KV S2T1	SIN RIESGOS A LOS PROCESOS	LAS CONDICIONES REQUERIDAS SERÁN: B011-81 (S100W9) Y B011-82 (S100W10) ABIERTO Y BLOQUEADOS EN BARRA 220 KV E INCOMUNIS S20C08 (23 KV) ABIERTO, BLOQUEADO Y PUESTO A TIERRA.	No tiene consumo afectado					11-09-21 08:00	11-09-21 20:00	11-09-21 09:13	11-09-21 17:55	
2022077178	Subestacion	Ejecución Exitosa	MINERA ESCONDDA	Intervención	Origen Interno	Programada	S/E PURI	S/E PURI 220/16.9KV 27-36 MVA (EN REVISION)	Inspección Visual	0	Mantenimiento: Limpieza y reaporte, inspección visual y termografía paño Transformador 3	Riesgo bajo. Trabajos programados y bajo procedimientos respectivos.	S/E Puri: No reconectar S2T1 y S20T3	No tiene consumo afectado					11-09-21 08:00	11-09-21 19:00	11-09-21 12:01	11-09-21 18:00	
2022079420	Subestacion	Ejecución Exitosa	SOCIEDAD AUSTRAL DE TRANSMISION TRONCAL	Desconexión	Origen Interno	Programada	S/E SECCIONADORA RIO TOLTEN	S/E SECCIONADORA RIO TOLTEN I5	Otro Tipo de Trabajo		Nivel de riesgo bajo y controlado.	FT 66579 INTERNO DE STS.		No tiene consumo afectado					11-09-21 01:15	11-09-21 02:00	11-09-21 01:41	11-09-21 02:10	
2022079414	Subestacion	Ejecución Exitosa	SOCIEDAD AUSTRAL DE TRANSMISION TRONCAL	Desconexión	Origen Interno	Programada	S/E SECCIONADORA RIO TOLTEN	S/E SECCIONADORA RIO TOLTEN I2	Otro Tipo de Trabajo		Nivel de riesgo bajo y controlado.	FT 66578 INTERNO DE STS.		No tiene consumo afectado					11-09-21 00:00	11-09-21 00:45	11-09-21 00:20	11-09-21 01:41	
2022079232	Subestacion	Ejecución Exitosa	TRANSELEC S.A.	Intervención	Origen Interno	Curso Forzoso	S/E LOS VILOS	otro: grupo_emergencia	Otro Tipo de Trabajo	S/E Los Vilos: Revisión y normalización de los SS AA. de C.A. del Tablero Paño J7 Condores. Durante aprox. 1.5 horas quedará sin energía la RED III de los Servicios No esenciales. RED II quedará respaldada por GE. Red II será desconectada por 60 minutos aprox	Bajo	Intervención en SSAA C.A. S/E Los Vilos: Revisión y normalización de los SS AA. de C.A. del Tablero Paño J7 Condores. Nota: 1. Durante aproximadamente 1.5 horas quedará sin energía la RED III de los Servicios No esenciales, RED II quedará respaldada por el Grupo de Emergencia. 2. RED II quedará desconectada por un tiempo menor a 60 Minutos, cuando se proceda a conectar cables de fuerza. Restricciones: No hay instalaciones en Riesgo: SS AA. C.A. Los Vilos y SSAA. C.C. Los Vilos Temporalidad de los Riesgos: Durante de los trabajos Nivel de Riesgo: Bajo Bloqueos del Jefe de Faena: Subestación Los Vilos, Amanara SSAA. de C.A. RED II y III, más Tablero SSAA. de C.A. Paño J7 Delimitar zona de trabajo Elcorta el Jefe de Faena Subestación Los Vilos, En RED III, ITM N°12 a disposición del Jefe de Faena Subestación Los Vilos, En RED II y RED III, ITM N°13 Seccionar de Barras a disposición del Jefe de Faena Subestación Los Vilos, Tablero extensión SS AA. de CA RED II (II) Paño J7, ITM a disposición del Jefe de Faena Subestación Los Vilos, Grupo de Emergencia A disposición del Jefe de Faena	No tiene consumo afectado				11-09-21 14:30	11-09-21 20:00	11-09-21 16:50	11-09-21 22:24			
2022078640	Subestacion	Ejecución Exitosa	TRANSELEC S.A.	Intervención	Origen Interno	Programada	S/E PUERTO MONTT		Otro Tipo de Trabajo	0	PEP Proyecto MNR Actualización del sistema de control del CER de S/E Puerto Montt (NUP 1921).	Bajo	Actividades: S/E Puerto Montt: Primera energización del CER con el nuevo sistema de control MACH3, los equipos primarios son los mismos pero el sistema de control será probado por primera vez con el nuevo algoritmo y hardware instalado en este proyecto. Restricciones: No hay instalaciones en Riesgo: Durante de los trabajos (SCADA), Al término de los trabajos el CER Nivel de Riesgo: Bajo Bloqueos del Jefe de Faena: No hay.	No tiene consumo afectado					11-09-21 08:00	11-09-21 18:00	11-09-21 16:50	11-09-21 20:28	
2022078639	Subestacion	Ejecución Exitosa	TRANSELEC S.A.	Desconexión	Origen Interno	Programada	S/E PUERTO MONTT	CER S/E PUERTO MONTT J74 220KV 20MW4	Otro Tipo de Trabajo	0	PEP Proyecto MNR Actualización del sistema de control del CER de S/E Puerto Montt (NUP 1921).	Bajo	Actividades: S/E Puerto Montt: Primera energización del CER con el nuevo sistema de control MACH3, los equipos primarios son los mismos pero el sistema de control será probado por primera vez con el nuevo algoritmo y hardware instalado en este proyecto. Restricciones: No hay instalaciones en Riesgo: CER 01, 13 13V Puerto Montt o SCADA CER Puerto Montt Temporalidad de los Riesgos: Durante de los trabajos (SCADA), Al término de los trabajos el CER Nivel de Riesgo: Bajo Bloqueos del Jefe de Faena: No hay.	No tiene consumo afectado					11-09-21 08:00	11-09-21 18:00	11-09-21 16:50	11-09-21 20:28	
2022076560	Subestacion	Ejecución Exitosa	TRANSQUANTA S.A.	Intervención	Origen Externo	Programada	S/E NUEVA PANQUEHUE	S/E NUEVA PANQUEHUE H2	Mantenimiento preventivo	0	A solicitud de Colbún se requiere precaución de no reconectar interruptor S2D2 en S/E Nueva Panquehue por mantenimiento preventivo en la LT 110 kV Esperanza - Nueva Panquehue C1. Coordina con SO Cen 2021073352 - 2021073360 y 2021073362	Riesgo bajo, trabajo programado	A solicitud de Colbún se requiere precaución de no reconectar interruptor S2D2 en S/E Nueva Panquehue por mantenimiento preventivo en la LT 110 kV Esperanza - Nueva Panquehue C1. Coordina con SO Cen 2021073352 - 2021073360 y 2021073362	No tiene consumo afectado						11-09-21 08:00	11-09-21 18:00	11-09-21 07:25	11-09-21 20:52
2022076302	Subestacion	Ejecución Exitosa	TRANSQUANTA S.A.	Desconexión	Origen Externo	Programada	S/E NUEVA PANQUEHUE	S/E NUEVA PANQUEHUE H1	Mantenimiento preventivo	0	A solicitud de Colbún, se requiere desconexión de la LT 110 kV Esperanza - Nva Panquehue C1 por lo que se requiere la apertura del paño H1 en S/E Nueva Panquehue, trabajos corresponden a mantenimiento preventivo de la línea, control y equipos. Coordina con SO 2021073352 y 2021073366.	Riesgo bajo, trabajo programado	A solicitud de Colbún, se requiere desconexión de la LT 110 kV Esperanza - Nva Panquehue C1 por lo que se requiere la apertura del paño H1 en S/E Nueva Panquehue, trabajos corresponden a mantenimiento preventivo de la línea, control y equipos. Coordina con SO 2021073352 y 2021073366.	No tiene consumo afectado						11-09-21 08:00	11-09-21 18:00	11-09-21 07:25	11-09-21 20:52
2022075925	Subestacion	Ejecución Exitosa	TSGP SpA	Intervención	Origen Externo	Programada	S/E ANA MARIA	S/E ANA MARIA I1 S/E ANA MARIA I2 S/E ANA MARIA J4 S/E ANA MARIA I5	Lavado de Aislación	0	Lavado de aislación línea de transmisión 220 kV Ana María Iaparriz. Trabajos realizados por intermite. Condiciones requeridas: No reconectar S2I1-S2I2-S2I4-S2I5 en S/E Ana María.	El riesgo del trabajo es bajo.	Lavado de aislación línea de transmisión 220 kV Ana María Iaparriz. Trabajos realizados por intermite. Condiciones requeridas: No reconectar S2I1-S2I2-S2I4-S2I5 en S/E Ana María.	No tiene consumo afectado					11-09-21 08:00	11-09-21 18:00	11-09-21 12:11	11-09-21 17:41	

ANEXO N°5

Informes de trabajos y fallas de instalaciones ingresados en el sistema del Coordinador Eléctrico Nacional por la empresa CGE S.A.

Resumen

Fecha de envío al Coordinador Eléctrico : 12-09-2021 05:48

Finalizado

Número:

2021002584

Solicitante:

Victor Manuel Mena Brevis

Empresa:

COMPAÑÍA GENERAL DE ELECTRICIDAD S.A.

Tipo de Origen:

Externo

SubEstación:

S/E BOLLENAR

Falla Sobre:

barra

Elementos

Tipo: barras - BA S/E BOLLENAR 13.2KV BP1

Nombre : BA S/E BOLLENAR 13.2KV BP1

Fecha Perturbacion : 11-09-2021 23:34

Fecha Normaliza : 11-09-2021 23:36

Protección : .

Interruptor : 52CT1 de S/E Bollenar

Consumo : 5.3 MW

Comentario : .

¿Produce otra indisponibilidad?

No

Zona Afectada

Metropolitana

Comuna

Melipilla

Curacavi

Maria Pinto

Tipo Causa

Causa Presunta

Causa Principal

Se investiga

Comentarios Tipo Causa:

Se investiga.

Causas

-Fenómeno Físico: Fallas en instalaciones de terceros u en otro segmento.

-Elemento: Interruptores

-Fenómeno Eléctrico: Protección de sobrecorriente temporizada de fase

-Operación de los interruptores: Opera según lo esperado

Comentarios Causas:

-Fenómeno Físico: .

-Elemento: .

-Fenómeno Eléctrico: .

-Operación de los interruptores: .

Observaciones:

-Observaciones: Desconexión forzada del interruptor 52CT1 de S/E Bollenar, asociado al general 13.2 kV de la misma S/E, con una potencia interrumpida de 5,3 MW, al momento de la operación del 52CT1, presenta alarma de apertura el interruptor 52C2 circuito San José de la misma S/E.

-Acciones Inmediatas: Recuperación del servicio según procedimiento de CGE, y en coordinación con los Despachos del CEN y CGE Distribución.

-Hechos Sucedidos: .

-Acciones Correctivas a Corto Plazo: .

-Acciones Correctivas a Largo Plazo: .

Afecta SSCC:

No

Afecta Medidores:

No

Afecta Protecciones:

No

Consumo:

Consumo Regulado

Distribuidoras Afectadas

CGE DISTRIBUCIÓN S.A. / Perd. Estm. de Potencia: 5.3 / Región : Metropolitana / Clientes Afectados: 9313

Retorno Automatico:

No Tiene Retorno Automático

Fecha / Hora Perturbación de la Solicitud:

11-09-2021 23:34

Fecha / Hora Estimada Retorno:

11-09-2021 23:36

Fecha / Hora Efectiva Retorno:

11-09-2021 23:36

 Archivos Subidos

Archivo	Fecha Subida
📄 IF 2021002584 ANEXO III Registro de Eventos.zip (/informe_fallas/download_file/613dba49ad651f54762ffca8/IF 2021002584 ANEXO III Registro de Eventos.zip)	27/09/2021 16:48:46
📄 IF 2021002584 11-09-2021 SE Bollenar V1.pdf (/informe_fallas/download_file/613dba49ad651f54762ffca8/IF 2021002584 11-09-2021 SE Bollenar V1.pdf)	27/09/2021 16:48:46
📄 IF 2021002584 ANEXO I - AJUSTE DE PROTECCIONES v1.zip (/informe_fallas/download_file/613dba49ad651f54762ffca8/IF 2021002584 ANEXO I - AJUSTE DE PROTECCIONES v1.zip)	27/09/2021 16:48:46
📄 IF 2021002584 ANEXO II - ESTAMPA DE TIEMPO SINCRONIZADA.pdf (/informe_fallas/download_file/613dba49ad651f54762ffca8/IF 2021002584 ANEXO II - ESTAMPA DE TIEMPO SINCRONIZADA.pdf)	27/09/2021 16:48:46

ANEXO N°6
Otros antecedentes aportados por la empresa CGE S.A.

INFORME (s) QUINTO DÍA Nº: IF 2021002584	FECHA DE FALLA: 11 de septiembre de 2021
INSTALACIÓN (ES): 52CT1 SE Bollenar.	

1. CAUSA U ORIGEN DE LA FALLA:

1.1. Fecha y hora de la Falla:

Fecha	11 de septiembre de 2021
Hora	23:34

1.2. Localización de la falla:

1.2.1. Nombre de Instalación donde se produjo de falla.

Causa Origen:

Falla en Red de MT, específicamente de alimentador San José.

Causa de Propagación a Segmento de Transmisión.

- a) Paño CT1 - S/E BOLLENAR
- b) ID: 629

1.2.2. Segmento al cual pertenece el equipo o elemento fallado.

Distribución, instalación de distribución propiedad de CGE

1.2.3. Elemento o equipo fallado.

- a) No aplica
- b) ID: No aplica

No existe elemento o equipo Fallado en segmento de Transmisión.

1.3. Causa origen de la falla:

Falla en alimentador San José cercano a Subestación, provoca la operación simultanea de paños CT1 y C2 de SE Bollenar.

Propagación de la falla se produce como consecuencia de descoordinación originada en error de programación de Paño CT1 y C2 de SE Bollenar.

1.4. Proposición de origen de la falla.

Interna.

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1.5. Código de falla.

Causas de Falla	Código	Definición
Fenómeno Físico (*)	OPE22	Interrupción producida por error en la programación del sistema de protección o control de la instalación.
Elemento del Sistema Eléctrico	PR12	Sistema de Protección
Fenómeno Eléctrico	PR51	Protección de sobrecorriente temporizada de fase
Modo	13	Opera según lo esperado

(*) El Código de falla indicado se refiere a la **Propagación de falla con origen en Red de MT.**

1.6. Comuna donde se originó la falla.

13501	Melipilla
-------	-----------

1.7. Comunas afectadas por la falla.

13501	Melipilla
13504	María Pinto
13503	Curacaví

1.8. Reiteración.

No hay

1.8.1. N° de Fallas en Instalación. (Últimos 24 meses móviles).

No hay

1.8.2. N° de Fallas en Instalación con mismo Fenómeno Físico. (Últimos 24 meses móviles).

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No hay

1.8.3. Identificación de Evento de Falla que afecta a instalación en los últimos 24 meses móviles.

No aplica

1.9. Datos de la Empresa

Nombre Empresa: Compañía General de Electricidad S.A
RUT: 76.411.321-7
Representante Legal: Iván Arístides Quezada Escobar.
Dirección: Av. Presidente Riesco N° 5561 Piso17, las Condes, Santiago, Chile.

2. INSTALACIONES AFECTADAS.

Subestación Primaria	Instalación (Barra Primaria)	Hora desconexión	Hora Normalización
S/E Bollenar	Barra 110 kV	23:34	23:37

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3. DIAGRAMAS SIMPLIFICADOS

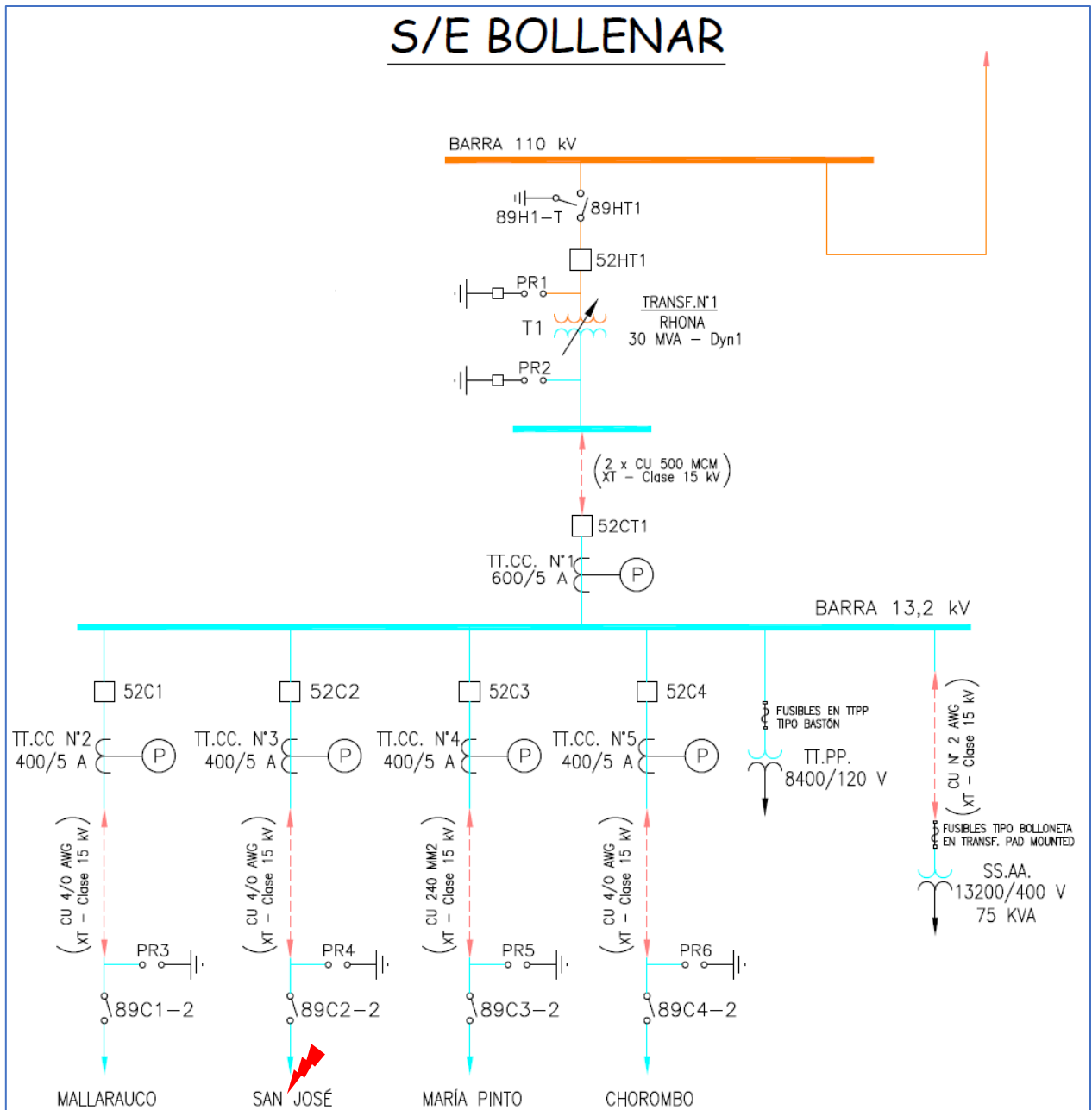


Figura 1: Diagrama Unilineal Simplificado de Zona Afectada.

INFORME (s) QUINTO DÍA N°: IF 2021002584	FECHA DE FALLA: 11 de septiembre de 2021
INSTALACIÓN (ES): 52CT1 SE Bollenar.	

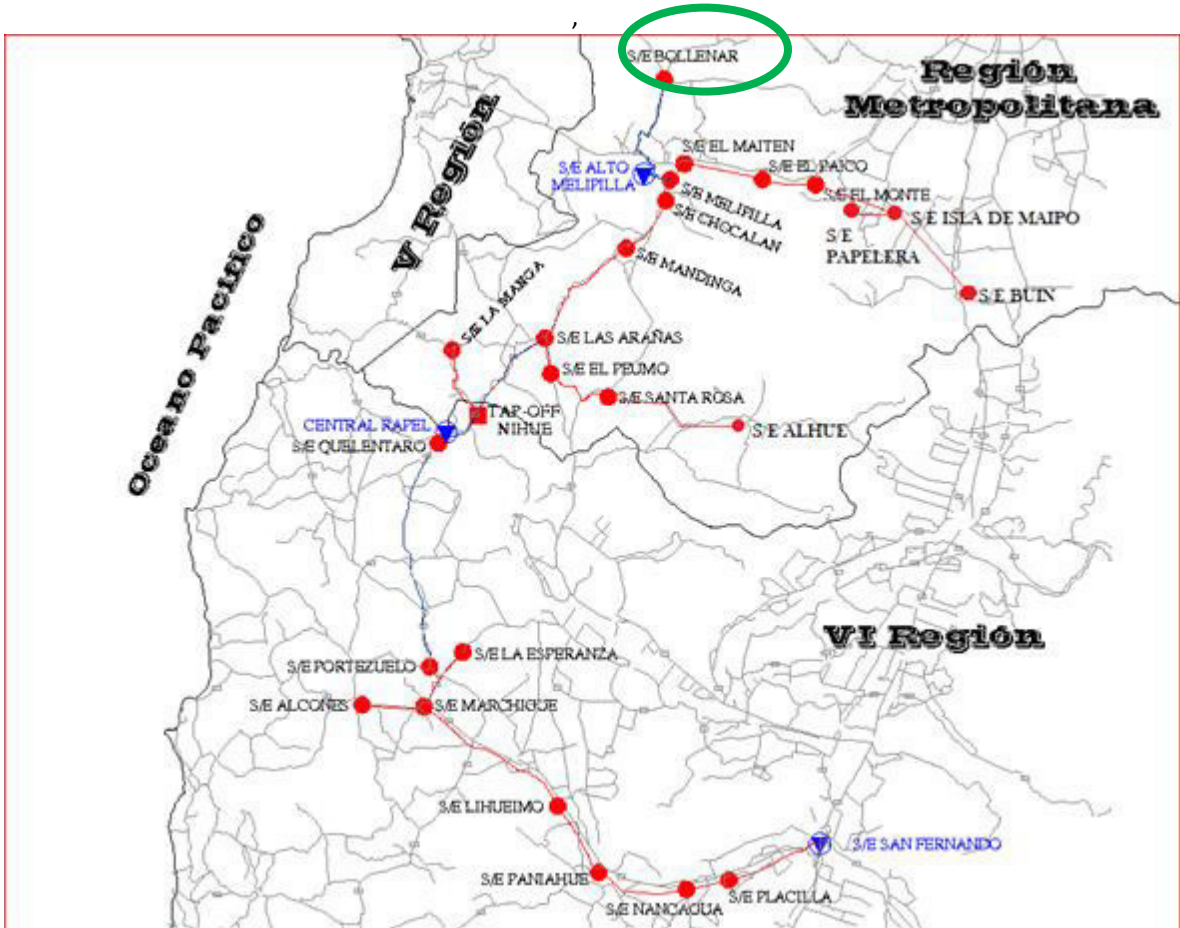


Figura 2: Plano Geográfico de Zona Afectada.

4. PERDIDAS DE GENERACIÓN.

No hay generación de propiedad de CGE S.A., involucrada en la falla.

INFORME (s) QUINTO DÍA N°: IF 2021002584	FECHA DE FALLA: 11 de septiembre de 2021
INSTALACIÓN (ES): 52CT1 SE Bollenar.	

5. POTENCIA INTERRUMPIDA DE CLIENTES FINALES.

Subestación	Transformador	Alimentador		MW	Horario		Bloque	Clientes Afectados	kVa afectados (potencia instalada Dx)	Distribuidora	Comunas	Urbano / Rural	Observación
	(Primario)	Nombre	Nema		Desconexión	Normalización							
Bollenar	T1	Mallarauco	C1	1,8	23:34	23:37	1	1.949	6.019	CGE	MELIPILLA	RURAL	Se recupera 100% de los consumos
	T1	San Jose	C2	0,6	23:34	02:19	1	1.271	3.414	CGE	MELIPILLA	RURAL	Se recupera 100% de los consumos
	T1	Maria Pinto	C3	1,6	23:34	23:37	1	1.891	10.943	CGE	MARIA PINTO - CURACAVÍ	RURAL	Se recupera 100% de los consumos
	T1	Chorombo	C4	1,3	23:34	23:37	1	1.740	10.197	CGE	MARIA PINTO	RURAL	Se recupera 100% de los consumos
Total				5,3				6851	30.572				

Tabla desconexión y normalización de consumos

ENS: 1,885 MWH

N° de clientes afectados CGE: 30.572

INFORME (s) QUINTO DÍA N°: IF 2021002584	FECHA DE FALLA: 11 de septiembre de 2021
INSTALACIÓN (ES): 52CT1 SE Bollenar.	

Se adjunta tabla con los PMGD conectados en redes de MT en los circuitos afectados.

PMGD conectados en redes de MT para instalaciones afectadas.				
Subestación	Transformador (Primario)	Alimentador		Denominación de PMGD
		Nombre	Nema	
Bollenar	T1	Mallarauco	52C1	El Campesino (2MW)
Bollenar	T1	San José	52C2	Los Molinos de San José (9MW)
Bollenar	T1	María Pinto	52C3	Planta Solar Maria Pinto (3MW)
Bollenar	T1	Chorombo	52C4	PFV El Queltehue (3MW)
Bollenar	T1	Chorombo	52C4	PFV El Pilpen (3MW)

PMGD conectados a redes MT CGE

INFORME (s) QUINTO DÍA N°: IF 2021002584	FECHA DE FALLA: 11 de septiembre de 2021
INSTALACIÓN (ES): 52CT1 SE Bollenar.	

6. CRONOLOGÍA DE EVENTOS Y DESCRIPCIÓN DE CAUSAS.

SUBESTACIÓN	EVENTO	HORARIO
Bollenar	Apertura del interruptor 52CT1 por protecciones	23:34
Bollenar	Apertura del interruptor 52C2 por protecciones	23:34
Bollenar	Reconexión Automática de interruptor 52C2 por protecciones	23:34
	Se aplica procedimiento de recuperación de barras	
Bollenar	Apertura manual interruptor 52C1.	23:35
Bollenar	Apertura manual interruptor 52C2.	23:35
Bollenar	Apertura manual interruptor 52C3.	23:35
Bollenar	Apertura manual interruptor 52C4.	23:35
Bollenar	Cierre manual del interruptor 52CT1, energizada barra de MT.	23:36
Bollenar	Cierre manual interruptor 52C1.	23:37
Bollenar	Cierre manual interruptor 52C3.	23:37
Bollenar	Cierre manual interruptor 52C4.	23:37
Bollenar	Cierre manual interruptor 52C2.	02:19

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INSTALACIÓN (ES): 52CT1 SE Bollenar.	

7. ESQUEMAS DE PROTECCIÓN Y CONTROL INVOLUCRADOS EN LA FALLA.

A continuación, se presenta el análisis de esquemas de protección involucrados en despeje de falla.

7.1. Resumen de Operación de esquema de protección:

Hora Relé	S/E	Instalación (Paño)	Protección Operada	Tiempo [s].	Observaciones
2:33:52.517000 AM	Bollenar	CT1	67G1T	2.5	CG
2:33:52.526000 AM	Bollenar	C2	51G1T	2.5	CG

7.2. Ajustes de Protección en Formato Resumido.

7.2.1 Ajustes actuales paño CT1 de S/E Bollenar

Protección de sobrecorriente de fases y residual 51/51N

Relé: SEL 351-S

	Protección de Fase 51P	Protección Residual 51G
Pick up	1248 [A]	195,2 A.
TT/CC	1600/5	1600/5
Curva	C2	C1
Lever	0,17	0,8
Tiempo Definido	no	313,6 A x 2,5 seg

7.2.2 Ajustes actuales paño C2 de S/E Bollenar.

Protección de sobrecorriente de fases y residual 51/51N (En Instante de Falla)

Relé: SEL 351S

	Protección de Fase	Protección Residual	Protección SEF
Pick up	450,4 [A]	80 [A]	20 A
TT/CC	400/5	400/5	
Curva	Kyle 133	C1	Tiempo definido
Lever	2,0	0,8	90 seg.

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Tiempo Definido	4000 [A]	2700 [A] 2,2	--
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7.3. Análisis Actuación de Esquema de Protección 1

7.3.1. SE Bollenar - CT1

7.3.1.1. General MT 52CT1 – SE Bollenar

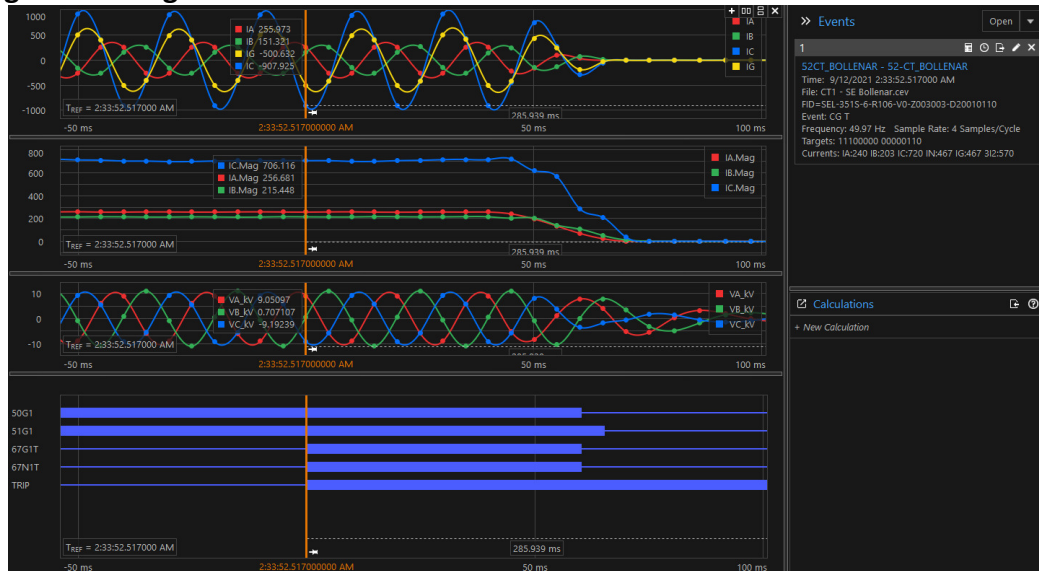
Relé SEL 351-S.

- **Reporte de Evento.**

52CT_BOLLENAR - 52-CT_BOLLENAR
 Time: 9/12/2021 2:33:52.517000 AM
 File: Evento 7 CT1 - SE Bollenar.cev
 FID=SEL-351S-6-R106-V0-Z003003-D20010110
 Event: CG T
 Frequency: 49.97 Hz Sample Rate: 4 Samples/Cycle
 Targets: 11100000 00000110
 Currents: IA:240 IB:203 IC:720 IN:467 IG:467 3I2:570

Reporte de evento Relé SEL 351S de Paño CT1 SE Bollenar
Nota: Relé sincronizado por GPS en horario UTC.

- **Registro oscilográfico de evento**



Registro oscilográfico Relé SEL 351S de Paño CT1 de SE Bollenar

En la oscilografía se observa el aumento de Ic e In, y a su vez la correcta operación de la protección SEL351S, por medio de su función de sobrecorriente residual de

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tiempo definido (51G1), frente a falla Monofásica a tierra, la que al cumplir el tiempo definido (67G1T) da orden de disparo (TRIP) sobre el interruptor 52CT1.

- Registro Secuencial de Evento.**

#	DATE	TIME	ELEMENT	STATE	OBSERVACIONES
82	09-11-2021	18:05:17.664	51G1	Asserted	
81	09-11-2021	18:05:17.669	51G1	Deasserted	
80	09-11-2021	18:05:17.674	51G1	Asserted	
79	09-11-2021	18:05:17.974	51G1	Deasserted	
78	09-11-2021	18:19:33.019	51G1	Asserted	
77	09-11-2021	18:19:33.199	51G1	Deasserted	
76	09-11-2021	18:55:50.800	51G1	Asserted	
75	09-11-2021	18:55:51.160	51G1	Deasserted	
74	09-11-2021	18:56:00.220	51G1	Asserted	
73	09-11-2021	18:56:00.569	51G1	Deasserted	
72	09-11-2021	18:56:09.640	51G1	Asserted	
71	09-11-2021	18:56:09.989	51G1	Deasserted	
70	09-12-2021	01:00:29.793	51P1	Asserted	
69	09-12-2021	01:00:29.983	51G1	Asserted	
68	09-12-2021	01:00:29.993	51G1	Deasserted	
67	09-12-2021	01:00:30.063	51P1	Deasserted	
66	09-12-2021	02:04:18.899	51G1	Asserted	
65	09-12-2021	02:04:18.949	51G1	Deasserted	
64	09-12-2021	02:23:04.726	51G1	Asserted	
63	09-12-2021	02:23:04.736	51P1	Asserted	
62	09-12-2021	02:23:05.580	51P1	Deasserted	
61	09-12-2021	02:23:05.595	51G1	Deasserted	
60	09-12-2021	02:33:50.014	51G1	Asserted	detección de condiciones de falla
59	09-12-2021	02:33:50.029	51P1	Asserted	
58	09-12-2021	02:33:50.339	51P1	Deasserted	
57	09-12-2021	02:33:50.369	51P1	Asserted	
56	09-12-2021	02:33:50.444	51P1	Deasserted	
55	09-12-2021	02:33:52.517	67G1T	Asserted	Se cumple tiempo definido para función 51G1
54	09-12-2021	02:33:52.517	67N1T	Asserted	Se cumple tiempo definido para función 51N1
53	09-12-2021	02:33:52.517	OUT101	Asserted	
52	09-12-2021	02:33:52.517	OUT104	Asserted	

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51	09-12-2021	02:33:52.517	TRIP	Asserted	Orden de trip
50	09-12-2021	02:33:52.567	IN101	Deasserted	Señal de apertura
49	09-12-2021	02:33:52.572	IN104	Asserted	
48	09-12-2021	02:33:52.577	67G1T	Deasserted	
47	09-12-2021	02:33:52.577	67N1T	Deasserted	
46	09-12-2021	02:33:52.577	52A	Deasserted	Interruptor abierto
45	09-12-2021	02:33:52.582	51G1	Deasserted	Condiciones de falla no presentes
44	09-12-2021	02:33:52.697	OUT101	Deasserted	
43	09-12-2021	02:33:52.697	OUT104	Deasserted	
42	09-12-2021	02:33:52.697	TRIP	Deasserted	
41	09-12-2021	02:36:00.935	SV7T	Asserted	
40	09-12-2021	02:36:00.935	OUT102	Asserted	
39	09-12-2021	02:36:00.935	CC	Asserted	Cierre remoto para recuperación de barra MT
38	09-12-2021	02:36:00.940	CC	Deasserted	
37	09-12-2021	02:36:01.000	IN104	Deasserted	
36	09-12-2021	02:36:01.005	IN101	Asserted	
35	09-12-2021	02:36:01.005	52A	Asserted	Interruptor cerrado
34	09-12-2021	02:36:01.340	SV7T	Deasserted	
33	09-12-2021	02:36:01.340	OUT102	Deasserted	
32	09-12-2021	02:59:41.412	51G1	Asserted	
31	09-12-2021	02:59:41.587	51G1	Deasserted	
30	09-12-2021	02:59:41.592	51G1	Asserted	
29	09-12-2021	02:59:41.602	51G1	Deasserted	
28	09-12-2021	02:59:41.617	51G1	Asserted	

Registro Secuencial de eventos Relé SEL 351S de Paño CT1 SE Bollenar

De acuerdo con el registro, se destaca lo siguiente:

- evento #60** 02:33:50.014, se activa función de corriente residual 51G1.
- evento # 55** 02:33:52.517, se cumple tiempo definido para la operación por este elemento (67G1T).
- evento #51** 02:33:52.517, señal de trip interruptor (TRIP).
- evento #46** 02:33:52.577, interruptor abierto (52A = deasserted).
- evento #39** 02:36:00.935, apertura de interruptor para recuperación de barra.
- evento #35** 02:36:01.005, registro de cierre del interruptor (52A = asserted).

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7.4. Análisis Actuación de Esquema de Protección

7.4.1. Protección de sobrecorriente fase y residual

7.4.1.1. Sistema 1

Relé SEL 351-S

Reconectador cabecera 52C2 – SE Bollenar

- **Reporte de Evento**

*** Debido a la cantidad de eventos se sobrescribe la memoria con los eventos más recientes

- **Registro oscilográfico de evento.**

*** Debido a la cantidad de eventos se sobrescribe la memoria con los eventos más recientes.

- **Registro secuencial de evento.**

#	DATE	TIME	ELEMENT	STATE	OBSERVACIONES
193	09-11-2021	17:57:03.560	SV6T	Asserted	
192	09-11-2021	17:57:03.560	OUT102	Asserted	
191	09-11-2021	17:57:03.560	CC	Asserted	
190	09-11-2021	17:57:03.565	CC	Deasserted	
189	09-11-2021	17:57:03.625	IN102	Deasserted	
188	09-11-2021	17:57:03.629	IN101	Asserted	
187	09-11-2021	17:57:03.629	52A	Asserted	
186	09-11-2021	17:57:03.964	SV6T	Deasserted	
185	09-11-2021	17:57:03.964	OUT102	Deasserted	
184	09-11-2021	17:58:21.227	LT2	Asserted	
183	09-11-2021	17:58:21.227	RB1	Asserted	
182	09-11-2021	17:58:21.227	SV7	Asserted	
181	09-11-2021	17:58:21.232	RB1	Deasserted	
180	09-11-2021	17:58:22.432	79LO	Deasserted	
179	09-11-2021	17:58:22.432	79RS	Asserted	
178	09-11-2021	17:58:22.437	SH1	Deasserted	
177	09-11-2021	17:58:22.437	SH0	Asserted	

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176	09-12-2021	01:00:29.791	51P2T	Asserted	
175	09-12-2021	01:00:29.886	51G2T	Asserted	
174	09-12-2021	01:00:30.006	50P1	Asserted	
173	09-12-2021	01:00:30.006	OUT101	Asserted	
172	09-12-2021	01:00:30.006	OUT104	Asserted	
171	09-12-2021	01:00:30.006	TRIP	Asserted	
170	09-12-2021	01:00:30.051	50P1	Deasserted	
169	09-12-2021	01:00:30.056	IN101	Deasserted	
168	09-12-2021	01:00:30.056	IN102	Asserted	
167	09-12-2021	01:00:30.066	52A	Deasserted	
166	09-12-2021	01:00:30.066	79LO	Asserted	
165	09-12-2021	01:00:30.066	79RS	Deasserted	
164	09-12-2021	01:00:30.071	SH1	Asserted	
163	09-12-2021	01:00:30.071	SH0	Deasserted	
162	09-12-2021	01:00:30.086	51G2T	Deasserted	
161	09-12-2021	01:00:30.091	51P2T	Deasserted	
160	09-12-2021	01:00:30.186	OUT101	Deasserted	
159	09-12-2021	01:00:30.186	OUT104	Deasserted	
158	09-12-2021	01:00:30.186	TRIP	Deasserted	
157	09-12-2021	02:03:13.410	LT2	Deasserted	
156	09-12-2021	02:03:13.410	RB2	Asserted	
155	09-12-2021	02:03:13.410	SV7	Deasserted	
154	09-12-2021	02:03:13.415	RB2	Deasserted	
153	09-12-2021	02:03:49.684	SV6T	Asserted	
152	09-12-2021	02:03:49.684	OUT102	Asserted	
151	09-12-2021	02:03:49.684	CC	Asserted	
150	09-12-2021	02:03:49.689	CC	Deasserted	
149	09-12-2021	02:03:49.749	IN102	Deasserted	
148	09-12-2021	02:03:49.754	IN101	Asserted	
147	09-12-2021	02:03:49.754	52A	Asserted	
146	09-12-2021	02:03:49.769	51P2T	Asserted	
145	09-12-2021	02:03:49.829	51P2T	Deasserted	
144	09-12-2021	02:03:50.089	SV6T	Deasserted	
143	09-12-2021	02:03:50.089	OUT102	Deasserted	
142	09-12-2021	02:04:18.895	51G2T	Asserted	
141	09-12-2021	02:04:18.985	51G2T	Deasserted	
140	09-12-2021	02:04:21.898	LT2	Asserted	

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139	09-12-2021	02:04:21.898	RB1	Asserted	
138	09-12-2021	02:04:21.898	SV7	Asserted	
137	09-12-2021	02:04:21.903	RB1	Deasserted	
136	09-12-2021	02:04:23.104	79LO	Deasserted	
135	09-12-2021	02:04:23.104	79RS	Asserted	
134	09-12-2021	02:04:23.109	SH1	Deasserted	
133	09-12-2021	02:04:23.109	SH0	Asserted	
132	09-12-2021	02:23:04.726	51G2T	Asserted	
131	09-12-2021	02:23:04.731	51P2T	Asserted	
130	09-12-2021	02:23:05.530	51P1T	Asserted	
129	09-12-2021	02:23:05.530	79CY	Asserted	
128	09-12-2021	02:23:05.530	79RS	Deasserted	
127	09-12-2021	02:23:05.530	OUT101	Asserted	
126	09-12-2021	02:23:05.530	OUT104	Asserted	
125	09-12-2021	02:23:05.530	TRIP	Asserted	
124	09-12-2021	02:23:05.580	IN101	Deasserted	
123	09-12-2021	02:23:05.580	IN102	Asserted	
122	09-12-2021	02:23:05.590	52A	Deasserted	
121	09-12-2021	02:23:05.610	51P1T	Deasserted	
120	09-12-2021	02:23:05.610	51P2T	Deasserted	
119	09-12-2021	02:23:05.615	51G2T	Deasserted	
118	09-12-2021	02:23:05.709	OUT101	Deasserted	
117	09-12-2021	02:23:05.709	OUT104	Deasserted	
116	09-12-2021	02:23:05.709	TRIP	Deasserted	
115	09-12-2021	02:23:10.696	CLOSE	Asserted	
114	09-12-2021	02:23:10.696	SH1	Asserted	
113	09-12-2021	02:23:10.696	SH0	Deasserted	
112	09-12-2021	02:23:10.696	OUT102	Asserted	
111	09-12-2021	02:23:10.761	IN101	Asserted	
110	09-12-2021	02:23:10.761	IN102	Deasserted	
109	09-12-2021	02:23:10.761	52A	Asserted	
108	09-12-2021	02:23:10.761	CLOSE	Deasserted	
107	09-12-2021	02:23:10.761	OUT102	Deasserted	
106	09-12-2021	02:24:10.701	SH1	Deasserted	
105	09-12-2021	02:24:10.701	SH0	Asserted	
104	09-12-2021	02:24:10.701	79CY	Deasserted	
103	09-12-2021	02:24:10.701	79RS	Asserted	

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102	09-12-2021	02:33:50.016	51G2T	Asserted	
101	09-12-2021	02:33:50.021	51P2T	Asserted	
100	09-12-2021	02:33:52.526	51G1T	Asserted	Se cumple el tiempo de operación para función 51G1
99	09-12-2021	02:33:52.526	79CY	Asserted	Inicio de ciclo de reconexión
98	09-12-2021	02:33:52.526	79RS	Deasserted	
97	09-12-2021	02:33:52.526	OUT101	Asserted	
96	09-12-2021	02:33:52.526	OUT104	Asserted	
95	09-12-2021	02:33:52.526	TRIP	Asserted	Orden de trip
94	09-12-2021	02:33:52.575	IN101	Deasserted	
93	09-12-2021	02:33:52.575	IN102	Asserted	
92	09-12-2021	02:33:52.585	52A	Deasserted	Interruptor abierto
91	09-12-2021	02:33:52.600	51P2T	Deasserted	
90	09-12-2021	02:33:52.610	51G2T	Deasserted	
89	09-12-2021	02:33:52.610	51G1T	Deasserted	
88	09-12-2021	02:33:52.705	OUT101	Deasserted	
87	09-12-2021	02:33:52.705	OUT104	Deasserted	
86	09-12-2021	02:33:52.705	TRIP	Deasserted	
85	09-12-2021	02:33:57.699	CLOSE	Asserted	Cierre
84	09-12-2021	02:33:57.699	SH1	Asserted	
83	09-12-2021	02:33:57.699	SH0	Deasserted	
82	09-12-2021	02:33:57.699	OUT102	Asserted	
81	09-12-2021	02:33:57.764	IN101	Asserted	
80	09-12-2021	02:33:57.764	IN102	Deasserted	
79	09-12-2021	02:33:57.764	52A	Asserted	Interruptor cerrado
78	09-12-2021	02:33:57.764	CLOSE	Deasserted	
77	09-12-2021	02:33:57.764	OUT102	Deasserted	
76	09-12-2021	02:34:57.754	SH1	Deasserted	
75	09-12-2021	02:34:57.754	SH0	Asserted	
74	09-12-2021	02:34:57.754	79CY	Deasserted	
73	09-12-2021	02:34:57.754	79RS	Asserted	
72	09-12-2021	02:35:01.038	LT2	Deasserted	
71	09-12-2021	02:35:01.038	RB2	Asserted	
70	09-12-2021	02:35:01.038	SV7	Deasserted	
69	09-12-2021	02:35:01.043	RB2	Deasserted	
68	09-12-2021	02:35:01.043	79LO	Asserted	
67	09-12-2021	02:35:01.043	79RS	Deasserted	

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66	09-12-2021	02:35:01.048	SH1	Asserted	
65	09-12-2021	02:35:01.048	SH0	Deasserted	
64	09-12-2021	02:35:31.041	SV5T	Asserted	
63	09-12-2021	02:35:31.041	OUT101	Asserted	
62	09-12-2021	02:35:31.041	OC	Asserted	Apertura remota
61	09-12-2021	02:35:31.046	OC	Deasserted	
60	09-12-2021	02:35:31.091	IN101	Deasserted	
59	09-12-2021	02:35:31.096	IN102	Asserted	
58	09-12-2021	02:35:31.101	52A	Deasserted	Interruptor abierto
57	09-12-2021	02:35:31.446	SV5T	Deasserted	
56	09-12-2021	02:35:31.446	OUT101	Deasserted	
55	09-12-2021	04:07:28.808	SV6T	Asserted	
54	09-12-2021	04:07:28.808	OUT102	Asserted	
53	09-12-2021	04:07:28.808	CC	Asserted	Cierre remoto para prueba operacional
52	09-12-2021	04:07:28.813	CC	Deasserted	
51	09-12-2021	04:07:28.873	IN101	Asserted	
50	09-12-2021	04:07:28.873	IN102	Deasserted	
49	09-12-2021	04:07:28.873	52A	Asserted	Interruptor cerrado
48	09-12-2021	04:07:29.213	SV6T	Deasserted	
47	09-12-2021	04:07:29.213	OUT102	Deasserted	
46	09-12-2021	04:08:37.787	SV5T	Asserted	
45	09-12-2021	04:08:37.787	OUT101	Asserted	
44	09-12-2021	04:08:37.787	OC	Asserted	Interruptor abierto tras pruebas operacionales remotras
43	09-12-2021	04:08:37.792	OC	Deasserted	
42	09-12-2021	04:08:37.837	IN101	Deasserted	
41	09-12-2021	04:08:37.842	IN102	Asserted	
40	09-12-2021	04:08:37.847	52A	Deasserted	
39	09-12-2021	04:08:38.191	SV5T	Deasserted	
38	09-12-2021	04:08:38.191	OUT101	Deasserted	
37	09-12-2021	05:18:30.949	SV6T	Asserted	
36	09-12-2021	05:18:30.949	OUT102	Asserted	
35	09-12-2021	05:18:30.949	CC	Asserted	
34	09-12-2021	05:18:30.954	CC	Deasserted	
33	09-12-2021	05:18:31.014	IN102	Deasserted	
32	09-12-2021	05:18:31.018	IN101	Asserted	
31	09-12-2021	05:18:31.018	52A	Asserted	

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30	09-12-2021	05:18:31.039	51P2T	Asserted	
29	09-12-2021	05:18:31.079	51P2T	Deasserted	
28	09-12-2021	05:18:31.353	SV6T	Deasserted	
27	09-12-2021	05:18:31.353	OUT102	Deasserted	
26	09-12-2021	05:19:05.425	LT2	Asserted	
25	09-12-2021	05:19:05.425	RB1	Asserted	
24	09-12-2021	05:19:05.425	SV7	Asserted	
23	09-12-2021	05:19:05.430	RB1	Deasserted	
22	09-12-2021	05:19:06.629	79LO	Deasserted	
21	09-12-2021	05:19:06.629	79RS	Asserted	
20	09-12-2021	05:19:06.634	SH1	Deasserted	
19	09-12-2021	05:19:06.634	SH0	Asserted	

Registro Secuencial de eventos Relé SEL 351S de Paño C2 de SE Bollenar.

De acuerdo con el registro, se destaca lo siguiente:

- evento #100** 02:33:52.526, Se cumple el tiempo de operación para función 51G1.
- evento #99** 02:33:52.526, inicio de ciclo de reconexión 79CY.
- evento #95** 02:33:52.526, señal de orden de TRIP.
- evento #92** 02:33:52.577, interruptor abierto (52A = deasserted).
- evento #85** 02:33:57.699, cierre tras fin de ciclo de reconexión.
- evento #62** 02:35:31.041, comando de apertura remoto, condición solicitada para atención de falla en redes de distribución.

INFORME (s) QUINTO DÍA N°: IF 2021002584	FECHA DE FALLA: 11 de septiembre de 2021
INSTALACIÓN (ES): 52CT1 SE Bollenar.	

8. ACCIONES CORRECTIVAS.

8.1. Acciones Correctivas de Corto Plazo.

- Mediante la solicitud de curso forzoso 2021082892 se realiza la corrección del ajuste de protecciones de la cabecera del alimentador San José, 52C2 SE Bollenar, conforme al estudio ECP 4363/2021.
 - Se corrige la ecuación de Trip del 52C2 para el cual se implementa el elemento de protección de sobrecorriente residual instantáneo
 - En el paño CT1 se deshabilita la funciones de tiempo definido 67G1 y 67N1 (En conformidad a lo indicado en el EAP 4363/2021.)

8.2. Acciones correctivas de Largo Plazo

No aplica.

9. CONCLUSIONES.

En base a los registros de eventos y reportes de falla de los relés involucrados, se concluye que la operación de 52CT1 se produce de manera correcta y en concordancia con los ajustes cargados.

Descoordinación entre el paño C2 y CT1, se produce por error en carga de nuevos ajustes en Paño C2, realizados el día 3 de agosto de 2021, mediante la solicitud de intervención N°2021064711, para permitir la inyección plena del PMGD Los Molinos 9 MW.

Se realiza la corrección del ajuste de protecciones de la cabecera del alimentador San José, 52C2, conforme al estudio ECP 4363/2021, mediante la solicitud de CF N°2021082892.

INFORME (s) QUINTO DÍA N°: IF 2021002584	FECHA DE FALLA: 11 de septiembre de 2021
INSTALACIÓN (ES): 52CT1 SE Bollenar.	

10. ANÁLISIS CONJUNTO.

Siendo las 11:34 hrs. del día 11.09.2021, se produce la desconexión forzada de Interruptor 52CT1 y la reconexión automática exitosa de Interruptor 52C2 (Alimentador San José) de SE Bollenar, a consecuencia de falla en redes MT de distribución.

A continuación, el Centro de control de CGE identifica a través del SCADA que ambos interruptores, 52CT1 y 52C2, habían registrado una operación simultánea, lo que dio paso a ejecutar el Procedimiento de Recuperación de Barra MT, realizando la apertura de los alimentadores de SE Bollenar aprox. a las 11:35 hrs, recuperando la Barra MT y los consumos de los alimentadores C1, C3 y C4.

Posteriormente, personal de CGE Distribución da cuenta que la falla (en cercanías de SE Bollenar) ya había sido identificada y que se procedería a realizar las reparaciones correspondientes en el alimentador San José.

Por parte de CGE Tx, se procede con la lectura de ajustes de protecciones para identificar los elementos operados.

Finalmente, a solicitud del COZ de Distribución se procede a realizar el cierre de Alimentador San José a las 02:19 hrs.

11. ANEXOS.

I. ANEXOS I. PRINT OUT DE PROTECCIONES

II. ANEXO II. ESTAMPA DE TIEMPO SINCRONIZADA

ANEXO I
INFORME DE FALLA
AJUSTES DE PROTECCIONES

INFORME (s) QUINTO DÍA N°: IF 2021001986	FECHA DE FALLA: 28 de Julio de 2021
INSTALACIÓN (ES): 89B3 TO Nihue	

52CT1 – SE Bollenar

1. Ajustes de Protección en Formato Nativo (Print Out)

Group 1

Group Settings:

RID =52-CT_BOLLENAR TID =52CT_BOLLENAR
CTR = 320 CTRN = 320 PTR = 120.00 PTRS = 120.00
Z1MAG = 3.00 Z1ANG = 75.00
Z0MAG = 12.00 Z0ANG = 72.47 LL = 4.84
E50P = N E50N = 1 E50G = 1 E50Q = N
E51P = 1 E51N = 1 E51G = 1 E51Q = N
E32 = N ELOAD = N ESOTF = Y EVOLT = N
E25 = N EFLOC = N ELOP = N ECOMM = N
E81 = N E79 = N ESV = 16 EDEM = THM
50N1P = 0.980
67N1D = 125.00
50G1P = 0.98
67G1D = 125.00
51P1P = 3.90 51P1C = C2 51P1TD= 0.17 51P1RS= N
51P1CT= 0.00 51P1MR= 0.00
51N1P = 0.610 51N1C = C1 51N1TD= 0.80 51N1RS= N
51N1CT= 0.00 51N1MR= 0.00
51G1P = 0.61 51G1C = C1 51G1TD= 0.80 51G1RS= N
51G1CT= 0.00 51G1MR= 0.00
CLOEND= OFF 52AEND= 50.00 SOTFD = 25.00
DMTC = 5
PDEMP = 5.00 NDEMP = 1.500 GDEMP = 1.50 QDEMP = 1.50
TDURD = 9.00 CFD = 30.00 3POD = 1.00 50LP = 0.25
SV1PU = 4.00 SV1DO = 9.00 SV2PU = 6.00 SV2DO = 9.00
SV3PU = 4.00 SV3DO = 1.00 SV4PU = 0.00 SV4DO = 10.00
SV5PU = 500.00 SV5DO = 0.00 SV6PU = 0.00 SV6DO = 20.00
SV7PU = 0.00 SV7DO = 20.00 SV8PU = 0.00 SV8DO = 20.00
SV9PU = 0.00 SV9DO = 20.00 SV10PU= 0.00 SV10DO= 0.00
SV11PU= 0.00 SV11DO= 0.00 SV12PU= 0.00 SV12DO= 500.00
SV13PU= 0.00 SV13DO= 500.00 SV14PU= 0.00 SV14DO= 0.00
SV15PU= 0.00 SV15DO= 0.00 SV16PU= 0.00 SV16DO= 0.00
SELogic group 1
SELogic Control Equations:
TR =51P1T + 51G1T + 51N1T + 67G1T + 67N1T

ANEXO I
INFORME DE FALLA
AJUSTES DE PROTECCIONES

INFORME (s) QUINTO DÍA N°: IF 2021001986	FECHA DE FALLA: 28 de Julio de 2021
INSTALACIÓN (ES): 89B3 TO Nihue	

TRCOMM=0
TRSOTF=50P1 + 50G1
DTT =0
ULTR =!(51P1 + 51G1) + !52A
PT1 =0
LOG1 =0
PT2 =0
LOG2 =0
BT =0
52A =IN101
CL =0
ULCL =TRIP + !(LT4 + CLOSE)
79RI =0
79RIS =0
79DTL =0
79DLS =0
79SKP =0
79STL =0
79BRS =0
79SEQ =0
79CLS =0
SET1 =!LT1 * PB1 * LT4
RST1 =LT1 * PB1 * LT4
SET2 =0
RST2 =0
SET3 =0
RST3 =0
SET4 =!LT4 * PB5
RST4 =LT4 * (PB5 + SV5T)
SET5 =0
RST5 =0
SET6 =0
RST6 =0
SET7 =0
RST7 =0
SET8 =0
RST8 =0
SET9 =0
RST9 =0

ANEXO I
INFORME DE FALLA
AJUSTES DE PROTECCIONES

INFORME (s) QUINTO DÍA N°: IF 2021001986	FECHA DE FALLA: 28 de Julio de 2021
INSTALACIÓN (ES): 89B3 TO Nihue	

SET10 =0
RST10 =0
SET11 =0
RST11 =0
SET12 =0
RST12 =0
SET13 =0
RST13 =0
SET14 =0
RST14 =0
SET15 =0
RST15 =0
SET16 =0
RST16 =0
67P1TC=1
67P2TC=1
67P3TC=1
67P4TC=1
67N1TC=1
67N2TC=1
67N3TC=1
67N4TC=1
67G1TC=1
67G2TC=1
67G3TC=1
67G4TC=1
67Q1TC=1
67Q2TC=1
67Q3TC=1
67Q4TC=1
51P1TC=1
51N1TC=1
51G1TC=LT1
51P2TC=1
51N2TC=1
51G2TC=1
51QTC =1
SV1 =TRIP
SV2 =SV1T

ANEXO I
INFORME DE FALLA
AJUSTES DE PROTECCIONES

INFORME (s) QUINTO DÍA N°: IF 2021001986	FECHA DE FALLA: 28 de Julio de 2021
INSTALACIÓN (ES): 89B3 TO Nihue	

SV3 =FAULT
SV4 =(IN202 * 0 + IN203 + IN204 + IN205 + IN206 + IN207)
SV5 =LT4 * !(PB1 + PB2 + PB3 + PB4 + PB6 + PB7 + PB8 + PB9 + PB10)
SV6 =OC
SV7 =CC
SV8 =RB1
SV9 =RB2
SV10 =0
SV11 =0
SV12 =51P1T + 67P1T
SV13 =51G1T + 67G1T + 67N1T
SV14 =0
SV15 =0
SV16 =0
OUT101=TRIP + SV6T
OUT102=SV7T
OUT103=SV4T
OUT104=TRIP
OUT105=SV4T + SV8T
OUT106=SV9T
OUT107=0
OUT201=0
OUT202=0
OUT203=0
OUT204=0
OUT205=0
OUT206=0
OUT207=0
OUT208=0
OUT209=0
OUT210=0
OUT211=0
OUT212=0
LED1 =LT1
LED2 =0
LED3 =0
LED4 =0
LED5 =!LT4
LED6 =0

ANEXO I
INFORME DE FALLA
AJUSTES DE PROTECCIONES

INFORME (s) QUINTO DÍA N°: IF 2021001986	FECHA DE FALLA: 28 de Julio de 2021
INSTALACIÓN (ES): 89B3 TO Nihue	

LED7 =0
LED8 =0
LED9 =0
LED10 =0
LED12 =TRIP
LED13 =FAULT * !SV1T
LED14 =COMMT
LED15 =SOTFT
LED16 =0
LED17 =51P1T + 51G1T
LED18 =81D1T
LED19 =0
LED20 =79CY
LED21 =79LO
LED25 =51G1
LED26 =0
DP1 =0
DP2 =0
DP3 =0
DP4 =0
DP5 =0
DP6 =0
DP7 =0
DP8 =0
DP9 =0
DP10 =0
DP11 =0
DP12 =0
DP13 =0
DP14 =0
DP15 =0
DP16 =0
SS1 =1
SS2 =0
SS3 =0
SS4 =0
SS5 =0
SS6 =0
ER =/51P1 + /51G1 + /51QT

ANEXO I
INFORME DE FALLA
AJUSTES DE PROTECCIONES

INFORME (s) QUINTO DÍA N°: IF 2021001986	FECHA DE FALLA: 28 de Julio de 2021
INSTALACIÓN (ES): 89B3 TO Nihue	

FAULT =51P1 + 51G1 + 51QT

BSYNCH=1

CLMON =0

BKMON =0

E32IV =1

TMB1A =0

TMB2A =0

TMB3A =0

TMB4A =0

TMB5A =0

TMB6A =0

TMB7A =0

TMB8A =0

TMB1B =0

TMB2B =0

TMB3B =0

TMB4B =0

TMB5B =0

TMB6B =0

TMB7B =0

TMB8B =0

Global Settings:

TGR = 0.00 NFREQ = 50 PHROT = ABC

DATE_F= MDY FP_TO = 15 SCROLD= 2 FPNGD = IG

LER = 30 PRE = 4 DCLOP = OFF DCHIP = OFF

IN101D= 0.50 IN102D= 0.50 IN103D= 0.50 IN104D= 0.50

IN105D= 0.50 IN106D= 0.50

IN201D= 0.50 IN202D= 0.50 IN203D= 0.50 IN204D= 0.50

IN205D= 0.50 IN206D= 0.50 IN207D= 0.50 IN208D= 0.50

EBMON = Y COSP1 = 10000 COSP2 = 150 COSP3 = 12

KASP1 = 1.20 KASP2 = 8.00 KASP3 = 20.00

LED12L= Y LED13L= Y LED14L= Y LED15L= Y

LED16L= Y LED17L= Y LED18L= Y LED19L= N

LED20L= N LED21L= N LED25L= Y LED26L= Y

RSTLED= Y PB9D = 0.00 PB10D = 0.00

Table Of Contents

Date Generated agosto 03 2021 12:51:53 pm

Device Information

Part Number 0351S61354554X1

FID SEL-351S-6-R106-V0-Z003003-D20010110

BFID SELBOOT-35R-R101

Config

Special

Displayed Setting Groups

[Group 1](#)

[SELogic 1](#)

[Global](#)

[SER](#)

[Text](#)

Settings Legend

Visible Setting

Hidden Setting

Invalid Setting

Group 1			
			Top
Setting	Description	Range	Value
RID	Relay Identifier (30 chars)	Range = ASCII string with a maximum length of 30.	52C2 - ALIMENTADOR SAN JOSE
TID	Terminal Identifier (30 chars)	Range = ASCII string with a maximum length of 30.	SUBESTACION BOLLENAR
CTR	Phase (IA,IB,IC) CT Ratio, CTR:1	Range = 1 to 6000	80
CTRN	Neutral (IN) CT Ratio, CTRN:1	Range = 1 to 10000	80
PTR	Phase (VA,VB,VC) PT Ratio, PTR:1	Range = 1,00 to 10000,00	120,00
PTRS	Synch. Voltage (VS) PT Ratio, PTRS:1	Range = 1,00 to 10000,00	120,00
Z0MAG	Zero-Seq Line Impedance Magnitude (Ohms secondary)	Range = 0,10 to 510,00	6,38
Z1MAG	Pos-Seq Line Impedance Magnitude (Ohms secondary)	Range = 0,10 to 510,00	2,14
Z0ANG	Zero-Seq Line Impedance Angle (degrees)	Range = 40,00 to 90,00	72,47
Z1ANG	Pos-Seq Line Impedance Angle (degrees)	Range = 40,00 to 90,00	68,86
LL	Line Length (unitless)	Range = 0,10 to 999,00	4,84
EFLOC	Fault Location Enable	Select: Y, N	N
E50P	Enable Phase Overcurrent Elements	Select: N, 1-6	2
50P1P	Level 1 (Amps secondary)	Range = 0,25 to 100,00, OFF	50,00
50P2P	Level 2 (Amps secondary)	Range = 0,25 to 100,00, OFF	50,00
67P1D	Level 1 (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
67P2D	Level 2 (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
50PP1P	Level 1 (Amps secondary)	Range = 1,00 to 170,00, OFF	OFF
50PP2P	Level 2 (Amps secondary)	Range = 1,00 to 170,00, OFF	OFF
E50N	Enable Neutral Ground(channel IN) Overcurrent Elements	Select: N, 1-6	N
E50G	Enable Residual Ground Overcurrent Elements	Select: N, 1-6	3
50G1P	Level 1 (Amps secondary)	Range = 0,25 to 100,00, OFF	33,75
50G2P	Level 2 (Amps secondary)	Range = 0,25 to 100,00, OFF	33,75
50G3P	Level 3 (Amps secondary)	Range = 0,25 to 100,00, OFF	0,25
67G1D	Level 1 (cycles in 0.25 increments)	Range = 0,00 to 16000,00	110,00
67G2D	Level 2 (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
67G3D	Level 3 (cycles in 0.25 increments)	Range = 0,00 to 16000,00	4500,00
E50Q	Enable Negative-Sequence Overcurrent Elements	Select: N, 1-6	N
E51P	Enable Phase Time-Overcurrent Elements	Select: N, 1, 2	2
51P1P	Level 1 Pickup (Amps secondary)	Range = 0,50 to 16,00, OFF	5,63

51PIC	Level 1 Curve	Select: U1-U5, C1-C5, Recloser-Curves	133
51P1TD	Level 1 Time Dial	Range = 0,10 to 2,00	2,00
51P1RS	Level 1 Electromechanical Reset Delay	Select: Y, N	N
51P1CT	Level 1 Constant Time Adder (cycles in 0.25 increments)	Range = 0,00 to 60,00	0,00
51P1MR	Level 1 Minimum Response (cycles in 0.25 increments)	Range = 0,00 to 60,00	0,00
51P2P	Level 2 Pickup (Amps secondary)	Range = 0,50 to 16,00, OFF	5,63
51P2C	Level 2 Curve	Select: U1-U5, C1-C5, Recloser-Curves	101
51P2TD	Level 2 Time Dial	Range = 0,10 to 2,00	1,00
51P2RS	Level 2 Electromechanical Reset Delay	Select: Y, N	N
51P2CT	Level 2 Constant Time Adder (cycles in 0.25 increments)	Range = 0,00 to 60,00	0,00
51P2MR	Level 2 Minimum Response (cycles in 0.25 increments)	Range = 0,00 to 60,00	0,00
E51N	Enable Neutral Ground Time-Overcurrent Elements	Select: N, 1, 2	N
E51G	Enable Residual Ground Time-Overcurrent Elements	Select: N, 1, 2	2
51G1P	Level 1 Pickup (Amps secondary)	Range = 0,50 to 16,00, OFF	1,00
51G1C	Level 1 Curve	Select: U1-U5, C1-C5, Recloser-Curves	C1
51G1TD	Level 1 Time Dial	Range = 0,05 to 1,00	0,80
51G1RS	Level 1 Electromechanical Reset Delay	Select: Y, N	N
51G1CT	Level 1 Constant Time Adder (cycles in 0.25 increments)	Range = 0,00 to 60,00	0,00
51G1MR	Level 1 Minimum Response (cycles in 0.25 increments)	Range = 0,00 to 60,00	0,00
51G2P	Level 2 Pickup (Amps secondary)	Range = 0,50 to 16,00, OFF	1,00
51G2C	Level 2 Curve	Select: U1-U5, C1-C5, Recloser-Curves	102
51G2TD	Level 2 Time Dial	Range = 0,10 to 2,00	1,00
51G2RS	Level 2 Electromechanical Reset Delay	Select: Y, N	N
51G2CT	Level 2 Constant Time Adder (cycles in 0.25 increments)	Range = 0,00 to 60,00	0,00
51G2MR	Level 2 Minimum Response (cycles in 0.25 increments)	Range = 0,00 to 60,00	0,00
E51Q	Enable Negative-Sequence Time-Overcurrent Elements	Select: Y, N	N
ELOAD	Enable Load Encroachment Elements	Select: Y, N	N
E32	Enable Directional Control Elements	Select: Y, AUTO, N	N
ELOP	Loss-Of-Potential Enable	Select: Y, Y1, N	N
EVOLT	Enable Voltage Element Enables	Select: Y, N	Y
27P1P	Phase Undervoltage Pickup (Volts secondary)	Range = 0,00 to 300,00, OFF	OFF
27P2P	Phase Undervoltage Pickup (Volts secondary)	Range = 0,00 to 300,00, OFF	OFF
59P1P	Phase Overvoltage Pickup (Volts secondary)	Range = 0,00 to 300,00, OFF	OFF
59P2P	Phase Overvoltage Pickup (Volts secondary)	Range = 0,00 to 300,00, OFF	OFF
59N1P	Zero-Seq(3V0) Overvoltage Pickup (Volts secondary)	Range = 0,00 to 300,00, OFF	OFF

59N2P	Zero-Seq(3V0) Overvoltage Pickup (Volts secondary)	Range = 0,00 to 300,00, OFF	OFF
59QP	Neg-Seq(V2) Overvoltage Pickup (Volts secondary)	Range = 0,00 to 200,00, OFF	OFF
59V1P	Pos-Seq(V1) Overvoltage Pickup (Volts secondary)	Range = 0,00 to 300,00, OFF	OFF
27SP	Channel VS Undervoltage Pickup (Volts secondary)	Range = 0,00 to 300,00, OFF	OFF
59S1P	Channel VS Overvoltage Pickup (Volts secondary)	Range = 0,00 to 300,00, OFF	OFF
59S2P	Channel VS Overvoltage Pickup (Volts secondary)	Range = 0,00 to 300,00, OFF	OFF
27PP	Phase-Phase Undervoltage Pickup (Volts secondary)	Range = 0,00 to 520,00, OFF	OFF
59PP	Phase-Phase Overvoltage Pickup (Volts secondary)	Range = 0,00 to 520,00, OFF	OFF
E25	Synchronism Check Enable	Select: Y, N	N
E81	Frequency Elements Enables	Select: N, 1-6	1
27B81P	Undervoltage Block (Volts secondary)	Range = 25,00 to 300,00	40,00
81D1P	Level 1 Pickup (Hz)	Range = 40,10 to 65,00, OFF	48,55
81D1D	Level 1 Time Delay (cycles in 0.25 increments)	Range = 2,00 to 16000,00	10,00
E79	Reclosures Enables	Select: N, 1-4	1
79OI1	Open Interval 1 (cycles in 0.25 increments)	Range = 0,00 to 999999,00	250,00
79RSD	Reset Time from Reclose Cycle (cycles in 0.25 increments)	Range = 0,00 to 999999,00	3000,00
79RSLD	Reset Time from Lockout (cycles in 0.25 increments)	Range = 0,00 to 999999,00	500,00
79CLSD	Reclose Supv. Time Limit (cycles in 0.25 increments)	Range = 0,00 to 999999,00, OFF	0,00
ESOTF	Enable Switch-Onto-Fault	Select: Y, N	Y
CLOEND	Close Enable Time Delay (cycles in 0.25 increments)	Range = 0,00 to 16000,00, OFF	OFF
52AEND	52A Enable Time Delay (cycles in 0.25 increments)	Range = 0,00 to 16000,00, OFF	50,00
SOTFD	SOTF Duration (cycles in 0.25 increments)	Range = 0,50 to 16000,00	25,00
ECOMM	Comm.-Assisted Trip Scheme Enables	Select: N, POTT, DCUB1, DCUB2, DCB	N
EDEM	Demand Metering Type	Select: THM, ROL	THM
DMTC	Time Constant (minutes)	Select: 5, 10, 15, 30, 60	5
PDEMP	Phase Pickup (Amps secondary)	Range = 0,50 to 16,00, OFF	5,00
NDEMP	Neutral Ground Pickup (Amps secondary)	Range = 0,500 to 16,000, OFF	OFF
GDEMP	Residual Ground Pickup (Amps secondary)	Range = 0,50 to 16,00, OFF	OFF
QDEMP	Negative-Sequence Pickup (Amps secondary)	Range = 0,50 to 16,00, OFF	OFF
TDURD	Minimum Trip Duration Time (cycles in 0.25 increments)	Range = 4,00 to 16000,00	9,00

CFD	Close Failure Time Delay (cycles in 0.25 increments)	Range = 0,00 to 16000,00, OFF	30,00
3POD	Three-Pole Open Time Delay (cycles in 0.25 increments)	Range = 0,00 to 60,00	1,00
50LP	Load Detection Phase Pickup (Amps secondary)	Range = 0,25 to 100,00, OFF	0,25
ESV	SELogic Variable Timers Enables	Select: N, 1-16	16
SV1PU	SV1 Timer Pickup (cycles in 0.25 increments)	Range = 0,00 to 999999,00	4,00
SV2PU	SV2 Timer Pickup (cycles in 0.25 increments)	Range = 0,00 to 999999,00	6,00
SV3PU	SV3 Timer Pickup (cycles in 0.25 increments)	Range = 0,00 to 999999,00	4,00
SV4PU	SV4 Timer Pickup (cycles in 0.25 increments)	Range = 0,00 to 999999,00	500,00
SV5PU	SV5 Timer Pickup (cycles in 0.25 increments)	Range = 0,00 to 999999,00	0,00
SV6PU	SV6 Timer Pickup (cycles in 0.25 increments)	Range = 0,00 to 999999,00	0,00
SV7PU	SV7 Timer Pickup (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
SV8PU	SV8 Timer Pickup (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
SV9PU	SV9 Timer Pickup (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
SV10PU	SV10 Timer Pickup (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
SV11PU	SV11 Timer Pickup (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
SV12PU	SV12 Timer Pickup (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
SV13PU	SV13 Timer Pickup (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
SV14PU	SV14 Timer Pickup (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
SV15PU	SV15 Timer Pickup (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
SV16PU	SV16 Timer Pickup (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
SV1DO	SV1 Timer Dropout (cycles in 0.25 increments)	Range = 0,00 to 999999,00	9,00
SV2DO	SV2 Timer Dropout (cycles in 0.25 increments)	Range = 0,00 to 999999,00	9,00
SV3DO	SV3 Timer Dropout (cycles in 0.25 increments)	Range = 0,00 to 999999,00	0,00
SV4DO	SV4 Timer Dropout (cycles in 0.25 increments)	Range = 0,00 to 999999,00	0,00
SV5DO	SV5 Timer Dropout (cycles in 0.25 increments)	Range = 0,00 to 999999,00	20,00
SV6DO	SV6 Timer Dropout (cycles in 0.25 increments)	Range = 0,00 to 999999,00	20,00
SV7DO	SV7 Timer Dropout (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
SV8DO	SV8 Timer Dropout (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
SV9DO	SV9 Timer Dropout (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
SV10DO	SV10 Timer Dropout (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
SV11DO	SV11 Timer Dropout (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
SV12DO	SV12 Timer Dropout (cycles in 0.25 increments)	Range = 0,00 to 16000,00	500,00
SV13DO	SV13 Timer Dropout (cycles in 0.25 increments)	Range = 0,00 to 16000,00	500,00
SV14DO	SV14 Timer Dropout (cycles in 0.25 increments)	Range = 0,00 to 16000,00	500,00
SV15DO	SV15 Timer Dropout (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
SV16DO	SV16 Timer Dropout (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
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Setting	Description	Range	Value
TR	Other trip conditions	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	LT5 * (50P1 + 51P1T + LT1 * 67G1T + LT1 * 51G1T) + !LT5 * (51P2T + 51G2T) + 67G3T * LT7 + IN106
TRCOMM	Communications-assisted trip conditions	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TRSOTF	Switch-onto-fault trip conditions	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	50P2 + 50G2
DTT	Direct transfer trip conditions	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
ULTR	Unlatch trip conditions	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	!(51P1 + 51G1)
PT1	Permissive trip 1 (used for ECOMM = POTT, DCUB1, or DCUB2)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
PT2	Permissive trip 2 (used for ECOMM = DCUB2)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LOG1	Loss-of-guard 1 (used for ECOMM = DCUB1 or DCUB2)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LOG2	Loss of guard 2 (used for ECOMM = DCUB2)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
BT	Block trip (used for ECOMM = DCB)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
52A	Circuit breaker status	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	IN101
CL	Close conditions (other than automatic reclosing or	Valid range = Boolean equation using word bit	IN106 * LT5

	CLOSE command)	elements and the legal operators: !/\() * +	
ULCL	Unlatch close conditions	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	TRIP + !(LT5 + CLOSE) + !(LT4 + CLOSE + 79CY)
79RI	Reclose initiate	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	51P1T + 51G1T
79RIS	Reclose initiate supervision	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	52A + 79CY
79DTL	Drive-to-lockout	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	!SV7
79DLS	Drive-to-last shot	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	79LO
79SKP	Skip shot	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
79STL	Stall open interval timing	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	TRIP
79BRS	Block reset timing	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	79CY * (51P1 + 51G1)
79SEQ	Sequence coordination	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
79CLS	Reclose supervision	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
SET1	Set Latch Bit 1	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	!LT1 * PB1 * LT4 + !LT1 * RB5 * !LT4
SET2	Set Latch Bit 2	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	!LT2 * LT5 * PB2 * LT4 + !LT2 * LT5 * RB1 * !LT4
SET3	Set Latch Bit 3	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	!LT3 * PB3 * LT4
		Valid range = Boolean	

SET4	Set Latch Bit 4	equation using word bit elements and the legal operators: !/\()* +	!LT4 * PB5
SET5	Set Latch Bit 5	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	!LT5 * PB6 * LT4 + !LT5 * RB4 * !LT4
SET6	Set Latch Bit 6	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	IN106
SET7	Set Latch Bit 7	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	!LT7 * PB8 * LT4 + !LT7 * RB7 * !LT4
SET8	Set Latch Bit 8	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET9	Set Latch Bit 9	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET10	Set Latch Bit 10	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET11	Set Latch Bit 11	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET12	Set Latch Bit 12	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET13	Set Latch Bit 13	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET14	Set Latch Bit 14	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET15	Set Latch Bit 15	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET16	Set Latch Bit 16	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
RST1	Reset Latch Bit 1	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	LT1 * PB1 * LT4 + LT1 * RB6 * !LT4

RST2	Reset Latch Bit 2	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	$LT2 * PB2 * LT4 + !(79RS + 79CY + 79LO) + LT2 * LT5 * RB2 * !LT4$
RST3	Reset Latch Bit 3	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	$LT3 * PB3 * LT4$
RST4	Reset Latch Bit 4	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	$LT4 * (PB5 + SV4T)$
RST5	Reset Latch Bit 5	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	$LT5 * PB6 * LT4 + LT5 * RB3 * !LT4$
RST6	Reset latch Bit 6	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	/52A
RST7	Reset Latch Bit 7	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	$LT7 * PB8 * LT4 + LT7 * RB8 * !LT4$
RST8	Reset Latch Bit 8	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
RST9	Reset Latch Bit 9	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
RST10	Reset Latch Bit 10	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
RST11	Reset Latch Bit 11	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
RST12	Reset Latch Bit 12	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
RST13	Reset Latch Bit 13	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
RST14	Reset latch Bit 14	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
RST15	Reset Latch Bit 15	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
RST16	Reset Latch Bit 16	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
67P1TC	Level 1 phase	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67P2TC	Level 2 phase	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67P3TC	Level 3 phase	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67P4TC	Level 4 phase	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67N1TC	Level 1 neutral ground	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67N2TC	Level 2 neutral ground	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67N3TC	Level 3 neutral ground	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67N4TC	Level 4 neutral ground	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G1TC	Level 1 residual ground	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G2TC	Level 2 residual ground	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G3TC	Level 3 residual ground	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G4TC	Level 4 residual ground	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
		Valid range = Boolean equation using word bit	

67Q1TC	Level 1 negative-sequence	elements and the legal operators: !/\() * +	1
67Q2TC	Level 2 negative-sequence	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q3TC	Level 3 negative-sequence	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q4TC	Level 4 negative-sequence	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
51P1TC	Phase	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
51P2TC	Phase	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
51N1TC	Neutral Ground	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
51N2TC	Neutral Ground	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
51G1TC	Residual Ground	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	LT1
51G2TC	Residual Ground	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
51QTC	Negative-Sequence	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
SV1	SELogic Control Equation Variable 1	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	TRIP
SV2	SELogic Control Equation Variable 2	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	SVIT
SV3	SELogic Control Equation Variable 3	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	FAULT
			LT4 * !(PB1 +

SV4	SELogic Control Equation Variable 4	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	PB2 + PB3 + PB4 + PB6 + PB7 + PB8 + PB9 + PB10)
SV5	SELogic Control Equation Variable 5	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	OC * !LT4
SV6	SELogic Control Equation Variable 6	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	CC * !LT4
SV7	SELogic Control Equation Variable 7	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	LT2 * LT5
SV8	SELogic Control Equation Variable 8	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV9	SELogic Control Equation Variable 9	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV10	SELogic Control Equation Variable 10	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	!SV7
SV11	SELogic Control Equation Variable 11	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	!LT1
SV12	SELogic Control Equation Variable 12	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	LT5 * (50P1 + 51P1T) + !LT5 * 51P2T
SV13	SELogic Control Equation Variable 13	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	LT5 * (LT1 * 50G1 + LT1 * 51G1T) + !LT5 * 51G2T + 67G3T
SV14	SELogic Control Equation Variable 14	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	CLOSE
SV15	SELogic Control Equation Variable 15	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV16	SELogic Control Equation Variable 16	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
OUT101	Output Contact 101	Valid range = Boolean equation using word bit elements and the legal	TRIP + SV5T

		operators: !/\(\) * +	
OUT102	Output Contact 102	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	CLOSE + SV6T
OUT103	Output Contact 103	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
OUT104	Output Contact 104	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	TRIP
OUT105	Output Contact 105	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
OUT106	Output Contact 106	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
OUT107	Output Contact 107	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
LED1	(Ground Enabled)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	LT1
LED2	(Reclose Enabled)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	SV7
LED3	(Remote Enabled)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
LED4	(Alternate Settings)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	!SG1
LED5	(Lock)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	!LT4
LED6	(Hot Line Tag)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	!LT5
LED7	(Aux. 1)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	IN106 + LT6
		Valid range = Boolean equation using word bit	

LED8	(Aux. 2)	elements and the legal operators: !/\() * +	LT7
LED9	(Breaker Closed)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LED10	(Breaker Open)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LED12	(Trip)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	TRIP
LED13	(Inst)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	FAULT * !SV3T
LED14	(Comm)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	COMMT
LED15	(SOTF)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	SOTFT
LED16	(50)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	LT5 * 50P1 + !LT5 * (50P2 + 50G2)
LED17	(51)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	LT5 * (51P1T + 51G1T + 51QT) + !LT5 * (51P2T + 51G2T)
LED18	(81)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	81D1T
LED19	(Reset)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	79RS
LED20	(Cycle)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	79CY
LED21	(Lockout)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	79LO
LED25	(G)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	51G1
		Valid range = Boolean	

LED26	(N)	equation using word bit elements and the legal operators: !/\() * +	0
DP1	Display Point 1	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	52A
DP2	Display Point 2	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
DP3	Display Point 3	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	LT6
DP4	Display Point 4	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP5	Display Point 5	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP6	Display Point 6	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP7	Display Point 7	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP8	Display Point 8	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP9	Display Point 9	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP10	Display Point 10	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP11	Display Point 11	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP12	Display Point 12	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP13	Display Point 13	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0

DP14	Display Point 14	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP15	Display Point 15	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP16	Display Point 16	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS1	Select Setting Group 1	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
SS2	Select Setting Group 2	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS3	Select Setting Group 3	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS4	Select Setting Group 4	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS5	Select Setting Group 5	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS6	Select Setting Group 6	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
ER	Event report trigger conditions	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	/51P1 + /51G1 + /IN101
FAULT	Fault indication	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	(51P1 + 51G1 + 51Q) * LT5 + (51P2 + 51G2) * ! LT5
BSYNCH	Block synchronism check elements	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
CLMON	Close bus monitor	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
BKMON	Breaker monitor initiation	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
E32IV	Enable for V0 polarized and IN polarized elements	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
TMB1A	Channel A, transmit bit 1	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB2A	Channel A, transmit bit 2	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB3A	Channel A, transmit bit 3	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB4A	Channel A, transmit bit 4	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB5A	Channel A, transmit bit 5	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB6A	Channel A, transmit bit 6	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB7A	Channel A, transmit bit 7	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB8A	Channel A, transmit bit 8	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB1B	Channel B, transmit bit 1	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB2B	Channel B, transmit bit 2	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB3B	Channel B, transmit bit 3	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB4B	Channel B, transmit bit 4	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

TMB5B	Channel B, transmit bit 5	elements and the legal operators: !/\() * +	0
TMB6B	Channel B, transmit bit 6	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB7B	Channel B, transmit bit 7	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB8B	Channel B, transmit bit 8	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
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Setting	Description	Range	Value
TGR	Group Change Delay (cycles in 0.25 increments)	Range = 0,00 to 16000,00	0,00
NFREQ	Nominal Frequency (Hz)	Select: 50, 60	50
PHROT	Phase Rotation	Select: ABC, ACB	ABC
DATE_F	Date Format	Select: MDY, YMD	MDY
FP_TO	Front Panel Timeout (minutes in steps of 1)	Range = 1 to 30, OFF	15
SCROLLD	Display Update Rate (seconds)	Range = 1 to 60	2
FPNGD	Front Panel Neutral/Ground Display	Select: OFF, IN, IG	IG
LER	Length of Event Report (cycles)	Select: 15, 30	30
PRE	Cycle Length of Prefault in Event Report (cycles in increments of 1)	Range = 1 to 29	2
DCLOP	DC Battery LO Voltage Pickup (Vdc)	Range = 20,00 to 300,00, OFF	OFF
DCHIP	DC Battery HI Voltage Pickup (Vdc)	Range = 20,00 to 300,00, OFF	OFF
IN101D	Input 101 Debounce Time (cycles in 0.25 increments)	Range = 0,00 to 1,00, AC	0,50
IN102D	Input 102 Debounce Time (cycles in 0.25 increments)	Range = 0,00 to 1,00, AC	0,50
IN103D	Input 103 Debounce time (cycles in 0.25 increments)	Range = 0,00 to 1,00, AC	0,50
IN104D	Input 104 Debounce Time (cycles in 0.25 increments)	Range = 0,00 to 1,00, AC	0,50
IN105D	Input 105 Debounce Time (cycles in 0.25 increments)	Range = 0,00 to 1,00, AC	0,50
IN106D	Input 106 Debounce Time (cycles in 0.25 increments)	Range = 0,00 to 1,00, AC	0,50
EBMON	Breaker Monitor	Select: Y, N	Y
COSP1	Close/Open Operations Set Point 1 - max (operations)	Range = 0 to 65000	10000
COSP2	Close/Open Operations Set Point 2 - mid (operations)	Range = 0 to 65000	150
COSP3	Close/Open Operations Set Point 3 - min (operations)	Range = 0 to 65000	12
KASP1	kA(pri) Interrupted Set Point 1 - min (pri. in 0.01 kA steps)	Range = 0,00 to 999,00	1,20
KASP2	kA(pri) Interrupted Set Point 2 - mid (pri. in 0.01 kA steps)	Range = 0,00 to 999,00	8,00
KASP3	kA(pri) Interrupted Set Point 3 - max (pri. in 0.01 kA steps)	Range = 0,00 to 999,00	20,00
LED12L	Trip Latch LED 12	Select: Y, N	Y
LED13L	Trip Latch LED 13	Select: Y, N	Y
LED14L	Trip Latch LED 14	Select: Y, N	Y
LED15L	Trip Latch LED 15	Select: Y, N	Y
LED16L	Trip Latch LED 16	Select: Y, N	Y
LED17L	Trip Latch LED 17	Select: Y, N	Y
LED18L	Trip Latch LED 18	Select: Y, N	Y
LED19L	Trip Latch LED 19	Select: Y, N	N
LED20L	Trip Latch LED 20	Select: Y, N	N
LED21L	Trip Latch LED 21	Select: Y, N	N

LED25L	Trip Latch LED 25	Select: Y, N	Y
LED26L	Trip Latch LED 26	Select: Y, N	Y
RSTLED	Reset trip-latched LEDs when recloser closes	Select: Y, N	Y
PB9D	CLOSE operator control time delay (cycles)	Range = 0,00 to 3600,00	0,00
PB10D	TRIP operator control time delay (cycles)	Range = 0,00 to 3600,00	0,00
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Setting	Description	Range	Value
SER1	Sequential Events Recorder 1, 24 elements max. (enter NA to null)	Valid range = 0, NA or a list of relay elements.	TRIP, 51P1T, 51G1T, 50P1, 51P2T, 51G2T, IN101, IN102, IN103, IN104, IN105, IN106, 67G3T
SER2	Sequential Events Recorder 2, 24 elements max. (enter NA to null)	Valid range = 0, NA or a list of relay elements.	CLOSE, 52A, CF, PB1, PB2, PB3, PB4, PB5, PB6, OC, CC, RB1, RB2, RB3, RB4, RB5, RB6, RB7, RB8, LT1, LT2, LT3, LT4, LT5
SER3	Sequential Events Recorder 3, 24 elements max. (enter NA to null)	Valid range = 0, NA or a list of relay elements.	79RS, 79CY, 79LO, SH0, SH1, SH2, PB2, OUT101, OUT102, OUT103, OUT104, OUT105, OUT106, ALARM, SV5T, SV6T, SV7, LT6, LT7, PB8
LDLIST	Load Profile List, 15 elements max. (enter NA to null)	Valid range = 0, NA or a list of relay elements.	IA, IB, IC, IG, MW3DI, MW3DO, MVR3DI, MVR3DO, PF3
LDAR	Load Profile Acquisition Rate	Select: 5, 10, 15, 30, 60	15
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Setting	Description	Range	Value
NLB1	Local Bit 1 Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	NA
NLB2	Local Bit 2 Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	NA
NLB3	Local Bit 3 Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	NA
NLB4	Local Bit 4 Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	NA
NLB5	Local Bit 5 Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	NA
NLB6	Local Bit 6 Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	NA
NLB7	Local Bit 7 Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	NA
NLB8	Local Bit 8 Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	NA
NLB9	Local Bit 9 Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	NA
NLB10	Local Bit 10 Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	NA
NLB11	Local Bit 11 Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	NA
NLB12	Local Bit 12 Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	NA
NLB13	Local Bit 13 Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	NA
NLB14	Local Bit 14 Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	NA
NLB15	Local Bit 15 Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	NA
NLB16	Local Bit 16 Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	NA
CLB1	Clear Local Bit 1 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
CLB2	Clear Local Bit 2 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
CLB3	Clear Local Bit 3 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
CLB4	Clear Local Bit 4 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
CLB5	Clear Local Bit 5 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
CLB6	Clear Local Bit 6 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
		Range = ASCII string with	

CLB7	Clear Local Bit 7 Label (7 char; enter NA to null)	a maximum length of 7.	NA
CLB8	Clear Local Bit 8 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
CLB9	Clear Local Bit 9 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
CLB10	Clear Local Bit 10 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
CLB11	Clear Local Bit 11 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
CLB12	Clear Local Bit 12 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
CLB13	Clear Local Bit 13 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
CLB14	Clear Local Bit 14 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
CLB15	Clear Local Bit 15 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
CLB16	Clear Local Bit 16 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
SLB1	Set Local Bit 1 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
SLB2	Set Local Bit 2 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
SLB3	Set Local Bit 3 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
SLB4	Set Local Bit 4 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
SLB5	Set Local Bit 5 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
SLB6	Set Local Bit 6 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
SLB7	Set Local Bit 7 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
SLB8	Set Local Bit 8 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
SLB9	Set Local Bit 9 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
SLB10	Set Local Bit 10 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
SLB11	Set Local Bit 11 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
SLB12	Set Local Bit 12 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
SLB13	Set Local Bit 13 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
SLB14	Set Local Bit 14 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
SLB15	Set Local Bit 15 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
SLB16	Set Local Bit 16 Label (7 char; enter NA to null)	Range = ASCII string with	NA

		a maximum length of 7.	
PLB1	Pulse Local Bit 1 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
PLB2	Pulse Local Bit 2 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
PLB3	Pulse Local Bit 3 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
PLB4	Pulse Local Bit 4 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
PLB5	Pulse Local Bit 5 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
PLB6	Pulse Local Bit 6 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
PLB7	Pulse Local Bit 7 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
PLB8	Pulse Local Bit 8 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
PLB9	Pulse Local Bit 9 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
PLB10	Pulse Local Bit 10 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
PLB11	Pulse Local Bit 11 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
PLB12	Pulse Local Bit 12 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
PLB13	Pulse Local Bit 13 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
PLB14	Pulse Local Bit 14 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
PLB15	Pulse Local Bit 15 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
PLB16	Pulse Local Bit 16 Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	NA
DP1_1	Display Point 1 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	INT CERRADO
DP2_1	Display Point 2 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	AL_SAN JOSE
DP3_1	Display Point 3 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	TRIP X EDAC
DP4_1	Display Point 4 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP5_1	Display Point 5 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP6_1	Display Point 6 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP7_1	Display Point 7 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP8_1	Display Point 8 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP9_1	Display Point 9 Label (16 char; enter NA to null)	Range = ASCII string with	NA

		a maximum length of 16.	
DP10_1	Display Point 10 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP11_1	Display Point 11 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP12_1	Display Point 12 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP13_1	Display Point 13 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP14_1	Display Point 14 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP15_1	Display Point 15 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP16_1	Display Point 16 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP1_0	Display Point 1 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	INT ABIERTO
DP2_0	Display Point 2 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP3_0	Display Point 3 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP4_0	Display Point 4 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP5_0	Display Point 5 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP6_0	Display Point 6 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP7_0	Display Point 7 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP8_0	Display Point 8 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP9_0	Display Point 9 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP10_0	Display Point 10 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP11_0	Display Point 11 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP12_0	Display Point 12 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP13_0	Display Point 13 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP14_0	Display Point 14 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP15_0	Display Point 15 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
DP16_0	Display Point 16 Label (16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	NA
79LL	Last Shot Label (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	MAX RECONEX
79SL	Shot Counter Label (14 char; enter NA to null)	Range = ASCII string with	RECONEX

	a maximum length of 14.	HECHAS
Text		
	Top	

Setting	Range	Value
<input type="checkbox"/> Group : 1		
RID	Range = ASCII string with a maximum length of 30.	52C2 - ALIMENTADOR SAN JOSE
TID	Range = ASCII string with a maximum length of 30.	SUBESTACION BOLLENAR
CTR	Range = 1 to 6000	80
CTRN	Range = 1 to 10000	80
PTR	Range = 1,00 to 10000,00	120.00
PTRS	Range = 1,00 to 10000,00	120.00
ZOMAG	Range = 0,10 to 510,00	6.38
Z1MAG	Range = 0,10 to 510,00	2.14
ZOANG	Range = 40,00 to 90,00	72.47
Z1ANG	Range = 40,00 to 90,00	68.86
LL	Range = 0,10 to 999,00	4.84
EFLOC	Select: Y, N	N
E50P	Select: N, 1-6	2
50P1P	Range = 0,25 to 100,00, OFF	50.00
50P2P	Range = 0,25 to 100,00, OFF	50.00
50P3P	Range = 0,25 to 100,00, OFF	OFF
50P4P	Range = 0,25 to 100,00, OFF	OFF

<Filter is Empty>

Setting	Range	Value
50P5P	Range = 0,25 to 100,00, OFF	OFF
50P6P	Range = 0,25 to 100,00, OFF	OFF
67P1D	Range = 0,00 to 16000,00	0.00
67P2D	Range = 0,00 to 16000,00	0.00
67P3D	Range = 0,00 to 16000,00	0.00
67P4D	Range = 0,00 to 16000,00	0.00
50PP1P	Range = 1,00 to 170,00, OFF	OFF
50PP2P	Range = 1,00 to 170,00, OFF	OFF
50PP3P	Range = 1,00 to 170,00, OFF	OFF
50PP4P	Range = 1,00 to 170,00, OFF	OFF
E50N	Select: N, 1-6	N
50N1P	Range = 0,250 to 100,000, OFF	OFF
50N2P	Range = 0,250 to 100,000, OFF	OFF
50N3P	Range = 0,250 to 100,000, OFF	OFF
50N4P	Range = 0,250 to 100,000, OFF	OFF
50N5P	Range = 0,250 to 100,000, OFF	OFF
50N6P	Range = 0,250 to 100,000, OFF	OFF

<Filter is Empty>

Setting	Range	Value
67N1D	Range = 0,00 to 16000,00	0.00
67N2D	Range = 0,00 to 16000,00	0.00
67N3D	Range = 0,00 to 16000,00	0.00
67N4D	Range = 0,00 to 16000,00	0.00
E50G	Select: N, 1-6	3
50G1P	Range = 0,25 to 100,00, OFF	33.75
50G2P	Range = 0,25 to 100,00, OFF	33.75
50G3P	Range = 0,25 to 100,00, OFF	0.25
50G4P	Range = 0,25 to 100,00, OFF	OFF
50G5P	Range = 0,25 to 100,00, OFF	OFF
50G6P	Range = 0,25 to 100,00, OFF	OFF
67G1D	Range = 0,00 to 16000,00	0.00
67G2D	Range = 0,00 to 16000,00	0.00
67G3D	Range = 0,00 to 16000,00	4500.00
67G4D	Range = 0,00 to 16000,00	0.00
E50Q	Select: N, 1-6	N
50Q1P	Range = 0,25 to 100,00, OFF	OFF
50Q2P	Range = 0,25 to 100,00, OFF	OFF
50Q3P	Range = 0,25 to 100,00, OFF	OFF

<Filter is Empty>



Setting	Range	Value
50Q4P	Range = 0,25 to 100,00, OFF	OFF
50Q5P	Range = 0,25 to 100,00, OFF	OFF
50Q6P	Range = 0,25 to 100,00, OFF	OFF
67Q1D	Range = 0,00 to 16000,00	0.00
67Q2D	Range = 0,00 to 16000,00	0.00
67Q3D	Range = 0,00 to 16000,00	0.00
67Q4D	Range = 0,00 to 16000,00	0.00
E51P	Select: N, 1, 2	2
51P1P	Range = 0,50 to 16,00, OFF	5.63
51P1C	Select: U1-U5, C1-C5, Recloser-Curves	133
51P1TD	Range = 0,10 to 2,00	2.00
51P1RS	Select: Y, N	N
51P1CT	Range = 0,00 to 60,00	0.00
51P1MR	Range = 0,00 to 60,00	0.00
51P2P	Range = 0,50 to 16,00, OFF	5.63
51P2C	Select: U1-U5, C1-C5, Recloser-Curves	101

<Filter is Empty>

Setting	Range	Value
51P2TD	Range = 0,10 to 2,00	1.00
51P2RS	Select: Y, N	N
51P2CT	Range = 0,00 to 60,00	0.00
51P2MR	Range = 0,00 to 60,00	0.00
E51N	Select: N, 1, 2	N
51N1P	Range = 0,500 to 16,000, OFF	OFF
51N1C	Select: U1-U5, C1-C5, Recloser-Curves	U3
51N1TD	Range = 0,50 to 15,00	1.50
51N1RS	Select: Y, N	N
51N1CT	Range = 0,00 to 60,00	0.00
51N1MR	Range = 0,00 to 60,00	0.00
51N2P	Range = 0,500 to 16,000, OFF	OFF
51N2C	Select: U1-U5, C1-C5, Recloser-Curves	U3
51N2TD	Range = 0,50 to 15,00	1.50

<Filter is Empty>



Setting	Range	Value
51N2RS	Select: Y, N	N
51N2CT	Range = 0,00 to 60,00	0.00
51N2MR	Range = 0,00 to 60,00	0.00
E51G	Select: N, 1, 2	2
51G1P	Range = 0,50 to 16,00, OFF	1.00
51G1C	Select: U1-U5, C1-C5, Recloser-Curves	C1
51G1TD	Range = 0,05 to 1,00	0.80
51G1RS	Select: Y, N	N
51G1CT	Range = 0,00 to 60,00	0.00
51G1MR	Range = 0,00 to 60,00	0.00
51G2P	Range = 0,50 to 16,00, OFF	1.00
51G2C	Select: U1-U5, C1-C5, Recloser-Curves	102
51G2TD	Range = 0,10 to 2,00	1.00
51G2RS	Select: Y, N	N

<Filter is Empty>

Setting	Range	Value
51G2CT	Range = 0,00 to 60,00	0.00
51G2MR	Range = 0,00 to 60,00	0.00
E51Q	Select: Y, N	N
51QP	Range = 0,50 to 16,00, OFF	OFF
51QC	Select: U1-U5, C1-C5, Recloser-Curves	C2
51QTD	Range = 0,05 to 1,00	0.63
51QRS	Select: Y, N	N
51QCT	Range = 0,00 to 60,00	0.00
51QMR	Range = 0,00 to 60,00	0.00
ELOAD	Select: Y, N	N
ZLF	Range = 0,10 to 128,00	6.50
ZLR	Range = 0,10 to 128,00	6.50
PLAF	Range = -90,00 to 90,00	30.00
NLAF	Range = -90,00 to 90,00	-30.00
PLAR	Range = 90,00 to 270,00	150.00
NLAR	Range = 90,00 to 270,00	210.00
E32	Select: Y, AUTO, N	N
ELOP	Select: Y, Y1, N	N

<Filter is Empty>

Setting	Range	Value
DIR1	Select: F, R, N	N
DIR2	Select: F, R, N	N
DIR3	Select: F, R, N	N
DIR4	Select: F, R, N	N
ORDER	Select: I, Q, V, OFF	OFF
50P32P	Range = 0,50 to 10,00	3.00
Z2F	Range = -128,00 to 128,00	1.08
Z2R	Range = -128,00 to 128,00	1.28
50QFP	Range = 0,25 to 5,00	0.50
50QRP	Range = 0,25 to 5,00	0.25
a2	Range = 0,02 to 0,50	0.10
k2	Range = 0,10 to 1,20	0.20
50GFP	Range = 0,25 to 5,00	0.50
50GRP	Range = 0,25 to 5,00	0.25
a0	Range = 0,02 to 0,50	0.10
Z0F	Range = -128,00 to 128,00	3.20
Z0R	Range = -128,00 to 128,00	3.40
EVOLT	Select: Y, N	Y
27P1P	Range = 0,00 to 300,00, OFF	OFF

<Filter is Empty>



Setting	Range	Value
27P2P	Range = 0,00 to 300,00, OFF	OFF
59P1P	Range = 0,00 to 300,00, OFF	OFF
59P2P	Range = 0,00 to 300,00, OFF	OFF
59N1P	Range = 0,00 to 300,00, OFF	OFF
59N2P	Range = 0,00 to 300,00, OFF	OFF
59QP	Range = 0,00 to 200,00, OFF	OFF
59V1P	Range = 0,00 to 300,00, OFF	OFF
27SP	Range = 0,00 to 300,00, OFF	OFF
59S1P	Range = 0,00 to 300,00, OFF	OFF
59S2P	Range = 0,00 to 300,00, OFF	OFF
27PP	Range = 0,00 to 520,00, OFF	OFF
59PP	Range = 0,00 to 520,00, OFF	OFF
E25	Select: Y, N	N
25VLO	Range = 0,00 to 300,00	105.00
25VHI	Range = 0,00 to 300,00	130.00
25SF	Range = 0,005 to 0,500	0.042
25ANG1	Range = 0,00 to 80,00	25.00
25ANG2	Range = 0,00 to 80,00	40.00

<Filter is Empty>



Setting	Range	Value
SYNCP	Range = 0 to 330, VA, VB, VC	VA
TCLOSD	Range = 0,00 to 60,00	3.00
E81	Select: N, 1-6	1
27B81P	Range = 25,00 to 300,00	40.00
81D1P	Range = 40,10 to 65,00, OFF	48.55
81D1D	Range = 2,00 to 16000,00	10.00
81D2P	Range = 40,10 to 65,00, OFF	OFF
81D2D	Range = 2,00 to 16000,00	2.00
81D3P	Range = 40,10 to 65,00, OFF	OFF
81D3D	Range = 2,00 to 16000,00	2.00
81D4P	Range = 40,10 to 65,00, OFF	OFF
81D4D	Range = 2,00 to 16000,00	2.00
81D5P	Range = 40,10 to 65,00, OFF	OFF
81D5D	Range = 2,00 to 16000,00	2.00
81D6P	Range = 40,10 to 65,00, OFF	OFF
81D6D	Range = 2,00 to 16000,00	2.00
E79	Select: N, 1-4	1
79OI1	Range = 0,00 to 999999,00	250.00

<Filter is Empty>

Setting	Range	Value
79OI2	Range = 0,00 to 999999,00	0.00
79OI3	Range = 0,00 to 999999,00	0.00
79OI4	Range = 0,00 to 999999,00	0.00
79RSD	Range = 0,00 to 999999,00	3000.00
79RSLD	Range = 0,00 to 999999,00	500.00
79CLSD	Range = 0,00 to 999999,00, OFF	0.00
ESOTF	Select: Y, N	Y
CLOEN D	Range = 0,00 to 16000,00, OFF	OFF
52AEND	Range = 0,00 to 16000,00, OFF	50.00
SOTFD	Range = 0,50 to 16000,00	25.00
ECOMM	Select: N, POTT, DCUB1, DCUB2, DCB	N
Z3RBD	Range = 0,00 to 16000,00	5.00
EBLKD	Range = 0,00 to 16000,00, OFF	10.00
ETDPU	Range = 0,00 to 16000,00, OFF	2.00
EDURD	Range = 0,00 to 16000,00	3.50
EWFC	Select: Y, N	N

<Filter is Empty>

Setting	Range	Value
GARD1 D	Range = 0,00 to 16000,00	1.00
UBDUR D	Range = 0,25 to 16000,00	9.00
UBEND	Range = 0,00 to 16000,00	0.50
Z3XPU	Range = 0,00 to 16000,00	2.00
Z3XD	Range = 0,00 to 16000,00	5.00
BTXD	Range = 0,00 to 16000,00	0.00
67P2SD	Range = 0,00 to 60,00	1.00
67N2SD	Range = 0,00 to 60,00	1.00
67G2SD	Range = 0,00 to 60,00	1.00
67Q2SD	Range = 0,00 to 60,00	1.00
EDEM	Select: THM, ROL	THM
DMTC	Select: 5, 10, 15, 30, 60	5
PDEMP	Range = 0,50 to 16,00, OFF	5.00
NDEMP	Range = 0,500 to 16,000, OFF	OFF
GDEMP	Range = 0,50 to 16,00, OFF	OFF
QDEMP	Range = 0,50 to 16,00, OFF	OFF

<Filter is Empty>



Setting	Range	Value
TDURD	Range = 4,00 to 16000,00	9.00
CFD	Range = 0,00 to 16000,00, OFF	30.00
3POD	Range = 0,00 to 60,00	1.00
50LP	Range = 0,25 to 100,00, OFF	0.25
ESV	Select: N, 1-16	16
SV1PU	Range = 0,00 to 999999,00	4.00
SV2PU	Range = 0,00 to 999999,00	6.00
SV3PU	Range = 0,00 to 999999,00	4.00
SV4PU	Range = 0,00 to 999999,00	500.00
SV5PU	Range = 0,00 to 999999,00	0.00
SV6PU	Range = 0,00 to 999999,00	0.00
SV7PU	Range = 0,00 to 16000,00	0.00
SV8PU	Range = 0,00 to 16000,00	0.00
SV9PU	Range = 0,00 to 16000,00	0.00
SV10PU	Range = 0,00 to 16000,00	0.00
SV11PU	Range = 0,00 to 16000,00	0.00
SV12PU	Range = 0,00 to 16000,00	0.00

<Filter is Empty>



Setting	Range	Value
SV13PU	Range = 0,00 to 16000,00	0.00
SV14PU	Range = 0,00 to 16000,00	0.00
SV15PU	Range = 0,00 to 16000,00	0.00
SV16PU	Range = 0,00 to 16000,00	0.00
SV1DO	Range = 0,00 to 999999,00	9.00
SV2DO	Range = 0,00 to 999999,00	9.00
SV3DO	Range = 0,00 to 999999,00	0.00
SV4DO	Range = 0,00 to 999999,00	0.00
SV5DO	Range = 0,00 to 999999,00	20.00
SV6DO	Range = 0,00 to 999999,00	20.00
SV7DO	Range = 0,00 to 16000,00	0.00
SV8DO	Range = 0,00 to 16000,00	0.00
SV9DO	Range = 0,00 to 16000,00	0.00
SV10DO	Range = 0,00 to 16000,00	0.00
SV11DO	Range = 0,00 to 16000,00	0.00

<Filter is Empty>

Setting	Range	Value
SV12DO	Range = 0,00 to 16000,00	500.00
SV13DO	Range = 0,00 to 16000,00	500.00
SV14DO	Range = 0,00 to 16000,00	500.00
SV15DO	Range = 0,00 to 16000,00	0.00
SV16DO	Range = 0,00 to 16000,00	0.00

 Group : 2

RID	Range = ASCII string with a maximum length of 30.	52C2 - ALIMENTADOR SAN JOSE
TID	Range = ASCII string with a maximum length of 30.	SUBESTACION BOLLENAR
CTR	Range = 1 to 6000	80
CTRN	Range = 1 to 10000	80
PTR	Range = 1,00 to 10000,00	120.00
PTRS	Range = 1,00 to 10000,00	120.00
ZOMAG	Range = 0,10 to 510,00	6.38
Z1MAG	Range = 0,10 to 510,00	2.14
ZOANG	Range = 40,00 to 90,00	72.47

<Filter is Empty>



Setting	Range	Value
Z1ANG	Range = 40,00 to 90,00	68.86
LL	Range = 0,10 to 999,00	4.84
EFLOC	Select: Y, N	N
E50P	Select: N, 1-6	2
50P1P	Range = 0,25 to 100,00, OFF	50.00
50P2P	Range = 0,25 to 100,00, OFF	50.00
50P3P	Range = 0,25 to 100,00, OFF	OFF
50P4P	Range = 0,25 to 100,00, OFF	OFF
50P5P	Range = 0,25 to 100,00, OFF	OFF
50P6P	Range = 0,25 to 100,00, OFF	OFF
67P1D	Range = 0,00 to 16000,00	0.00
67P2D	Range = 0,00 to 16000,00	0.00
67P3D	Range = 0,00 to 16000,00	0.00
67P4D	Range = 0,00 to 16000,00	0.00
50PP1P	Range = 1,00 to 170,00, OFF	OFF
50PP2P	Range = 1,00 to 170,00, OFF	OFF
50PP3P	Range = 1,00 to 170,00, OFF	OFF

<Filter is Empty>



Setting	Range	Value
50PP4P	Range = 1,00 to 170,00, OFF	OFF
E50N	Select: N, 1-6	N
50N1P	Range = 0,250 to 100,000, OFF	OFF
50N2P	Range = 0,250 to 100,000, OFF	OFF
50N3P	Range = 0,250 to 100,000, OFF	OFF
50N4P	Range = 0,250 to 100,000, OFF	OFF
50N5P	Range = 0,250 to 100,000, OFF	OFF
50N6P	Range = 0,250 to 100,000, OFF	OFF
67N1D	Range = 0,00 to 16000,00	0.00
67N2D	Range = 0,00 to 16000,00	0.00
67N3D	Range = 0,00 to 16000,00	0.00
67N4D	Range = 0,00 to 16000,00	0.00
E50G	Select: N, 1-6	3
50G1P	Range = 0,25 to 100,00, OFF	33.75
50G2P	Range = 0,25 to 100,00, OFF	33.75
50G3P	Range = 0,25 to 100,00, OFF	0.25
50G4P	Range = 0,25 to 100,00, OFF	OFF
50G5P	Range = 0,25 to 100,00, OFF	OFF
50G6P	Range = 0,25 to 100,00, OFF	OFF

<Filter is Empty>

Setting	Range	Value
67G1D	Range = 0,00 to 16000,00	0.00
67G2D	Range = 0,00 to 16000,00	0.00
67G3D	Range = 0,00 to 16000,00	4500.00
67G4D	Range = 0,00 to 16000,00	0.00
E50Q	Select: N, 1-6	N
50Q1P	Range = 0,25 to 100,00, OFF	OFF
50Q2P	Range = 0,25 to 100,00, OFF	OFF
50Q3P	Range = 0,25 to 100,00, OFF	OFF
50Q4P	Range = 0,25 to 100,00, OFF	OFF
50Q5P	Range = 0,25 to 100,00, OFF	OFF
50Q6P	Range = 0,25 to 100,00, OFF	OFF
67Q1D	Range = 0,00 to 16000,00	0.00
67Q2D	Range = 0,00 to 16000,00	0.00
67Q3D	Range = 0,00 to 16000,00	0.00
67Q4D	Range = 0,00 to 16000,00	0.00
E51P	Select: N, 1, 2	2
51P1P	Range = 0,50 to 16,00, OFF	5.63
51P1C	Select: U1-U5, C1-C5, Recloser-Curves	133
51P1TD	Range = 0,10 to 2,00	2.00

<Filter is Empty>



Setting	Range	Value
51P1RS	Select: Y, N	N
51P1CT	Range = 0,00 to 60,00	0.00
51P1MR	Range = 0,00 to 60,00	0.00
51P2P	Range = 0,50 to 16,00, OFF	5.63
51P2C	Select: U1-U5, C1-C5, Recloser-Curves	101
51P2TD	Range = 0,10 to 2,00	1.00
51P2RS	Select: Y, N	N
51P2CT	Range = 0,00 to 60,00	0.00
51P2MR	Range = 0,00 to 60,00	0.00
E51N	Select: N, 1, 2	N
51N1P	Range = 0,500 to 16,000, OFF	OFF
51N1C	Select: U1-U5, C1-C5, Recloser-Curves	U3
51N1TD	Range = 0,50 to 15,00	1.50
51N1RS	Select: Y, N	N

<Filter is Empty>



Setting	Range	Value
51N1CT	Range = 0,00 to 60,00	0.00
51N1MR	Range = 0,00 to 60,00	0.00
51N2P	Range = 0,500 to 16,000, OFF	OFF
51N2C	Select: U1-U5, C1-C5, Recloser-Curves	U3
51N2TD	Range = 0,50 to 15,00	1.50
51N2RS	Select: Y, N	N
51N2CT	Range = 0,00 to 60,00	0.00
51N2MR	Range = 0,00 to 60,00	0.00
E51G	Select: N, 1, 2	2
51G1P	Range = 0,50 to 16,00, OFF	1.00
51G1C	Select: U1-U5, C1-C5, Recloser-Curves	C1
51G1TD	Range = 0,05 to 1,00	0.80
51G1RS	Select: Y, N	N
51G1CT	Range = 0,00 to 60,00	0.00

<Filter is Empty>

Setting	Range	Value
51G1MR	Range = 0,00 to 60,00	0.00
51G2P	Range = 0,50 to 16,00, OFF	1.00
51G2C	Select: U1-U5, C1-C5, Recloser-Curves	102
51G2TD	Range = 0,10 to 2,00	1.00
51G2RS	Select: Y, N	N
51G2CT	Range = 0,00 to 60,00	0.00
51G2MR	Range = 0,00 to 60,00	0.00
E51Q	Select: Y, N	N
51QP	Range = 0,50 to 16,00, OFF	OFF
51QC	Select: U1-U5, C1-C5, Recloser-Curves	C2
51QTD	Range = 0,05 to 1,00	0.63
51QRS	Select: Y, N	N
51QCT	Range = 0,00 to 60,00	0.00
51QMR	Range = 0,00 to 60,00	0.00
ELOAD	Select: Y, N	N
ZLF	Range = 0,10 to 128,00	6.50

<Filter is Empty>



Setting	Range	Value
ZLR	Range = 0,10 to 128,00	6.50
PLAF	Range = -90,00 to 90,00	30.00
NLAF	Range = -90,00 to 90,00	-30.00
PLAR	Range = 90,00 to 270,00	150.00
NLAR	Range = 90,00 to 270,00	210.00
E32	Select: Y, AUTO, N	N
ELOP	Select: Y, Y1, N	N
DIR1	Select: F, R, N	N
DIR2	Select: F, R, N	N
DIR3	Select: F, R, N	N
DIR4	Select: F, R, N	N
ORDER	Select: I, Q, V, OFF	OFF
50P32P	Range = 0,50 to 10,00	3.00
Z2F	Range = -128,00 to 128,00	1.08
Z2R	Range = -128,00 to 128,00	1.28
50QFP	Range = 0,25 to 5,00	0.50
50QRP	Range = 0,25 to 5,00	0.25
a2	Range = 0,02 to 0,50	0.10
k2	Range = 0,10 to 1,20	0.20

<Filter is Empty>

Setting	Range	Value
50GFP	Range = 0,25 to 5,00	0.50
50GRP	Range = 0,25 to 5,00	0.25
a0	Range = 0,02 to 0,50	0.10
Z0F	Range = -128,00 to 128,00	3.20
Z0R	Range = -128,00 to 128,00	3.40
EVOLT	Select: Y, N	Y
27P1P	Range = 0,00 to 300,00, OFF	OFF
27P2P	Range = 0,00 to 300,00, OFF	OFF
59P1P	Range = 0,00 to 300,00, OFF	OFF
59P2P	Range = 0,00 to 300,00, OFF	OFF
59N1P	Range = 0,00 to 300,00, OFF	OFF
59N2P	Range = 0,00 to 300,00, OFF	OFF
59QP	Range = 0,00 to 200,00, OFF	OFF
59V1P	Range = 0,00 to 300,00, OFF	OFF
27SP	Range = 0,00 to 300,00, OFF	OFF
59S1P	Range = 0,00 to 300,00, OFF	OFF
59S2P	Range = 0,00 to 300,00, OFF	OFF
27PP	Range = 0,00 to 520,00, OFF	OFF
59PP	Range = 0,00 to 520,00, OFF	OFF

<Filter is Empty>

Setting	Range	Value
E25	Select: Y, N	N
25VLO	Range = 0,00 to 300,00	105.00
25VHI	Range = 0,00 to 300,00	130.00
25SF	Range = 0,005 to 0,500	0.042
25ANG1	Range = 0,00 to 80,00	25.00
25ANG2	Range = 0,00 to 80,00	40.00
SYNCP	Range = 0 to 330, VA, VB, VC	VA
TCLOSD	Range = 0,00 to 60,00	3.00
E81	Select: N, 1-6	1
27B81P	Range = 25,00 to 300,00	40.00
81D1P	Range = 40,10 to 65,00, OFF	48.55
81D1D	Range = 2,00 to 16000,00	10.00
81D2P	Range = 40,10 to 65,00, OFF	OFF
81D2D	Range = 2,00 to 16000,00	2.00
81D3P	Range = 40,10 to 65,00, OFF	OFF
81D3D	Range = 2,00 to 16000,00	2.00
81D4P	Range = 40,10 to 65,00, OFF	OFF

<Filter is Empty>

Setting	Range	Value
81D4D	Range = 2,00 to 16000,00	2.00
81D5P	Range = 40,10 to 65,00, OFF	OFF
81D5D	Range = 2,00 to 16000,00	2.00
81D6P	Range = 40,10 to 65,00, OFF	OFF
81D6D	Range = 2,00 to 16000,00	2.00
E79	Select: N, 1-4	1
79OI1	Range = 0,00 to 999999,00	250.00
79OI2	Range = 0,00 to 999999,00	0.00
79OI3	Range = 0,00 to 999999,00	0.00
79OI4	Range = 0,00 to 999999,00	0.00
79RSD	Range = 0,00 to 999999,00	3000.00
79RSLD	Range = 0,00 to 999999,00	500.00
79CLSD	Range = 0,00 to 999999,00, OFF	0.00
ESOTF	Select: Y, N	Y
CLOEN D	Range = 0,00 to 16000,00, OFF	OFF
52AEND	Range = 0,00 to 16000,00, OFF	50.00
SOTFD	Range = 0,50 to 16000,00	25.00

<Filter is Empty>

Setting	Range	Value
ECOMM	Select: N, POTT, DCUB1, DCUB2, DCB	N
Z3RBD	Range = 0,00 to 16000,00	5.00
EBLKD	Range = 0,00 to 16000,00, OFF	10.00
ETDPU	Range = 0,00 to 16000,00, OFF	2.00
EDURD	Range = 0,00 to 16000,00	3.50
EWFC	Select: Y, N	N
GARD1 D	Range = 0,00 to 16000,00	1.00
UBDUR D	Range = 0,25 to 16000,00	9.00
UBEND	Range = 0,00 to 16000,00	0.50
Z3XPU	Range = 0,00 to 16000,00	2.00
Z3XD	Range = 0,00 to 16000,00	5.00
BTXD	Range = 0,00 to 16000,00	0.00
67P2SD	Range = 0,00 to 60,00	1.00
67N2SD	Range = 0,00 to 60,00	1.00
67G2SD	Range = 0,00 to 60,00	1.00

<Filter is Empty>



Setting	Range	Value
67Q2SD	Range = 0,00 to 60,00	1.00
EDEM	Select: THM, ROL	THM
DMTC	Select: 5, 10, 15, 30, 60	5
PDEMP	Range = 0,50 to 16,00, OFF	5.00
NDEMP	Range = 0,500 to 16,000, OFF	OFF
GDEMP	Range = 0,50 to 16,00, OFF	OFF
QDEMP	Range = 0,50 to 16,00, OFF	OFF
TDURD	Range = 4,00 to 16000,00	9.00
CFD	Range = 0,00 to 16000,00, OFF	30.00
3POD	Range = 0,00 to 60,00	1.00
50LP	Range = 0,25 to 100,00, OFF	0.25
ESV	Select: N, 1-16	16
SV1PU	Range = 0,00 to 999999,00	4.00
SV2PU	Range = 0,00 to 999999,00	6.00
SV3PU	Range = 0,00 to 999999,00	4.00
SV4PU	Range = 0,00 to 999999,00	500.00
SV5PU	Range = 0,00 to 999999,00	0.00
SV6PU	Range = 0,00 to 999999,00	0.00
SV7PU	Range = 0,00 to 16000,00	0.00

<Filter is Empty>



Setting	Range	Value
SV8PU	Range = 0,00 to 16000,00	0.00
SV9PU	Range = 0,00 to 16000,00	0.00
SV10PU	Range = 0,00 to 16000,00	0.00
SV11PU	Range = 0,00 to 16000,00	0.00
SV12PU	Range = 0,00 to 16000,00	0.00
SV13PU	Range = 0,00 to 16000,00	0.00
SV14PU	Range = 0,00 to 16000,00	0.00
SV15PU	Range = 0,00 to 16000,00	0.00
SV16PU	Range = 0,00 to 16000,00	0.00
SV1DO	Range = 0,00 to 999999,00	9.00
SV2DO	Range = 0,00 to 999999,00	9.00
SV3DO	Range = 0,00 to 999999,00	0.00
SV4DO	Range = 0,00 to 999999,00	0.00
SV5DO	Range = 0,00 to 999999,00	20.00
SV6DO	Range = 0,00 to 999999,00	20.00

<Filter is Empty>

Setting	Range	Value
SV7DO	Range = 0,00 to 16000,00	0.00
SV8DO	Range = 0,00 to 16000,00	0.00
SV9DO	Range = 0,00 to 16000,00	0.00
SV10DO	Range = 0,00 to 16000,00	0.00
SV11DO	Range = 0,00 to 16000,00	0.00
SV12DO	Range = 0,00 to 16000,00	500.00
SV13DO	Range = 0,00 to 16000,00	500.00
SV14DO	Range = 0,00 to 16000,00	500.00
SV15DO	Range = 0,00 to 16000,00	0.00
SV16DO	Range = 0,00 to 16000,00	0.00

 Group : 3

RID	Range = ASCII string with a maximum length of 30.	52C2 - ALIMENTADOR SAN JOSE
TID	Range = ASCII string with a maximum length of 30.	SUBESTACION BOLLENAR

<Filter is Empty>



Setting	Range	Value
CTR	Range = 1 to 6000	80
CTRN	Range = 1 to 10000	80
PTR	Range = 1,00 to 10000,00	120.00
PTRS	Range = 1,00 to 10000,00	120.00
Z0MAG	Range = 0,10 to 510,00	6.38
Z1MAG	Range = 0,10 to 510,00	2.14
Z0ANG	Range = 40,00 to 90,00	72.47
Z1ANG	Range = 40,00 to 90,00	68.86
LL	Range = 0,10 to 999,00	4.84
EFLOC	Select: Y, N	N
E50P	Select: N, 1-6	2
50P1P	Range = 0,25 to 100,00, OFF	50.00
50P2P	Range = 0,25 to 100,00, OFF	50.00
50P3P	Range = 0,25 to 100,00, OFF	OFF
50P4P	Range = 0,25 to 100,00, OFF	OFF
50P5P	Range = 0,25 to 100,00, OFF	OFF
50P6P	Range = 0,25 to 100,00, OFF	OFF
67P1D	Range = 0,00 to 16000,00	0.00
67P2D	Range = 0,00 to 16000,00	0.00

<Filter is Empty>

Setting	Range	Value
67P3D	Range = 0,00 to 16000,00	0.00
67P4D	Range = 0,00 to 16000,00	0.00
50PP1P	Range = 1,00 to 170,00, OFF	OFF
50PP2P	Range = 1,00 to 170,00, OFF	OFF
50PP3P	Range = 1,00 to 170,00, OFF	OFF
50PP4P	Range = 1,00 to 170,00, OFF	OFF
E50N	Select: N, 1-6	N
50N1P	Range = 0,250 to 100,000, OFF	OFF
50N2P	Range = 0,250 to 100,000, OFF	OFF
50N3P	Range = 0,250 to 100,000, OFF	OFF
50N4P	Range = 0,250 to 100,000, OFF	OFF
50N5P	Range = 0,250 to 100,000, OFF	OFF
50N6P	Range = 0,250 to 100,000, OFF	OFF
67N1D	Range = 0,00 to 16000,00	0.00
67N2D	Range = 0,00 to 16000,00	0.00
67N3D	Range = 0,00 to 16000,00	0.00
67N4D	Range = 0,00 to 16000,00	0.00

<Filter is Empty>



Setting	Range	Value
E50G	Select: N, 1-6	3
50G1P	Range = 0,25 to 100,00, OFF	33.75
50G2P	Range = 0,25 to 100,00, OFF	33.75
50G3P	Range = 0,25 to 100,00, OFF	0.25
50G4P	Range = 0,25 to 100,00, OFF	OFF
50G5P	Range = 0,25 to 100,00, OFF	OFF
50G6P	Range = 0,25 to 100,00, OFF	OFF
67G1D	Range = 0,00 to 16000,00	0.00
67G2D	Range = 0,00 to 16000,00	0.00
67G3D	Range = 0,00 to 16000,00	4500.00
67G4D	Range = 0,00 to 16000,00	0.00
E50Q	Select: N, 1-6	N
50Q1P	Range = 0,25 to 100,00, OFF	OFF
50Q2P	Range = 0,25 to 100,00, OFF	OFF
50Q3P	Range = 0,25 to 100,00, OFF	OFF
50Q4P	Range = 0,25 to 100,00, OFF	OFF
50Q5P	Range = 0,25 to 100,00, OFF	OFF
50Q6P	Range = 0,25 to 100,00, OFF	OFF
67Q1D	Range = 0,00 to 16000,00	0.00

<Filter is Empty>

Setting	Range	Value
67Q2D	Range = 0,00 to 16000,00	0.00
67Q3D	Range = 0,00 to 16000,00	0.00
67Q4D	Range = 0,00 to 16000,00	0.00
E51P	Select: N, 1, 2	2
51P1P	Range = 0,50 to 16,00, OFF	5.63
51P1C	Select: U1-U5, C1-C5, Recloser-Curves	133
51P1TD	Range = 0,10 to 2,00	2.00
51P1RS	Select: Y, N	N
51P1CT	Range = 0,00 to 60,00	0.00
51P1MR	Range = 0,00 to 60,00	0.00
51P2P	Range = 0,50 to 16,00, OFF	5.63
51P2C	Select: U1-U5, C1-C5, Recloser-Curves	101
51P2TD	Range = 0,10 to 2,00	1.00
51P2RS	Select: Y, N	N
51P2CT	Range = 0,00 to 60,00	0.00

<Filter is Empty>



Setting	Range	Value
51P2MR	Range = 0,00 to 60,00	0.00
E51N	Select: N, 1, 2	N
51N1P	Range = 0,500 to 16,000, OFF	OFF
51N1C	Select: U1-U5, C1-C5, Recloser-Curves	U3
51N1TD	Range = 0,50 to 15,00	1.50
51N1RS	Select: Y, N	N
51N1CT	Range = 0,00 to 60,00	0.00
51N1MR	Range = 0,00 to 60,00	0.00
51N2P	Range = 0,500 to 16,000, OFF	OFF
51N2C	Select: U1-U5, C1-C5, Recloser-Curves	U3
51N2TD	Range = 0,50 to 15,00	1.50
51N2RS	Select: Y, N	N
51N2CT	Range = 0,00 to 60,00	0.00
51N2MR	Range = 0,00 to 60,00	0.00

<Filter is Empty>

Setting	Range	Value
E51G	Select: N, 1, 2	2
51G1P	Range = 0,50 to 16,00, OFF	1.00
51G1C	Select: U1-U5, C1-C5, Recloser-Curves	C1
51G1TD	Range = 0,05 to 1,00	0.80
51G1RS	Select: Y, N	N
51G1CT	Range = 0,00 to 60,00	0.00
51G1MR	Range = 0,00 to 60,00	0.00
51G2P	Range = 0,50 to 16,00, OFF	1.00
51G2C	Select: U1-U5, C1-C5, Recloser-Curves	102
51G2TD	Range = 0,10 to 2,00	1.00
51G2RS	Select: Y, N	N
51G2CT	Range = 0,00 to 60,00	0.00
51G2MR	Range = 0,00 to 60,00	0.00
E51Q	Select: Y, N	N
51QP	Range = 0,50 to 16,00, OFF	OFF

<Filter is Empty>

Setting	Range	Value
51QC	Select: U1-U5, C1-C5, Recloser-Curves	C2
51QTD	Range = 0,05 to 1,00	0.63
51QRS	Select: Y, N	N
51QCT	Range = 0,00 to 60,00	0.00
51QMR	Range = 0,00 to 60,00	0.00
ELOAD	Select: Y, N	N
ZLF	Range = 0,10 to 128,00	6.50
ZLR	Range = 0,10 to 128,00	6.50
PLAF	Range = -90,00 to 90,00	30.00
NLAF	Range = -90,00 to 90,00	-30.00
PLAR	Range = 90,00 to 270,00	150.00
NLAR	Range = 90,00 to 270,00	210.00
E32	Select: Y, AUTO, N	N
ELOP	Select: Y, Y1, N	N
DIR1	Select: F, R, N	N
DIR2	Select: F, R, N	N
DIR3	Select: F, R, N	N
DIR4	Select: F, R, N	N
ORDER	Select: I, Q, V, OFF	OFF

<Filter is Empty>

Setting	Range	Value
50P32P	Range = 0,50 to 10,00	3.00
Z2F	Range = -128,00 to 128,00	1.08
Z2R	Range = -128,00 to 128,00	1.28
50QFP	Range = 0,25 to 5,00	0.50
50QRP	Range = 0,25 to 5,00	0.25
a2	Range = 0,02 to 0,50	0.10
k2	Range = 0,10 to 1,20	0.20
50GFP	Range = 0,25 to 5,00	0.50
50GRP	Range = 0,25 to 5,00	0.25
a0	Range = 0,02 to 0,50	0.10
Z0F	Range = -128,00 to 128,00	3.20
Z0R	Range = -128,00 to 128,00	3.40
EVOLT	Select: Y, N	Y
27P1P	Range = 0,00 to 300,00, OFF	OFF
27P2P	Range = 0,00 to 300,00, OFF	OFF
59P1P	Range = 0,00 to 300,00, OFF	OFF
59P2P	Range = 0,00 to 300,00, OFF	OFF
59N1P	Range = 0,00 to 300,00, OFF	OFF
59N2P	Range = 0,00 to 300,00, OFF	OFF

<Filter is Empty>

Setting	Range	Value
59QP	Range = 0,00 to 200,00, OFF	OFF
59V1P	Range = 0,00 to 300,00, OFF	OFF
27SP	Range = 0,00 to 300,00, OFF	OFF
59S1P	Range = 0,00 to 300,00, OFF	OFF
59S2P	Range = 0,00 to 300,00, OFF	OFF
27PP	Range = 0,00 to 520,00, OFF	OFF
59PP	Range = 0,00 to 520,00, OFF	OFF
E25	Select: Y, N	N
25VLO	Range = 0,00 to 300,00	105.00
25VHI	Range = 0,00 to 300,00	130.00
25SF	Range = 0,005 to 0,500	0.042
25ANG1	Range = 0,00 to 80,00	25.00
25ANG2	Range = 0,00 to 80,00	40.00
SYNCP	Range = 0 to 330, VA, VB, VC	VA
TCLOSD	Range = 0,00 to 60,00	3.00
E81	Select: N, 1-6	1
27B81P	Range = 25,00 to 300,00	40.00

<Filter is Empty>



Setting	Range	Value
81D1P	Range = 40,10 to 65,00, OFF	48.55
81D1D	Range = 2,00 to 16000,00	10.00
81D2P	Range = 40,10 to 65,00, OFF	OFF
81D2D	Range = 2,00 to 16000,00	2.00
81D3P	Range = 40,10 to 65,00, OFF	OFF
81D3D	Range = 2,00 to 16000,00	2.00
81D4P	Range = 40,10 to 65,00, OFF	OFF
81D4D	Range = 2,00 to 16000,00	2.00
81D5P	Range = 40,10 to 65,00, OFF	OFF
81D5D	Range = 2,00 to 16000,00	2.00
81D6P	Range = 40,10 to 65,00, OFF	OFF
81D6D	Range = 2,00 to 16000,00	2.00
E79	Select: N, 1-4	1
79OI1	Range = 0,00 to 999999,00	250.00
79OI2	Range = 0,00 to 999999,00	0.00
79OI3	Range = 0,00 to 999999,00	0.00
79OI4	Range = 0,00 to 999999,00	0.00
79RSD	Range = 0,00 to 999999,00	3000.00
79RSLD	Range = 0,00 to 999999,00	500.00

<Filter is Empty>

Setting	Range	Value
79CLSD	Range = 0,00 to 999999,00, OFF	0.00
ESOTF	Select: Y, N	Y
CLOEN D	Range = 0,00 to 16000,00, OFF	OFF
52AEND	Range = 0,00 to 16000,00, OFF	50.00
SOTFD	Range = 0,50 to 16000,00	25.00
ECOMM	Select: N, POTT, DCUB1, DCUB2, DCB	N
Z3RBD	Range = 0,00 to 16000,00	5.00
EBLKD	Range = 0,00 to 16000,00, OFF	10.00
ETDPU	Range = 0,00 to 16000,00, OFF	2.00
EDURD	Range = 0,00 to 16000,00	3.50
EWFC	Select: Y, N	N
GARD1 D	Range = 0,00 to 16000,00	1.00
UBDUR D	Range = 0,25 to 16000,00	9.00
UBEND	Range = 0,00 to 16000,00	0.50
Z3XPU	Range = 0,00 to 16000,00	2.00
Z3XD	Range = 0,00 to 16000,00	5.00

<Filter is Empty>

Setting	Range	Value
BTXD	Range = 0,00 to 16000,00	0.00
67P2SD	Range = 0,00 to 60,00	1.00
67N2SD	Range = 0,00 to 60,00	1.00
67G2SD	Range = 0,00 to 60,00	1.00
67Q2SD	Range = 0,00 to 60,00	1.00
EDEM	Select: THM, ROL	THM
DMTC	Select: 5, 10, 15, 30, 60	5
PDEMP	Range = 0,50 to 16,00, OFF	5.00
NDEMP	Range = 0,500 to 16,000, OFF	OFF
GDEMP	Range = 0,50 to 16,00, OFF	OFF
QDEMP	Range = 0,50 to 16,00, OFF	OFF
TDURD	Range = 4,00 to 16000,00	9.00
CFD	Range = 0,00 to 16000,00, OFF	30.00
3POD	Range = 0,00 to 60,00	1.00
50LP	Range = 0,25 to 100,00, OFF	0.25
ESV	Select: N, 1-16	16
SV1PU	Range = 0,00 to 999999,00	4.00

<Filter is Empty>



Setting	Range	Value
SV2PU	Range = 0,00 to 999999,00	6.00
SV3PU	Range = 0,00 to 999999,00	4.00
SV4PU	Range = 0,00 to 999999,00	500.00
SV5PU	Range = 0,00 to 999999,00	0.00
SV6PU	Range = 0,00 to 999999,00	0.00
SV7PU	Range = 0,00 to 16000,00	0.00
SV8PU	Range = 0,00 to 16000,00	0.00
SV9PU	Range = 0,00 to 16000,00	0.00
SV10PU	Range = 0,00 to 16000,00	0.00
SV11PU	Range = 0,00 to 16000,00	0.00
SV12PU	Range = 0,00 to 16000,00	0.00
SV13PU	Range = 0,00 to 16000,00	0.00
SV14PU	Range = 0,00 to 16000,00	0.00
SV15PU	Range = 0,00 to 16000,00	0.00
SV16PU	Range = 0,00 to 16000,00	0.00

<Filter is Empty>



Setting	Range	Value
SV1DO	Range = 0,00 to 999999,00	9.00
SV2DO	Range = 0,00 to 999999,00	9.00
SV3DO	Range = 0,00 to 999999,00	0.00
SV4DO	Range = 0,00 to 999999,00	0.00
SV5DO	Range = 0,00 to 999999,00	20.00
SV6DO	Range = 0,00 to 999999,00	20.00
SV7DO	Range = 0,00 to 16000,00	0.00
SV8DO	Range = 0,00 to 16000,00	0.00
SV9DO	Range = 0,00 to 16000,00	0.00
SV10DO	Range = 0,00 to 16000,00	0.00
SV11DO	Range = 0,00 to 16000,00	0.00
SV12DO	Range = 0,00 to 16000,00	500.00
SV13DO	Range = 0,00 to 16000,00	500.00
SV14DO	Range = 0,00 to 16000,00	500.00
SV15DO	Range = 0,00 to 16000,00	0.00

<Filter is Empty>

Setting	Range	Value
SV16DO	Range = 0,00 to 16000,00	0.00
<input type="checkbox"/> Group : 4		
RID	Range = ASCII string with a maximum length of 30.	52C2 - ALIMENTADOR SAN JOSE
TID	Range = ASCII string with a maximum length of 30.	SUBESTACION BOLLENAR
CTR	Range = 1 to 6000	80
CTRN	Range = 1 to 10000	80
PTR	Range = 1,00 to 10000,00	120.00
PTRS	Range = 1,00 to 10000,00	120.00
Z0MAG	Range = 0,10 to 510,00	6.38
Z1MAG	Range = 0,10 to 510,00	2.14
Z0ANG	Range = 40,00 to 90,00	72.47
Z1ANG	Range = 40,00 to 90,00	68.86
LL	Range = 0,10 to 999,00	4.84
EFLOC	Select: Y, N	N
E50P	Select: N, 1-6	2
50P1P	Range = 0,25 to 100,00, OFF	50.00
50P2P	Range = 0,25 to 100,00, OFF	50.00

<Filter is Empty>



Setting	Range	Value
50P3P	Range = 0,25 to 100,00, OFF	OFF
50P4P	Range = 0,25 to 100,00, OFF	OFF
50P5P	Range = 0,25 to 100,00, OFF	OFF
50P6P	Range = 0,25 to 100,00, OFF	OFF
67P1D	Range = 0,00 to 16000,00	0.00
67P2D	Range = 0,00 to 16000,00	0.00
67P3D	Range = 0,00 to 16000,00	0.00
67P4D	Range = 0,00 to 16000,00	0.00
50PP1P	Range = 1,00 to 170,00, OFF	OFF
50PP2P	Range = 1,00 to 170,00, OFF	OFF
50PP3P	Range = 1,00 to 170,00, OFF	OFF
50PP4P	Range = 1,00 to 170,00, OFF	OFF
E50N	Select: N, 1-6	N
50N1P	Range = 0,250 to 100,000, OFF	OFF
50N2P	Range = 0,250 to 100,000, OFF	OFF
50N3P	Range = 0,250 to 100,000, OFF	OFF
50N4P	Range = 0,250 to 100,000, OFF	OFF

<Filter is Empty>



Setting	Range	Value
50N5P	Range = 0,250 to 100,000, OFF	OFF
50N6P	Range = 0,250 to 100,000, OFF	OFF
67N1D	Range = 0,00 to 16000,00	0.00
67N2D	Range = 0,00 to 16000,00	0.00
67N3D	Range = 0,00 to 16000,00	0.00
67N4D	Range = 0,00 to 16000,00	0.00
E50G	Select: N, 1-6	3
50G1P	Range = 0,25 to 100,00, OFF	33.75
50G2P	Range = 0,25 to 100,00, OFF	33.75
50G3P	Range = 0,25 to 100,00, OFF	0.25
50G4P	Range = 0,25 to 100,00, OFF	OFF
50G5P	Range = 0,25 to 100,00, OFF	OFF
50G6P	Range = 0,25 to 100,00, OFF	OFF
67G1D	Range = 0,00 to 16000,00	0.00
67G2D	Range = 0,00 to 16000,00	0.00
67G3D	Range = 0,00 to 16000,00	4500.00
67G4D	Range = 0,00 to 16000,00	0.00
E50Q	Select: N, 1-6	N
50Q1P	Range = 0,25 to 100,00, OFF	OFF

<Filter is Empty>

Setting	Range	Value
50Q2P	Range = 0,25 to 100,00, OFF	OFF
50Q3P	Range = 0,25 to 100,00, OFF	OFF
50Q4P	Range = 0,25 to 100,00, OFF	OFF
50Q5P	Range = 0,25 to 100,00, OFF	OFF
50Q6P	Range = 0,25 to 100,00, OFF	OFF
67Q1D	Range = 0,00 to 16000,00	0.00
67Q2D	Range = 0,00 to 16000,00	0.00
67Q3D	Range = 0,00 to 16000,00	0.00
67Q4D	Range = 0,00 to 16000,00	0.00
E51P	Select: N, 1, 2	2
51P1P	Range = 0,50 to 16,00, OFF	5.63
51P1C	Select: U1-U5, C1-C5, Recloser-Curves	133
51P1TD	Range = 0,10 to 2,00	2.00
51P1RS	Select: Y, N	N
51P1CT	Range = 0,00 to 60,00	0.00
51P1MR	Range = 0,00 to 60,00	0.00
51P2P	Range = 0,50 to 16,00, OFF	5.63

<Filter is Empty>

Setting	Range	Value
51P2C	Select: U1-U5, C1-C5, Recloser-Curves	101
51P2TD	Range = 0,10 to 2,00	1.00
51P2RS	Select: Y, N	N
51P2CT	Range = 0,00 to 60,00	0.00
51P2MR	Range = 0,00 to 60,00	0.00
E51N	Select: N, 1, 2	N
51N1P	Range = 0,500 to 16,000, OFF	OFF
51N1C	Select: U1-U5, C1-C5, Recloser-Curves	U3
51N1TD	Range = 0,50 to 15,00	1.50
51N1RS	Select: Y, N	N
51N1CT	Range = 0,00 to 60,00	0.00
51N1MR	Range = 0,00 to 60,00	0.00
51N2P	Range = 0,500 to 16,000, OFF	OFF
51N2C	Select: U1-U5, C1-C5, Recloser-Curves	U3

<Filter is Empty>

Setting	Range	Value
51N2TD	Range = 0,50 to 15,00	1.50
51N2RS	Select: Y, N	N
51N2CT	Range = 0,00 to 60,00	0.00
51N2MR	Range = 0,00 to 60,00	0.00
E51G	Select: N, 1, 2	2
51G1P	Range = 0,50 to 16,00, OFF	1.00
51G1C	Select: U1-U5, C1-C5, Recloser-Curves	C1
51G1TD	Range = 0,05 to 1,00	0.80
51G1RS	Select: Y, N	N
51G1CT	Range = 0,00 to 60,00	0.00
51G1MR	Range = 0,00 to 60,00	0.00
51G2P	Range = 0,50 to 16,00, OFF	1.00
51G2C	Select: U1-U5, C1-C5, Recloser-Curves	102
51G2TD	Range = 0,10 to 2,00	1.00

<Filter is Empty>

Setting	Range	Value
51G2RS	Select: Y, N	N
51G2CT	Range = 0,00 to 60,00	0.00
51G2MR	Range = 0,00 to 60,00	0.00
E51Q	Select: Y, N	N
51QP	Range = 0,50 to 16,00, OFF	OFF
51QC	Select: U1-U5, C1-C5, Recloser-Curves	C2
51QTD	Range = 0,05 to 1,00	0.63
51QRS	Select: Y, N	N
51QCT	Range = 0,00 to 60,00	0.00
51QMR	Range = 0,00 to 60,00	0.00
ELOAD	Select: Y, N	N
ZLF	Range = 0,10 to 128,00	6.50
ZLR	Range = 0,10 to 128,00	6.50
PLAF	Range = -90,00 to 90,00	30.00
NLAF	Range = -90,00 to 90,00	-30.00
PLAR	Range = 90,00 to 270,00	150.00
NLAR	Range = 90,00 to 270,00	210.00
E32	Select: Y, AUTO, N	N

<Filter is Empty>

Setting	Range	Value
ELOP	Select: Y, Y1, N	N
DIR1	Select: F, R, N	N
DIR2	Select: F, R, N	N
DIR3	Select: F, R, N	N
DIR4	Select: F, R, N	N
ORDER	Select: I, Q, V, OFF	OFF
50P32P	Range = 0,50 to 10,00	3.00
Z2F	Range = -128,00 to 128,00	1.08
Z2R	Range = -128,00 to 128,00	1.28
50QFP	Range = 0,25 to 5,00	0.50
50QRP	Range = 0,25 to 5,00	0.25
a2	Range = 0,02 to 0,50	0.10
k2	Range = 0,10 to 1,20	0.20
50GFP	Range = 0,25 to 5,00	0.50
50GRP	Range = 0,25 to 5,00	0.25
a0	Range = 0,02 to 0,50	0.10
Z0F	Range = -128,00 to 128,00	3.20
Z0R	Range = -128,00 to 128,00	3.40
EVOLT	Select: Y, N	Y

<Filter is Empty>

Setting	Range	Value
27P1P	Range = 0,00 to 300,00, OFF	OFF
27P2P	Range = 0,00 to 300,00, OFF	OFF
59P1P	Range = 0,00 to 300,00, OFF	OFF
59P2P	Range = 0,00 to 300,00, OFF	OFF
59N1P	Range = 0,00 to 300,00, OFF	OFF
59N2P	Range = 0,00 to 300,00, OFF	OFF
59QP	Range = 0,00 to 200,00, OFF	OFF
59V1P	Range = 0,00 to 300,00, OFF	OFF
27SP	Range = 0,00 to 300,00, OFF	OFF
59S1P	Range = 0,00 to 300,00, OFF	OFF
59S2P	Range = 0,00 to 300,00, OFF	OFF
27PP	Range = 0,00 to 520,00, OFF	OFF
59PP	Range = 0,00 to 520,00, OFF	OFF
E25	Select: Y, N	N
25VLO	Range = 0,00 to 300,00	105.00
25VHI	Range = 0,00 to 300,00	130.00
25SF	Range = 0,005 to 0,500	0.042
25ANG1	Range = 0,00 to 80,00	25.00

<Filter is Empty>

Setting	Range	Value
25ANG2	Range = 0,00 to 80,00	40.00
SYNCP	Range = 0 to 330, VA, VB, VC	VA
TCLOSD	Range = 0,00 to 60,00	3.00
E81	Select: N, 1-6	1
27B81P	Range = 25,00 to 300,00	40.00
81D1P	Range = 40,10 to 65,00, OFF	48.55
81D1D	Range = 2,00 to 16000,00	10.00
81D2P	Range = 40,10 to 65,00, OFF	OFF
81D2D	Range = 2,00 to 16000,00	2.00
81D3P	Range = 40,10 to 65,00, OFF	OFF
81D3D	Range = 2,00 to 16000,00	2.00
81D4P	Range = 40,10 to 65,00, OFF	OFF
81D4D	Range = 2,00 to 16000,00	2.00
81D5P	Range = 40,10 to 65,00, OFF	OFF
81D5D	Range = 2,00 to 16000,00	2.00
81D6P	Range = 40,10 to 65,00, OFF	OFF
81D6D	Range = 2,00 to 16000,00	2.00
E79	Select: N, 1-4	1

<Filter is Empty>

Setting	Range	Value
79OI1	Range = 0,00 to 999999,00	250.00
79OI2	Range = 0,00 to 999999,00	0.00
79OI3	Range = 0,00 to 999999,00	0.00
79OI4	Range = 0,00 to 999999,00	0.00
79RSD	Range = 0,00 to 999999,00	3000.00
79RSLD	Range = 0,00 to 999999,00	500.00
79CLSD	Range = 0,00 to 999999,00, OFF	0.00
ESOTF	Select: Y, N	Y
CLOEN D	Range = 0,00 to 16000,00, OFF	OFF
52AEND	Range = 0,00 to 16000,00, OFF	50.00
SOTFD	Range = 0,50 to 16000,00	25.00
ECOMM	Select: N, POTT, DCUB1, DCUB2, DCB	N
Z3RBD	Range = 0,00 to 16000,00	5.00
EBLKD	Range = 0,00 to 16000,00, OFF	10.00
ETDPU	Range = 0,00 to 16000,00, OFF	2.00
EDURD	Range = 0,00 to 16000,00	3.50

<Filter is Empty>

Setting	Range	Value
EWFC	Select: Y, N	N
GARD1 D	Range = 0,00 to 16000,00	1.00
UBDUR D	Range = 0,25 to 16000,00	9.00
UBEND	Range = 0,00 to 16000,00	0.50
Z3XPU	Range = 0,00 to 16000,00	2.00
Z3XD	Range = 0,00 to 16000,00	5.00
BTXD	Range = 0,00 to 16000,00	0.00
67P2SD	Range = 0,00 to 60,00	1.00
67N2SD	Range = 0,00 to 60,00	1.00
67G2SD	Range = 0,00 to 60,00	1.00
67Q2SD	Range = 0,00 to 60,00	1.00
EDEM	Select: THM, ROL	THM
DMTC	Select: 5, 10, 15, 30, 60	5
PDEMP	Range = 0,50 to 16,00, OFF	5.00
NDEMP	Range = 0,500 to 16,000, OFF	OFF
GDEMP	Range = 0,50 to 16,00, OFF	OFF

<Filter is Empty>



Setting	Range	Value
QDEMP	Range = 0,50 to 16,00, OFF	OFF
TDURD	Range = 4,00 to 16000,00	9.00
CFD	Range = 0,00 to 16000,00, OFF	30.00
3POD	Range = 0,00 to 60,00	1.00
50LP	Range = 0,25 to 100,00, OFF	0.25
ESV	Select: N, 1-16	16
SV1PU	Range = 0,00 to 999999,00	4.00
SV2PU	Range = 0,00 to 999999,00	6.00
SV3PU	Range = 0,00 to 999999,00	4.00
SV4PU	Range = 0,00 to 999999,00	500.00
SV5PU	Range = 0,00 to 999999,00	0.00
SV6PU	Range = 0,00 to 999999,00	0.00
SV7PU	Range = 0,00 to 16000,00	0.00
SV8PU	Range = 0,00 to 16000,00	0.00
SV9PU	Range = 0,00 to 16000,00	0.00
SV10PU	Range = 0,00 to 16000,00	0.00
SV11PU	Range = 0,00 to 16000,00	0.00
SV12PU	Range = 0,00 to 16000,00	0.00

<Filter is Empty>



Setting	Range	Value
SV13PU	Range = 0,00 to 16000,00	0.00
SV14PU	Range = 0,00 to 16000,00	0.00
SV15PU	Range = 0,00 to 16000,00	0.00
SV16PU	Range = 0,00 to 16000,00	0.00
SV1DO	Range = 0,00 to 999999,00	9.00
SV2DO	Range = 0,00 to 999999,00	9.00
SV3DO	Range = 0,00 to 999999,00	0.00
SV4DO	Range = 0,00 to 999999,00	0.00
SV5DO	Range = 0,00 to 999999,00	20.00
SV6DO	Range = 0,00 to 999999,00	20.00
SV7DO	Range = 0,00 to 16000,00	0.00
SV8DO	Range = 0,00 to 16000,00	0.00
SV9DO	Range = 0,00 to 16000,00	0.00
SV10DO	Range = 0,00 to 16000,00	0.00
SV11DO	Range = 0,00 to 16000,00	0.00

<Filter is Empty>

Setting	Range	Value
SV12DO	Range = 0,00 to 16000,00	500.00
SV13DO	Range = 0,00 to 16000,00	500.00
SV14DO	Range = 0,00 to 16000,00	500.00
SV15DO	Range = 0,00 to 16000,00	0.00
SV16DO	Range = 0,00 to 16000,00	0.00

 Group : 5

RID	Range = ASCII string with a maximum length of 30.	52C2 - ALIMENTADOR SAN JOSE
TID	Range = ASCII string with a maximum length of 30.	SUBESTACION BOLLENAR
CTR	Range = 1 to 6000	80
CTRN	Range = 1 to 10000	80
PTR	Range = 1,00 to 10000,00	120.00
PTRS	Range = 1,00 to 10000,00	120.00
ZOMAG	Range = 0,10 to 510,00	6.38
Z1MAG	Range = 0,10 to 510,00	2.14
ZOANG	Range = 40,00 to 90,00	72.47

<Filter is Empty>

Setting	Range	Value
Z1ANG	Range = 40,00 to 90,00	68.86
LL	Range = 0,10 to 999,00	4.84
EFLOC	Select: Y, N	N
E50P	Select: N, 1-6	2
50P1P	Range = 0,25 to 100,00, OFF	50.00
50P2P	Range = 0,25 to 100,00, OFF	50.00
50P3P	Range = 0,25 to 100,00, OFF	OFF
50P4P	Range = 0,25 to 100,00, OFF	OFF
50P5P	Range = 0,25 to 100,00, OFF	OFF
50P6P	Range = 0,25 to 100,00, OFF	OFF
67P1D	Range = 0,00 to 16000,00	0.00
67P2D	Range = 0,00 to 16000,00	0.00
67P3D	Range = 0,00 to 16000,00	0.00
67P4D	Range = 0,00 to 16000,00	0.00
50PP1P	Range = 1,00 to 170,00, OFF	OFF
50PP2P	Range = 1,00 to 170,00, OFF	OFF
50PP3P	Range = 1,00 to 170,00, OFF	OFF

<Filter is Empty>



Setting	Range	Value
50PP4P	Range = 1,00 to 170,00, OFF	OFF
E50N	Select: N, 1-6	N
50N1P	Range = 0,250 to 100,000, OFF	OFF
50N2P	Range = 0,250 to 100,000, OFF	OFF
50N3P	Range = 0,250 to 100,000, OFF	OFF
50N4P	Range = 0,250 to 100,000, OFF	OFF
50N5P	Range = 0,250 to 100,000, OFF	OFF
50N6P	Range = 0,250 to 100,000, OFF	OFF
67N1D	Range = 0,00 to 16000,00	0.00
67N2D	Range = 0,00 to 16000,00	0.00
67N3D	Range = 0,00 to 16000,00	0.00
67N4D	Range = 0,00 to 16000,00	0.00
E50G	Select: N, 1-6	3
50G1P	Range = 0,25 to 100,00, OFF	33.75
50G2P	Range = 0,25 to 100,00, OFF	33.75
50G3P	Range = 0,25 to 100,00, OFF	0.25
50G4P	Range = 0,25 to 100,00, OFF	OFF
50G5P	Range = 0,25 to 100,00, OFF	OFF
50G6P	Range = 0,25 to 100,00, OFF	OFF

<Filter is Empty>

Setting	Range	Value
67G1D	Range = 0,00 to 16000,00	0.00
67G2D	Range = 0,00 to 16000,00	0.00
67G3D	Range = 0,00 to 16000,00	4500.00
67G4D	Range = 0,00 to 16000,00	0.00
E50Q	Select: N, 1-6	N
50Q1P	Range = 0,25 to 100,00, OFF	OFF
50Q2P	Range = 0,25 to 100,00, OFF	OFF
50Q3P	Range = 0,25 to 100,00, OFF	OFF
50Q4P	Range = 0,25 to 100,00, OFF	OFF
50Q5P	Range = 0,25 to 100,00, OFF	OFF
50Q6P	Range = 0,25 to 100,00, OFF	OFF
67Q1D	Range = 0,00 to 16000,00	0.00
67Q2D	Range = 0,00 to 16000,00	0.00
67Q3D	Range = 0,00 to 16000,00	0.00
67Q4D	Range = 0,00 to 16000,00	0.00
E51P	Select: N, 1, 2	2
51P1P	Range = 0,50 to 16,00, OFF	5.63
51P1C	Select: U1-U5, C1-C5, Recloser-Curves	133
51P1TD	Range = 0,10 to 2,00	2.00

<Filter is Empty>

Setting	Range	Value
51P1RS	Select: Y, N	N
51P1CT	Range = 0,00 to 60,00	0.00
51P1MR	Range = 0,00 to 60,00	0.00
51P2P	Range = 0,50 to 16,00, OFF	5.63
51P2C	Select: U1-U5, C1-C5, Recloser-Curves	101
51P2TD	Range = 0,10 to 2,00	1.00
51P2RS	Select: Y, N	N
51P2CT	Range = 0,00 to 60,00	0.00
51P2MR	Range = 0,00 to 60,00	0.00
E51N	Select: N, 1, 2	N
51N1P	Range = 0,500 to 16,000, OFF	OFF
51N1C	Select: U1-U5, C1-C5, Recloser-Curves	U3
51N1TD	Range = 0,50 to 15,00	1.50
51N1RS	Select: Y, N	N

<Filter is Empty>



Setting	Range	Value
51N1CT	Range = 0,00 to 60,00	0.00
51N1MR	Range = 0,00 to 60,00	0.00
51N2P	Range = 0,500 to 16,000, OFF	OFF
51N2C	Select: U1-U5, C1-C5, Recloser-Curves	U3
51N2TD	Range = 0,50 to 15,00	1.50
51N2RS	Select: Y, N	N
51N2CT	Range = 0,00 to 60,00	0.00
51N2MR	Range = 0,00 to 60,00	0.00
E51G	Select: N, 1, 2	2
51G1P	Range = 0,50 to 16,00, OFF	1.00
51G1C	Select: U1-U5, C1-C5, Recloser-Curves	C1
51G1TD	Range = 0,05 to 1,00	0.80
51G1RS	Select: Y, N	N
51G1CT	Range = 0,00 to 60,00	0.00

<Filter is Empty>

Setting	Range	Value
51G1MR	Range = 0,00 to 60,00	0.00
51G2P	Range = 0,50 to 16,00, OFF	1.00
51G2C	Select: U1-U5, C1-C5, Recloser-Curves	102
51G2TD	Range = 0,10 to 2,00	1.00
51G2RS	Select: Y, N	N
51G2CT	Range = 0,00 to 60,00	0.00
51G2MR	Range = 0,00 to 60,00	0.00
E51Q	Select: Y, N	N
51QP	Range = 0,50 to 16,00, OFF	OFF
51QC	Select: U1-U5, C1-C5, Recloser-Curves	C2
51QTD	Range = 0,05 to 1,00	0.63
51QRS	Select: Y, N	N
51QCT	Range = 0,00 to 60,00	0.00
51QMR	Range = 0,00 to 60,00	0.00
ELOAD	Select: Y, N	N
ZLF	Range = 0,10 to 128,00	6.50

<Filter is Empty>

Setting	Range	Value
ZLR	Range = 0,10 to 128,00	6.50
PLAF	Range = -90,00 to 90,00	30.00
NLAF	Range = -90,00 to 90,00	-30.00
PLAR	Range = 90,00 to 270,00	150.00
NLAR	Range = 90,00 to 270,00	210.00
E32	Select: Y, AUTO, N	N
ELOP	Select: Y, Y1, N	N
DIR1	Select: F, R, N	N
DIR2	Select: F, R, N	N
DIR3	Select: F, R, N	N
DIR4	Select: F, R, N	N
ORDER	Select: I, Q, V, OFF	OFF
50P32P	Range = 0,50 to 10,00	3.00
Z2F	Range = -128,00 to 128,00	1.08
Z2R	Range = -128,00 to 128,00	1.28
50QFP	Range = 0,25 to 5,00	0.50
50QRP	Range = 0,25 to 5,00	0.25
a2	Range = 0,02 to 0,50	0.10
k2	Range = 0,10 to 1,20	0.20

<Filter is Empty>

Setting	Range	Value
50GFP	Range = 0,25 to 5,00	0.50
50GRP	Range = 0,25 to 5,00	0.25
a0	Range = 0,02 to 0,50	0.10
Z0F	Range = -128,00 to 128,00	3.20
Z0R	Range = -128,00 to 128,00	3.40
EVOLT	Select: Y, N	Y
27P1P	Range = 0,00 to 300,00, OFF	OFF
27P2P	Range = 0,00 to 300,00, OFF	OFF
59P1P	Range = 0,00 to 300,00, OFF	OFF
59P2P	Range = 0,00 to 300,00, OFF	OFF
59N1P	Range = 0,00 to 300,00, OFF	OFF
59N2P	Range = 0,00 to 300,00, OFF	OFF
59QP	Range = 0,00 to 200,00, OFF	OFF
59V1P	Range = 0,00 to 300,00, OFF	OFF
27SP	Range = 0,00 to 300,00, OFF	OFF
59S1P	Range = 0,00 to 300,00, OFF	OFF
59S2P	Range = 0,00 to 300,00, OFF	OFF
27PP	Range = 0,00 to 520,00, OFF	OFF
59PP	Range = 0,00 to 520,00, OFF	OFF

<Filter is Empty>

Setting	Range	Value
E25	Select: Y, N	N
25VLO	Range = 0,00 to 300,00	105.00
25VHI	Range = 0,00 to 300,00	130.00
25SF	Range = 0,005 to 0,500	0.042
25ANG1	Range = 0,00 to 80,00	25.00
25ANG2	Range = 0,00 to 80,00	40.00
SYNCP	Range = 0 to 330, VA, VB, VC	VA
TCLOSD	Range = 0,00 to 60,00	3.00
E81	Select: N, 1-6	1
27B81P	Range = 25,00 to 300,00	40.00
81D1P	Range = 40,10 to 65,00, OFF	48.55
81D1D	Range = 2,00 to 16000,00	10.00
81D2P	Range = 40,10 to 65,00, OFF	OFF
81D2D	Range = 2,00 to 16000,00	2.00
81D3P	Range = 40,10 to 65,00, OFF	OFF
81D3D	Range = 2,00 to 16000,00	2.00
81D4P	Range = 40,10 to 65,00, OFF	OFF

<Filter is Empty>

Setting	Range	Value
81D4D	Range = 2,00 to 16000,00	2.00
81D5P	Range = 40,10 to 65,00, OFF	OFF
81D5D	Range = 2,00 to 16000,00	2.00
81D6P	Range = 40,10 to 65,00, OFF	OFF
81D6D	Range = 2,00 to 16000,00	2.00
E79	Select: N, 1-4	1
79OI1	Range = 0,00 to 999999,00	250.00
79OI2	Range = 0,00 to 999999,00	0.00
79OI3	Range = 0,00 to 999999,00	0.00
79OI4	Range = 0,00 to 999999,00	0.00
79RSD	Range = 0,00 to 999999,00	3000.00
79RSLD	Range = 0,00 to 999999,00	500.00
79CLSD	Range = 0,00 to 999999,00, OFF	0.00
ESOTF	Select: Y, N	Y
CLOEN D	Range = 0,00 to 16000,00, OFF	OFF
52AEND	Range = 0,00 to 16000,00, OFF	50.00
SOTFD	Range = 0,50 to 16000,00	25.00

<Filter is Empty>



Setting	Range	Value
ECOMM	Select: N, POTT, DCUB1, DCUB2, DCB	N
Z3RBD	Range = 0,00 to 16000,00	5.00
EBLKD	Range = 0,00 to 16000,00, OFF	10.00
ETDPU	Range = 0,00 to 16000,00, OFF	2.00
EDURD	Range = 0,00 to 16000,00	3.50
EWFC	Select: Y, N	N
GARD1 D	Range = 0,00 to 16000,00	1.00
UBDUR D	Range = 0,25 to 16000,00	9.00
UBEND	Range = 0,00 to 16000,00	0.50
Z3XPU	Range = 0,00 to 16000,00	2.00
Z3XD	Range = 0,00 to 16000,00	5.00
BTXD	Range = 0,00 to 16000,00	0.00
67P2SD	Range = 0,00 to 60,00	1.00
67N2SD	Range = 0,00 to 60,00	1.00
67G2SD	Range = 0,00 to 60,00	1.00

<Filter is Empty>

Setting	Range	Value
67Q2SD	Range = 0,00 to 60,00	1.00
EDEM	Select: THM, ROL	THM
DMTC	Select: 5, 10, 15, 30, 60	5
PDEMP	Range = 0,50 to 16,00, OFF	5.00
NDEMP	Range = 0,500 to 16,000, OFF	OFF
GDEMP	Range = 0,50 to 16,00, OFF	OFF
QDEMP	Range = 0,50 to 16,00, OFF	OFF
TDURD	Range = 4,00 to 16000,00	9.00
CFD	Range = 0,00 to 16000,00, OFF	30.00
3POD	Range = 0,00 to 60,00	1.00
50LP	Range = 0,25 to 100,00, OFF	0.25
ESV	Select: N, 1-16	16
SV1PU	Range = 0,00 to 999999,00	4.00
SV2PU	Range = 0,00 to 999999,00	6.00
SV3PU	Range = 0,00 to 999999,00	4.00
SV4PU	Range = 0,00 to 999999,00	500.00
SV5PU	Range = 0,00 to 999999,00	0.00
SV6PU	Range = 0,00 to 999999,00	0.00
SV7PU	Range = 0,00 to 16000,00	0.00

<Filter is Empty>



Setting	Range	Value
SV8PU	Range = 0,00 to 16000,00	0.00
SV9PU	Range = 0,00 to 16000,00	0.00
SV10PU	Range = 0,00 to 16000,00	0.00
SV11PU	Range = 0,00 to 16000,00	0.00
SV12PU	Range = 0,00 to 16000,00	0.00
SV13PU	Range = 0,00 to 16000,00	0.00
SV14PU	Range = 0,00 to 16000,00	0.00
SV15PU	Range = 0,00 to 16000,00	0.00
SV16PU	Range = 0,00 to 16000,00	0.00
SV1DO	Range = 0,00 to 999999,00	9.00
SV2DO	Range = 0,00 to 999999,00	9.00
SV3DO	Range = 0,00 to 999999,00	0.00
SV4DO	Range = 0,00 to 999999,00	0.00
SV5DO	Range = 0,00 to 999999,00	20.00
SV6DO	Range = 0,00 to 999999,00	20.00

<Filter is Empty>

Setting	Range	Value
SV7DO	Range = 0,00 to 16000,00	0.00
SV8DO	Range = 0,00 to 16000,00	0.00
SV9DO	Range = 0,00 to 16000,00	0.00
SV10DO	Range = 0,00 to 16000,00	0.00
SV11DO	Range = 0,00 to 16000,00	0.00
SV12DO	Range = 0,00 to 16000,00	500.00
SV13DO	Range = 0,00 to 16000,00	500.00
SV14DO	Range = 0,00 to 16000,00	500.00
SV15DO	Range = 0,00 to 16000,00	0.00
SV16DO	Range = 0,00 to 16000,00	0.00
<input type="checkbox"/> Group : 6		
RID	Range = ASCII string with a maximum length of 30.	52C2 - ALIMENTADOR SAN JOSE
TID	Range = ASCII string with a maximum length of 30.	SUBESTACION BOLLENAR

<Filter is Empty>



Setting	Range	Value
CTR	Range = 1 to 6000	80
CTRN	Range = 1 to 10000	80
PTR	Range = 1,00 to 10000,00	120.00
PTRS	Range = 1,00 to 10000,00	120.00
Z0MAG	Range = 0,10 to 510,00	6.38
Z1MAG	Range = 0,10 to 510,00	2.14
Z0ANG	Range = 40,00 to 90,00	72.47
Z1ANG	Range = 40,00 to 90,00	68.86
LL	Range = 0,10 to 999,00	4.84
EFLOC	Select: Y, N	N
E50P	Select: N, 1-6	2
50P1P	Range = 0,25 to 100,00, OFF	50.00
50P2P	Range = 0,25 to 100,00, OFF	50.00
50P3P	Range = 0,25 to 100,00, OFF	OFF
50P4P	Range = 0,25 to 100,00, OFF	OFF
50P5P	Range = 0,25 to 100,00, OFF	OFF
50P6P	Range = 0,25 to 100,00, OFF	OFF
67P1D	Range = 0,00 to 16000,00	0.00
67P2D	Range = 0,00 to 16000,00	0.00

<Filter is Empty>



Setting	Range	Value
67P3D	Range = 0,00 to 16000,00	0.00
67P4D	Range = 0,00 to 16000,00	0.00
50PP1P	Range = 1,00 to 170,00, OFF	OFF
50PP2P	Range = 1,00 to 170,00, OFF	OFF
50PP3P	Range = 1,00 to 170,00, OFF	OFF
50PP4P	Range = 1,00 to 170,00, OFF	OFF
E50N	Select: N, 1-6	N
50N1P	Range = 0,250 to 100,000, OFF	OFF
50N2P	Range = 0,250 to 100,000, OFF	OFF
50N3P	Range = 0,250 to 100,000, OFF	OFF
50N4P	Range = 0,250 to 100,000, OFF	OFF
50N5P	Range = 0,250 to 100,000, OFF	OFF
50N6P	Range = 0,250 to 100,000, OFF	OFF
67N1D	Range = 0,00 to 16000,00	0.00
67N2D	Range = 0,00 to 16000,00	0.00
67N3D	Range = 0,00 to 16000,00	0.00
67N4D	Range = 0,00 to 16000,00	0.00

<Filter is Empty>

Setting	Range	Value
E50G	Select: N, 1-6	3
50G1P	Range = 0,25 to 100,00, OFF	33.75
50G2P	Range = 0,25 to 100,00, OFF	33.75
50G3P	Range = 0,25 to 100,00, OFF	0.25
50G4P	Range = 0,25 to 100,00, OFF	OFF
50G5P	Range = 0,25 to 100,00, OFF	OFF
50G6P	Range = 0,25 to 100,00, OFF	OFF
67G1D	Range = 0,00 to 16000,00	0.00
67G2D	Range = 0,00 to 16000,00	0.00
67G3D	Range = 0,00 to 16000,00	4500.00
67G4D	Range = 0,00 to 16000,00	0.00
E50Q	Select: N, 1-6	N
50Q1P	Range = 0,25 to 100,00, OFF	OFF
50Q2P	Range = 0,25 to 100,00, OFF	OFF
50Q3P	Range = 0,25 to 100,00, OFF	OFF
50Q4P	Range = 0,25 to 100,00, OFF	OFF
50Q5P	Range = 0,25 to 100,00, OFF	OFF
50Q6P	Range = 0,25 to 100,00, OFF	OFF
67Q1D	Range = 0,00 to 16000,00	0.00

<Filter is Empty>

Setting	Range	Value
67Q2D	Range = 0,00 to 16000,00	0.00
67Q3D	Range = 0,00 to 16000,00	0.00
67Q4D	Range = 0,00 to 16000,00	0.00
E51P	Select: N, 1, 2	2
51P1P	Range = 0,50 to 16,00, OFF	5.63
51P1C	Select: U1-U5, C1-C5, Recloser-Curves	133
51P1TD	Range = 0,10 to 2,00	2.00
51P1RS	Select: Y, N	N
51P1CT	Range = 0,00 to 60,00	0.00
51P1MR	Range = 0,00 to 60,00	0.00
51P2P	Range = 0,50 to 16,00, OFF	5.63
51P2C	Select: U1-U5, C1-C5, Recloser-Curves	101
51P2TD	Range = 0,10 to 2,00	1.00
51P2RS	Select: Y, N	N
51P2CT	Range = 0,00 to 60,00	0.00

<Filter is Empty>



Setting	Range	Value
51P2MR	Range = 0,00 to 60,00	0.00
E51N	Select: N, 1, 2	N
51N1P	Range = 0,500 to 16,000, OFF	OFF
51N1C	Select: U1-U5, C1-C5, Recloser-Curves	U3
51N1TD	Range = 0,50 to 15,00	1.50
51N1RS	Select: Y, N	N
51N1CT	Range = 0,00 to 60,00	0.00
51N1MR	Range = 0,00 to 60,00	0.00
51N2P	Range = 0,500 to 16,000, OFF	OFF
51N2C	Select: U1-U5, C1-C5, Recloser-Curves	U3
51N2TD	Range = 0,50 to 15,00	1.50
51N2RS	Select: Y, N	N
51N2CT	Range = 0,00 to 60,00	0.00
51N2MR	Range = 0,00 to 60,00	0.00

<Filter is Empty>



Setting	Range	Value
E51G	Select: N, 1, 2	2
51G1P	Range = 0,50 to 16,00, OFF	1.00
51G1C	Select: U1-U5, C1-C5, Recloser-Curves	C1
51G1TD	Range = 0,05 to 1,00	0.80
51G1RS	Select: Y, N	N
51G1CT	Range = 0,00 to 60,00	0.00
51G1MR	Range = 0,00 to 60,00	0.00
51G2P	Range = 0,50 to 16,00, OFF	1.00
51G2C	Select: U1-U5, C1-C5, Recloser-Curves	102
51G2TD	Range = 0,10 to 2,00	1.00
51G2RS	Select: Y, N	N
51G2CT	Range = 0,00 to 60,00	0.00
51G2MR	Range = 0,00 to 60,00	0.00
E51Q	Select: Y, N	N
51QP	Range = 0,50 to 16,00, OFF	OFF

<Filter is Empty>

Setting	Range	Value
51QC	Select: U1-U5, C1-C5, Recloser-Curves	C2
51QTD	Range = 0,05 to 1,00	0.63
51QRS	Select: Y, N	N
51QCT	Range = 0,00 to 60,00	0.00
51QMR	Range = 0,00 to 60,00	0.00
ELOAD	Select: Y, N	N
ZLF	Range = 0,10 to 128,00	6.50
ZLR	Range = 0,10 to 128,00	6.50
PLAF	Range = -90,00 to 90,00	30.00
NLAF	Range = -90,00 to 90,00	-30.00
PLAR	Range = 90,00 to 270,00	150.00
NLAR	Range = 90,00 to 270,00	210.00
E32	Select: Y, AUTO, N	N
ELOP	Select: Y, Y1, N	N
DIR1	Select: F, R, N	N
DIR2	Select: F, R, N	N
DIR3	Select: F, R, N	N
DIR4	Select: F, R, N	N
ORDER	Select: I, Q, V, OFF	OFF

<Filter is Empty>

Setting	Range	Value
50P32P	Range = 0,50 to 10,00	3.00
Z2F	Range = -128,00 to 128,00	1.08
Z2R	Range = -128,00 to 128,00	1.28
50QFP	Range = 0,25 to 5,00	0.50
50QRP	Range = 0,25 to 5,00	0.25
a2	Range = 0,02 to 0,50	0.10
k2	Range = 0,10 to 1,20	0.20
50GFP	Range = 0,25 to 5,00	0.50
50GRP	Range = 0,25 to 5,00	0.25
a0	Range = 0,02 to 0,50	0.10
Z0F	Range = -128,00 to 128,00	3.20
Z0R	Range = -128,00 to 128,00	3.40
EVOLT	Select: Y, N	Y
27P1P	Range = 0,00 to 300,00, OFF	OFF
27P2P	Range = 0,00 to 300,00, OFF	OFF
59P1P	Range = 0,00 to 300,00, OFF	OFF
59P2P	Range = 0,00 to 300,00, OFF	OFF
59N1P	Range = 0,00 to 300,00, OFF	OFF
59N2P	Range = 0,00 to 300,00, OFF	OFF

<Filter is Empty>

Setting	Range	Value
59QP	Range = 0,00 to 200,00, OFF	OFF
59V1P	Range = 0,00 to 300,00, OFF	OFF
27SP	Range = 0,00 to 300,00, OFF	OFF
59S1P	Range = 0,00 to 300,00, OFF	OFF
59S2P	Range = 0,00 to 300,00, OFF	OFF
27PP	Range = 0,00 to 520,00, OFF	OFF
59PP	Range = 0,00 to 520,00, OFF	OFF
E25	Select: Y, N	N
25VLO	Range = 0,00 to 300,00	105.00
25VHI	Range = 0,00 to 300,00	130.00
25SF	Range = 0,005 to 0,500	0.042
25ANG1	Range = 0,00 to 80,00	25.00
25ANG2	Range = 0,00 to 80,00	40.00
SYNCP	Range = 0 to 330, VA, VB, VC	VA
TCLOSD	Range = 0,00 to 60,00	3.00
E81	Select: N, 1-6	1
27B81P	Range = 25,00 to 300,00	40.00

<Filter is Empty>



Setting	Range	Value
81D1P	Range = 40,10 to 65,00, OFF	48.55
81D1D	Range = 2,00 to 16000,00	10.00
81D2P	Range = 40,10 to 65,00, OFF	OFF
81D2D	Range = 2,00 to 16000,00	2.00
81D3P	Range = 40,10 to 65,00, OFF	OFF
81D3D	Range = 2,00 to 16000,00	2.00
81D4P	Range = 40,10 to 65,00, OFF	OFF
81D4D	Range = 2,00 to 16000,00	2.00
81D5P	Range = 40,10 to 65,00, OFF	OFF
81D5D	Range = 2,00 to 16000,00	2.00
81D6P	Range = 40,10 to 65,00, OFF	OFF
81D6D	Range = 2,00 to 16000,00	2.00
E79	Select: N, 1-4	1
79OI1	Range = 0,00 to 999999,00	250.00
79OI2	Range = 0,00 to 999999,00	0.00
79OI3	Range = 0,00 to 999999,00	0.00
79OI4	Range = 0,00 to 999999,00	0.00
79RSD	Range = 0,00 to 999999,00	3000.00
79RSLD	Range = 0,00 to 999999,00	500.00

<Filter is Empty>



Setting	Range	Value
79CLSD	Range = 0,00 to 999999,00, OFF	0.00
ESOTF	Select: Y, N	Y
CLOEN D	Range = 0,00 to 16000,00, OFF	OFF
52AEND	Range = 0,00 to 16000,00, OFF	50.00
SOTFD	Range = 0,50 to 16000,00	25.00
ECOMM	Select: N, POTT, DCUB1, DCUB2, DCB	N
Z3RBD	Range = 0,00 to 16000,00	5.00
EBLKD	Range = 0,00 to 16000,00, OFF	10.00
ETDPU	Range = 0,00 to 16000,00, OFF	2.00
EDURD	Range = 0,00 to 16000,00	3.50
EWFC	Select: Y, N	N
GARD1 D	Range = 0,00 to 16000,00	1.00
UBDUR D	Range = 0,25 to 16000,00	9.00
UBEND	Range = 0,00 to 16000,00	0.50
Z3XPU	Range = 0,00 to 16000,00	2.00
Z3XD	Range = 0,00 to 16000,00	5.00

<Filter is Empty>



Setting	Range	Value
BTXD	Range = 0,00 to 16000,00	0.00
67P2SD	Range = 0,00 to 60,00	1.00
67N2SD	Range = 0,00 to 60,00	1.00
67G2SD	Range = 0,00 to 60,00	1.00
67Q2SD	Range = 0,00 to 60,00	1.00
EDEM	Select: THM, ROL	THM
DMTC	Select: 5, 10, 15, 30, 60	5
PDEMP	Range = 0,50 to 16,00, OFF	5.00
NDEMP	Range = 0,500 to 16,000, OFF	OFF
GDEMP	Range = 0,50 to 16,00, OFF	OFF
QDEMP	Range = 0,50 to 16,00, OFF	OFF
TDURD	Range = 4,00 to 16000,00	9.00
CFD	Range = 0,00 to 16000,00, OFF	30.00
3POD	Range = 0,00 to 60,00	1.00
50LP	Range = 0,25 to 100,00, OFF	0.25
ESV	Select: N, 1-16	16
SV1PU	Range = 0,00 to 999999,00	4.00

<Filter is Empty>



Setting	Range	Value
SV2PU	Range = 0,00 to 999999,00	6.00
SV3PU	Range = 0,00 to 999999,00	4.00
SV4PU	Range = 0,00 to 999999,00	500.00
SV5PU	Range = 0,00 to 999999,00	0.00
SV6PU	Range = 0,00 to 999999,00	0.00
SV7PU	Range = 0,00 to 16000,00	0.00
SV8PU	Range = 0,00 to 16000,00	0.00
SV9PU	Range = 0,00 to 16000,00	0.00
SV10PU	Range = 0,00 to 16000,00	0.00
SV11PU	Range = 0,00 to 16000,00	0.00
SV12PU	Range = 0,00 to 16000,00	0.00
SV13PU	Range = 0,00 to 16000,00	0.00
SV14PU	Range = 0,00 to 16000,00	0.00
SV15PU	Range = 0,00 to 16000,00	0.00
SV16PU	Range = 0,00 to 16000,00	0.00

<Filter is Empty>

Setting	Range	Value
SV1DO	Range = 0,00 to 999999,00	9.00
SV2DO	Range = 0,00 to 999999,00	9.00
SV3DO	Range = 0,00 to 999999,00	0.00
SV4DO	Range = 0,00 to 999999,00	0.00
SV5DO	Range = 0,00 to 999999,00	20.00
SV6DO	Range = 0,00 to 999999,00	20.00
SV7DO	Range = 0,00 to 16000,00	0.00
SV8DO	Range = 0,00 to 16000,00	0.00
SV9DO	Range = 0,00 to 16000,00	0.00
SV10DO	Range = 0,00 to 16000,00	0.00
SV11DO	Range = 0,00 to 16000,00	0.00
SV12DO	Range = 0,00 to 16000,00	500.00
SV13DO	Range = 0,00 to 16000,00	500.00
SV14DO	Range = 0,00 to 16000,00	500.00
SV15DO	Range = 0,00 to 16000,00	0.00

<Filter is Empty>



Setting	Range	Value
SV16DO	Range = 0,00 to 16000,00	0.00
<input type="checkbox"/> Group : DNPA		
DNPA	Valid range = 0, NA or a list of relay elements.	
<input type="checkbox"/> Group : DNPB		
DNPB	Valid range = 0, NA or a list of relay elements.	
<input type="checkbox"/> Group : G		
TGR	Range = 0,00 to 16000,00	0.00
NFREQ	Select: 50, 60	50
PHROT	Select: ABC, ACB	ABC
DATE_F	Select: MDY, YMD	MDY
FP_TO	Range = 1 to 30, OFF	15
SCROLD	Range = 1 to 60	2
FPNGD	Select: OFF, IN, IG	IG
LER	Select: 15, 30	30
PRE	Range = 1 to 29	4
DCLOP	Range = 20,00 to 300,00, OFF	OFF
DCHIP	Range = 20,00 to 300,00, OFF	OFF

<Filter is Empty>

Setting	Range	Value
IN101D	Range = 0,00 to 1,00, AC	0.50
IN102D	Range = 0,00 to 1,00, AC	0.50
IN103D	Range = 0,00 to 1,00, AC	0.50
IN104D	Range = 0,00 to 1,00, AC	0.50
IN105D	Range = 0,00 to 1,00, AC	0.50
IN106D	Range = 0,00 to 1,00, AC	0.50
EBMON	Select: Y, N	Y
COSP1	Range = 0 to 65000	10000
KASP1	Range = 0,00 to 999,00	1.20
COSP2	Range = 0 to 65000	150
KASP2	Range = 0,00 to 999,00	8.00
COSP3	Range = 0 to 65000	12
KASP3	Range = 0,00 to 999,00	20.00
LED12L	Select: Y, N	Y
LED13L	Select: Y, N	Y
LED14L	Select: Y, N	Y

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Setting	Range	Value
LED15L	Select: Y, N	Y
LED16L	Select: Y, N	Y
LED17L	Select: Y, N	Y
LED18L	Select: Y, N	Y
LED19L	Select: Y, N	N
LED20L	Select: Y, N	N
LED21L	Select: Y, N	N
LED25L	Select: Y, N	Y
LED26L	Select: Y, N	Y
RSTLED	Select: Y, N	Y
PB9D	Range = 0,00 to 3600,00	0.00
PB10D	Range = 0,00 to 3600,00	0.00

 Group : L1

TR	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT5*(51P1T+LT1*51G1T)+!LT5*(51P2T+51G2T)+50P1+50G1+67G3T*LT7+IN106$
TRCOM M	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
TRSOTF	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	50P2+50G2
DTT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
ULTR	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!(51P1+51G1)
PT1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LOG1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
PT2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LOG2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
BT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
52A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN101
CL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106*LT5
ULCL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP+!(LT5+CLOSE)+!(LT4+CLOSE+79CY)

<Filter is Empty>

Setting	Range	Value
79RI	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	51P1T+51G1T
79RIS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	52A+79CY
79DTL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SV7
79DLS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79LO
79SKP	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
79STL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
79BRS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79CY*(51P1+51G1)
79SEQ	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
79CLS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SET1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT1*PB1*LT4+!LT1*RB5*!LT4
SET2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT2*LT5*PB2*LT4+!LT2*LT5*RB1*!LT4

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Setting	Range	Value
SET3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT3*PB3*LT4
SET4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT4*PB5
SET5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT5*PB6*LT4+!LT5*RB4*!LT4
SET6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106
SET7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT7*PB8*LT4+!LT7*RB7*!LT4
SET8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
SET15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT1*PB1*LT4+LT1*RB6*!LT4
RST2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT2*PB2*LT4+!(79RS+79CY+79LO)+LT2*LT5*RB2*!LT4
RST3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT3*PB3*LT4
RST4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT4*(PB5+SV4T)
RST5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*PB6*LT4+LT5*RB3*!LT4
RST6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	/52A
RST7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT7*PB8*LT4+LT7*RB8*!LT4
RST8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
RST10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
67P1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67P2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67P3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67P4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1

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Setting	Range	Value
67N2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51P1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1

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Setting	Range	Value
51P2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51N1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51N2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51G1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT1
51G2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51QTC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SV1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
SV2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SV1T
SV3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	FAULT
SV4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT4*!(PB1+PB2+PB3+PB4+PB6+PB7+PB8+PB9+PB10)
SV5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	OC*!LT4

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Setting	Range	Value
SV6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CC*!LT4
SV7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT2*LT5
SV8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SV7
SV11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT1
SV12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(50P1+51P1T) +!LT5*51P2T
SV13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(LT1*50G1+LT 1*51G1T)+!LT5*51 G2T+67G3T
SV14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CLOSE
SV15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
OUT101	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP+SV5T
OUT102	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CLOSE+SV6T
OUT103	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT104	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
OUT105	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT106	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT107	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT1
LED2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SV7
LED3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SG1
LED5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT4

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Setting	Range	Value
LED6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT5
LED7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106+LT6
LED8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT7
LED9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
LED13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	FAULT*!SV3T
LED14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	COMMT
LED15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SOTFT
LED16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*50P1+!LT5*(50P2+50G2)
LED17	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(51P1T+51G1T+51QT)+!LT5*(51P2T+51G2T)

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Setting	Range	Value
LED18	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	81D1T
LED19	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79RS
LED20	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79CY
LED21	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79LO
LED25	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	51G1
LED26	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	52A
DP2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
DP3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT6
DP4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
DP7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SS2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
SS3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
ER	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	/51P1+/51G1+/IN1 01
FAULT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	(51P1+51G1+51Q) *LT5+(51P2+51G2) *!LT5
BSYNCH	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
CLMON	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
BKMON	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
E32IV	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
TMB1A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
TMB2A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB3A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB4A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB5A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB6A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB7A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB8A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB1B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB2B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB3B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB4B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB5B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
TMB6B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB7B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB8B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

 Group : L2

TR	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT5*(51P1T+LT1*51G1T)+!LT5*(51P2T+51G2T)+50P1+50G1+67G3T*LT7+IN106$
TRCOM M	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TRSOTF	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$50P2+50G2$
DTT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
ULTR	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$!(51P1+51G1)$
PT1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LOG1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
PT2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LOG2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
BT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
52A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN101
CL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106*LT5
ULCL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP+!(LT5+CLOSE)+!(LT4+CLOSE+79CY)
79RI	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	51P1T+51G1T
79RIS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	52A+79CY
79DTL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SV7
79DLS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79LO
79SKP	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
79STL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
79BRS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79CY*(51P1+51G1)
79SEQ	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
79CLS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SET1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT1*PB1*LT4+!LT1*RB5*!LT4
SET2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT2*LT5*PB2*LT4+!LT2*LT5*RB1*!LT4
SET3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT3*PB3*LT4
SET4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT4*PB5
SET5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT5*PB6*LT4+!LT5*RB4*!LT4
SET6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106
SET7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT7*PB8*LT4+!LT7*RB7*!LT4

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Setting	Range	Value
SET8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT1*PB1*LT4+LT1*RB6*!LT4
RST2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT2*PB2*LT4+!(79RS+79CY+79LO)+LT2*LT5*RB2*!LT4

<Filter is Empty>

Setting	Range	Value
RST3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT3*PB3*LT4
RST4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT4*(PB5+SV4T)
RST5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*PB6*LT4+LT5*RB3*!LT4
RST6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	/52A
RST7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT7*PB8*LT4+LT7*RB8*!LT4
RST8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
RST15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
67P1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67P2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67P3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67P4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1

<Filter is Empty>

Setting	Range	Value
67G3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51P1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51P2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51N1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51N2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51G1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT1
51G2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1

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Setting	Range	Value
51QTC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SV1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
SV2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SV1T
SV3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	FAULT
SV4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT4*!(PB1+PB2+PB3+PB4+PB6+PB7+PB8+PB9+PB10)
SV5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	OC*!LT4
SV6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CC*!LT4
SV7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT2*LT5
SV8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SV7

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Setting	Range	Value
SV11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT1
SV12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(50P1+51P1T)+!LT5*51P2T
SV13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(LT1*50G1+LT1*51G1T)+!LT5*51G2T+67G3T
SV14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CLOSE
SV15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT101	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP+SV5T
OUT102	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CLOSE+SV6T
OUT103	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT104	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
OUT105	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
OUT106	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT107	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT1
LED2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SV7
LED3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SG1
LED5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT4
LED6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT5
LED7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106+LT6
LED8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT7
LED9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
LED12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
LED13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	FAULT*!SV3T
LED14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	COMMT
LED15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SOTFT
LED16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*50P1+!LT5*(50P2+50G2)
LED17	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(51P1T+51G1T+51QT)+!LT5*(51P2T+51G2T)
LED18	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	81D1T
LED19	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79RS
LED20	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79CY
LED21	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79LO
LED25	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	51G1

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Setting	Range	Value
LED26	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	52A
DP2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
DP3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT6
DP4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
DP12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SS2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
ER	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	/51P1+/51G1+/IN101

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Setting	Range	Value
FAULT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	(51P1+51G1+51Q) *LT5+(51P2+51G2) *!LT5
BSYNCH	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
CLMON	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
BKMON	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
E32IV	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
TMB1A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB2A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB3A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB4A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB5A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB6A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
TMB7A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB8A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB1B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB2B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB3B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB4B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB5B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB6B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB7B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB8B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

Group : L3

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Setting	Range	Value
TR	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT5*(51P1T+LT1*51G1T)+!LT5*(51P2T+51G2T)+50P1+50G1+67G3T*LT7+IN106$
TRCOM M	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TRSOTF	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$50P2+50G2$
DTT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
ULTR	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$!(51P1+51G1)$
PT1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
PT2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LOG1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LOG2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
BT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
52A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN101

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Setting	Range	Value
CL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106*LT5
ULCL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP+!(LT5+CLOSE)+!(LT4+CLOSE+79CY)
79RI	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	51P1T+51G1T
79RIS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	52A+79CY
79DTL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SV7
79DLS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79LO
79SKP	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
79STL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
79BRS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79CY*(51P1+51G1)
79SEQ	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
79CLS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1

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Setting	Range	Value
SET1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT1*PB1*LT4+!LT1*RB5*!LT4
SET2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT2*LT5*PB2*LT4+!LT2*LT5*RB1*!LT4
SET3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT3*PB3*LT4
SET4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT4*PB5
SET5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT5*PB6*LT4+!LT5*RB4*!LT4
SET6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106
SET7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT7*PB8*LT4+!LT7*RB7*!LT4
SET8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
SET12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT1*PB1*LT4+LT1*RB6*!LT4
RST2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT2*PB2*LT4+!(79RS+79CY+79LO)+LT2*LT5*RB2*!LT4
RST3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT3*PB3*LT4
RST4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT4*(PB5+SV4T)
RST5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*PB6*LT4+LT5*RB3*!LT4
RST6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	/52A

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Setting	Range	Value
RST7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT7*PB8*LT4+LT7*RB8*!LT4
RST8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
67P1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67P2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1

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Setting	Range	Value
67P3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67P4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1

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Setting	Range	Value
67Q3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51P1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51P2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51N1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51N2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51G1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT1
51G2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51QTC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SV1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
SV2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SV1T
SV3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	FAULT

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Setting	Range	Value
SV4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT4*!(PB1+PB2+PB3+PB4+PB6+PB7+PB8+PB9+PB10)$
SV5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$OC*!LT4$
SV6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$CC*!LT4$
SV7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT2*LT5$
SV8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$!SV7$
SV11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$!LT1$
SV12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT5*(50P1+51P1T)+!LT5*51P2T$
SV13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT5*(LT1*50G1+LT1*51G1T)+!LT5*51G2T+67G3T$
SV14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CLOSE

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Setting	Range	Value
SV15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT101	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP+SV5T
OUT102	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CLOSE+SV6T
OUT103	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT104	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
OUT105	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT106	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT107	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT1
LED2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SV7
LED3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
LED4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SG1
LED5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT4
LED6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT5
LED7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106+LT6
LED8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT7
LED9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
LED13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	FAULT*!SV3T
LED14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	COMMT
LED15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SOTFT
LED16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*50P1+!LT5*(50P2+50G2)

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Setting	Range	Value
LED17	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(51P1T+51G1T+51QT)+!LT5*(51P2T+51G2T)
LED18	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	81D1T
LED19	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79RS
LED20	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79CY
LED21	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79LO
LED25	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	51G1
LED26	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	52A
DP2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
DP3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT6
DP4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
DP5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
SS1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SS2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
ER	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	/51P1+/51G1+/IN101
FAULT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	(51P1+51G1+51Q)*LT5+(51P2+51G2)*!LT5
BSYNCH	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
CLMON	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
BKMON	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
E32IV	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
TMB1A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB2A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB3A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB4A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB5A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB6A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB7A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB8A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB1B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB2B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB3B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
TMB4B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB5B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB6B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB7B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB8B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

 Group : L4

TR	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(51P1T+LT1*51G1T)+!LT5*(51P2T+51G2T)+50P1+50G1+67G3T*LT7+IN106
TRCOM M	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TRSOTF	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	50P2+50G2
DTT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
ULTR	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!(51P1+51G1)

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Setting	Range	Value
PT1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
PT2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LOG1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LOG2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
BT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
52A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN101
CL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106*LT5
ULCL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP+!(LT5+CLOSE)+!(LT4+CLOSE+79CY)
79RI	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	51P1T+51G1T
79RIS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	52A+79CY
79DTL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SV7

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Setting	Range	Value
79DLS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79LO
79SKP	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
79STL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
79BRS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79CY*(51P1+51G1)
79SEQ	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
79CLS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SET1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT1*PB1*LT4+!LT1*RB5*!LT4
SET2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT2*LT5*PB2*LT4+!LT2*LT5*RB1*!LT4
SET3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT3*PB3*LT4
SET4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT4*PB5
SET5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT5*PB6*LT4+!LT5*RB4*!LT4

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Setting	Range	Value
SET6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106
SET7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT7*PB8*LT4+!LT7*RB7*!LT4
SET8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT1*PB1*LT4+LT1*RB6*!LT4

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Setting	Range	Value
RST2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT2*PB2*LT4+!(79RS+79CY+79LO)+LT2*LT5*RB2*!LT4$
RST3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT3*PB3*LT4$
RST4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT4*(PB5+SV4T)$
RST5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT5*PB6*LT4+LT5*RB3*!LT4$
RST6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	/52A
RST7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT7*PB8*LT4+LT7*RB8*!LT4$
RST8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
RST13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
67P1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67P2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67P3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67P4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1

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Setting	Range	Value
67G1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51P1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51P2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51N1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51N2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1

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Setting	Range	Value
51G1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT1
51G2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51QTC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SV1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
SV2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SV1T
SV3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	FAULT
SV4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT4*!(PB1+PB2+PB3+PB4+PB6+PB7+PB8+PB9+PB10)
SV5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	OC*!LT4
SV6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CC*!LT4
SV7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT2*LT5
SV8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
SV9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SV7
SV11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT1
SV12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(50P1+51P1T) +!LT5*51P2T
SV13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(LT1*50G1+LT 1*51G1T)+!LT5*51 G2T+67G3T
SV14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CLOSE
SV15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT101	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP+SV5T
OUT102	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CLOSE+SV6T
OUT103	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
OUT104	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
OUT105	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT106	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT107	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT1
LED2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SV7
LED3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SG1
LED5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT4
LED6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT5
LED7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106+LT6
LED8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT7

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Setting	Range	Value
LED9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
LED13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	FAULT*!SV3T
LED14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	COMMT
LED15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SOTFT
LED16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*50P1+!LT5*(50P2+50G2)
LED17	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(51P1T+51G1T+51QT)+!LT5*(51P2T+51G2T)
LED18	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	81D1T
LED19	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79RS
LED20	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79CY

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Setting	Range	Value
LED21	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79LO
LED25	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	51G1
LED26	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	52A
DP2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
DP3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT6
DP4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
DP10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SS2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
SS6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
ER	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	/51P1+/51G1+/IN1 01
FAULT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	(51P1+51G1+51Q) *LT5+(51P2+51G2) *!LT5
BSYNCH	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
CLMON	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
BKMON	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
E32IV	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
TMB1A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB2A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB3A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB4A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
TMB5A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB6A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB7A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB8A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB1B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB2B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB3B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB4B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB5B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB6B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB7B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB8B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
<input type="checkbox"/> Group : L5		
TR	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT5*(51P1T+LT1*51G1T)+!LT5*(51P2T+51G2T)+50P1+50G1+67G3T*LT7+IN106$
TRCOM M	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TRSOTF	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$50P2+50G2$
DTT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
ULTR	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$!(51P1+51G1)$
PT1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
PT2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LOG1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LOG2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
BT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
52A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN101
CL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106*LT5
ULCL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP+!(LT5+CLOSE)+!(LT4+CLOSE+79CY)
79RI	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	51P1T+51G1T
79RIS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	52A+79CY
79DTL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SV7
79DLS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79LO
79SKP	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
79STL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
79BRS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79CY*(51P1+51G1)
79SEQ	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
79CLS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SET1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT1*PB1*LT4+!LT1*RB5*!LT4
SET2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT2*LT5*PB2*LT4+!LT2*LT5*RB1*!LT4
SET3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT3*PB3*LT4
SET4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT4*PB5
SET5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT5*PB6*LT4+!LT5*RB4*!LT4
SET6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106
SET7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT7*PB8*LT4+!LT7*RB7*!LT4
SET8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
SET11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT1*PB1*LT4+LT1*RB6*!LT4$
RST2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT2*PB2*LT4+!(79RS+79CY+79LO)+LT2*LT5*RB2*!LT4$
RST3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT3*PB3*LT4$
RST4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT4*(PB5+SV4T)$
RST5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT5*PB6*LT4+LT5*RB3*!LT4$

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Setting	Range	Value
RST6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	/52A
RST7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT7*PB8*LT4+LT7*RB8*!LT4
RST8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
67P1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1

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Setting	Range	Value
67P2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67P3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67P4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1

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Setting	Range	Value
67Q2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51P1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51P2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51N1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51N2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51G1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT1
51G2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51QTC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SV1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
SV2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SV1T

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Setting	Range	Value
SV3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	FAULT
SV4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT4*!(PB1+PB2+PB3+PB4+PB6+PB7+PB8+PB9+PB10)
SV5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	OC*!LT4
SV6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CC*!LT4
SV7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT2*LT5
SV8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SV7
SV11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT1
SV12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(50P1+51P1T)+!LT5*51P2T
SV13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(LT1*50G1+LT1*51G1T)+!LT5*51G2T+67G3T

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Setting	Range	Value
SV14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CLOSE
SV15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT101	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP+SV5T
OUT102	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CLOSE+SV6T
OUT103	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT104	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
OUT105	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT106	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT107	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT1
LED2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SV7

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Setting	Range	Value
LED3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SG1
LED5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT4
LED6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT5
LED7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106+LT6
LED8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT7
LED9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
LED13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	FAULT*!SV3T
LED14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	COMMT
LED15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SOTFT

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Setting	Range	Value
LED16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*50P1+!LT5*(50P2+50G2)
LED17	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(51P1T+51G1T+51QT)+!LT5*(51P2T+51G2T)
LED18	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	81D1T
LED19	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79RS
LED20	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79CY
LED21	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79LO
LED25	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	51G1
LED26	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	52A
DP2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
DP3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT6

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Setting	Range	Value
DP4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
DP16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SS2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
ER	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	/51P1+/51G1+/IN101
FAULT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	(51P1+51G1+51Q)*LT5+(51P2+51G2)*!LT5
BSYNCH	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
CLMON	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
BKMON	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
E32IV	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
TMB1A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB2A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB3A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB4A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB5A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB6A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB7A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB8A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB1B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB2B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
TMB3B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB4B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB5B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB6B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB7B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB8B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

 Group : L6

TR	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(51P1T+LT1*51G1T)+!LT5*(51P2T+51G2T)+50P1+50G1+67G3T*LT7+IN106
TRCOM M	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TRSOTF	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	50P2+50G2
DTT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
ULTR	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!(51P1+51G1)
PT1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
PT2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LOG1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LOG2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
BT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
52A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN101
CL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106*LT5
ULCL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP+!(LT5+CLOSE)+!(LT4+CLOSE+79CY)
79RI	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	51P1T+51G1T
79RIS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	52A+79CY

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Setting	Range	Value
79DTL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SV7
79DLS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79LO
79SKP	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
79STL	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
79BRS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79CY*(51P1+51G1)
79SEQ	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
79CLS	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SET1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT1*PB1*LT4+!LT1*RB5*!LT4
SET2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT2*LT5*PB2*LT4+!LT2*LT5*RB1*!LT4
SET3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT3*PB3*LT4
SET4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT4*PB5

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Setting	Range	Value
SET5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT5*PB6*LT4+!LT5*RB4*!LT4
SET6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106
SET7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT7*PB8*LT4+!LT7*RB7*!LT4
SET8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SET16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
RST1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT1*PB1*LT4+LT1*RB6*!LT4$
RST2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT2*PB2*LT4+!(79RS+79CY+79LO)+LT2*LT5*RB2*!LT4$
RST3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT3*PB3*LT4$
RST4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT4*(PB5+SV4T)$
RST5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT5*PB6*LT4+LT5*RB3*!LT4$
RST6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	/52A
RST7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	$LT7*PB8*LT4+LT7*RB8*!LT4$
RST8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
RST12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
RST16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
67P1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67P2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67P3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67P4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67N3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1

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Setting	Range	Value
67N4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67G4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q3TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
67Q4TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51P1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51P2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51N1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1

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Setting	Range	Value
51N2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51G1TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT1
51G2TC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
51QTC	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SV1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
SV2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SV1T
SV3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	FAULT
SV4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT4*!(PB1+PB2+PB3+PB4+PB6+PB7+PB8+PB9+PB10)
SV5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	OC*!LT4
SV6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CC*!LT4
SV7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT2*LT5

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Setting	Range	Value
SV8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SV7
SV11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT1
SV12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(50P1+51P1T) +!LT5*51P2T
SV13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(LT1*50G1+LT 1*51G1T)+!LT5*51 G2T+67G3T
SV14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CLOSE
SV15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SV16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT101	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP+SV5T
OUT102	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	CLOSE+SV6T

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Setting	Range	Value
OUT103	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT104	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
OUT105	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT106	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
OUT107	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT1
LED2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SV7
LED3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!SG1
LED5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT4
LED6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	!LT5
LED7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	IN106+LT6

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Setting	Range	Value
LED8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT7
LED9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
LED12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	TRIP
LED13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	FAULT*!SV3T
LED14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	COMMT
LED15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	SOTFT
LED16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*50P1+!LT5*(50P2+50G2)
LED17	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT5*(51P1T+51G1T+51QT)+!LT5*(51P2T+51G2T)
LED18	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	81D1T
LED19	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79RS

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Setting	Range	Value
LED20	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79CY
LED21	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	79LO
LED25	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	51G1
LED26	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	52A
DP2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
DP3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	LT6
DP4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP7	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP8	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
DP9	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP10	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP11	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP12	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP13	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP14	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP15	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
DP16	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS1	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
SS2	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS3	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS4	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
SS5	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
SS6	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
ER	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	/51P1+/51G1+/IN101
FAULT	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	(51P1+51G1+51Q)*LT5+(51P2+51G2)*!LT5
BSYNCH	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
CLMON	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
BKMON	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
E32IV	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	1
TMB1A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB2A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB3A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

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Setting	Range	Value
TMB4A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB5A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB6A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB7A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB8A	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB1B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB2B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB3B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB4B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB5B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB6B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
TMB7B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0

<Filter is Empty>



Setting	Range	Value
TMB8B	Valid range = Boolean equation using word bit elements and the legal operators: ! / \ () * +	0
<input type="checkbox"/> Group : P1		
PROTO	Select: SEL, LMD, MBA, MB8A, MBB, MB8B	SEL
T_OUT	Range = 0 to 30	0
AUTO	Select: Y, N, DTA	N
SPEED	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400	19200
RTSCTS	Select: Y, N, MBT	N
BITS	Select: 6-8	8
FASTOP	Select: Y, N	N
PARITY	Select: O, E, N	N
STOP	Select: 1, 2	1
PREFIX	Select: @, #, \$, %, &&	@
ADDR	Range = 1 to 99	1
SETTLE	Range = 0,00 to 30,00	0.00
DNPAD R	Range = 0 to 65534	3

<Filter is Empty>



Setting	Range	Value
DECPLA	Range = 0 to 3	1
TIMERQ	Range = 0 to 32767	0
DECPLM	Range = 0 to 3	2
DECPLV	Range = 0 to 3	2
DRETRY	Range = 0 to 15	3
STIMEO	Range = 0,0 to 30,0	1.0
MINDLY	Range = 0,00 to 1,00	0.05
DTIMEO	Range = 0 to 5	1
PREDLY	Range = 0,00 to 30,00, OFF	0.00
MAXDL Y	Range = 0,00 to 1,00	0.10
NUMEV E	Range = 1 to 200	10
PSTDLY	Range = 0,00 to 30,00	0.00

<Filter is Empty>

Setting	Range	Value
UTIMEO	Range = 1 to 50	2
UNSOL	Select: Y, N	N
PUNSOL	Select: Y, N	N
REPADR	Range = 0 to 65534	1000
ANADB	Range = 0 to 32767	100
AGEEVE	Range = 0,0 to 60,0	2.0
ANADB A	Range = 0 to 32767	100
ECLASS	Select: 0-3	2
ANADB V	Range = 0 to 32767	100
CLASSA	Select: 0-3	2
ANADB M	Range = 0 to 32767	100
CLASSB	Select: 0-3	2
CLASSC	Select: 0-3	2

<Filter is Empty>



Setting	Range	Value
RBADP U	Range = 1 to 10000	60
CBADPU	Range = 1 to 10000	1000
RXID	Select: 1-4	1
TXID	Select: 1-4	2
RXDFLT	Range = 8 chars: (0s, 1s, Xs)	XXXXXXXX
RMB1P U	Range = 1 to 8	1
RMB2P U	Range = 1 to 8	1
RMB3P U	Range = 1 to 8	1
RMB4P U	Range = 1 to 8	1
RMB5P U	Range = 1 to 8	1
RMB6P U	Range = 1 to 8	1
RMB7P U	Range = 1 to 8	1
RMB8P U	Range = 1 to 8	1

<Filter is Empty>

Setting	Range	Value
RMB1D O	Range = 1 to 8	1
RMB2D O	Range = 1 to 8	1
RMB3D O	Range = 1 to 8	1
RMB4D O	Range = 1 to 8	1
RMB5D O	Range = 1 to 8	1
RMB6D O	Range = 1 to 8	1
RMB7D O	Range = 1 to 8	1
RMB8D O	Range = 1 to 8	1
<input type="checkbox"/> Group : P2		
PROTO	Select: SEL, LMD, MBA, MB8A, MBB, MB8B	SEL
T_OUT	Range = 0 to 30	15
AUTO	Select: Y, N, DTA	N
SPEED	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400	19200

<Filter is Empty>



Setting	Range	Value
RTSCTS	Select: Y, N, MBT	N
BITS	Select: 6-8	8
FASTOP	Select: Y, N	N
PARITY	Select: O, E, N	N
STOP	Select: 1, 2	1
PREFIX	Select: @, #, \$, %, &&	@
ADDR	Range = 1 to 99	1
SETTLE	Range = 0,00 to 30,00	0.00
DNPAD R	Range = 0 to 65534	0
DECPLA	Range = 0 to 3	1
TIMERQ	Range = 0 to 32767	0
DECPLM	Range = 0 to 3	1
DECPLV	Range = 0 to 3	1
DRETRY	Range = 0 to 15	3

<Filter is Empty>

Setting	Range	Value
STIMEO	Range = 0,0 to 30,0	1.0
MINDLY	Range = 0,00 to 1,00	0.05
DTIMEO	Range = 0 to 5	1
PREDLY	Range = 0,00 to 30,00, OFF	0.00
MAXDL Y	Range = 0,00 to 1,00	0.10
NUMEV E	Range = 1 to 200	10
PSTDLY	Range = 0,00 to 30,00	0.00
UTIMEO	Range = 1 to 50	2
UNSOL	Select: Y, N	N
PUNSOL	Select: Y, N	N
REPADR	Range = 0 to 65534	0
ANADB	Range = 0 to 32767	100
AGEEVE	Range = 0,0 to 60,0	2.0

<Filter is Empty>

Setting	Range	Value
ANADB A	Range = 0 to 32767	100
ECLASS	Select: 0-3	2
ANADB V	Range = 0 to 32767	100
CLASSA	Select: 0-3	2
ANADB M	Range = 0 to 32767	100
CLASSB	Select: 0-3	2
CLASSC	Select: 0-3	2
RBADP U	Range = 1 to 10000	60
CBADPU	Range = 1 to 10000	1000
RXID	Select: 1-4	1
TXID	Select: 1-4	2
RXDFLT	Range = 8 chars: (0s, 1s, Xs)	XXXXXXXX
RMB1P U	Range = 1 to 8	1

<Filter is Empty>

Setting	Range	Value
RMB2P U	Range = 1 to 8	1
RMB3P U	Range = 1 to 8	1
RMB4P U	Range = 1 to 8	1
RMB5P U	Range = 1 to 8	1
RMB6P U	Range = 1 to 8	1
RMB7P U	Range = 1 to 8	1
RMB8P U	Range = 1 to 8	1
RMB1D O	Range = 1 to 8	1
RMB2D O	Range = 1 to 8	1
RMB3D O	Range = 1 to 8	1
RMB4D O	Range = 1 to 8	1
RMB5D O	Range = 1 to 8	1

<Filter is Empty>



Setting	Range	Value
RMB6D O	Range = 1 to 8	1
RMB7D O	Range = 1 to 8	1
RMB8D O	Range = 1 to 8	1

 Group : P3

PROTO	Select: SEL, LMD, DNP, DNPE, MBA, MB8A, MBB, MB8B	DNP
T_OUT	Range = 0 to 30	0
AUTO	Select: Y, N, DTA	N
SPEED	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400	19200
RTSCTS	Select: Y, N, MBT	N
BITS	Select: 6-8	8
FASTOP	Select: Y, N	N
PARITY	Select: O, E, N	N
STOP	Select: 1, 2	1
PREFIX	Select: @, #, \$, %, &&	@
ADDR	Range = 1 to 99	1

<Filter is Empty>

Setting	Range	Value
SETTLE	Range = 0,00 to 30,00	0.00
DNPAD R	Range = 0 to 65534	3
DECPLA	Range = 0 to 3	1
TIMERQ	Range = 0 to 32767	0
DECPLM	Range = 0 to 3	2
DECPLV	Range = 0 to 3	2
DRETRY	Range = 0 to 15	3
STIMEO	Range = 0,0 to 30,0	1.0
MINDLY	Range = 0,00 to 1,00	0.05
DTIMEO	Range = 0 to 5	1
PREDLY	Range = 0,00 to 30,00, OFF	0.00
MAXDL Y	Range = 0,00 to 1,00	0.10

<Filter is Empty>



Setting	Range	Value
NUMEV E	Range = 1 to 200	10
PSTDLY	Range = 0,00 to 30,00	0.00
UTIMEO	Range = 1 to 50	2
UNSOL	Select: Y, N	N
PUNSOL	Select: Y, N	N
REPADR	Range = 0 to 65534	1000
ANADB	Range = 0 to 32767	1
AGEEVE	Range = 0,0 to 60,0	2.0
ANADB A	Range = 0 to 32767	1
ECLASS	Select: 0-3	2
ANADB V	Range = 0 to 32767	1
CLASSA	Select: 0-3	2
ANADB M	Range = 0 to 32767	1

<Filter is Empty>



Setting	Range	Value
CLASSB	Select: 0-3	2
CLASSC	Select: 0-3	2
RBADP U	Range = 1 to 10000	60
CBADPU	Range = 1 to 10000	1000
RXID	Select: 1-4	1
TXID	Select: 1-4	2
RXDFLT	Range = 8 chars: (0s, 1s, Xs)	XXXXXXXX
RMB1P U	Range = 1 to 8	1
RMB2P U	Range = 1 to 8	1
RMB3P U	Range = 1 to 8	1
RMB4P U	Range = 1 to 8	1
RMB5P U	Range = 1 to 8	1
RMB6P U	Range = 1 to 8	1

<Filter is Empty>

Setting	Range	Value
RMB7P U	Range = 1 to 8	1
RMB8P U	Range = 1 to 8	1
RMB1D O	Range = 1 to 8	1
RMB2D O	Range = 1 to 8	1
RMB3D O	Range = 1 to 8	1
RMB4D O	Range = 1 to 8	1
RMB5D O	Range = 1 to 8	1
RMB6D O	Range = 1 to 8	1
RMB7D O	Range = 1 to 8	1
RMB8D O	Range = 1 to 8	1
<input type="checkbox"/> Group : P4		
PROTO	Select: SEL, LMD, MBA, MB8A, MBB, MB8B	SEL
T_OUT	Range = 0 to 30	15

<Filter is Empty>

Setting	Range	Value
AUTO	Select: Y, N, DTA	N
SPEED	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400	19200
RTSCTS	Select: Y, N, MBT	N
BITS	Select: 6-8	8
FASTOP	Select: Y, N	N
PARITY	Select: O, E, N	N
STOP	Select: 1, 2	1
PREFIX	Select: @, #, \$, %, &&	@
ADDR	Range = 1 to 99	1
SETTLE	Range = 0,00 to 30,00	0.00
DNPAD R	Range = 0 to 65534	0
DECPLA	Range = 0 to 3	1
TIMERQ	Range = 0 to 32767	0
DECPLM	Range = 0 to 3	1

<Filter is Empty>

Setting	Range	Value
DECPLV	Range = 0 to 3	1
DRETRY	Range = 0 to 15	3
STIMEO	Range = 0,0 to 30,0	1.0
MINDLY	Range = 0,00 to 1,00	0.05
DTIMEO	Range = 0 to 5	1
PREDLY	Range = 0,00 to 30,00, OFF	0.00
MAXDL Y	Range = 0,00 to 1,00	0.10
NUMEV E	Range = 1 to 200	10
PSTDLY	Range = 0,00 to 30,00	0.00
UTIMEO	Range = 1 to 50	2
UNSOL	Select: Y, N	N
PUNSOL	Select: Y, N	N

<Filter is Empty>



Setting	Range	Value
REPADR	Range = 0 to 65534	0
ANADB	Range = 0 to 32767	100
AGEEVE	Range = 0,0 to 60,0	2.0
ANADB A	Range = 0 to 32767	100
ECLASS	Select: 0-3	2
ANADB V	Range = 0 to 32767	100
CLASSA	Select: 0-3	2
ANADB M	Range = 0 to 32767	100
CLASSB	Select: 0-3	2
CLASSC	Select: 0-3	2
RBADP U	Range = 1 to 10000	60
CBADPU	Range = 1 to 10000	1000
RXID	Select: 1-4	1

<Filter is Empty>



Setting	Range	Value
TXID	Select: 1-4	2
RXDFLT	Range = 8 chars: (0s, 1s, Xs)	XXXXXXXX
RMB1P U	Range = 1 to 8	1
RMB2P U	Range = 1 to 8	1
RMB3P U	Range = 1 to 8	1
RMB4P U	Range = 1 to 8	1
RMB5P U	Range = 1 to 8	1
RMB6P U	Range = 1 to 8	1
RMB7P U	Range = 1 to 8	1
RMB8P U	Range = 1 to 8	1
RMB1D O	Range = 1 to 8	1
RMB2D O	Range = 1 to 8	1

<Filter is Empty>

Setting	Range	Value
RMB3D O	Range = 1 to 8	1
RMB4D O	Range = 1 to 8	1
RMB5D O	Range = 1 to 8	1
RMB6D O	Range = 1 to 8	1
RMB7D O	Range = 1 to 8	1
RMB8D O	Range = 1 to 8	1

 Group : R

SER1	Valid range = 0, NA or a list of relay elements.	TRIP,51P1T,51G1T, 50P1,50G1,50N1,51 P2T,51G2T,IN101,I N102,IN103,IN104,I N105,IN106,67G3T
SER2	Valid range = 0, NA or a list of relay elements.	CLOSE,52A,CF,PB1, PB2,PB3,PB4,PB5,P B6,OC,CC,RB1,RB2, RB3,RB4,RB5,RB6,R B7,RB8,LT1,LT2,LT 3,LT4,LT5

<Filter is Empty>

Setting	Range	Value
SER3	Valid range = 0, NA or a list of relay elements.	79RS,79CY,79LO,SH0,SH1,SH2,PB2,OUT101,OUT102,OUT103,OUT104,OUT105,OUT106,ALARM,SV5T,SV6T,SV7,LT6,LT7,PB8
LDLIST	Valid range = 0, NA or a list of relay elements.	IA,IB,IC,IG,MW3DI,MW3DO,MVR3DI,MVR3DO,PF3
LDAR	Select: 5, 10, 15, 30, 60	15

 Group : T

NLB1	Range = ASCII string with a maximum length of 14.	NA
NLB2	Range = ASCII string with a maximum length of 14.	NA
NLB3	Range = ASCII string with a maximum length of 14.	NA
NLB4	Range = ASCII string with a maximum length of 14.	NA
NLB5	Range = ASCII string with a maximum length of 14.	NA
NLB6	Range = ASCII string with a maximum length of 14.	NA

<Filter is Empty>

Setting	Range	Value
NLB7	Range = ASCII string with a maximum length of 14.	NA
NLB8	Range = ASCII string with a maximum length of 14.	NA
NLB9	Range = ASCII string with a maximum length of 14.	NA
NLB10	Range = ASCII string with a maximum length of 14.	NA
NLB11	Range = ASCII string with a maximum length of 14.	NA
NLB12	Range = ASCII string with a maximum length of 14.	NA
NLB13	Range = ASCII string with a maximum length of 14.	NA
NLB14	Range = ASCII string with a maximum length of 14.	NA
NLB15	Range = ASCII string with a maximum length of 14.	NA
NLB16	Range = ASCII string with a maximum length of 14.	NA
CLB1	Range = ASCII string with a maximum length of 7.	NA
CLB2	Range = ASCII string with a maximum length of 7.	NA

<Filter is Empty>

Setting	Range	Value
CLB3	Range = ASCII string with a maximum length of 7.	NA
CLB4	Range = ASCII string with a maximum length of 7.	NA
CLB5	Range = ASCII string with a maximum length of 7.	NA
CLB6	Range = ASCII string with a maximum length of 7.	NA
CLB7	Range = ASCII string with a maximum length of 7.	NA
CLB8	Range = ASCII string with a maximum length of 7.	NA
CLB9	Range = ASCII string with a maximum length of 7.	NA
CLB10	Range = ASCII string with a maximum length of 7.	NA
CLB11	Range = ASCII string with a maximum length of 7.	NA
CLB12	Range = ASCII string with a maximum length of 7.	NA
CLB13	Range = ASCII string with a maximum length of 7.	NA
CLB14	Range = ASCII string with a maximum length of 7.	NA

<Filter is Empty>

Setting	Range	Value
CLB15	Range = ASCII string with a maximum length of 7.	NA
CLB16	Range = ASCII string with a maximum length of 7.	NA
SLB1	Range = ASCII string with a maximum length of 7.	NA
SLB2	Range = ASCII string with a maximum length of 7.	NA
SLB3	Range = ASCII string with a maximum length of 7.	NA
SLB4	Range = ASCII string with a maximum length of 7.	NA
SLB5	Range = ASCII string with a maximum length of 7.	NA
SLB6	Range = ASCII string with a maximum length of 7.	NA
SLB7	Range = ASCII string with a maximum length of 7.	NA
SLB8	Range = ASCII string with a maximum length of 7.	NA
SLB9	Range = ASCII string with a maximum length of 7.	NA
SLB10	Range = ASCII string with a maximum length of 7.	NA

<Filter is Empty>

Setting	Range	Value
SLB11	Range = ASCII string with a maximum length of 7.	NA
SLB12	Range = ASCII string with a maximum length of 7.	NA
SLB13	Range = ASCII string with a maximum length of 7.	NA
SLB14	Range = ASCII string with a maximum length of 7.	NA
SLB15	Range = ASCII string with a maximum length of 7.	NA
SLB16	Range = ASCII string with a maximum length of 7.	NA
PLB1	Range = ASCII string with a maximum length of 7.	NA
PLB2	Range = ASCII string with a maximum length of 7.	NA
PLB3	Range = ASCII string with a maximum length of 7.	NA
PLB4	Range = ASCII string with a maximum length of 7.	NA
PLB5	Range = ASCII string with a maximum length of 7.	NA
PLB6	Range = ASCII string with a maximum length of 7.	NA

<Filter is Empty>

Setting	Range	Value
PLB7	Range = ASCII string with a maximum length of 7.	NA
PLB8	Range = ASCII string with a maximum length of 7.	NA
PLB9	Range = ASCII string with a maximum length of 7.	NA
PLB10	Range = ASCII string with a maximum length of 7.	NA
PLB11	Range = ASCII string with a maximum length of 7.	NA
PLB12	Range = ASCII string with a maximum length of 7.	NA
PLB13	Range = ASCII string with a maximum length of 7.	NA
PLB14	Range = ASCII string with a maximum length of 7.	NA
PLB15	Range = ASCII string with a maximum length of 7.	NA
PLB16	Range = ASCII string with a maximum length of 7.	NA
DP1_1	Range = ASCII string with a maximum length of 16.	INT CERRADO
DP2_1	Range = ASCII string with a maximum length of 16.	AL_SAN JOSE

<Filter is Empty>

Setting	Range	Value
DP3_1	Range = ASCII string with a maximum length of 16.	TRIP X EDAC
DP4_1	Range = ASCII string with a maximum length of 16.	NA
DP5_1	Range = ASCII string with a maximum length of 16.	NA
DP6_1	Range = ASCII string with a maximum length of 16.	NA
DP7_1	Range = ASCII string with a maximum length of 16.	NA
DP8_1	Range = ASCII string with a maximum length of 16.	NA
DP9_1	Range = ASCII string with a maximum length of 16.	NA
DP10_1	Range = ASCII string with a maximum length of 16.	NA
DP11_1	Range = ASCII string with a maximum length of 16.	NA
DP12_1	Range = ASCII string with a maximum length of 16.	NA
DP13_1	Range = ASCII string with a maximum length of 16.	NA
DP14_1	Range = ASCII string with a maximum length of 16.	NA

<Filter is Empty>

Setting	Range	Value
DP15_1	Range = ASCII string with a maximum length of 16.	NA
DP16_1	Range = ASCII string with a maximum length of 16.	NA
DP1_0	Range = ASCII string with a maximum length of 16.	INT ABIERTO
DP2_0	Range = ASCII string with a maximum length of 16.	NA
DP3_0	Range = ASCII string with a maximum length of 16.	NA
DP4_0	Range = ASCII string with a maximum length of 16.	NA
DP5_0	Range = ASCII string with a maximum length of 16.	NA
DP6_0	Range = ASCII string with a maximum length of 16.	NA
DP7_0	Range = ASCII string with a maximum length of 16.	NA
DP8_0	Range = ASCII string with a maximum length of 16.	NA
DP9_0	Range = ASCII string with a maximum length of 16.	NA
DP10_0	Range = ASCII string with a maximum length of 16.	NA

<Filter is Empty>

Setting	Range	Value
DP11_0	Range = ASCII string with a maximum length of 16.	NA
DP12_0	Range = ASCII string with a maximum length of 16.	NA
DP13_0	Range = ASCII string with a maximum length of 16.	NA
DP14_0	Range = ASCII string with a maximum length of 16.	NA
DP15_0	Range = ASCII string with a maximum length of 16.	NA
DP16_0	Range = ASCII string with a maximum length of 16.	NA
79LL	Range = ASCII string with a maximum length of 14.	MAX RECONEX
79SL	Range = ASCII string with a maximum length of 14.	RECONEX HECHAS

<Filter is Empty>

**ANEXO II
INFORME DE FALLA**

ESTAMPA DE TIEMPO SINCRONIZADA

INFORME (s) QUINTO DÍA Nº: IF 2021002584	FECHA DE FALLA: 11 de Septiembre de 2021
INSTALACIÓN (ES) 52CT1 SE Bollenar	

1. Estampa de tiempo sincronizada

Día	Hora	Zona	Subestación	Paño	Descripción	Valor
12-09-2021	01:00:30.7730000	MELIPILLA	BOLLENAR	C2	52C2 ABIERTO	ABIERTO
12-09-2021	01:00:30.7730000	MELIPILLA	BOLLENAR	C2	52C2 CERRADO	0
12-09-2021	01:00:30.7730000	MELIPILLA	BOLLENAR	C2	PS1 (5051P) SOBRECORRIENTE DE FASE TRIP	ACTIVA
12-09-2021	01:00:40.2710000	MELIPILLA	BOLLENAR	C2	PS1 (5051P) SOBRECORRIENTE DE FASE TRIP	NORMAL
12-09-2021	02:03:51.2950000	MELIPILLA	BOLLENAR	C2	52C2 CERRADO	CERRADO
12-09-2021	02:03:51.2950000	MELIPILLA	BOLLENAR	C2	52C2 ABIERTO	0
12-09-2021	02:23:05.1630000	MELIPILLA	BOLLENAR	C2	PS1 (5051N) SOBRECORRIENTE RESIDUAL TRIP	ACTIVA
12-09-2021	02:23:06.6620000	MELIPILLA	BOLLENAR	C2	52C2 CERRADO	0
12-09-2021	02:23:06.6620000	MELIPILLA	BOLLENAR	C2	PS1 (5051P) SOBRECORRIENTE DE FASE TRIP	ACTIVA
12-09-2021	02:23:06.6620000	MELIPILLA	BOLLENAR	C2	52C2 ABIERTO	ABIERTO
12-09-2021	02:23:12.5850000	MELIPILLA	BOLLENAR	C2	52C2 ABIERTO	0
12-09-2021	02:23:12.5850000	MELIPILLA	BOLLENAR	C2	52C2 CERRADO	CERRADO
12-09-2021	02:23:12.5850000	MELIPILLA	BOLLENAR	C2	PS1 (79) RECONEXION TRIP	ACTIVA
12-09-2021	02:23:15.9100000	MELIPILLA	BOLLENAR	C2	PS1 (5051P) SOBRECORRIENTE DE FASE TRIP	NORMAL
12-09-2021	02:23:15.9100000	MELIPILLA	BOLLENAR	C2	PS1 (5051N) SOBRECORRIENTE RESIDUAL TRIP	NORMAL
12-09-2021	02:23:21.5320000	MELIPILLA	BOLLENAR	C2	PS1 (79) RECONEXION TRIP	NORMAL
12-09-2021	02:33:53.8190000	MELIPILLA	BOLLENAR	CT1	PS1 (5051N) SOBRECORRIENTE RESIDUAL TRIP	ACTIVA
12-09-2021	02:33:53.8190000	MELIPILLA	BOLLENAR	CT1	52CT1 ABIERTO	ABIERTO
12-09-2021	02:33:53.8190000	MELIPILLA	BOLLENAR	CT1	52CT1 CERRADO	0
12-09-2021	02:33:54.0380000	MELIPILLA	BOLLENAR	C2	PS1 (5051N) SOBRECORRIENTE RESIDUAL TRIP	ACTIVA
12-09-2021	02:33:54.0380000	MELIPILLA	BOLLENAR	C2	52C2 ABIERTO	ABIERTO
12-09-2021	02:33:54.0380000	MELIPILLA	BOLLENAR	C2	52C2 CERRADO	0
12-09-2021	02:33:58.2920000	MELIPILLA	BOLLENAR	C2	PS1 (79) RECONEXION TRIP	ACTIVA
12-09-2021	02:33:58.2920000	MELIPILLA	BOLLENAR	C2	52C2 ABIERTO	0
12-09-2021	02:33:58.2920000	MELIPILLA	BOLLENAR	C2	52C2 CERRADO	CERRADO
12-09-2021	02:34:02.8370000	MELIPILLA	BOLLENAR	CT1	PS1 (5051N) SOBRECORRIENTE RESIDUAL TRIP	NORMAL
12-09-2021	02:34:03.1620000	MELIPILLA	BOLLENAR	C2	PS1 (5051N) SOBRECORRIENTE RESIDUAL TRIP	NORMAL
12-09-2021	02:34:08.4100000	MELIPILLA	BOLLENAR	C2	PS1 (79) RECONEXION TRIP	NORMAL

ANEXO II
INFORME DE FALLA

ESTAMPA DE TIEMPO SINCRONIZADA

INFORME (s) QUINTO DÍA Nº: IF 2021002584	FECHA DE FALLA: 11 de Septiembre de 2021
INSTALACIÓN (ES) 52CT1 SE Bollenar	

12-09-2021	02:35:27.0380000	MELIPILLA	BOLLENAR	C1	52C1 ABIERTO	ABIERTO
12-09-2021	02:35:27.0380000	MELIPILLA	BOLLENAR	C1	52C1 CERRADO	0
12-09-2021	02:35:31.9090000	MELIPILLA	BOLLENAR	C2	52C2 ABIERTO	ABIERTO
12-09-2021	02:35:31.9090000	MELIPILLA	BOLLENAR	C2	52C2 CERRADO	0
12-09-2021	02:35:36.9470000	MELIPILLA	BOLLENAR	C3	52C3 ABIERTO	ABIERTO
12-09-2021	02:35:36.9470000	MELIPILLA	BOLLENAR	C3	52C3 CERRADO	0
12-09-2021	02:35:40.7700000	MELIPILLA	BOLLENAR	C4	52C4 ABIERTO	ABIERTO
12-09-2021	02:35:40.7700000	MELIPILLA	BOLLENAR	C4	52C4 CERRADO	0
12-09-2021	02:36:01.9430000	MELIPILLA	BOLLENAR	CT1	52CT1 ABIERTO	0
12-09-2021	02:36:01.9430000	MELIPILLA	BOLLENAR	CT1	52CT1 CERRADO	CERRADO
12-09-2021	02:36:23.1630000	MELIPILLA	BOLLENAR	C1	52C1 ABIERTO	0
12-09-2021	02:36:23.1630000	MELIPILLA	BOLLENAR	C1	52C1 CERRADO	CERRADO
12-09-2021	02:36:25.5180000	MELIPILLA	BOLLENAR	C4	52C4 CERRADO	CERRADO
12-09-2021	02:36:31.3220000	MELIPILLA	BOLLENAR	C3	52C3 ABIERTO	0
12-09-2021	02:36:31.3220000	MELIPILLA	BOLLENAR	C3	52C3 CERRADO	CERRADO
12-09-2021	02:36:31.3220000	MELIPILLA	BOLLENAR	C4	52C4 ABIERTO	0
12-09-2021	02:59:57.4600000	MELIPILLA	BOLLENAR	C3	PS1 (5051N) SOBRECORRIENTE RESIDUAL TRIP	ACTIVA
12-09-2021	03:00:09.0770000	MELIPILLA	BOLLENAR	C3	PS1 (5051N) SOBRECORRIENTE RESIDUAL TRIP	NORMAL
12-09-2021	04:07:30.8010000	MELIPILLA	BOLLENAR	C2	52C2 CERRADO	CERRADO
12-09-2021	04:07:30.8010000	MELIPILLA	BOLLENAR	C2	52C2 ABIERTO	0
12-09-2021	04:08:39.0520000	MELIPILLA	BOLLENAR	C2	52C2 CERRADO	0
12-09-2021	04:08:39.0520000	MELIPILLA	BOLLENAR	C2	52C2 ABIERTO	ABIERTO
12-09-2021	04:29:33.3220000	MELIPILLA	BOLLENAR	CT1	PS1 EQUIPO FALLA	ACTIVA
12-09-2021	04:29:34.3150000	MELIPILLA	BOLLENAR	CT1	PS1 EQUIPO FALLA	NORMAL
12-09-2021	04:40:25.9980000	MELIPILLA	BOLLENAR	SE	EDAC EQUIPO FALLA	ACTIVA
12-09-2021	04:40:26.9900000	MELIPILLA	BOLLENAR	SE	EDAC EQUIPO FALLA	NORMAL
12-09-2021	05:18:31.8160000	MELIPILLA	BOLLENAR	C2	52C2 CERRADO	CERRADO
12-09-2021	05:18:31.8160000	MELIPILLA	BOLLENAR	C2	52C2 ABIERTO	0

Registro en horario UTC.