

Estudio para análisis de falla EAF 546/2024

"Falla en línea 44 kV Catemu - Los Ángeles"

Fecha de Emisión: 05-12-2024

1. Descripción pormenorizada de la perturbación

a. Fecha y Hora de la falla

Fecha	14/11/2024
Hora	12:18
Consumos desconectados (MW)	3.50
Demanda previa del sistema (MW)	10270.72
Porcentaje de desconexión	0.034 %
Calificación Apagón	No aplica (porcentaje de desconexión < 10%)

b. Identificación instalación afectada

Nombre de la instalación	Línea 44 kV Catemu - Los Ángeles / LT059-----T0057
Tipo de instalación	Línea
Tensión nominal	44 kV
Segmento	Transmisión Dedicado
Propietario instalación afectada	Chilquinta Transmisión S.A.
RUT	77.402.187-6
Representante Legal	Francisco Mualim Tietz
Dirección	Av. Argentina N°1, piso 9, Valparaíso.

c. Identificación del elemento fallado

Nombre del elemento afectado	Sección de tramo de la línea 44 kV Catemu - Los Ángeles / LT059CI1TR02T0057ST01T0057
Propietario elemento fallado	Chilquinta Transmisión S.A.
RUT	77.402.187-6
Representante Legal	Francisco Mualim Tietz
Dirección	Av. Argentina N°1, piso 9, Valparaíso.

d.1 Origen y causa de la falla

Se produjo la apertura automática del interruptor 52F1 de S/E Catemu, asociado a la línea 44 kV Catemu - Los Ángeles, por operación de su protección de distancia residual en zona 2.

La empresa Chilquinta Transmisión S.A. indica que el origen de la falla fue a causa de un ave que redujo la distancia dieléctrica entre el puente conductor energizado de la fase lateral izquierda y la cruceta metálica que le entrega soporte a la cadena de aisladores de la estructura N°137.

d.2 Fenómeno Físico:

ANI1: Acción de animales, roedores o pájaros (por contacto directo u otro).

Las empresas Chilquinta Transmisión S.A. entregan los siguientes antecedentes probatorios para acreditar el fenómeno físico declarado:

- Registro Fotográfico con fecha, hora y coordenadas UTM del punto de falla.
- Número de veces que la instalación se ha visto afectada por esta causa, con o sin afectación de suministro.

d.3 Reiteración:

Reiteración Fenómeno Físico en la instalación afectada: Esta instalación ha sido afectada por el mismo fenómeno físico durante los últimos 24 meses móviles, correspondiente al Estudio para Análisis de Falla EAF 236-2024.

Reiteración Fenómeno Físico en instalaciones del mismo propietario: Se han producido fallas en instalaciones del mismo propietario con un mismo fenómeno físico, durante los últimos 24 meses móviles:

FALLA_ID	NOMBRE_FALLA	FECHA_FALLA	ACCIONES_CORRECTIVAS
EAF 464_2022	Falla en línea 44 kV Las Vegas - FFCC Los Andes C1	14-12-2022	No se indican.
EAF 214_2023	Falla en línea 44 kV Calera - El Melón	18-05-2023	No se indican.
EAF 407_2023	Falla en línea 110 kV Agua Santa - Placilla	14-09-2023	La empresa Chilquinta Transmisión S.A. no indica acciones correctivas de corto plazo.
EAF 071_2024	Falla en línea 44 kV Estancilla - FFCC Andes N°2	13-02-2024	No se indican
EAF 080_2024	Falla en línea 44 kV La Calera - El Melón	18-02-2024	No se indican.
EAF 236_2024	Falla en la línea 44 kV Catemu - Los Ángeles	04-06-2024	No se indican.
EAF 295_2024	Desconexión forzada de la barra 12 kV N°2 de S/E La Calera	02-07-2024	La empresa Chilquinta Transmisión S.A. señala lo siguiente: "Como medida de mitigación, se procede a reemplazar los cables reparados por nuevos cables con fleje de cobre, que otorga mejor protección contra roedores." "A modo de recaudo, se revisó la totalidad de canalizaciones de la subestación sin encontrar daño evidente en otros cables de control y protecciones de S/E La Calera."
EAF 498-2024	Falla en línea 44 kV FFCC Los Andes - Juncal N°1	05-10-2024	La empresa Chilquinta Transmisión S.A. indica las siguientes acciones correctivas: "Como medida de precaución, el próximo sábado 12 de octubre del 2024, con solicitud de desconexión SD 2024104033 en la plataforma Neomante del Coordinador Eléctrico Nacional (CEN), se realizará el cambio de la cadena de aisladores de suspensión de la fase superior de la estructura E11 y se instalarán discos antiguos en las fases superiores de las estructuras 10 a la 14, correspondientes a la línea de transmisión 44 [kV] FF.CC. Los Andes - Hermanos Clark circuito N° 1".

Cantidad de fallas (sin importar Fenómeno Físico) en la misma instalación: Se han producido 3 fallas en la misma instalación afectada durante los últimos 24 meses móviles, correspondiente a los Estudios para Análisis de Falla EAF 536-2023, EAF 236-2024 y EAF 312-2024.

d.4 Fenómeno eléctrico

DI21N: Distancia residual.

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

La instalación afectada por la falla corresponde al tramo Catemu - Los Ángeles de la línea 44 kV Chagres - Los Ángeles. De acuerdo con lo informado por su propietario en la plataforma Infotécnica del Coordinador, el tramo afectado cuenta con una longitud de 21.2 km, con un conductor por fase del tipo CU 4 AWG y su fecha de puesta en servicio fue durante el año 1945.

La empresa Chilquinta Transmisión S.A. sí remitió antecedentes respecto de los mantenimientos realizados a la línea 44 kV Catemu - Los Ángeles, durante los últimos 24 meses.

f. Ubicación urbana o rural según DS 327/1997

No aplica.

g. Proposición del propietario respecto del origen de la falla

Fuerza mayor.

h. Comuna donde se presenta la falla

5402: Cabildo.

i. Fecha de entrega de la información al Coordinador

Coordinado	Informe de 48 horas (18-11-2024)	Informe de 5 días (21-11-2024)
Chilquinta Transmisión S.A. (Chilquinta Tx)	14-11-2024	21-11-2024
Compañía Minera Cerro Negro S.A.	04-12-2024	04-12-2024

2. Descripción del equipamiento afectado

a. Sistema de Generación

b. Sistema de Transmisión

Elemento Afectado	Segmento	Tramo	Hora Desc.	Hora Norm.
Línea 44 kV Catemu - Los Ángeles	ST Dedicado	Catemu - Los Ángeles	12:18	18:29

- Los horarios señalados corresponden a lo informado por la empresa Chilquinta Transmisión S.A.

c. Consumos

Sub-Estación	Alimentador/ Paño	Comuna	Pérdida de Consumo (MW)	% consumo pre-falla	Clientes Afectados	H. Desc.	H. Dispon.	H. Norm.
Cerro Negro	-	Cabildo	3.50	0.034	1	12:18	18:29	18:29

Total: 3.50 MW 0.034 % 1

- Los montos y horarios señalados corresponden a lo informado por las empresas Chilquinta Transmisión S.A. y Compañía Minera Cerro Negro S.A.

3. Estimación de la energía no suministrada

Sub-Estación	Alimentador/ Paño	Empresa	Tipo de Cliente	Pérdida de Consumo (MW)	Tiempo Indispon. (h)	Tiempo Desc. (h)	ENS (MWh)
Cerro Negro	-	Compañía Minera Cerro Negro S.A.	Libre	3.50	6.18	6.18	21.6

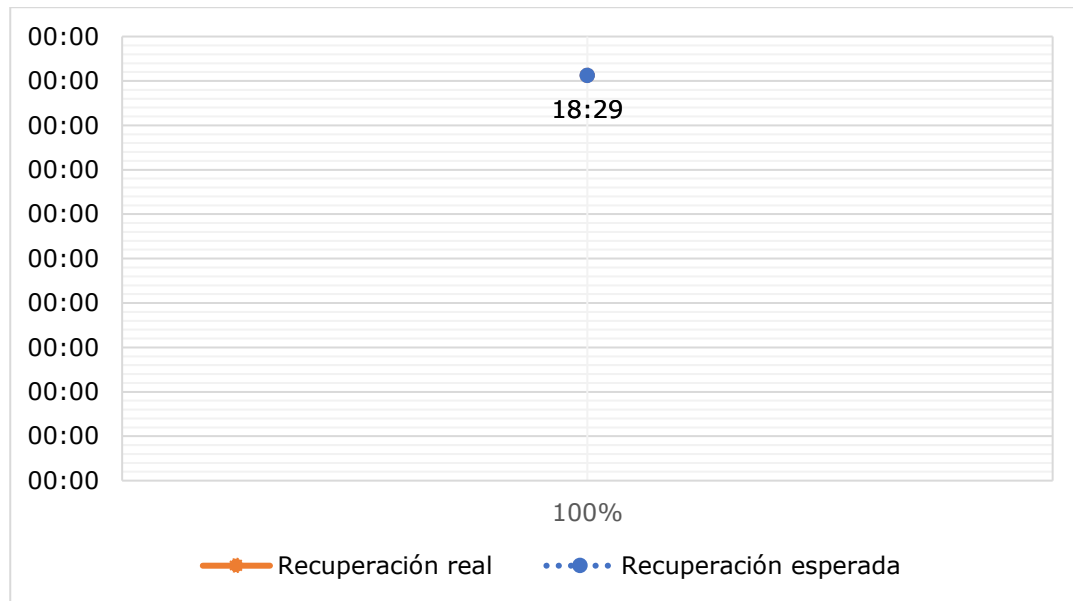
Clientes Regulados : MWh

Clientes Libres : 21.6 MWh

Total : 21.6 MWh

- Los montos señalados corresponden a lo informado por las empresas Chilquinta Transmisión S.A. y Compañía Minera Cerro Negro S.A.

- Curva de recuperación esperada v/s recuperación real.



No se observan diferencias entre los horarios de recuperación esperada y la recuperación real para los distintos consumos afectados.

- Velocidad promedio de recuperación.

Rango	Potencia (MW)	Tiempo recuperación (h)	Velocidad de recuperación (MW/h)
Primer 80 %	2.80	6.18	0.45
Último 20 %	0.70	6.18	0.11
100 % Total	3.50	6.18	0.57

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

Demanda del sistema previo a la falla: 10270.72 MW

Regulación de Frecuencia

Control distribuido de frecuencia en el Sistema Eléctrico Nacional, previo a la falla, mediante las centrales El Toro (U1, U2 y U3), PFV Diego Almagro Sur, PFV Malgárida y Ralco U1.

Operación Programada

En Anexo N°1 se adjunta el detalle de la generación programada para el día 14 de noviembre de 2024.

Operación Real

En Anexo N°2 se adjunta el detalle de la generación real del día 14 de noviembre de 2024.

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 14 de noviembre de 2024.

Mantenimientos

En Anexo N°4 se presenta el detalle de los mantenimientos programados y forzados para el día 14 de noviembre de 2024.

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 informado por la empresa Chilquinta Transmisión S.A.:

"A las 12:18 horas del jueves 14 de noviembre de 2024, se produjo la desconexión forzada de la línea de transmisión 44 [kV] Catemu - Los Ángeles circuito N° 1, accionada por la función de distancia residual (21N), afectando los consumos de nuestro único cliente Minera Cerro Negro en la subestación (S/E) Los Ángeles.

El Área de Mantenimiento Transmisión, se dirige a la subestación (S/E) Catemu con el equipo localizador de fallas, para realizar la prueba de continuidad a los conductores eléctricos de la línea, encontrándose ésta normal, con continuidad mecánica y eléctrica en sus tres fases y en toda su extensión de 20,7 [Km], hasta el final de la línea en la subestación (S/E) Los Ángeles.

Paralelamente, se había iniciado el patrullaje de la línea de transmisión 44 [kV] Catemu - Los Ángeles circuito N° 1, de manera pedestre y con apoyo de vehículo aéreo no tripulado (RPAS), siendo posible localizar e identificar el fenómeno físico causante de la falla eléctrica, caracterizándose por la presencia de un ave que redujo la distancia dieléctrica entre el puente conductor energizado de la fase lateral izquierda y la cruceta metálica que le entrega soporte a la cadena de aisladores de la estructura de tracción N° 137, ubicada a 11,7 kilómetros de la subestación (S/E) Catemu, generándose en consecuencia, el fenómeno eléctrico correspondiente a una sobre corriente monofásica a tierra.

Una vez finalizada la inspección y reparada la instalación afectada, se verifica el estado normal de todos los componentes y se informa al Centro Control Transmisión de Chilquinta Transmisión S.A., que la línea se encuentra en condiciones para ser energizada nuevamente.

El Centro Control Transmisión de Chilquinta Transmisión S.A., posteriormente solicita la autorización al Coordinador Eléctrico Nacional de la energización de la línea 44 [kV] Catemu - Los Ángeles circuito N° 1, la que se produce de manera exitosa".

De forma complementaria, se adjuntan los informes de falla de instalaciones ingresados en el sistema del Coordinador Eléctrico Nacional por Chilquinta Transmisión S.A. y Compañía Minera Cerro Negro S.A. (Anexo N°1) y otros antecedentes aportados por las mismas empresas (Anexo N°2).

Acciones preventivas y/o correctivas

a) La instalación afectada no cuenta con una auditoría, plan de acción u otro tipo de mantenimiento en curso.

b) Acciones correctivas a corto plazo:

La empresa Chilquinta Transmisión S.A. indica las siguientes acciones correctivas: "Con fines preventivos, se realiza el cambio de la cadena de aisladores de la fase lateral izquierda y el aislador de pedestal, junto con la reinstalación de las manguillas dieléctricas sobre los puentes de las tres fases de la estructura de tracción N° 137".

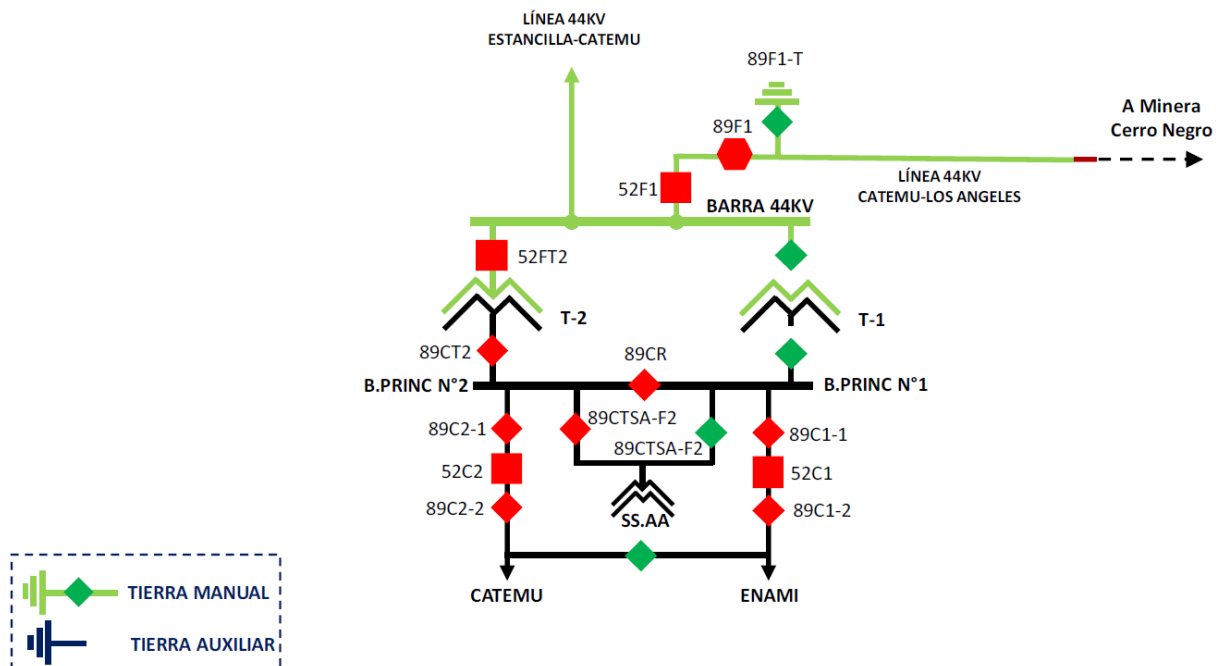
La empresa Compañía Minera Cerro Negro S.A. indica que no aplica.

c) Acciones correctivas a largo plazo:

La empresa Chilquinta Transmisión S.A. no indica acciones correctivas.

La empresa Compañía Minera Cerro Negro S.A. indica que no aplica.

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
12:18	Chilquinta Tx	Apertura automática en S/E Catemu del interruptor 52F1, asociado a la línea 44 kV Catemu - Los Ángeles, accionada por el relé de distancia SEL-311C de S/E Catemu, afectando el consumo de S/E Los Ángeles.

- Horas, maniobras y eventos señalados corresponden a lo informado por la Empresa Chilquinta Transmisión S.A.

6. Normalización del servicio

Fecha	Involucrado	Hora	Acción
14/11/2024	Chilquinta Tx	12:59	Apertura en S/E Los Ángeles de los desconectores fusibles asociados a la línea 44 kV Chagres - Los Ángeles.
14/11/2024	Chilquinta Tx	14:29	Bloqueo del interruptor 52F1 en S/E Catemu como preparativo para la instalación de equipo localizador de falla.
14/11/2024	Chilquinta Tx	14:49	Prueba con localizador de fallas indica que las tres fases se encuentran continuas hasta fusibles abiertos en S/E Los Ángeles. Se continúa con la inspección de la línea.
14/11/2024	Chilquinta Tx	15:20	En inspección pedestre, se encuentra aislador con señales de descarga en estructura N°137. Se envía personal para reemplazo de aisladores.
14/11/2024	Chilquinta Tx	15:30	Apertura del desconector de línea 89F1 de S/E Catemu, y cierre del desconector de tierra 89F1-T de la misma S/E para el reemplazo de aisladores dañados.
14/11/2024	Chilquinta Tx	18:04	Personal de mantenimiento confirma el reemplazo de aisladores en estructura N°137 y solicita prueba de energización en vacío, la que se coordina con el CDC y Minera Cerro Negro.
14/11/2024	Chilquinta Tx	18:11	Cierre del desconector de línea 89F1 de S/E Catemu, y apertura del desconector de tierra 89F1-T.
14/11/2024	Chilquinta Tx	18:12	Cierre del interruptor 52F1 de S/E Catemu, asociado a la línea 44 kV Catemu - Los Ángeles. Prueba de energización exitosa. La línea queda energizada en vacío hasta fusibles abiertos en S/E Los Ángeles.
14/11/2024	Chilquinta Tx	18:14	Apertura del interruptor 52F1 de S/E Catemu, asociado a la línea 44 kV Catemu - Los Ángeles, para el cierre de los desconectores fusibles en S/E Los Ángeles en coordinación con Minera Cerro Negro.
14/11/2024	Chilquinta Tx	18:27	Cliente Minera Cerro Negro informa cierre exitoso de los desconectores fusibles en S/E Los Ángeles.
14/11/2024	Chilquinta Tx	18:29	Cierre del interruptor 52F1 de S/E Catemu, asociado a la línea 44 kV Catemu - Los Ángeles. Se normaliza la topología previa a la falla.

- Horas, maniobras y eventos señalados corresponden a lo informado por la empresa Chilquinta Transmisión S.A.

ANEXO N°1

Informe de trabajo y falla de instalaciones ingresados en el sistema del
Coordinador Eléctrico Nacional por las empresas Chilquinta Transmisión
S.A. y Compañía Minera Cerro Negro S.A.

 Resumen

Fecha de envío al Coordinador Eléctrico : 14-11-2024 15:35

Finalizado

Número:

2024005132

Solicitante:

Despacho Transmisión

Empresa:

CHILQUINTA TRANSMISIÓN S.A.

Tipo de Origen:

Interno

Línea:

CATEMU - TAP OFF LOS ANGELES 44KV

Tramo:

Tipo: secciones_tramos - CATEMU - LOS ANGELES 44KV C1
Nombre : CATEMU - LOS ANGELES 44KV C1
Fecha Perturbacion : 14-11-2024 12:18
Fecha Normaliza : 14-11-2024 18:00
Protección : S/C de fase
Interruptor : 52F1
Consumo : 3.4 MW
Comentario : .

Zona Afectada

Valparaíso

Comuna

Catemu

Tipo Causa

Causa Presunta
Causa Principal

Comentarios Tipo Causa:

.

Causas

-Fenómeno Físico: Origen no determinado.
-Elemento: Interruptores
-Fenómeno Eléctrico: Sobrecorriente instantánea de fase
-Operación de los interruptores: Opera según lo esperado

Comentarios Causas:

-Fenómeno Físico: .
-Elemento: .

-Fenómeno Eléctrico: .
-Operación de los interruptores: .

Observaciones:

-Observaciones: Operación automática LT 44 kV Catemu - Los Angeles. Afecta Cliente Minera Cerro Negro.
-Acciones Inmediatas: Se da aviso al CEN, se coordina con personal de Minera Cerro Negro y se envía personal a SE Catemu para realizar prueba con localizador de falla.
-Hechos Sucidados: Operación automática LT 44 kV Catemu - Los Angeles. Afecta Cliente Minera Cerro Negro.
-Acciones Correctivas a Corto Plazo: .
-Acciones Correctivas a Largo Plazo: .

Afecta SSCC:

No

Afecta Medidores:

No

Afecta Protecciones:

No

Consumo:

Libre

Distribuidoras Afectadas

COMPAÑÍA MINERA CERRO NEGRO S.A. / Perd. Estm. de Potencia: 3.4 / Región : Valparaíso / Clientes Afectados: 1

Retorno Automatico:

No Tiene Retorno Automático

Fecha / Hora Perturbación de la Solicitud:

14-11-2024 12:18

Fecha / Hora Estimada Retorno:

14-11-2024 18:00

Fecha / Hora Efectiva Retorno (Ingreso CDC):

14-11-2024 18:28

Archivos Subidos

Archivo	Fecha Subida
 IF-TX-80_14-11-2024 O.A. LT 44 kV Catemu - Los Ángeles.zip (/informe_fallas/download_file/6736404fad651f6f1df26168/IF-TX-80_14-11-2024 O.A. LT 44 kV Catemu - Los Ángeles.zip)	21/11/2024 21:24:03

 Resumen

Fecha de envío al Coordinador Eléctrico : 04-12-2024 16:19

Pendiente

Número:

2024005325

Solicitante:

Maritza Baeza

Empresa:

COMPAÑÍA MINERA CERRO NEGRO S.A.

Tipo de Origen:

Externo

Línea:

LOS ANGELES - CERRO NEGRO 44KV

Tramo:

Tipo: secciones_tramos - LOS ANGELES - CERRO NEGRO 44KV C1
Nombre : LOS ANGELES - CERRO NEGRO 44KV C1
Fecha Perturbacion : 14-11-2024 12:18
Fecha Normaliza : 14-11-2024 18:28
Protección : No
Interruptor : No
Consumo : 3.5 MW
Comentario : IF 48hrs

Zona Afectada

Valparaíso

Comuna

Cabildo

Tipo Causa

Causa Definitiva
Causa Principal

Comentarios Tipo Causa:

Aislador dañado en Líneas pertenecientes a Chilquinta (estructura 137)

Causas

-Fenómeno Físico: Origen no determinado.
-Elemento: Sistema protecciones
-Fenómeno Eléctrico: Desequilibrio de cargas
-Operación de los interruptores: Varios

Comentarios Causas:

-Fenómeno Físico: Desconocido por nosotros
-Elemento: Desconocido por nosotros

- Fenómeno Eléctrico: Desconocido por nosotros
- Operación de los interruptores: Desconocido por nosotros

Observaciones:

- Observaciones: Corte de Energía externo no plinificado
- Acciones Inmediatas: Protocolos internos de compañía para activar nuestras protecciones después de consultar las causas a Chilquinta
- Hechos Sucedidos: Corte de Energía en Faena falla externa perteneciente a Chilquinta
- Acciones Correctivas a Corto Plazo: No Aplica
- Acciones Correctivas a Largo Plazo: No Aplica

Afecta SSCC:

No

Afecta Medidores:

No

Afecta Protecciones:

No

Consumo:

Consumo Regulado

Distribuidoras Afectadas

COMPAÑÍA MINERA CERRO NEGRO S.A. / Perd. Estm. de Potencia: 3.5 / Región : Valparaíso / Clientes Afectados: 1

Retorno Automatico:

No Tiene Retorno Automático

Fecha / Hora Perturbación de la Solicitud:

14-11-2024 12:18

Fecha / Hora Estimada Retorno:

14-11-2024 18:28

 Archivos Subidos

Archivo	Fecha Subida
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ANEXO N°2

Otros antecedentes aportados por las empresas Chilquinta Transmisión
S.A. y Compañía Minera Cerro Negro S.A.

Informe de Falla

Empresa

CHILQUINTA

Código de identificación

IF-TX-80

Versión

1

Operación Automática Línea 44 kV Catemu – Los Ángeles.

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1. OBJETO

Aportar la información solicitada por el Coordinador Eléctrico Nacional (CEN), debido a una desconexión intempestiva o limitación en las instalaciones de Chilquinta Transmisión S.A., de acuerdo con lo exigido por el procedimiento DO “Informe de falla de los Coordinados”.

2. ANTECEDENTES GENERALES

2.1. Detalle de la instalación fallada

Propietario Instalación Afectada:	Chilquinta Transmisión S.A.
RUT Propietario:	77.402.187-6
Representante legal Propietario:	Francisco Mualim Tietz
Dirección Propietario:	Av. Argentina N°1, piso 9, Valparaíso

Nombre Instalación:	Línea 44 kV Catemu – Los Ángeles (ID868)
Tipo de Instalación:	Línea de Transmisión
Tensión de Línea:	44 kV
Segmento:	Transmisión Dedicado (Td)
Tipo de Elemento Fallado:	Aislación
Elemento o Equipo Fallado:	No aplica

2.2. Resumen del evento

Referencia Informe CEN:	2024005132
Fecha inicio:	14/11/2024
Hora inicio:	12:18:26
Fecha término:	14/11/2024
Hora término:	18:28:45
Duración:	6 horas, 10 minutos y 19 segundos.
Equipos afectados:	Línea 44 kV Catemu – Los Ángeles.
Consumo interrumpido:	3.4 MW en S/E Los Ángeles (Minera Cerro Negro)
Porcentaje de desconexión:	100% S/E Los Ángeles (Minera Cerro Negro)
Comuna donde se origina la falla:	Catemu
Comunas afectadas por la falla:	Cabildo
Proposición origen causa falla:	Fuerza mayor
Fenómeno Físico	ANI1 (Acción de animales, roedores o pájaros)
Elemento	TX3 (Conjunto aislación línea)

Fenómeno Eléctrico	DI21N (Distancia residual)
Modo	13 (Opera según lo esperado)
Reiteración (SI/NO).	NO
N° de reiteración fenómeno físico	0
Cantidad de fallas	18-07-2024 (EAF 312/2024) 04-06-2024 (EAF 236/2024) 14-12-2023 (EAF 536/2023)
Ubicación urbana o rural (DS327, Título IX, Art. 25°)	Sin alimentadores asociados

2.3. Descripción de la operación.

Operación automática de la línea transmisión (LT) 44 kV Catemu – Los Ángeles, accionada por el relé de distancia SEL 311C de subestación (S/E) Catemu, afectando el consumo de la S/E Los Ángeles (único cliente Minera Cerro Negro).

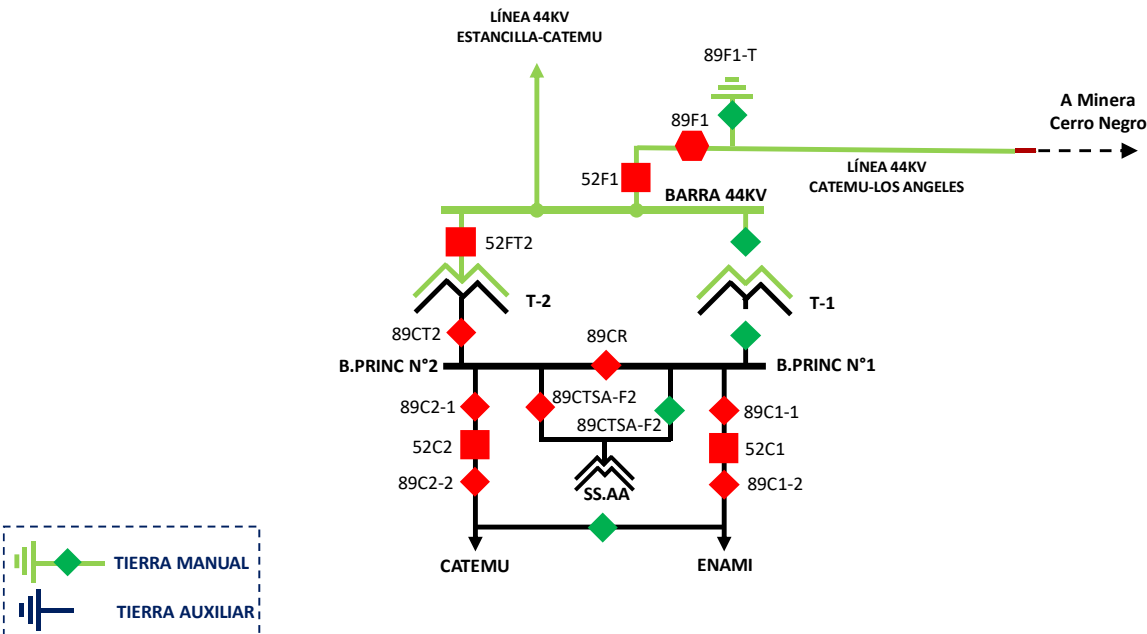
2.4. Cronología de eventos.

Jueves 14 de noviembre del 2024

- 12:18:26 hrs. Operación automática de la línea de transmisión (LT) 44 kV Catemu – Los Ángeles, accionada por el relé de distancia SEL 311C de subestación (S/E) Catemu, afectando el consumo de la S/E Los Ángeles (único cliente Minera Cerro Negro).
- 12:20 hrs. Se avisa a personal de mantenimiento de líneas de transmisión. Se coordina con operador de transmisión, dirigirse a S/E Catemu para preparar el esquema de prueba con equipo localizador de fallas.
- 12:20 hrs. Se avisa al CEN informando lo sucedido.
- 12:59 hrs. Cliente Minera Cerro Negro, abre los desconectores fusibles en S/E Los Ángeles.
- 14:29 hrs. Bloqueado interruptor 52F1 en S/E Catemu como preparativo para instalación de equipo localizador de falla.
- 14:49 hrs. Prueba con localizador de fallas indica que las tres fases se encuentran continuas hasta fusibles abiertos en S/E Los Ángeles. Se continúa con la inspección de la línea.
- 15:20 hrs. En inspección pedestre, se encuentra aislador con señales de descarga en estructura 137. Se envía personal para reemplazo de aisladores.

- 15:30 hrs. En S/E Catemu, abierto desconectador de línea 89F1 y cerrado desconectador de tierra 89F1-T para reemplazo de aisladores.
- 18:04 hrs. Personal de mantenimiento confirma el reemplazo de aisladores en estructura 137 y solicita prueba de energización en vacío, la que se coordina con el CEN y Minera Cerro Negro.
- 18:11:13 hrs. En S/E Catemu, abierto desconectador de tierra 89F1-T y cerrado desconectador de línea 89F1 de la LT 44 kV Catemu – Los Ángeles.
- 18:11:37 hrs. En S/E Catemu, cerrado interruptor 52F1 de LT 44 kV Catemu – Los Ángeles. Prueba de energización exitosa. La línea queda energizada en vacío hasta fusibles abiertos en S/E Los Ángeles.
- 18:14:29 hrs. En S/E Catemu, abierto interruptor 52F1 de LT 44 kV Catemu – Los Ángeles, para cierre de desconectores fusibles en S/E Los Ángeles en coordinación con Minera Cerro Negro.
- 18:27 hrs. Cliente Minera Cerro Negro, informa cerrados desconectores fusibles en S/E Los Ángeles.
- 18:28:45 hrs. En S/E Catemu, cerrado interruptor 52F1 de LT 44 kV Catemu – Los Ángeles, energizado hasta instalaciones de la Minera Cerro Negro. Fin del evento.

2.5. Esquema topológico sistema afectado.



2.6. Detalle de indisponibilidades y consumos afectados.

Instalaciones afectadas	Detalle	Horarios		
Líneas	Tramo de línea	Hora desconexión	Hora recuperación	Duración
LT 44 kV Estancilla-Catemu	Catemu- Los Ángeles	14-11-2024 12:18:26	14-11-2024 18:28:45	6:10:19

DETALLE CLIENTES AFECTADOS					
Subestaciones	MW	Clientes	Hora desconexión	Hora recuperación	Duración
Los Angeles (Minera Cerro Negro)	3,40	1	14-11-2024 12:18:26	14-11-2024 18:28:45	6:10:19
Total	3,40	1			

3. EVENTOS SCADA

Los eventos registrados por el sistema SCADA se encuentran en el archivo **Eventos SCADA.xls** adjunto a este informe.

4. PROTECCIONES

4.1. Análisis de la actuación del esquema de protecciones

En base al análisis del registro oscilográfico obtenido del relé SEL modelo 311C, asociado al paño de línea 1x44 [kV] Catemu – Los Ángeles, en S/E Catemu, se puede concluir que la señal de trip es originada por la actuación de la función de distancia residual (21N), en particular por la zona 2, ajustada en el equipo de protección.

A continuación, se pueden observar las corrientes que produjeron la señal de disparo, las cuales se pueden apreciar en el archivo COMTRADE generado por el equipo de protección.

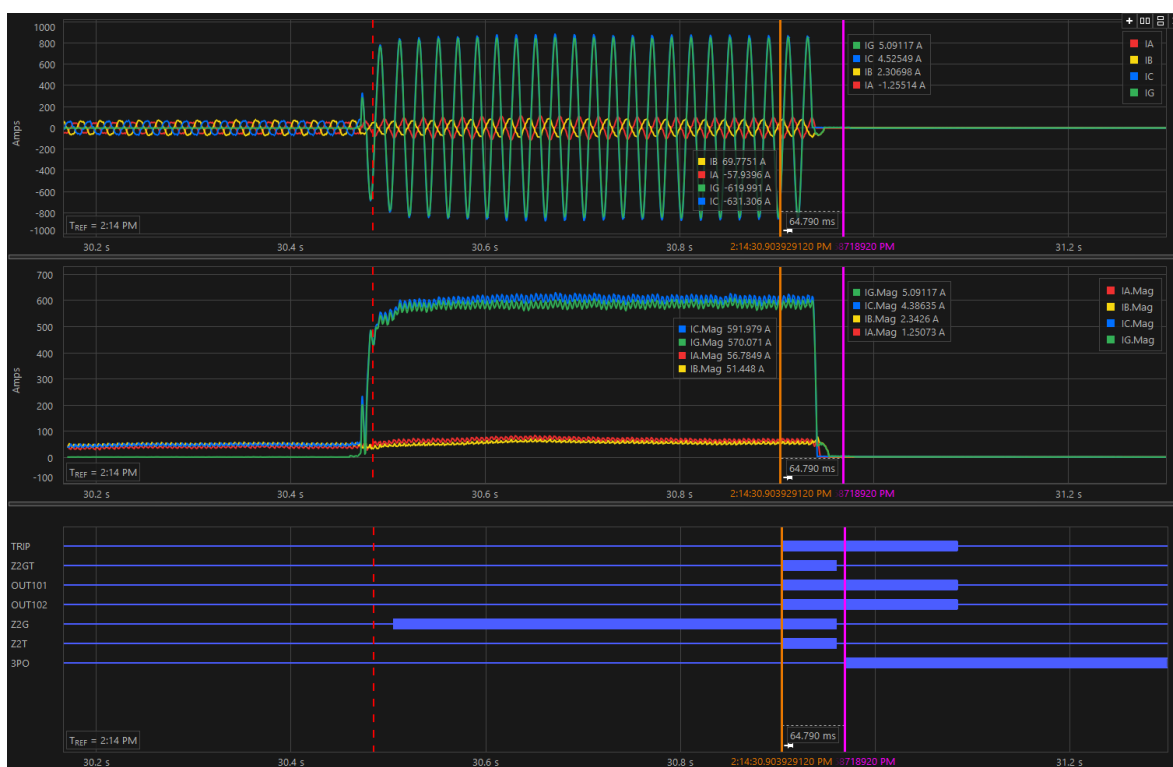
Corrientes de falla (RMS) – SEL 311C CA-LA			
Ia (A)	Ib (A)	Ic (A)	In (A)
57	51	592	570

4.2. Ajustes

Se adjunta al informe, el Print-Out del equipo de protección.

4.3. Registros Oscilográficos (UTC ± 00:00)

En el presente apartado, se exponen los registros oscilográficos con las señales analógicas y digitales más relevantes, sin embargo, se encuentran anexados los COMTRADES donde se pueden visualizar la totalidad de las señales.



La señal “3PO” refleja el cambio de estado del interruptor asociado al paño de la línea 1x44 [kV] Catemu – Los Ángeles, en S/E Catemu, por lo que se puede determinar que el tiempo de apertura del equipo fue de 64,79 [ms].

4.4. Registro de Eventos (UTC ± 00:00)

SEL 311C, Catemu – Los Ángeles (S/E Catemu):

```
=>ACC  
  
LINEA LOS ANGELES      Date: 24/11/19   Time: 13:23:58.298  
SE CATEMU  
  
Level 1  
  
=>SER 10  
  
LINEA LOS ANGELES      Date: 24/11/19   Time: 13:24:05.911  
SE CATEMU  
  
FID=SEL-311C-1-R508-V0-Z104101-D20150219      CID=8150  
  
#      Date      Time      Element      State  
10     24/07/18   16:49:38.812   OUT101       Deasserted  
9      24/07/18   16:49:38.812   OUT102       Deasserted  
8      24/11/14   14:14:30.479   51G          Asserted  
7      24/11/14   14:14:30.504   Z2G          Asserted  
6      24/11/14   14:14:30.904   OUT101       Asserted  
5      24/11/14   14:14:30.904   OUT102       Asserted  
4      24/11/14   14:14:30.959   Z2G          Deasserted  
3      24/11/14   14:14:30.959   51G          Deasserted  
2      24/11/14   14:14:31.084   OUT101       Deasserted  
1      24/11/14   14:14:31.084   OUT102       Deasserted  
  
=>HIS 5  
  
LINEA LOS ANGELES      Date: 24/11/19   Time: 13:24:15.420  
SE CATEMU  
  
#      DATE      TIME      EVENT      LOCAT      CURR      FREQ      GRP      SHOT      TARGETS  
1      24/11/14   14:14:30.484   CG T       11.53      594 50.04   1          TRIP TIME ZONE2  
2      24/07/18   16:49:38.631   AG T       -55.63     131 49.96   1          TRIP TIME 51  
3      24/07/18   16:49:35.507   AG         -83.22     117 49.95   1          TRIP TIME 51  
4      24/06/04   13:34:50.514   CG T       19.18      139 49.85   1          TRIP TIME 51  
  
=>
```

5. ANTECEDENTES RELEVANTES

5.1. Información Mantenimiento Líneas de Transmisión

Jueves 14 de noviembre de 2024

A las 12:18 horas del jueves 14 de noviembre de 2024, se produjo la desconexión forzada de la línea de transmisión 44 [kV] Catemu – Los Ángeles circuito N° 1, accionada por la función de distancia residual (21N), afectando los consumos de nuestro único cliente Minera Cerro Negro en la subestación (S/E) Los Ángeles.

El Área de Mantenimiento Transmisión, se dirige a la subestación (S/E) Catemu con el equipo localizador de fallas, para realizar la prueba de continuidad a los conductores eléctricos de la línea, encontrándose ésta normal, con continuidad mecánica y eléctrica en sus tres fases y en toda su extensión de 20,7 [Km], hasta el final de la línea en la subestación (S/E) Los Ángeles.

Paralelamente, se había iniciado el patrullaje de la línea de transmisión 44 [kV] Catemu – Los Ángeles circuito N° 1, de manera pedestre y con apoyo de vehículo aéreo no tripulado (RPAS), siendo posible localizar e identificar el fenómeno físico causante de la falla eléctrica, caracterizándose por la presencia de un ave que redujo la distancia dieléctrica entre el puente conductor energizado de la fase lateral izquierda y la cruceta metálica que le entrega soporte a la cadena de aisladores de la estructura de tracción N° 137, ubicada a 11,7 kilómetros de la subestación (S/E) Catemu, generándose en consecuencia, el fenómeno eléctrico correspondiente a una sobre corriente monofásica a tierra.

Una vez finalizada la inspección y reparada la instalación afectada, se verifica el estado normal de todos los componentes y se informa al Centro Control Transmisión de Chilquinta Transmisión S.A., que la línea se encuentra en condiciones para ser energizada nuevamente.

El Centro Control Transmisión de Chilquinta Transmisión S.A., posteriormente solicita la autorización al Coordinador Eléctrico Nacional de la energización de la línea 44 [kV] Catemu – Los Ángeles circuito N° 1, la que se produce de manera exitosa.

5.2. Registros fotográficos con fecha, hora y coordenadas UTM del punto de falla.

Muestras de descargas en el puente conductor energizado de la fase lateral izquierda de la estructura de ttracción N° 137, junto con el manto de la cadena de los aisladores de entrada y la cruceta metálica que le entrega soporte a ésta.







5.3. Mantenimiento de los últimos 24 meses móviles a la línea en comento

Se adjunta el plan anual de mantenimiento de la línea de transmisión 44 [kV] Catemu – Los Ángeles circuito N° 1, el que se ha ejecutado en su integridad, con sus distintas actividades al día y sin retraso en inversiones.

Ítem	Fecha	Circuito	Detalle	Informe
1	ene-22	Cto. 1	Mantenimiento Preventivo	Lavado de Aislación.
2	feb-22	Cto. 1	Mantenimiento Preventivo	Limpieza de Aislación.
3	mar-22	Cto. 1	Mantenimiento Preventivo	Inspección visual pedestre para inspección técnica de estructuras, conductores y franja de línea.
4	may-22	Cto. 1	Mantenimiento Preventivo	Manejo de Vegetación.
5	jul-22	Cto. 1	Mantenimiento Predictivo	Inspección Coronográfica.
6	dic-22	Cto. 1	Mantenimiento Predictivo	Inspección Termográfica.
7	abr-23	Cto. 1	Mantenimiento Preventivo	Inspección visual pedestre para inspección técnica de estructuras, conductores y franja de línea.
8	abr-23	Cto. 1	Mantenimiento Preventivo	Manejo de Vegetación.
9	may-23	Cto. 1	Mantenimiento Preventivo	Limpieza de Aislación.
10	may-23	Cto. 1	Mejoras Instalación	Reemplazo de estructuras, conductores, aisladores y ferretería eléctrica.
11	jul-23	Cto. 1	Mantenimiento Predictivo	Inspección Coronográfica.
12	sep-23	Cto. 1	Mantenimiento Predictivo	Medición de resistencia de malla puesta a tierra.
13	dic-23	Cto. 1	Mantenimiento Predictivo	Inspección Termográfica.
14	mar-24	Cto. 1	Mantenimiento Preventivo	Inspección visual pedestre para inspección técnica de estructuras, conductores y franja de línea.
15	may-24	Cto. 1	Mantenimiento Preventivo	Limpieza de Aislación.
16	may-24	Cto. 1	Mejoras Instalación	Reemplazo de estructuras, conductores, aisladores y ferretería eléctrica.
17	may-jun-24	Cto. 1	Mantenimiento Preventivo	Manejo de Vegetación.
18	ago-24	Cto. 1	Mantenimiento Predictivo	Inspección Coronográfica.

5.4. Número de veces que la instalación se ha visto afectada por esta causa.

Para la línea de transmisión 44 [kV] Catemu – Los Ángeles circuito N° 1, el número de reiteraciones que ha tenido el fenómeno físico (ANI1), interrupción producida por acción directa de los animales sobre la instalación que originó la indisponibilidad en la instalación en un plazo móvil de 24 meses, es ninguna (0).

5.5. Acciones correctivas de corto plazo.

Jueves 14 de noviembre de 2024

Con fines preventivos, se realiza el cambio de la cadena de aisladores de la fase lateral izquierda y el aislador de pedestal, junto con la reinstalación de las manguillas dieléctricas sobre los puentes de las tres fases de la estructura de tracción N° 137.



SEL-311C-1 Settings Report

Overview Information

File Name	Configuración Nueva 1
RDB	H4_S1.rdb
Device	SEL-311C-1
Setting Version Number	104
Part Number	0311C11HA4A5421
Firmware ID	SEL-311C-1-R508-V0-Z104101-D20150219
SELBoot Firmware ID	SLBT-3CF1-R200-V0-Z100100-D20120321

Settings

[Group 1](#)
[Group 2](#)
[Group 3](#)
[Group 4](#)
[Group 5](#)
[Group 6](#)
[DNP Map 1](#)
[DNP Map 2](#)
[DNP Map 3](#)
[Global](#)
[Logic 1](#)
[Logic 2](#)
[Logic 3](#)
[Logic 4](#)
[Logic 5](#)
[Logic 6](#)
[Modbus](#)
[Port 2](#)
[Port 3](#)
[Port F](#)
[Port 5](#)
[Report](#)
[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.	LINEA LOS ANGELES
TID	Terminal Identifier (30 chars)	Range = ASCII string with a maximum length of 30.	SE CATEMU
CTR	Phase (IA,IB,IC) CT Ratio	Range = 1 to 6000	40
CTRN	Neutral (IN) CT Ratio	Range = 1 to 10000	40
PTR	Phase (VA,VB,VC) PT Ratio	Range = 1,00 to 10000,00	400,00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1,00 to 10000,00	400,00
VNOM	Phase Nominal Voltage L-N (V,sec)	Range = 25,00 to 300,00	67,00
EADVS	Advanced Settings	Select: Y, N	N
EBBPT	Enable busbar PT LOP logic	Select: Y, N	N
Z1MAG	Pos-Seq Line Impedance Mag. (Ohm,sec)	Range = 0,10 to 255,00	2,11
Z1ANG	Pos-Seq Line Impedance Angle (deg)	Range = 5,00 to 90,00	23,73
Z0MAG	Zero-Seq Line Impedance Mag. (Ohm,sec)	Range = 0,10 to 255,00	4,11
Z0ANG	Zero-Seq Line Impedance Angle (deg)	Range = 5,00 to 90,00	57,21
LL	Line Length - unitless	Range = 0,10 to 999,00	21,22
EFLOC	Fault Location	Select: Y, N	Y
ECCVT	CCVT Transient Detection	Select: Y, N	N
E21P	Mho Phase Distance Elements	Select: N, 1-4, 1C-4C	2
Z1P	Zone 1 (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,69
Z2P	Zone 2 (Ohm,sec)	Range = 0,05 to 64,00, OFF	2,53
50PP1	Zone 1 Phase-Phase Current FD (A,sec)	Range = 0,50 to 170,00	3,25
E21MG	Mho Ground Distance Elements	Select: N, 1-4	2
Z1MG	Zone 1 (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,69
Z2MG	Zone 2 (Ohm,sec)	Range = 0,05 to 64,00, OFF	2,53
E21XG	Quad Ground Distance Elements	Select: N, 1-4	2
XG1	Zone 1 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	0,68
XG2	Zone 2 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,80
RG1	Zone 1 Resistance (Ohm,sec)	Range = 0,05 to 50,00	0,68
RG2	Zone 2 Resistance (Ohm,sec)	Range = 0,05 to 50,00	6,03
50L1	Zone 1 Phase Current FD (A,sec)	Range = 0,50 to 100,00	0,50
50GZ1	Zone 1 Residual Current FD (A,sec)	Range = 0,50 to 100,00	0,50
k0M1	Zone 1 ZSC Factor Mag (unitless)	Range = 0,000 to 6,000, AUTO	0,415
k0A1	Zone 1 ZSC Factor Ang (deg)	Range = -180,00 to 180,00	59,77

Z1PD	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	0,00
Z2PD	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	20,00
Z1GD	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	0,00
Z2GD	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	20,00
Z1D	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	0,00
Z2D	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	20,00
E50P	Phase	Select: N, 1-4	N
E50G	Residual Ground	Select: N, 1-4	N
E50Q	Negative-Sequence	Select: N, 1-4	N
E51P	Phase	Select: Y, N	Y
51PP	Pickup (A,sec)	Range = 0,25 to 16,00, OFF	3,25
51PC	Curve	Select: U1-U5, C1-C5	C3
51PTD	Time Dial	Range = 0,05 to 1,00	0,25
51PRS	EM Reset Delay	Select: Y, N	N
E51G	Residual Ground	Select: Y, N	Y
51GP	Pickup (A,sec)	Range = 0,10 to 16,00, OFF	1,75
51GC	Curve	Select: U1-U5, C1-C5	C1
51GTD	Time Dial	Range = 0,05 to 1,00	0,25
51GRS	EM Reset Delay	Select: Y, N	N
E51Q	Negative-Sequence	Select: Y, N	N
E50BF	Breaker Failure	Select: Y, N	N
EOOS	Out-of-Step	Select: Y, Y2, N	N
ELOAD	Load Encroachment	Select: Y, N	N
E32	Directional Control	Select: Y, AUTO	AUTO
ELOP	Loss-Of-Potential	Select: Y, Y1, N	Y
DIR3	Level 3	Select: F, R	R
DIR4	Level 4	Select: F, R	F
ORDER	Ground Dir. Priority (combo of Q,V,I)	Select: Q, V, I	QVI
EVOLT	Voltage Elements	Select: Y, N	N
E25	Synchronism Check	Select: Y, N	N
E81	Frequency Elements	Select: N, 1-6	N
E79	Reclosures	Select: N, 1-4	N
ESOTF	Switch-Onto-Fault	Select: Y, N	N
ECOMM	Comm-Asst Trip Scheme	Select: N, DCB, POTT, DCUB1, DCUB2	N
EZ1EXT	Zone 1 Extension	Select: Y, I, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (min)	Select: 5, 10, 15, 30, 60	5

PDEMP	Phase Pickup (A,sec)	Range = 0,50 to 16,00, OFF	5,00
NDEMP	Neutral Ground Pickup (A,sec)	Range = 0,500 to 16,000, OFF	OFF
GDEMP	Residual Ground Pickup (A,sec)	Range = 0,10 to 16,00, OFF	1,50
QDEMP	Negative-Sequence Pickup (A,sec)	Range = 0,50 to 16,00, OFF	1,50
TDURD	Minimum Trip Duration Time (cyc)	Range = 2,00 to 16000,00	9,00
CFD	Close Failure Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	60,00
3POD	Three-Pole Open Time Delay (cyc)	Range = 0,00 to 60,00	0,50
OPO	Open Pole Option	Select: 52, 27	52
50LP	Load Detection Phase PU (A,sec)	Range = 0,25 to 100,00, OFF	0,25
ESV	SELogic Variable Timers	Select: N, 1-16	1
SV1PU	SV_ Timer Pickup (cyc)	Range = 0,00 to 999999,00	0,00
SV1DO	SV_ Timer Dropout (cyc)	Range = 0,00 to 999999,00	0,00
Group 1			
Top			

Group 2			
Top			
Setting	Description	Range	Value
RID	Relay Identifier (30 chars)	Range = ASCII string with a maximum length of 30.	SEL-311
TID	Terminal Identifier (30 chars)	Range = ASCII string with a maximum length of 30.	STATION A
CTR	Phase (IA,IB,IC) CT Ratio	Range = 1 to 6000	200
CTRN	Neutral (IN) CT Ratio	Range = 1 to 10000	200
PTR	Phase (VA,VB,VC) PT Ratio	Range = 1,00 to 10000,00	2000,00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1,00 to 10000,00	2000,00
VNOM	Phase Nominal Voltage L-N (V,sec)	Range = 25,00 to 300,00	67,00
EADVS	Advanced Settings	Select: Y, N	N
EBBPT	Enable busbar PT LOP logic	Select: Y, N	N
Z1MAG	Pos-Seq Line Impedance Mag. (Ohm,sec)	Range = 0,10 to 255,00	7,80
Z1ANG	Pos-Seq Line Impedance Angle (deg)	Range = 5,00 to 90,00	84,00
Z0MAG	Zero-Seq Line Impedance Mag. (Ohm,sec)	Range = 0,10 to 255,00	24,80
Z0ANG	Zero-Seq Line Impedance Angle (deg)	Range = 5,00 to 90,00	81,50
LL	Line Length - unitless	Range = 0,10 to 999,00	100,00
EFLOC	Fault Location	Select: Y, N	Y
ECCVT	CCVT Transient Detection	Select: Y, N	N
E21P	Mho Phase Distance Elements	Select: N, 1-4, 1C-4C	3
Z1P	Zone 1 (Ohm,sec)	Range = 0,05 to 64,00, OFF	6,24
Z2P	Zone 2 (Ohm,sec)	Range = 0,05 to 64,00, OFF	9,36
Z3P	Zone 3 (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,87
50PP1	Zone 1 Phase-Phase Current FD (A,sec)	Range = 0,50 to 170,00	0,50
E21MG	Mho Ground Distance Elements	Select: N, 1-4	3
Z1MG	Zone 1 (Ohm,sec)	Range = 0,05 to 64,00, OFF	6,24
Z2MG	Zone 2 (Ohm,sec)	Range = 0,05 to 64,00, OFF	9,36
Z3MG	Zone 3 (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,87
E21XG	Quad Ground Distance Elements	Select: N, 1-4	3
XG1	Zone 1 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	6,24
XG2	Zone 2 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	9,36
XG3	Zone 3 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,87
RG1	Zone 1 Resistance (Ohm,sec)	Range = 0,05 to 50,00	2,50

RG2	Zone 2 Resistance (Ohm,sec)	Range = 0,05 to 50,00	5,00
RG3	Zone 3 Resistance (Ohm,sec)	Range = 0,05 to 50,00	6,00
50L1	Zone 1 Phase Current FD (A,sec)	Range = 0,50 to 100,00	0,50
50GZ1	Zone 1 Residual Current FD (A,sec)	Range = 0,50 to 100,00	0,50
k0M1	Zone 1 ZSC Factor Mag (unitless)	Range = 0,000 to 6,000, AUTO	0,726
k0A1	Zone 1 ZSC Factor Ang (deg)	Range = -180,00 to 180,00	-3,69
Z1PD	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z2PD	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	20,00
Z3PD	Zone 3 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z1GD	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z2GD	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	20,00
Z3GD	Zone 3 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z1D	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z2D	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z3D	Zone 3 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
E50P	Phase	Select: N, 1-4	1
50P1P	Level 1 (A,sec)	Range = 0,25 to 100,00, OFF	15,00
67P1D	Level 1 (cyc)	Range = 0,00 to 16000,00	0,00
E50G	Residual Ground	Select: N, 1-4	N
E50Q	Negative-Sequence	Select: N, 1-4	N
E51P	Phase	Select: Y, N	N
E51G	Residual Ground	Select: Y, N	Y
51GP	Pickup (A,sec)	Range = 0,10 to 16,00, OFF	0,75
51GC	Curve	Select: U1-U5, C1-C5	U3
51GTD	Time Dial	Range = 0,50 to 15,00	1,50
51GRS	EM Reset Delay	Select: Y, N	N
E51Q	Negative-Sequence	Select: Y, N	Y
51QP	Pickup (A,sec)	Range = 0,25 to 16,00, OFF	2,20
51QC	Curve	Select: U1-U5, C1-C5	U3
51QTD	Time Dial	Range = 0,50 to 15,00	3,00
51QRS	EM Reset Delay	Select: Y, N	N
E50BF	Breaker Failure	Select: Y, N	N
EOOS	Out-of-Step	Select: Y, Y2, N	N
ELOAD	Load Encroachment	Select: Y, N	Y

ZLF	Forward Load Impedance (Ohm,sec)	Range = 0,09 to 64,00	6,50
ZLR	Reverse Load Impedance (Ohm,sec)	Range = 0,09 to 64,00	6,50
PLAF	Positive Forward Load Angle (deg)	Range = -90,00 to 90,00	30,00
NLAF	Negative Forward Load Angle (deg)	Range = -90,00 to 90,00	-30,00
PLAR	Positive Reverse Load Angle (deg)	Range = 90,00 to 270,00	150,00
NLAR	Negative Reverse Load Angle (deg)	Range = 90,00 to 270,00	210,00
E32	Directional Control	Select: Y, AUTO	AUTO
ELOP	Loss-Of-Potential	Select: Y, Y1, N	Y
DIR3	Level 3	Select: F, R	R
DIR4	Level 4	Select: F, R	F
ORDER	Ground Dir. Priority (combo of Q,V,I)	Select: Q, V, I	QVI
EVOLT	Voltage Elements	Select: Y, N	N
E25	Synchronism Check	Select: Y, N	N
E81	Frequency Elements	Select: N, 1-6	N
E79	Reclosures	Select: N, 1-4	N
ESOTF	Switch-Onto-Fault	Select: Y, N	Y
EDDSOTF	SOTF Disturbance Detector Supervision	Select: Y, N	Y
CLOEND	Close Enable Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
52AEND	52A Enable Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	10,00
SOTFD	SOTF Duration (cyc)	Range = 0,50 to 16000,00	30,00
ECOMM	Comm-Asst Trip Scheme	Select: N, DCB, POTT, DCUB1, DCUB2	POTT
Z3RBD	Zone 3 Reverse Block Time Delay (cyc)	Range = 0,00 to 16000,00	5,00
EBLKD	Echo Block Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	10,00
ETDPU	Echo Time Delay Pickup (cyc)	Range = 0,00 to 16000,00, OFF	2,00
EDURD	Echo Duration Time Delay (cyc)	Range = 0,00 to 16000,00	4,00
EWFC	Weak-Infeed Enable	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (min)	Select: 5, 10, 15, 30, 60	5
PDEMP	Phase Pickup (A,sec)	Range = 0,50 to 16,00, OFF	5,00
NDEMP	Neutral Ground Pickup (A,sec)	Range = 0,500 to 16,000, OFF	OFF
GDEMP	Residual Ground Pickup (A,sec)	Range = 0,10 to 16,00, OFF	1,50
QDEMP	Negative-Sequence Pickup (A,sec)	Range = 0,50 to 16,00, OFF	1,50
TDURD	Minimum Trip Duration Time (cyc)	Range = 2,00 to 16000,00	9,00
CFD	Close Failure Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	60,00
3POD	Three-Pole Open Time Delay (cyc)	Range = 0,00 to 60,00	0,50
OPO	Open Pole Option	Select: 52, 27	52

50LP	Load Detection Phase PU (A,sec)	Range = 0,25 to 100,00, OFF	0,25
ESV	SELogic Variable Timers	Select: N, 1-16	1
SV1PU	SV _ Timer Pickup (cyc)	Range = 0,00 to 999999,00	0,00
SV1DO	SV _ Timer Dropout (cyc)	Range = 0,00 to 999999,00	0,00
Group 2 Top			

Group 3			
Top			
Setting	Description	Range	Value
RID	Relay Identifier (30 chars)	Range = ASCII string with a maximum length of 30.	SEL-311
TID	Terminal Identifier (30 chars)	Range = ASCII string with a maximum length of 30.	STATION A
CTR	Phase (IA,IB,IC) CT Ratio	Range = 1 to 6000	200
CTRN	Neutral (IN) CT Ratio	Range = 1 to 10000	200
PTR	Phase (VA,VB,VC) PT Ratio	Range = 1,00 to 10000,00	2000,00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1,00 to 10000,00	2000,00
VNOM	Phase Nominal Voltage L-N (V,sec)	Range = 25,00 to 300,00	67,00
EADVS	Advanced Settings	Select: Y, N	N
EBBPT	Enable busbar PT LOP logic	Select: Y, N	N
Z1MAG	Pos-Seq Line Impedance Mag. (Ohm,sec)	Range = 0,10 to 255,00	7,80
Z1ANG	Pos-Seq Line Impedance Angle (deg)	Range = 5,00 to 90,00	84,00
Z0MAG	Zero-Seq Line Impedance Mag. (Ohm,sec)	Range = 0,10 to 255,00	24,80
Z0ANG	Zero-Seq Line Impedance Angle (deg)	Range = 5,00 to 90,00	81,50
LL	Line Length - unitless	Range = 0,10 to 999,00	100,00
EFLOC	Fault Location	Select: Y, N	Y
ECCVT	CCVT Transient Detection	Select: Y, N	N
E21P	Mho Phase Distance Elements	Select: N, 1-4, 1C-4C	3
Z1P	Zone 1 (Ohm,sec)	Range = 0,05 to 64,00, OFF	6,24
Z2P	Zone 2 (Ohm,sec)	Range = 0,05 to 64,00, OFF	9,36
Z3P	Zone 3 (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,87
50PP1	Zone 1 Phase-Phase Current FD (A,sec)	Range = 0,50 to 170,00	0,50
E21MG	Mho Ground Distance Elements	Select: N, 1-4	3
Z1MG	Zone 1 (Ohm,sec)	Range = 0,05 to 64,00, OFF	6,24
Z2MG	Zone 2 (Ohm,sec)	Range = 0,05 to 64,00, OFF	9,36
Z3MG	Zone 3 (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,87
E21XG	Quad Ground Distance Elements	Select: N, 1-4	3
XG1	Zone 1 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	6,24
XG2	Zone 2 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	9,36
XG3	Zone 3 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,87
RG1	Zone 1 Resistance (Ohm,sec)	Range = 0,05 to 50,00	2,50

RG2	Zone 2 Resistance (Ohm,sec)	Range = 0,05 to 50,00	5,00
RG3	Zone 3 Resistance (Ohm,sec)	Range = 0,05 to 50,00	6,00
50L1	Zone 1 Phase Current FD (A,sec)	Range = 0,50 to 100,00	0,50
50GZ1	Zone 1 Residual Current FD (A,sec)	Range = 0,50 to 100,00	0,50
k0M1	Zone 1 ZSC Factor Mag (unitless)	Range = 0,000 to 6,000, AUTO	0,726
k0A1	Zone 1 ZSC Factor Ang (deg)	Range = -180,00 to 180,00	-3,69
Z1PD	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z2PD	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	20,00
Z3PD	Zone 3 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z1GD	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z2GD	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	20,00
Z3GD	Zone 3 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z1D	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z2D	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z3D	Zone 3 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
E50P	Phase	Select: N, 1-4	1
50P1P	Level 1 (A,sec)	Range = 0,25 to 100,00, OFF	15,00
67P1D	Level 1 (cyc)	Range = 0,00 to 16000,00	0,00
E50G	Residual Ground	Select: N, 1-4	N
E50Q	Negative-Sequence	Select: N, 1-4	N
E51P	Phase	Select: Y, N	N
E51G	Residual Ground	Select: Y, N	Y
51GP	Pickup (A,sec)	Range = 0,10 to 16,00, OFF	0,75
51GC	Curve	Select: U1-U5, C1-C5	U3
51GTD	Time Dial	Range = 0,50 to 15,00	1,50
51GRS	EM Reset Delay	Select: Y, N	N
E51Q	Negative-Sequence	Select: Y, N	Y
51QP	Pickup (A,sec)	Range = 0,25 to 16,00, OFF	2,20
51QC	Curve	Select: U1-U5, C1-C5	U3
51QTD	Time Dial	Range = 0,50 to 15,00	3,00
51QRS	EM Reset Delay	Select: Y, N	N
E50BF	Breaker Failure	Select: Y, N	N
EOOS	Out-of-Step	Select: Y, Y2, N	N
ELOAD	Load Encroachment	Select: Y, N	Y

ZLF	Forward Load Impedance (Ohm,sec)	Range = 0,09 to 64,00	6,50
ZLR	Reverse Load Impedance (Ohm,sec)	Range = 0,09 to 64,00	6,50
PLAF	Positive Forward Load Angle (deg)	Range = -90,00 to 90,00	30,00
NLAF	Negative Forward Load Angle (deg)	Range = -90,00 to 90,00	-30,00
PLAR	Positive Reverse Load Angle (deg)	Range = 90,00 to 270,00	150,00
NLAR	Negative Reverse Load Angle (deg)	Range = 90,00 to 270,00	210,00
E32	Directional Control	Select: Y, AUTO	AUTO
ELOP	Loss-Of-Potential	Select: Y, Y1, N	Y
DIR3	Level 3	Select: F, R	R
DIR4	Level 4	Select: F, R	F
ORDER	Ground Dir. Priority (combo of Q,V,I)	Select: Q, V, I	QVI
EVOLT	Voltage Elements	Select: Y, N	N
E25	Synchronism Check	Select: Y, N	N
E81	Frequency Elements	Select: N, 1-6	N
E79	Reclosures	Select: N, 1-4	N
ESOTF	Switch-Onto-Fault	Select: Y, N	Y
EDDSOTF	SOTF Disturbance Detector Supervision	Select: Y, N	Y
CLOEND	Close Enable Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
52AEND	52A Enable Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	10,00
SOTFD	SOTF Duration (cyc)	Range = 0,50 to 16000,00	30,00
ECOMM	Comm-Asst Trip Scheme	Select: N, DCB, POTT, DCUB1, DCUB2	POTT
Z3RBD	Zone 3 Reverse Block Time Delay (cyc)	Range = 0,00 to 16000,00	5,00
EBLKD	Echo Block Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	10,00
ETDPU	Echo Time Delay Pickup (cyc)	Range = 0,00 to 16000,00, OFF	2,00
EDURD	Echo Duration Time Delay (cyc)	Range = 0,00 to 16000,00	4,00
EWFC	Weak-Infeed Enable	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (min)	Select: 5, 10, 15, 30, 60	5
PDEMP	Phase Pickup (A,sec)	Range = 0,50 to 16,00, OFF	5,00
NDEMP	Neutral Ground Pickup (A,sec)	Range = 0,500 to 16,000, OFF	OFF
GDEMP	Residual Ground Pickup (A,sec)	Range = 0,10 to 16,00, OFF	1,50
QDEMP	Negative-Sequence Pickup (A,sec)	Range = 0,50 to 16,00, OFF	1,50
TDURD	Minimum Trip Duration Time (cyc)	Range = 2,00 to 16000,00	9,00
CFD	Close Failure Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	60,00
3POD	Three-Pole Open Time Delay (cyc)	Range = 0,00 to 60,00	0,50
OPO	Open Pole Option	Select: 52, 27	52

50LP	Load Detection Phase PU (A,sec)	Range = 0,25 to 100,00, OFF	0,25
ESV	SELogic Variable Timers	Select: N, 1-16	1
SV1PU	SV _ Timer Pickup (cyc)	Range = 0,00 to 999999,00	0,00
SV1DO	SV _ Timer Dropout (cyc)	Range = 0,00 to 999999,00	0,00
Group 3 Top			

Group 4			
Top			
Setting	Description	Range	Value
RID	Relay Identifier (30 chars)	Range = ASCII string with a maximum length of 30.	SEL-311
TID	Terminal Identifier (30 chars)	Range = ASCII string with a maximum length of 30.	STATION A
CTR	Phase (IA,IB,IC) CT Ratio	Range = 1 to 6000	200
CTRN	Neutral (IN) CT Ratio	Range = 1 to 10000	200
PTR	Phase (VA,VB,VC) PT Ratio	Range = 1,00 to 10000,00	2000,00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1,00 to 10000,00	2000,00
VNOM	Phase Nominal Voltage L-N (V,sec)	Range = 25,00 to 300,00	67,00
EADVS	Advanced Settings	Select: Y, N	N
EBBPT	Enable busbar PT LOP logic	Select: Y, N	N
Z1MAG	Pos-Seq Line Impedance Mag. (Ohm,sec)	Range = 0,10 to 255,00	7,80
Z1ANG	Pos-Seq Line Impedance Angle (deg)	Range = 5,00 to 90,00	84,00
Z0MAG	Zero-Seq Line Impedance Mag. (Ohm,sec)	Range = 0,10 to 255,00	24,80
Z0ANG	Zero-Seq Line Impedance Angle (deg)	Range = 5,00 to 90,00	81,50
LL	Line Length - unitless	Range = 0,10 to 999,00	100,00
EFLOC	Fault Location	Select: Y, N	Y
ECCVT	CCVT Transient Detection	Select: Y, N	N
E21P	Mho Phase Distance Elements	Select: N, 1-4, 1C-4C	3
Z1P	Zone 1 (Ohm,sec)	Range = 0,05 to 64,00, OFF	6,24
Z2P	Zone 2 (Ohm,sec)	Range = 0,05 to 64,00, OFF	9,36
Z3P	Zone 3 (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,87
50PP1	Zone 1 Phase-Phase Current FD (A,sec)	Range = 0,50 to 170,00	0,50
E21MG	Mho Ground Distance Elements	Select: N, 1-4	3
Z1MG	Zone 1 (Ohm,sec)	Range = 0,05 to 64,00, OFF	6,24
Z2MG	Zone 2 (Ohm,sec)	Range = 0,05 to 64,00, OFF	9,36
Z3MG	Zone 3 (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,87
E21XG	Quad Ground Distance Elements	Select: N, 1-4	3
XG1	Zone 1 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	6,24
XG2	Zone 2 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	9,36
XG3	Zone 3 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,87
RG1	Zone 1 Resistance (Ohm,sec)	Range = 0,05 to 50,00	2,50

RG2	Zone 2 Resistance (Ohm,sec)	Range = 0,05 to 50,00	5,00
RG3	Zone 3 Resistance (Ohm,sec)	Range = 0,05 to 50,00	6,00
50L1	Zone 1 Phase Current FD (A,sec)	Range = 0,50 to 100,00	0,50
50GZ1	Zone 1 Residual Current FD (A,sec)	Range = 0,50 to 100,00	0,50
k0M1	Zone 1 ZSC Factor Mag (unitless)	Range = 0,000 to 6,000, AUTO	0,726
k0A1	Zone 1 ZSC Factor Ang (deg)	Range = -180,00 to 180,00	-3,69
Z1PD	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z2PD	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	20,00
Z3PD	Zone 3 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z1GD	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z2GD	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	20,00
Z3GD	Zone 3 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z1D	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z2D	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z3D	Zone 3 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
E50P	Phase	Select: N, 1-4	1
50P1P	Level 1 (A,sec)	Range = 0,25 to 100,00, OFF	15,00
67P1D	Level 1 (cyc)	Range = 0,00 to 16000,00	0,00
E50G	Residual Ground	Select: N, 1-4	N
E50Q	Negative-Sequence	Select: N, 1-4	N
E51P	Phase	Select: Y, N	N
E51G	Residual Ground	Select: Y, N	Y
51GP	Pickup (A,sec)	Range = 0,10 to 16,00, OFF	0,75
51GC	Curve	Select: U1-U5, C1-C5	U3
51GTD	Time Dial	Range = 0,50 to 15,00	1,50
51GRS	EM Reset Delay	Select: Y, N	N
E51Q	Negative-Sequence	Select: Y, N	Y
51QP	Pickup (A,sec)	Range = 0,25 to 16,00, OFF	2,20
51QC	Curve	Select: U1-U5, C1-C5	U3
51QTD	Time Dial	Range = 0,50 to 15,00	3,00
51QRS	EM Reset Delay	Select: Y, N	N
E50BF	Breaker Failure	Select: Y, N	N
EOOS	Out-of-Step	Select: Y, Y2, N	N
ELOAD	Load Encroachment	Select: Y, N	Y

ZLF	Forward Load Impedance (Ohm,sec)	Range = 0,09 to 64,00	6,50
ZLR	Reverse Load Impedance (Ohm,sec)	Range = 0,09 to 64,00	6,50
PLAF	Positive Forward Load Angle (deg)	Range = -90,00 to 90,00	30,00
NLAF	Negative Forward Load Angle (deg)	Range = -90,00 to 90,00	-30,00
PLAR	Positive Reverse Load Angle (deg)	Range = 90,00 to 270,00	150,00
NLAR	Negative Reverse Load Angle (deg)	Range = 90,00 to 270,00	210,00
E32	Directional Control	Select: Y, AUTO	AUTO
ELOP	Loss-Of-Potential	Select: Y, Y1, N	Y
DIR3	Level 3	Select: F, R	R
DIR4	Level 4	Select: F, R	F
ORDER	Ground Dir. Priority (combo of Q,V,I)	Select: Q, V, I	QVI
EVOLT	Voltage Elements	Select: Y, N	N
E25	Synchronism Check	Select: Y, N	N
E81	Frequency Elements	Select: N, 1-6	N
E79	Reclosures	Select: N, 1-4	N
ESOTF	Switch-Onto-Fault	Select: Y, N	Y
EDDSOTF	SOTF Disturbance Detector Supervision	Select: Y, N	Y
CLOEND	Close Enable Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
52AEND	52A Enable Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	10,00
SOTFD	SOTF Duration (cyc)	Range = 0,50 to 16000,00	30,00
ECOMM	Comm-Asst Trip Scheme	Select: N, DCB, POTT, DCUB1, DCUB2	POTT
Z3RBD	Zone 3 Reverse Block Time Delay (cyc)	Range = 0,00 to 16000,00	5,00
EBLKD	Echo Block Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	10,00
ETDPU	Echo Time Delay Pickup (cyc)	Range = 0,00 to 16000,00, OFF	2,00
EDURD	Echo Duration Time Delay (cyc)	Range = 0,00 to 16000,00	4,00
EWFC	Weak-Infeed Enable	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (min)	Select: 5, 10, 15, 30, 60	5
PDEMP	Phase Pickup (A,sec)	Range = 0,50 to 16,00, OFF	5,00
NDEMP	Neutral Ground Pickup (A,sec)	Range = 0,500 to 16,000, OFF	OFF
GDEMP	Residual Ground Pickup (A,sec)	Range = 0,10 to 16,00, OFF	1,50
QDEMP	Negative-Sequence Pickup (A,sec)	Range = 0,50 to 16,00, OFF	1,50
TDURD	Minimum Trip Duration Time (cyc)	Range = 2,00 to 16000,00	9,00
CFD	Close Failure Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	60,00
3POD	Three-Pole Open Time Delay (cyc)	Range = 0,00 to 60,00	0,50
OPO	Open Pole Option	Select: 52, 27	52

50LP	Load Detection Phase PU (A,sec)	Range = 0,25 to 100,00, OFF	0,25
ESV	SELogic Variable Timers	Select: N, 1-16	1
SV1PU	SV _ Timer Pickup (cyc)	Range = 0,00 to 999999,00	0,00
SV1DO	SV _ Timer Dropout (cyc)	Range = 0,00 to 999999,00	0,00
Group 4 Top			

Group 5			
Top			
Setting	Description	Range	Value
RID	Relay Identifier (30 chars)	Range = ASCII string with a maximum length of 30.	SEL-311
TID	Terminal Identifier (30 chars)	Range = ASCII string with a maximum length of 30.	STATION A
CTR	Phase (IA,IB,IC) CT Ratio	Range = 1 to 6000	200
CTRN	Neutral (IN) CT Ratio	Range = 1 to 10000	200
PTR	Phase (VA,VB,VC) PT Ratio	Range = 1,00 to 10000,00	2000,00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1,00 to 10000,00	2000,00
VNOM	Phase Nominal Voltage L-N (V,sec)	Range = 25,00 to 300,00	67,00
EADVS	Advanced Settings	Select: Y, N	N
EBBPT	Enable busbar PT LOP logic	Select: Y, N	N
Z1MAG	Pos-Seq Line Impedance Mag. (Ohm,sec)	Range = 0,10 to 255,00	7,80
Z1ANG	Pos-Seq Line Impedance Angle (deg)	Range = 5,00 to 90,00	84,00
Z0MAG	Zero-Seq Line Impedance Mag. (Ohm,sec)	Range = 0,10 to 255,00	24,80
Z0ANG	Zero-Seq Line Impedance Angle (deg)	Range = 5,00 to 90,00	81,50
LL	Line Length - unitless	Range = 0,10 to 999,00	100,00
EFLOC	Fault Location	Select: Y, N	Y
ECCVT	CCVT Transient Detection	Select: Y, N	N
E21P	Mho Phase Distance Elements	Select: N, 1-4, 1C-4C	3
Z1P	Zone 1 (Ohm,sec)	Range = 0,05 to 64,00, OFF	6,24
Z2P	Zone 2 (Ohm,sec)	Range = 0,05 to 64,00, OFF	9,36
Z3P	Zone 3 (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,87
50PP1	Zone 1 Phase-Phase Current FD (A,sec)	Range = 0,50 to 170,00	0,50
E21MG	Mho Ground Distance Elements	Select: N, 1-4	3
Z1MG	Zone 1 (Ohm,sec)	Range = 0,05 to 64,00, OFF	6,24
Z2MG	Zone 2 (Ohm,sec)	Range = 0,05 to 64,00, OFF	9,36
Z3MG	Zone 3 (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,87
E21XG	Quad Ground Distance Elements	Select: N, 1-4	3
XG1	Zone 1 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	6,24
XG2	Zone 2 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	9,36
XG3	Zone 3 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,87
RG1	Zone 1 Resistance (Ohm,sec)	Range = 0,05 to 50,00	2,50

RG2	Zone 2 Resistance (Ohm,sec)	Range = 0,05 to 50,00	5,00
RG3	Zone 3 Resistance (Ohm,sec)	Range = 0,05 to 50,00	6,00
50L1	Zone 1 Phase Current FD (A,sec)	Range = 0,50 to 100,00	0,50
50GZ1	Zone 1 Residual Current FD (A,sec)	Range = 0,50 to 100,00	0,50
k0M1	Zone 1 ZSC Factor Mag (unitless)	Range = 0,000 to 6,000, AUTO	0,726
k0A1	Zone 1 ZSC Factor Ang (deg)	Range = -180,00 to 180,00	-3,69
Z1PD	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z2PD	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	20,00
Z3PD	Zone 3 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z1GD	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z2GD	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	20,00
Z3GD	Zone 3 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z1D	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z2D	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z3D	Zone 3 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
E50P	Phase	Select: N, 1-4	1
50P1P	Level 1 (A,sec)	Range = 0,25 to 100,00, OFF	15,00
67P1D	Level 1 (cyc)	Range = 0,00 to 16000,00	0,00
E50G	Residual Ground	Select: N, 1-4	N
E50Q	Negative-Sequence	Select: N, 1-4	N
E51P	Phase	Select: Y, N	N
E51G	Residual Ground	Select: Y, N	Y
51GP	Pickup (A,sec)	Range = 0,10 to 16,00, OFF	0,75
51GC	Curve	Select: U1-U5, C1-C5	U3
51GTD	Time Dial	Range = 0,50 to 15,00	1,50
51GRS	EM Reset Delay	Select: Y, N	N
E51Q	Negative-Sequence	Select: Y, N	Y
51QP	Pickup (A,sec)	Range = 0,25 to 16,00, OFF	2,20
51QC	Curve	Select: U1-U5, C1-C5	U3
51QTD	Time Dial	Range = 0,50 to 15,00	3,00
51QRS	EM Reset Delay	Select: Y, N	N
E50BF	Breaker Failure	Select: Y, N	N
EOOS	Out-of-Step	Select: Y, Y2, N	N
ELOAD	Load Encroachment	Select: Y, N	Y

ZLF	Forward Load Impedance (Ohm,sec)	Range = 0,09 to 64,00	6,50
ZLR	Reverse Load Impedance (Ohm,sec)	Range = 0,09 to 64,00	6,50
PLAF	Positive Forward Load Angle (deg)	Range = -90,00 to 90,00	30,00
NLAF	Negative Forward Load Angle (deg)	Range = -90,00 to 90,00	-30,00
PLAR	Positive Reverse Load Angle (deg)	Range = 90,00 to 270,00	150,00
NLAR	Negative Reverse Load Angle (deg)	Range = 90,00 to 270,00	210,00
E32	Directional Control	Select: Y, AUTO	AUTO
ELOP	Loss-Of-Potential	Select: Y, Y1, N	Y
DIR3	Level 3	Select: F, R	R
DIR4	Level 4	Select: F, R	F
ORDER	Ground Dir. Priority (combo of Q,V,I)	Select: Q, V, I	QVI
EVOLT	Voltage Elements	Select: Y, N	N
E25	Synchronism Check	Select: Y, N	N
E81	Frequency Elements	Select: N, 1-6	N
E79	Reclosures	Select: N, 1-4	N
ESOTF	Switch-Onto-Fault	Select: Y, N	Y
EDDSOTF	SOTF Disturbance Detector Supervision	Select: Y, N	Y
CLOEND	Close Enable Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
52AEND	52A Enable Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	10,00
SOTFD	SOTF Duration (cyc)	Range = 0,50 to 16000,00	30,00
ECOMM	Comm-Asst Trip Scheme	Select: N, DCB, POTT, DCUB1, DCUB2	POTT
Z3RBD	Zone 3 Reverse Block Time Delay (cyc)	Range = 0,00 to 16000,00	5,00
EBLKD	Echo Block Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	10,00
ETDPU	Echo Time Delay Pickup (cyc)	Range = 0,00 to 16000,00, OFF	2,00
EDURD	Echo Duration Time Delay (cyc)	Range = 0,00 to 16000,00	4,00
EWFC	Weak-Infeed Enable	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (min)	Select: 5, 10, 15, 30, 60	5
PDEMP	Phase Pickup (A,sec)	Range = 0,50 to 16,00, OFF	5,00
NDEMP	Neutral Ground Pickup (A,sec)	Range = 0,500 to 16,000, OFF	OFF
GDEMP	Residual Ground Pickup (A,sec)	Range = 0,10 to 16,00, OFF	1,50
QDEMP	Negative-Sequence Pickup (A,sec)	Range = 0,50 to 16,00, OFF	1,50
TDURD	Minimum Trip Duration Time (cyc)	Range = 2,00 to 16000,00	9,00
CFD	Close Failure Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	60,00
3POD	Three-Pole Open Time Delay (cyc)	Range = 0,00 to 60,00	0,50
OPO	Open Pole Option	Select: 52, 27	52

50LP	Load Detection Phase PU (A,sec)	Range = 0,25 to 100,00, OFF	0,25
ESV	SELogic Variable Timers	Select: N, 1-16	1
SV1PU	SV _ Timer Pickup (cyc)	Range = 0,00 to 999999,00	0,00
SV1DO	SV _ Timer Dropout (cyc)	Range = 0,00 to 999999,00	0,00
Group 5 Top			

Group 6			
Top			
Setting	Description	Range	Value
RID	Relay Identifier (30 chars)	Range = ASCII string with a maximum length of 30.	SEL-311
TID	Terminal Identifier (30 chars)	Range = ASCII string with a maximum length of 30.	STATION A
CTR	Phase (IA,IB,IC) CT Ratio	Range = 1 to 6000	200
CTRN	Neutral (IN) CT Ratio	Range = 1 to 10000	200
PTR	Phase (VA,VB,VC) PT Ratio	Range = 1,00 to 10000,00	2000,00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1,00 to 10000,00	2000,00
VNOM	Phase Nominal Voltage L-N (V,sec)	Range = 25,00 to 300,00	67,00
EADVS	Advanced Settings	Select: Y, N	N
EBBPT	Enable busbar PT LOP logic	Select: Y, N	N
Z1MAG	Pos-Seq Line Impedance Mag. (Ohm,sec)	Range = 0,10 to 255,00	7,80
Z1ANG	Pos-Seq Line Impedance Angle (deg)	Range = 5,00 to 90,00	84,00
Z0MAG	Zero-Seq Line Impedance Mag. (Ohm,sec)	Range = 0,10 to 255,00	24,80
Z0ANG	Zero-Seq Line Impedance Angle (deg)	Range = 5,00 to 90,00	81,50
LL	Line Length - unitless	Range = 0,10 to 999,00	100,00
EFLOC	Fault Location	Select: Y, N	Y
ECCVT	CCVT Transient Detection	Select: Y, N	N
E21P	Mho Phase Distance Elements	Select: N, 1-4, 1C-4C	3
Z1P	Zone 1 (Ohm,sec)	Range = 0,05 to 64,00, OFF	6,24
Z2P	Zone 2 (Ohm,sec)	Range = 0,05 to 64,00, OFF	9,36
Z3P	Zone 3 (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,87
50PP1	Zone 1 Phase-Phase Current FD (A,sec)	Range = 0,50 to 170,00	0,50
E21MG	Mho Ground Distance Elements	Select: N, 1-4	3
Z1MG	Zone 1 (Ohm,sec)	Range = 0,05 to 64,00, OFF	6,24
Z2MG	Zone 2 (Ohm,sec)	Range = 0,05 to 64,00, OFF	9,36
Z3MG	Zone 3 (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,87
E21XG	Quad Ground Distance Elements	Select: N, 1-4	3
XG1	Zone 1 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	6,24
XG2	Zone 2 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	9,36
XG3	Zone 3 Reactance (Ohm,sec)	Range = 0,05 to 64,00, OFF	1,87
RG1	Zone 1 Resistance (Ohm,sec)	Range = 0,05 to 50,00	2,50

RG2	Zone 2 Resistance (Ohm,sec)	Range = 0,05 to 50,00	5,00
RG3	Zone 3 Resistance (Ohm,sec)	Range = 0,05 to 50,00	6,00
50L1	Zone 1 Phase Current FD (A,sec)	Range = 0,50 to 100,00	0,50
50GZ1	Zone 1 Residual Current FD (A,sec)	Range = 0,50 to 100,00	0,50
k0M1	Zone 1 ZSC Factor Mag (unitless)	Range = 0,000 to 6,000, AUTO	0,726
k0A1	Zone 1 ZSC Factor Ang (deg)	Range = -180,00 to 180,00	-3,69
Z1PD	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z2PD	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	20,00
Z3PD	Zone 3 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z1GD	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z2GD	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	20,00
Z3GD	Zone 3 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z1D	Zone 1 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z2D	Zone 2 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
Z3D	Zone 3 Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
E50P	Phase	Select: N, 1-4	1
50P1P	Level 1 (A,sec)	Range = 0,25 to 100,00, OFF	15,00
67P1D	Level 1 (cyc)	Range = 0,00 to 16000,00	0,00
E50G	Residual Ground	Select: N, 1-4	N
E50Q	Negative-Sequence	Select: N, 1-4	N
E51P	Phase	Select: Y, N	N
E51G	Residual Ground	Select: Y, N	Y
51GP	Pickup (A,sec)	Range = 0,10 to 16,00, OFF	0,75
51GC	Curve	Select: U1-U5, C1-C5	U3
51GTD	Time Dial	Range = 0,50 to 15,00	1,50
51GRS	EM Reset Delay	Select: Y, N	N
E51Q	Negative-Sequence	Select: Y, N	Y
51QP	Pickup (A,sec)	Range = 0,25 to 16,00, OFF	2,20
51QC	Curve	Select: U1-U5, C1-C5	U3
51QTD	Time Dial	Range = 0,50 to 15,00	3,00
51QRS	EM Reset Delay	Select: Y, N	N
E50BF	Breaker Failure	Select: Y, N	N
EOOS	Out-of-Step	Select: Y, Y2, N	N
ELOAD	Load Encroachment	Select: Y, N	Y

ZLF	Forward Load Impedance (Ohm,sec)	Range = 0,09 to 64,00	6,50
ZLR	Reverse Load Impedance (Ohm,sec)	Range = 0,09 to 64,00	6,50
PLAF	Positive Forward Load Angle (deg)	Range = -90,00 to 90,00	30,00
NLAF	Negative Forward Load Angle (deg)	Range = -90,00 to 90,00	-30,00
PLAR	Positive Reverse Load Angle (deg)	Range = 90,00 to 270,00	150,00
NLAR	Negative Reverse Load Angle (deg)	Range = 90,00 to 270,00	210,00
E32	Directional Control	Select: Y, AUTO	AUTO
ELOP	Loss-Of-Potential	Select: Y, Y1, N	Y
DIR3	Level 3	Select: F, R	R
DIR4	Level 4	Select: F, R	F
ORDER	Ground Dir. Priority (combo of Q,V,I)	Select: Q, V, I	QVI
EVOLT	Voltage Elements	Select: Y, N	N
E25	Synchronism Check	Select: Y, N	N
E81	Frequency Elements	Select: N, 1-6	N
E79	Reclosures	Select: N, 1-4	N
ESOTF	Switch-Onto-Fault	Select: Y, N	Y
EDDSOTF	SOTF Disturbance Detector Supervision	Select: Y, N	Y
CLOEND	Close Enable Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	OFF
52AEND	52A Enable Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	10,00
SOTFD	SOTF Duration (cyc)	Range = 0,50 to 16000,00	30,00
ECOMM	Comm-Asst Trip Scheme	Select: N, DCB, POTT, DCUB1, DCUB2	POTT
Z3RBD	Zone 3 Reverse Block Time Delay (cyc)	Range = 0,00 to 16000,00	5,00
EBLKD	Echo Block Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	10,00
ETDPU	Echo Time Delay Pickup (cyc)	Range = 0,00 to 16000,00, OFF	2,00
EDURD	Echo Duration Time Delay (cyc)	Range = 0,00 to 16000,00	4,00
EWFC	Weak-Infeed Enable	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (min)	Select: 5, 10, 15, 30, 60	5
PDEMP	Phase Pickup (A,sec)	Range = 0,50 to 16,00, OFF	5,00
NDEMP	Neutral Ground Pickup (A,sec)	Range = 0,500 to 16,000, OFF	OFF
GDEMP	Residual Ground Pickup (A,sec)	Range = 0,10 to 16,00, OFF	1,50
QDEMP	Negative-Sequence Pickup (A,sec)	Range = 0,50 to 16,00, OFF	1,50
TDURD	Minimum Trip Duration Time (cyc)	Range = 2,00 to 16000,00	9,00
CFD	Close Failure Time Delay (cyc)	Range = 0,00 to 16000,00, OFF	60,00
3POD	Three-Pole Open Time Delay (cyc)	Range = 0,00 to 60,00	0,50
OPO	Open Pole Option	Select: 52, 27	52

50LP	Load Detection Phase PU (A,sec)	Range = 0,25 to 100,00, OFF	0,25
ESV	SELogic Variable Timers	Select: N, 1-16	1
SV1PU	SV _ Timer Pickup (cyc)	Range = 0,00 to 999999,00	0,00
SV1DO	SV _ Timer Dropout (cyc)	Range = 0,00 to 999999,00	0,00
Group 6 Top			

DNP Map 1			
			Top
Setting	Description	Range	Value
BI_000	Binary Input 0	Range = Maximum of 1 Digital Elements	Z1T
BI_001	Binary Input 1	Range = Maximum of 1 Digital Elements	Z1GT
BI_002	Binary Input 2	Range = Maximum of 1 Digital Elements	Z2GT
BI_003	Binary Input 3	Range = Maximum of 1 Digital Elements	Z2T
BI_004	Binary Input 4	Range = Maximum of 1 Digital Elements	Z3GT
BI_005	Binary Input 5	Range = Maximum of 1 Digital Elements	Z3T
BI_006	Binary Input 6	Range = Maximum of 1 Digital Elements	Z4GT
BI_007	Binary Input 7	Range = Maximum of 1 Digital Elements	Z4T
BI_008	Binary Input 8	Range = Maximum of 1 Digital Elements	67G1T
BI_009	Binary Input 9	Range = Maximum of 1 Digital Elements	67P1T
BI_010	Binary Input 10	Range = Maximum of 1 Digital Elements	67G3T
BI_011	Binary Input 11	Range = Maximum of 1 Digital Elements	67G4T
BI_012	Binary Input 12	Range = Maximum of 1 Digital Elements	67P1T
BI_013	Binary Input 13	Range = Maximum of 1 Digital Elements	67P2T
BI_014	Binary Input 14	Range = Maximum of 1 Digital Elements	67P3T
BI_015	Binary Input 15	Range = Maximum of 1 Digital Elements	67P4T
BI_016	Binary Input 16	Range = Maximum of 1 Digital Elements	UNRDEV
BI_017	Binary Input 17	Range = Maximum of 1 Digital Elements	NA
BI_018	Binary Input 18	Range = Maximum of 1 Digital Elements	NA
BI_019	Binary Input 19	Range = Maximum of 1 Digital Elements	NA
BI_020	Binary Input 20	Range = Maximum of 1 Digital Elements	NA
BI_021	Binary Input 21	Range = Maximum of 1 Digital Elements	NA
		Range = Maximum of 1	

BI_022	Binary Input 22	Digital Elements	NA
BI_023	Binary Input 23	Range = Maximum of 1 Digital Elements	NA
BI_024	Binary Input 24	Range = Maximum of 1 Digital Elements	NA
BI_025	Binary Input 25	Range = Maximum of 1 Digital Elements	NA
BI_026	Binary Input 26	Range = Maximum of 1 Digital Elements	NA
BI_027	Binary Input 27	Range = Maximum of 1 Digital Elements	NA
BI_028	Binary Input 28	Range = Maximum of 1 Digital Elements	NA
BI_029	Binary Input 29	Range = Maximum of 1 Digital Elements	NA
BI_030	Binary Input 30	Range = Maximum of 1 Digital Elements	NA
BI_031	Binary Input 31	Range = Maximum of 1 Digital Elements	NA
BI_032	Binary Input 32	Range = Maximum of 1 Digital Elements	NA
BI_033	Binary Input 33	Range = Maximum of 1 Digital Elements	NA
BI_034	Binary Input 34	Range = Maximum of 1 Digital Elements	NA
BI_035	Binary Input 35	Range = Maximum of 1 Digital Elements	NA
BI_036	Binary Input 36	Range = Maximum of 1 Digital Elements	NA
BI_037	Binary Input 37	Range = Maximum of 1 Digital Elements	NA
BI_038	Binary Input 38	Range = Maximum of 1 Digital Elements	NA
BI_039	Binary Input 39	Range = Maximum of 1 Digital Elements	NA
BI_040	Binary Input 40	Range = Maximum of 1 Digital Elements	NA
BI_041	Binary Input 41	Range = Maximum of 1 Digital Elements	NA
BI_042	Binary Input 42	Range = Maximum of 1 Digital Elements	NA
BI_043	Binary Input 43	Range = Maximum of 1 Digital Elements	NA
BI_044	Binary Input 44	Range = Maximum of 1 Digital Elements	NA
BI_045	Binary Input 45	Range = Maximum of 1 Digital Elements	NA
BI_046	Binary Input 46	Range = Maximum of 1 Digital Elements	NA
BI_047	Binary Input 47	Range = Maximum of 1	NA

		Digital Elements	
BI_048	Binary Input 48	Range = Maximum of 1 Digital Elements	NA
BI_049	Binary Input 49	Range = Maximum of 1 Digital Elements	NA
BI_050	Binary Input 50	Range = Maximum of 1 Digital Elements	NA
BI_051	Binary Input 51	Range = Maximum of 1 Digital Elements	NA
BI_052	Binary Input 52	Range = Maximum of 1 Digital Elements	NA
BI_053	Binary Input 53	Range = Maximum of 1 Digital Elements	NA
BI_054	Binary Input 54	Range = Maximum of 1 Digital Elements	NA
BI_055	Binary Input 55	Range = Maximum of 1 Digital Elements	NA
BI_056	Binary Input 56	Range = Maximum of 1 Digital Elements	NA
BI_057	Binary Input 57	Range = Maximum of 1 Digital Elements	NA
BI_058	Binary Input 58	Range = Maximum of 1 Digital Elements	NA
BI_059	Binary Input 59	Range = Maximum of 1 Digital Elements	NA
BI_060	Binary Input 60	Range = Maximum of 1 Digital Elements	NA
BI_061	Binary Input 61	Range = Maximum of 1 Digital Elements	NA
BI_062	Binary Input 62	Range = Maximum of 1 Digital Elements	NA
BI_063	Binary Input 63	Range = Maximum of 1 Digital Elements	NA
BI_064	Binary Input 64	Range = Maximum of 1 Digital Elements	NA
BI_065	Binary Input 65	Range = Maximum of 1 Digital Elements	NA
BI_066	Binary Input 66	Range = Maximum of 1 Digital Elements	NA
BI_067	Binary Input 67	Range = Maximum of 1 Digital Elements	NA
BI_068	Binary Input 68	Range = Maximum of 1 Digital Elements	NA
BI_069	Binary Input 69	Range = Maximum of 1 Digital Elements	NA
BI_070	Binary Input 70	Range = Maximum of 1 Digital Elements	NA
BI_071	Binary Input 71	Range = Maximum of 1 Digital Elements	NA
BI_072	Binary Input 72	Range = Maximum of 1	NA

		Digital Elements	
BI_073	Binary Input 73	Range = Maximum of 1 Digital Elements	NA
BI_074	Binary Input 74	Range = Maximum of 1 Digital Elements	NA
BI_075	Binary Input 75	Range = Maximum of 1 Digital Elements	NA
BI_076	Binary Input 76	Range = Maximum of 1 Digital Elements	NA
BI_077	Binary Input 77	Range = Maximum of 1 Digital Elements	NA
BI_078	Binary Input 78	Range = Maximum of 1 Digital Elements	NA
BI_079	Binary Input 79	Range = Maximum of 1 Digital Elements	NA
BI_080	Binary Input 80	Range = Maximum of 1 Digital Elements	NA
BI_081	Binary Input 81	Range = Maximum of 1 Digital Elements	NA
BI_082	Binary Input 82	Range = Maximum of 1 Digital Elements	NA
BI_083	Binary Input 83	Range = Maximum of 1 Digital Elements	NA
BI_084	Binary Input 84	Range = Maximum of 1 Digital Elements	NA
BI_085	Binary Input 85	Range = Maximum of 1 Digital Elements	NA
BI_086	Binary Input 86	Range = Maximum of 1 Digital Elements	NA
BI_087	Binary Input 87	Range = Maximum of 1 Digital Elements	NA
BI_088	Binary Input 88	Range = Maximum of 1 Digital Elements	NA
BI_089	Binary Input 89	Range = Maximum of 1 Digital Elements	NA
BI_090	Binary Input 90	Range = Maximum of 1 Digital Elements	NA
BI_091	Binary Input 91	Range = Maximum of 1 Digital Elements	NA
BI_092	Binary Input 92	Range = Maximum of 1 Digital Elements	NA
BI_093	Binary Input 93	Range = Maximum of 1 Digital Elements	NA
BI_094	Binary Input 94	Range = Maximum of 1 Digital Elements	NA
BI_095	Binary Input 95	Range = Maximum of 1 Digital Elements	NA
BI_096	Binary Input 96	Range = Maximum of 1 Digital Elements	NA
BI_097	Binary Input 97	Range = Maximum of 1	NA

		Digital Elements	
BI_098	Binary Input 98	Range = Maximum of 1 Digital Elements	NA
BI_099	Binary Input 99	Range = Maximum of 1 Digital Elements	NA
BI_100	Binary Input 100	Range = Maximum of 1 Digital Elements	NA
BI_101	Binary Input 101	Range = Maximum of 1 Digital Elements	NA
BI_102	Binary Input 102	Range = Maximum of 1 Digital Elements	NA
BI_103	Binary Input 103	Range = Maximum of 1 Digital Elements	NA
BI_104	Binary Input 104	Range = Maximum of 1 Digital Elements	NA
BI_105	Binary Input 105	Range = Maximum of 1 Digital Elements	NA
BI_106	Binary Input 106	Range = Maximum of 1 Digital Elements	NA
BI_107	Binary Input 107	Range = Maximum of 1 Digital Elements	NA
BI_108	Binary Input 108	Range = Maximum of 1 Digital Elements	NA
BI_109	Binary Input 109	Range = Maximum of 1 Digital Elements	NA
BI_110	Binary Input 110	Range = Maximum of 1 Digital Elements	NA
BI_111	Binary Input 111	Range = Maximum of 1 Digital Elements	NA
BI_112	Binary Input 112	Range = Maximum of 1 Digital Elements	NA
BI_113	Binary Input 113	Range = Maximum of 1 Digital Elements	NA
BI_114	Binary Input 114	Range = Maximum of 1 Digital Elements	NA
BI_115	Binary Input 115	Range = Maximum of 1 Digital Elements	NA
BI_116	Binary Input 116	Range = Maximum of 1 Digital Elements	NA
BI_117	Binary Input 117	Range = Maximum of 1 Digital Elements	NA
BI_118	Binary Input 118	Range = Maximum of 1 Digital Elements	NA
BI_119	Binary Input 119	Range = Maximum of 1 Digital Elements	NA
BI_120	Binary Input 120	Range = Maximum of 1 Digital Elements	NA
BI_121	Binary Input 121	Range = Maximum of 1 Digital Elements	NA
BI_122	Binary Input 122	Range = Maximum of 1	NA

		Digital Elements	
BI_123	Binary Input 123	Range = Maximum of 1 Digital Elements	NA
BI_124	Binary Input 124	Range = Maximum of 1 Digital Elements	NA
BI_125	Binary Input 125	Range = Maximum of 1 Digital Elements	NA
BI_126	Binary Input 126	Range = Maximum of 1 Digital Elements	NA
BI_127	Binary Input 127	Range = Maximum of 1 Digital Elements	NA
BI_128	Binary Input 128	Range = Maximum of 1 Digital Elements	NA
BI_129	Binary Input 129	Range = Maximum of 1 Digital Elements	NA
BI_130	Binary Input 130	Range = Maximum of 1 Digital Elements	NA
BI_131	Binary Input 131	Range = Maximum of 1 Digital Elements	NA
BI_132	Binary Input 132	Range = Maximum of 1 Digital Elements	NA
BI_133	Binary Input 133	Range = Maximum of 1 Digital Elements	NA
BI_134	Binary Input 134	Range = Maximum of 1 Digital Elements	NA
BI_135	Binary Input 135	Range = Maximum of 1 Digital Elements	NA
BI_136	Binary Input 136	Range = Maximum of 1 Digital Elements	NA
BI_137	Binary Input 137	Range = Maximum of 1 Digital Elements	NA
BI_138	Binary Input 138	Range = Maximum of 1 Digital Elements	NA
BI_139	Binary Input 139	Range = Maximum of 1 Digital Elements	NA
BI_140	Binary Input 140	Range = Maximum of 1 Digital Elements	NA
BI_141	Binary Input 141	Range = Maximum of 1 Digital Elements	NA
BI_142	Binary Input 142	Range = Maximum of 1 Digital Elements	NA
BI_143	Binary Input 143	Range = Maximum of 1 Digital Elements	NA
BI_144	Binary Input 144	Range = Maximum of 1 Digital Elements	NA
BI_145	Binary Input 145	Range = Maximum of 1 Digital Elements	NA
BI_146	Binary Input 146	Range = Maximum of 1 Digital Elements	NA
BI_147	Binary Input 147	Range = Maximum of 1	NA

		Digital Elements	
BI_148	Binary Input 148	Range = Maximum of 1 Digital Elements	NA
BI_149	Binary Input 149	Range = Maximum of 1 Digital Elements	NA
BI_150	Binary Input 150	Range = Maximum of 1 Digital Elements	NA
BI_151	Binary Input 151	Range = Maximum of 1 Digital Elements	NA
BI_152	Binary Input 152	Range = Maximum of 1 Digital Elements	NA
BI_153	Binary Input 153	Range = Maximum of 1 Digital Elements	NA
BI_154	Binary Input 154	Range = Maximum of 1 Digital Elements	NA
BI_155	Binary Input 155	Range = Maximum of 1 Digital Elements	NA
BI_156	Binary Input 156	Range = Maximum of 1 Digital Elements	NA
BI_157	Binary Input 157	Range = Maximum of 1 Digital Elements	NA
BI_158	Binary Input 158	Range = Maximum of 1 Digital Elements	NA
BI_159	Binary Input 159	Range = Maximum of 1 Digital Elements	NA
BI_160	Binary Input 160	Range = Maximum of 1 Digital Elements	NA
BI_161	Binary Input 161	Range = Maximum of 1 Digital Elements	NA
BI_162	Binary Input 162	Range = Maximum of 1 Digital Elements	NA
BI_163	Binary Input 163	Range = Maximum of 1 Digital Elements	NA
BI_164	Binary Input 164	Range = Maximum of 1 Digital Elements	NA
BI_165	Binary Input 165	Range = Maximum of 1 Digital Elements	NA
BI_166	Binary Input 166	Range = Maximum of 1 Digital Elements	NA
BI_167	Binary Input 167	Range = Maximum of 1 Digital Elements	NA
BI_168	Binary Input 168	Range = Maximum of 1 Digital Elements	NA
BI_169	Binary Input 169	Range = Maximum of 1 Digital Elements	NA
BI_170	Binary Input 170	Range = Maximum of 1 Digital Elements	NA
BI_171	Binary Input 171	Range = Maximum of 1 Digital Elements	NA
BI_172	Binary Input 172	Range = Maximum of 1	NA

		Digital Elements	
BI_173	Binary Input 173	Range = Maximum of 1 Digital Elements	NA
BI_174	Binary Input 174	Range = Maximum of 1 Digital Elements	NA
BI_175	Binary Input 175	Range = Maximum of 1 Digital Elements	NA
BI_176	Binary Input 176	Range = Maximum of 1 Digital Elements	NA
BI_177	Binary Input 177	Range = Maximum of 1 Digital Elements	NA
BI_178	Binary Input 178	Range = Maximum of 1 Digital Elements	NA
BI_179	Binary Input 179	Range = Maximum of 1 Digital Elements	NA
BI_180	Binary Input 180	Range = Maximum of 1 Digital Elements	NA
BI_181	Binary Input 181	Range = Maximum of 1 Digital Elements	NA
BI_182	Binary Input 182	Range = Maximum of 1 Digital Elements	NA
BI_183	Binary Input 183	Range = Maximum of 1 Digital Elements	NA
BI_184	Binary Input 184	Range = Maximum of 1 Digital Elements	NA
BI_185	Binary Input 185	Range = Maximum of 1 Digital Elements	NA
BI_186	Binary Input 186	Range = Maximum of 1 Digital Elements	NA
BI_187	Binary Input 187	Range = Maximum of 1 Digital Elements	NA
BI_188	Binary Input 188	Range = Maximum of 1 Digital Elements	NA
BI_189	Binary Input 189	Range = Maximum of 1 Digital Elements	NA
BI_190	Binary Input 190	Range = Maximum of 1 Digital Elements	NA
BI_191	Binary Input 191	Range = Maximum of 1 Digital Elements	NA
BI_192	Binary Input 192	Range = Maximum of 1 Digital Elements	NA
BI_193	Binary Input 193	Range = Maximum of 1 Digital Elements	NA
BI_194	Binary Input 194	Range = Maximum of 1 Digital Elements	NA
BI_195	Binary Input 195	Range = Maximum of 1 Digital Elements	NA
BI_196	Binary Input 196	Range = Maximum of 1 Digital Elements	NA
BI_197	Binary Input 197	Range = Maximum of 1	NA

		Digital Elements	
BI_198	Binary Input 198	Range = Maximum of 1 Digital Elements	NA
BI_199	Binary Input 199	Range = Maximum of 1 Digital Elements	NA
BO_000	Binary Output 0	Range = Maximum of 2 Digital Elements	DRST_TAR
BO_001	Binary Output 1	Range = Maximum of 2 Digital Elements	NA
BO_002	Binary Output 2	Range = Maximum of 2 Digital Elements	NA
BO_003	Binary Output 3	Range = Maximum of 2 Digital Elements	NA
BO_004	Binary Output 4	Range = Maximum of 2 Digital Elements	NA
BO_005	Binary Output 5	Range = Maximum of 2 Digital Elements	NA
BO_006	Binary Output 6	Range = Maximum of 2 Digital Elements	NA
BO_007	Binary Output 7	Range = Maximum of 2 Digital Elements	NA
BO_008	Binary Output 8	Range = Maximum of 2 Digital Elements	NA
BO_009	Binary Output 9	Range = Maximum of 2 Digital Elements	NA
BO_010	Binary Output 10	Range = Maximum of 2 Digital Elements	NA
BO_011	Binary Output 11	Range = Maximum of 2 Digital Elements	NA
BO_012	Binary Output 12	Range = Maximum of 2 Digital Elements	NA
BO_013	Binary Output 13	Range = Maximum of 2 Digital Elements	NA
BO_014	Binary Output 14	Range = Maximum of 2 Digital Elements	NA
BO_015	Binary Output 15	Range = Maximum of 2 Digital Elements	NA
BO_016	Binary Output 16	Range = Maximum of 2 Digital Elements	NA
BO_017	Binary Output 17	Range = Maximum of 2 Digital Elements	NA
BO_018	Binary Output 18	Range = Maximum of 2 Digital Elements	NA
BO_019	Binary Output 19	Range = Maximum of 2 Digital Elements	NA
BO_020	Binary Output 20	Range = Maximum of 2 Digital Elements	NA
BO_021	Binary Output 21	Range = Maximum of 2 Digital Elements	NA
BO_022	Binary Output 22	Range = Maximum of 2	NA

		Digital Elements	
BO_023	Binary Output 23	Range = Maximum of 2 Digital Elements	NA
BO_024	Binary Output 24	Range = Maximum of 2 Digital Elements	NA
BO_025	Binary Output 25	Range = Maximum of 2 Digital Elements	NA
BO_026	Binary Output 26	Range = Maximum of 2 Digital Elements	NA
BO_027	Binary Output 27	Range = Maximum of 2 Digital Elements	NA
BO_028	Binary Output 28	Range = Maximum of 2 Digital Elements	NA
BO_029	Binary Output 29	Range = Maximum of 2 Digital Elements	NA
BO_030	Binary Output 30	Range = Maximum of 2 Digital Elements	NA
BO_031	Binary Output 31	Range = Maximum of 2 Digital Elements	NA
BO_032	Binary Output 32	Range = Maximum of 2 Digital Elements	NA
AI_000	Analog Input 0	Range = Maximum of 1 Analog Elements	FTYPE
AI_001	Analog Input 1	Range = Maximum of 1 Analog Elements	FLOC
AI_002	Analog Input 2	Range = Maximum of 1 Analog Elements	FI
AI_003	Analog Input 3	Range = Maximum of 1 Analog Elements	FFREQ
AI_004	Analog Input 4	Range = Maximum of 1 Analog Elements	FGRP
AI_005	Analog Input 5	Range = Maximum of 1 Analog Elements	FM
AI_006	Analog Input 6	Range = Maximum of 1 Analog Elements	FIA
AI_007	Analog Input 7	Range = Maximum of 1 Analog Elements	FIB
AI_008	Analog Input 8	Range = Maximum of 1 Analog Elements	FIC
AI_009	Analog Input 9	Range = Maximum of 1 Analog Elements	FIG
AI_010	Analog Input 10	Range = Maximum of 1 Analog Elements	FIN
AI_011	Analog Input 11	Range = Maximum of 1 Analog Elements	FIQ
AI_012	Analog Input 12	Range = Maximum of 1 Analog Elements	FTIMEH
AI_013	Analog Input 13	Range = Maximum of 1 Analog Elements	NA
AI_014	Analog Input 14	Range = Maximum of 1	NA

		Analog Elements	
AI_015	Analog Input 15	Range = Maximum of 1 Analog Elements	NA
AI_016	Analog Input 16	Range = Maximum of 1 Analog Elements	NA
AI_017	Analog Input 17	Range = Maximum of 1 Analog Elements	NA
AI_018	Analog Input 18	Range = Maximum of 1 Analog Elements	NA
AI_019	Analog Input 19	Range = Maximum of 1 Analog Elements	NA
AI_020	Analog Input 20	Range = Maximum of 1 Analog Elements	NA
AI_021	Analog Input 21	Range = Maximum of 1 Analog Elements	NA
AI_022	Analog Input 22	Range = Maximum of 1 Analog Elements	NA
AI_023	Analog Input 23	Range = Maximum of 1 Analog Elements	NA
AI_024	Analog Input 24	Range = Maximum of 1 Analog Elements	NA
AI_025	Analog Input 25	Range = Maximum of 1 Analog Elements	NA
AI_026	Analog Input 26	Range = Maximum of 1 Analog Elements	NA
AI_027	Analog Input 27	Range = Maximum of 1 Analog Elements	NA
AI_028	Analog Input 28	Range = Maximum of 1 Analog Elements	NA
AI_029	Analog Input 29	Range = Maximum of 1 Analog Elements	NA
AI_030	Analog Input 30	Range = Maximum of 1 Analog Elements	NA
AI_031	Analog Input 31	Range = Maximum of 1 Analog Elements	NA
AI_032	Analog Input 32	Range = Maximum of 1 Analog Elements	NA
AI_033	Analog Input 33	Range = Maximum of 1 Analog Elements	NA
AI_034	Analog Input 34	Range = Maximum of 1 Analog Elements	NA
AI_035	Analog Input 35	Range = Maximum of 1 Analog Elements	NA
AI_036	Analog Input 36	Range = Maximum of 1 Analog Elements	NA
AI_037	Analog Input 37	Range = Maximum of 1 Analog Elements	NA
AI_038	Analog Input 38	Range = Maximum of 1 Analog Elements	NA
AI_039	Analog Input 39	Range = Maximum of 1	NA

		Analog Elements	
AI_040	Analog Input 40	Range = Maximum of 1 Analog Elements	NA
AI_041	Analog Input 41	Range = Maximum of 1 Analog Elements	NA
AI_042	Analog Input 42	Range = Maximum of 1 Analog Elements	NA
AI_043	Analog Input 43	Range = Maximum of 1 Analog Elements	NA
AI_044	Analog Input 44	Range = Maximum of 1 Analog Elements	NA
AI_045	Analog Input 45	Range = Maximum of 1 Analog Elements	NA
AI_046	Analog Input 46	Range = Maximum of 1 Analog Elements	NA
AI_047	Analog Input 47	Range = Maximum of 1 Analog Elements	NA
AI_048	Analog Input 48	Range = Maximum of 1 Analog Elements	NA
AI_049	Analog Input 49	Range = Maximum of 1 Analog Elements	NA
AI_050	Analog Input 50	Range = Maximum of 1 Analog Elements	NA
AI_051	Analog Input 51	Range = Maximum of 1 Analog Elements	NA
AI_052	Analog Input 52	Range = Maximum of 1 Analog Elements	NA
AI_053	Analog Input 53	Range = Maximum of 1 Analog Elements	NA
AI_054	Analog Input 54	Range = Maximum of 1 Analog Elements	NA
AI_055	Analog Input 55	Range = Maximum of 1 Analog Elements	NA
AI_056	Analog Input 56	Range = Maximum of 1 Analog Elements	NA
AI_057	Analog Input 57	Range = Maximum of 1 Analog Elements	NA
AI_058	Analog Input 58	Range = Maximum of 1 Analog Elements	NA
AI_059	Analog Input 59	Range = Maximum of 1 Analog Elements	NA
AI_060	Analog Input 60	Range = Maximum of 1 Analog Elements	NA
AI_061	Analog Input 61	Range = Maximum of 1 Analog Elements	NA
AI_062	Analog Input 62	Range = Maximum of 1 Analog Elements	NA
AI_063	Analog Input 63	Range = Maximum of 1 Analog Elements	NA
AI_064	Analog Input 64	Range = Maximum of 1	NA

		Analog Elements	
AI_065	Analog Input 65	Range = Maximum of 1 Analog Elements	NA
AI_066	Analog Input 66	Range = Maximum of 1 Analog Elements	NA
AI_067	Analog Input 67	Range = Maximum of 1 Analog Elements	NA
AI_068	Analog Input 68	Range = Maximum of 1 Analog Elements	NA
AI_069	Analog Input 69	Range = Maximum of 1 Analog Elements	NA
AI_070	Analog Input 70	Range = Maximum of 1 Analog Elements	NA
AI_071	Analog Input 71	Range = Maximum of 1 Analog Elements	NA
AI_072	Analog Input 72	Range = Maximum of 1 Analog Elements	NA
AI_073	Analog Input 73	Range = Maximum of 1 Analog Elements	NA
AI_074	Analog Input 74	Range = Maximum of 1 Analog Elements	NA
AI_075	Analog Input 75	Range = Maximum of 1 Analog Elements	NA
AI_076	Analog Input 76	Range = Maximum of 1 Analog Elements	NA
AI_077	Analog Input 77	Range = Maximum of 1 Analog Elements	NA
AI_078	Analog Input 78	Range = Maximum of 1 Analog Elements	NA
AI_079	Analog Input 79	Range = Maximum of 1 Analog Elements	NA
AI_080	Analog Input 80	Range = Maximum of 1 Analog Elements	NA
AI_081	Analog Input 81	Range = Maximum of 1 Analog Elements	NA
AI_082	Analog Input 82	Range = Maximum of 1 Analog Elements	NA
AI_083	Analog Input 83	Range = Maximum of 1 Analog Elements	NA
AI_084	Analog Input 84	Range = Maximum of 1 Analog Elements	NA
AI_085	Analog Input 85	Range = Maximum of 1 Analog Elements	NA
AI_086	Analog Input 86	Range = Maximum of 1 Analog Elements	NA
AI_087	Analog Input 87	Range = Maximum of 1 Analog Elements	NA
AI_088	Analog Input 88	Range = Maximum of 1 Analog Elements	NA
AI_089	Analog Input 89	Range = Maximum of 1	NA

		Analog Elements	
AI_090	Analog Input 90	Range = Maximum of 1 Analog Elements	NA
AI_091	Analog Input 91	Range = Maximum of 1 Analog Elements	NA
AI_092	Analog Input 92	Range = Maximum of 1 Analog Elements	NA
AI_093	Analog Input 93	Range = Maximum of 1 Analog Elements	NA
AI_094	Analog Input 94	Range = Maximum of 1 Analog Elements	NA
AI_095	Analog Input 95	Range = Maximum of 1 Analog Elements	NA
AI_096	Analog Input 96	Range = Maximum of 1 Analog Elements	NA
AI_097	Analog Input 97	Range = Maximum of 1 Analog Elements	NA
AI_098	Analog Input 98	Range = Maximum of 1 Analog Elements	NA
AI_099	Analog Input 99	Range = Maximum of 1 Analog Elements	NA
AI_100	Analog Input 100	Range = Maximum of 1 Analog Elements	NA
AI_101	Analog Input 101	Range = Maximum of 1 Analog Elements	NA
AI_102	Analog Input 102	Range = Maximum of 1 Analog Elements	NA
AI_103	Analog Input 103	Range = Maximum of 1 Analog Elements	NA
AI_104	Analog Input 104	Range = Maximum of 1 Analog Elements	NA
AI_105	Analog Input 105	Range = Maximum of 1 Analog Elements	NA
AI_106	Analog Input 106	Range = Maximum of 1 Analog Elements	NA
AI_107	Analog Input 107	Range = Maximum of 1 Analog Elements	NA
AI_108	Analog Input 108	Range = Maximum of 1 Analog Elements	NA
AI_109	Analog Input 109	Range = Maximum of 1 Analog Elements	NA
AI_110	Analog Input 110	Range = Maximum of 1 Analog Elements	NA
AI_111	Analog Input 111	Range = Maximum of 1 Analog Elements	NA
AI_112	Analog Input 112	Range = Maximum of 1 Analog Elements	NA
AI_113	Analog Input 113	Range = Maximum of 1 Analog Elements	NA
AI_114	Analog Input 114	Range = Maximum of 1	NA

		Analog Elements	
AI_115	Analog Input 115	Range = Maximum of 1 Analog Elements	NA
AI_116	Analog Input 116	Range = Maximum of 1 Analog Elements	NA
AI_117	Analog Input 117	Range = Maximum of 1 Analog Elements	NA
AI_118	Analog Input 118	Range = Maximum of 1 Analog Elements	NA
AI_119	Analog Input 119	Range = Maximum of 1 Analog Elements	NA
AI_120	Analog Input 120	Range = Maximum of 1 Analog Elements	NA
AI_121	Analog Input 121	Range = Maximum of 1 Analog Elements	NA
AI_122	Analog Input 122	Range = Maximum of 1 Analog Elements	NA
AI_123	Analog Input 123	Range = Maximum of 1 Analog Elements	NA
AI_124	Analog Input 124	Range = Maximum of 1 Analog Elements	NA
AI_125	Analog Input 125	Range = Maximum of 1 Analog Elements	NA
AI_126	Analog Input 126	Range = Maximum of 1 Analog Elements	NA
AI_127	Analog Input 127	Range = Maximum of 1 Analog Elements	NA
AI_128	Analog Input 128	Range = Maximum of 1 Analog Elements	NA
AI_129	Analog Input 129	Range = Maximum of 1 Analog Elements	NA
AI_130	Analog Input 130	Range = Maximum of 1 Analog Elements	NA
AI_131	Analog Input 131	Range = Maximum of 1 Analog Elements	NA
AI_132	Analog Input 132	Range = Maximum of 1 Analog Elements	NA
AI_133	Analog Input 133	Range = Maximum of 1 Analog Elements	NA
AI_134	Analog Input 134	Range = Maximum of 1 Analog Elements	NA
AI_135	Analog Input 135	Range = Maximum of 1 Analog Elements	NA
AI_136	Analog Input 136	Range = Maximum of 1 Analog Elements	NA
AI_137	Analog Input 137	Range = Maximum of 1 Analog Elements	NA
AI_138	Analog Input 138	Range = Maximum of 1 Analog Elements	NA
AI_139	Analog Input 139	Range = Maximum of 1	NA

		Analog Elements	
AI_140	Analog Input 140	Range = Maximum of 1 Analog Elements	NA
AI_141	Analog Input 141	Range = Maximum of 1 Analog Elements	NA
AI_142	Analog Input 142	Range = Maximum of 1 Analog Elements	NA
AI_143	Analog Input 143	Range = Maximum of 1 Analog Elements	NA
AI_144	Analog Input 144	Range = Maximum of 1 Analog Elements	NA
AI_145	Analog Input 145	Range = Maximum of 1 Analog Elements	NA
AI_146	Analog Input 146	Range = Maximum of 1 Analog Elements	NA
AI_147	Analog Input 147	Range = Maximum of 1 Analog Elements	NA
AI_148	Analog Input 148	Range = Maximum of 1 Analog Elements	NA
AI_149	Analog Input 149	Range = Maximum of 1 Analog Elements	NA
AI_150	Analog Input 150	Range = Maximum of 1 Analog Elements	NA
AI_151	Analog Input 151	Range = Maximum of 1 Analog Elements	NA
AI_152	Analog Input 152	Range = Maximum of 1 Analog Elements	NA
AI_153	Analog Input 153	Range = Maximum of 1 Analog Elements	NA
AI_154	Analog Input 154	Range = Maximum of 1 Analog Elements	NA
AI_155	Analog Input 155	Range = Maximum of 1 Analog Elements	NA
AI_156	Analog Input 156	Range = Maximum of 1 Analog Elements	NA
AI_157	Analog Input 157	Range = Maximum of 1 Analog Elements	NA
AI_158	Analog Input 158	Range = Maximum of 1 Analog Elements	NA
AI_159	Analog Input 159	Range = Maximum of 1 Analog Elements	NA
AI_160	Analog Input 160	Range = Maximum of 1 Analog Elements	NA
AI_161	Analog Input 161	Range = Maximum of 1 Analog Elements	NA
AI_162	Analog Input 162	Range = Maximum of 1 Analog Elements	NA
AI_163	Analog Input 163	Range = Maximum of 1 Analog Elements	NA
AI_164	Analog Input 164	Range = Maximum of 1	NA

		Analog Elements	
AI_165	Analog Input 165	Range = Maximum of 1 Analog Elements	NA
AI_166	Analog Input 166	Range = Maximum of 1 Analog Elements	NA
AI_167	Analog Input 167	Range = Maximum of 1 Analog Elements	NA
AI_168	Analog Input 168	Range = Maximum of 1 Analog Elements	NA
AI_169	Analog Input 169	Range = Maximum of 1 Analog Elements	NA
AI_170	Analog Input 170	Range = Maximum of 1 Analog Elements	NA
AI_171	Analog Input 171	Range = Maximum of 1 Analog Elements	NA
AI_172	Analog Input 172	Range = Maximum of 1 Analog Elements	NA
AI_173	Analog Input 173	Range = Maximum of 1 Analog Elements	NA
AI_174	Analog Input 174	Range = Maximum of 1 Analog Elements	NA
AI_175	Analog Input 175	Range = Maximum of 1 Analog Elements	NA
AI_176	Analog Input 176	Range = Maximum of 1 Analog Elements	NA
AI_177	Analog Input 177	Range = Maximum of 1 Analog Elements	NA
AI_178	Analog Input 178	Range = Maximum of 1 Analog Elements	NA
AI_179	Analog Input 179	Range = Maximum of 1 Analog Elements	NA
AI_180	Analog Input 180	Range = Maximum of 1 Analog Elements	NA
AI_181	Analog Input 181	Range = Maximum of 1 Analog Elements	NA
AI_182	Analog Input 182	Range = Maximum of 1 Analog Elements	NA
AI_183	Analog Input 183	Range = Maximum of 1 Analog Elements	NA
AI_184	Analog Input 184	Range = Maximum of 1 Analog Elements	NA
AI_185	Analog Input 185	Range = Maximum of 1 Analog Elements	NA
AI_186	Analog Input 186	Range = Maximum of 1 Analog Elements	NA
AI_187	Analog Input 187	Range = Maximum of 1 Analog Elements	NA
AI_188	Analog Input 188	Range = Maximum of 1 Analog Elements	NA
AI_189	Analog Input 189	Range = Maximum of 1	NA

		Analog Elements	
AI_190	Analog Input 190	Range = Maximum of 1 Analog Elements	NA
AI_191	Analog Input 191	Range = Maximum of 1 Analog Elements	NA
AI_192	Analog Input 192	Range = Maximum of 1 Analog Elements	NA
AI_193	Analog Input 193	Range = Maximum of 1 Analog Elements	NA
AI_194	Analog Input 194	Range = Maximum of 1 Analog Elements	NA
AI_195	Analog Input 195	Range = Maximum of 1 Analog Elements	NA
AI_196	Analog Input 196	Range = Maximum of 1 Analog Elements	NA
AI_197	Analog Input 197	Range = Maximum of 1 Analog Elements	NA
AI_198	Analog Input 198	Range = Maximum of 1 Analog Elements	NA
AI_199	Analog Input 199	Range = Maximum of 1 Analog Elements	NA
AO_000	Analog Input 0	Range = Maximum of 1 Digital Elements	ACTGRP
AO_001	Analog Input 1	Range = Maximum of 1 Digital Elements	NA
AO_002	Analog Input 2	Range = Maximum of 1 Digital Elements	NA
AO_003	Analog Input 3	Range = Maximum of 1 Digital Elements	NA
AO_004	Analog Input 4	Range = Maximum of 1 Digital Elements	NA
AO_005	Analog Input 5	Range = Maximum of 1 Digital Elements	NA
AO_006	Analog Input 6	Range = Maximum of 1 Digital Elements	NA
AO_007	Analog Input 7	Range = Maximum of 1 Digital Elements	NA
CO_000	Counter 0	Range = Maximum of 1 Analog Elements	ACTGRP
CO_001	Counter 1	Range = Maximum of 1 Analog Elements	INTTR
CO_002	Counter 2	Range = Maximum of 1 Analog Elements	EXTTR
CO_003	Counter 3	Range = Maximum of 1 Analog Elements	NA
CO_004	Counter 4	Range = Maximum of 1 Analog Elements	NA
CO_005	Counter 5	Range = Maximum of 1 Analog Elements	NA
CO_006	Counter 6	Range = Maximum of 1	NA

		Analog Elements	
CO_007	Counter 7	Range = Maximum of 1 Analog Elements	NA
BO_033	Binary Output 33	Range = Maximum of 2 Digital Elements	NA
BO_034	Binary Output 34	Range = Maximum of 2 Digital Elements	NA
BO_035	Binary Output 35	Range = Maximum of 2 Digital Elements	NA
BO_036	Binary Output 36	Range = Maximum of 2 Digital Elements	NA
BO_037	Binary Output 37	Range = Maximum of 2 Digital Elements	NA
BO_038	Binary Output 38	Range = Maximum of 2 Digital Elements	NA
BO_039	Binary Output 39	Range = Maximum of 2 Digital Elements	NA
BO_040	Binary Output 40	Range = Maximum of 2 Digital Elements	NA
BO_041	Binary Output 41	Range = Maximum of 2 Digital Elements	NA
BO_042	Binary Output 42	Range = Maximum of 2 Digital Elements	NA
BO_043	Binary Output 43	Range = Maximum of 2 Digital Elements	NA
BO_044	Binary Output 44	Range = Maximum of 2 Digital Elements	NA
BO_045	Binary Output 45	Range = Maximum of 2 Digital Elements	NA
BO_046	Binary Output 46	Range = Maximum of 2 Digital Elements	NA
BO_047	Binary Output 47	Range = Maximum of 2 Digital Elements	NA
BO_048	Binary Output 48	Range = Maximum of 2 Digital Elements	NA
BO_049	Binary Output 49	Range = Maximum of 2 Digital Elements	NA
BO_050	Binary Output 50	Range = Maximum of 2 Digital Elements	NA
BO_051	Binary Output 51	Range = Maximum of 2 Digital Elements	NA
BO_052	Binary Output 52	Range = Maximum of 2 Digital Elements	NA
BO_053	Binary Output 53	Range = Maximum of 2 Digital Elements	NA
BO_054	Binary Output 54	Range = Maximum of 2 Digital Elements	NA
BO_055	Binary Output 55	Range = Maximum of 2 Digital Elements	NA
BO_056	Binary Output 56	Range = Maximum of 2	NA

		Digital Elements	
BO_057	Binary Output 57	Range = Maximum of 2 Digital Elements	NA
BO_058	Binary Output 58	Range = Maximum of 2 Digital Elements	NA
BO_059	Binary Output 59	Range = Maximum of 2 Digital Elements	NA
BO_060	Binary Output 60	Range = Maximum of 2 Digital Elements	NA
BO_061	Binary Output 61	Range = Maximum of 2 Digital Elements	NA
BO_062	Binary Output 62	Range = Maximum of 2 Digital Elements	NA
BO_063	Binary Output 63	Range = Maximum of 2 Digital Elements	NA
BO_064	Binary Output 64	Range = Maximum of 2 Digital Elements	NA
BO_065	Binary Output 65	Range = Maximum of 2 Digital Elements	NA
BO_066	Binary Output 66	Range = Maximum of 2 Digital Elements	NA
BO_067	Binary Output 67	Range = Maximum of 2 Digital Elements	NA
BO_068	Binary Output 68	Range = Maximum of 2 Digital Elements	NA
BO_069	Binary Output 69	Range = Maximum of 2 Digital Elements	NA
BO_070	Binary Output 70	Range = Maximum of 2 Digital Elements	NA
DNP Map 1			
			Top

DNP Map 2			
			Top
Setting	Description	Range	Value
BI_000	Binary Input 0	Range = Maximum of 1 Digital Elements	52A
BI_001	Binary Input 1	Range = Maximum of 1 Digital Elements	79RS
BI_002	Binary Input 2	Range = Maximum of 1 Digital Elements	79LO
BI_003	Binary Input 3	Range = Maximum of 1 Digital Elements	TLED18
BI_004	Binary Input 4	Range = Maximum of 1 Digital Elements	TLED17
BI_005	Binary Input 5	Range = Maximum of 1 Digital Elements	TLED16
BI_006	Binary Input 6	Range = Maximum of 1 Digital Elements	TLED15
BI_007	Binary Input 7	Range = Maximum of 1 Digital Elements	TLED14
BI_008	Binary Input 8	Range = Maximum of 1 Digital Elements	TLED13
BI_009	Binary Input 9	Range = Maximum of 1 Digital Elements	TLED12
BI_010	Binary Input 10	Range = Maximum of 1 Digital Elements	TLED11
BI_011	Binary Input 11	Range = Maximum of 1 Digital Elements	TLED26
BI_012	Binary Input 12	Range = Maximum of 1 Digital Elements	TLED25
BI_013	Binary Input 13	Range = Maximum of 1 Digital Elements	TLED24
BI_014	Binary Input 14	Range = Maximum of 1 Digital Elements	TLED23
BI_015	Binary Input 15	Range = Maximum of 1 Digital Elements	TLED22
BI_016	Binary Input 16	Range = Maximum of 1 Digital Elements	TLED21
BI_017	Binary Input 17	Range = Maximum of 1 Digital Elements	TLED20
BI_018	Binary Input 18	Range = Maximum of 1 Digital Elements	TLED19
BI_019	Binary Input 19	Range = Maximum of 1 Digital Elements	LDPF3
BI_020	Binary Input 20	Range = Maximum of 1 Digital Elements	RLYDIS
BI_021	Binary Input 21	Range = Maximum of 1 Digital Elements	STFAIL
		Range = Maximum of 1	

BI_022	Binary Input 22	Digital Elements	STWARN
BI_023	Binary Input 23	Range = Maximum of 1 Digital Elements	UNRDEV
BI_024	Binary Input 24	Range = Maximum of 1 Digital Elements	NA
BI_025	Binary Input 25	Range = Maximum of 1 Digital Elements	NA
BI_026	Binary Input 26	Range = Maximum of 1 Digital Elements	NA
BI_027	Binary Input 27	Range = Maximum of 1 Digital Elements	NA
BI_028	Binary Input 28	Range = Maximum of 1 Digital Elements	NA
BI_029	Binary Input 29	Range = Maximum of 1 Digital Elements	NA
BI_030	Binary Input 30	Range = Maximum of 1 Digital Elements	NA
BI_031	Binary Input 31	Range = Maximum of 1 Digital Elements	NA
BI_032	Binary Input 32	Range = Maximum of 1 Digital Elements	NA
BI_033	Binary Input 33	Range = Maximum of 1 Digital Elements	NA
BI_034	Binary Input 34	Range = Maximum of 1 Digital Elements	NA
BI_035	Binary Input 35	Range = Maximum of 1 Digital Elements	NA
BI_036	Binary Input 36	Range = Maximum of 1 Digital Elements	NA
BI_037	Binary Input 37	Range = Maximum of 1 Digital Elements	NA
BI_038	Binary Input 38	Range = Maximum of 1 Digital Elements	NA
BI_039	Binary Input 39	Range = Maximum of 1 Digital Elements	NA
BI_040	Binary Input 40	Range = Maximum of 1 Digital Elements	NA
BI_041	Binary Input 41	Range = Maximum of 1 Digital Elements	NA
BI_042	Binary Input 42	Range = Maximum of 1 Digital Elements	NA
BI_043	Binary Input 43	Range = Maximum of 1 Digital Elements	NA
BI_044	Binary Input 44	Range = Maximum of 1 Digital Elements	NA
BI_045	Binary Input 45	Range = Maximum of 1 Digital Elements	NA
BI_046	Binary Input 46	Range = Maximum of 1 Digital Elements	NA
BI_047	Binary Input 47	Range = Maximum of 1	NA

		Digital Elements	
BI_048	Binary Input 48	Range = Maximum of 1 Digital Elements	NA
BI_049	Binary Input 49	Range = Maximum of 1 Digital Elements	NA
BI_050	Binary Input 50	Range = Maximum of 1 Digital Elements	NA
BI_051	Binary Input 51	Range = Maximum of 1 Digital Elements	NA
BI_052	Binary Input 52	Range = Maximum of 1 Digital Elements	NA
BI_053	Binary Input 53	Range = Maximum of 1 Digital Elements	NA
BI_054	Binary Input 54	Range = Maximum of 1 Digital Elements	NA
BI_055	Binary Input 55	Range = Maximum of 1 Digital Elements	NA
BI_056	Binary Input 56	Range = Maximum of 1 Digital Elements	NA
BI_057	Binary Input 57	Range = Maximum of 1 Digital Elements	NA
BI_058	Binary Input 58	Range = Maximum of 1 Digital Elements	NA
BI_059	Binary Input 59	Range = Maximum of 1 Digital Elements	NA
BI_060	Binary Input 60	Range = Maximum of 1 Digital Elements	NA
BI_061	Binary Input 61	Range = Maximum of 1 Digital Elements	NA
BI_062	Binary Input 62	Range = Maximum of 1 Digital Elements	NA
BI_063	Binary Input 63	Range = Maximum of 1 Digital Elements	NA
BI_064	Binary Input 64	Range = Maximum of 1 Digital Elements	NA
BI_065	Binary Input 65	Range = Maximum of 1 Digital Elements	NA
BI_066	Binary Input 66	Range = Maximum of 1 Digital Elements	NA
BI_067	Binary Input 67	Range = Maximum of 1 Digital Elements	NA
BI_068	Binary Input 68	Range = Maximum of 1 Digital Elements	NA
BI_069	Binary Input 69	Range = Maximum of 1 Digital Elements	NA
BI_070	Binary Input 70	Range = Maximum of 1 Digital Elements	NA
BI_071	Binary Input 71	Range = Maximum of 1 Digital Elements	NA
BI_072	Binary Input 72	Range = Maximum of 1	NA

		Digital Elements	
BI_073	Binary Input 73	Range = Maximum of 1 Digital Elements	NA
BI_074	Binary Input 74	Range = Maximum of 1 Digital Elements	NA
BI_075	Binary Input 75	Range = Maximum of 1 Digital Elements	NA
BI_076	Binary Input 76	Range = Maximum of 1 Digital Elements	NA
BI_077	Binary Input 77	Range = Maximum of 1 Digital Elements	NA
BI_078	Binary Input 78	Range = Maximum of 1 Digital Elements	NA
BI_079	Binary Input 79	Range = Maximum of 1 Digital Elements	NA
BI_080	Binary Input 80	Range = Maximum of 1 Digital Elements	NA
BI_081	Binary Input 81	Range = Maximum of 1 Digital Elements	NA
BI_082	Binary Input 82	Range = Maximum of 1 Digital Elements	NA
BI_083	Binary Input 83	Range = Maximum of 1 Digital Elements	NA
BI_084	Binary Input 84	Range = Maximum of 1 Digital Elements	NA
BI_085	Binary Input 85	Range = Maximum of 1 Digital Elements	NA
BI_086	Binary Input 86	Range = Maximum of 1 Digital Elements	NA
BI_087	Binary Input 87	Range = Maximum of 1 Digital Elements	NA
BI_088	Binary Input 88	Range = Maximum of 1 Digital Elements	NA
BI_089	Binary Input 89	Range = Maximum of 1 Digital Elements	NA
BI_090	Binary Input 90	Range = Maximum of 1 Digital Elements	NA
BI_091	Binary Input 91	Range = Maximum of 1 Digital Elements	NA
BI_092	Binary Input 92	Range = Maximum of 1 Digital Elements	NA
BI_093	Binary Input 93	Range = Maximum of 1 Digital Elements	NA
BI_094	Binary Input 94	Range = Maximum of 1 Digital Elements	NA
BI_095	Binary Input 95	Range = Maximum of 1 Digital Elements	NA
BI_096	Binary Input 96	Range = Maximum of 1 Digital Elements	NA
BI_097	Binary Input 97	Range = Maximum of 1	NA

		Digital Elements	
BI_098	Binary Input 98	Range = Maximum of 1 Digital Elements	NA
BI_099	Binary Input 99	Range = Maximum of 1 Digital Elements	NA
BI_100	Binary Input 100	Range = Maximum of 1 Digital Elements	NA
BI_101	Binary Input 101	Range = Maximum of 1 Digital Elements	NA
BI_102	Binary Input 102	Range = Maximum of 1 Digital Elements	NA
BI_103	Binary Input 103	Range = Maximum of 1 Digital Elements	NA
BI_104	Binary Input 104	Range = Maximum of 1 Digital Elements	NA
BI_105	Binary Input 105	Range = Maximum of 1 Digital Elements	NA
BI_106	Binary Input 106	Range = Maximum of 1 Digital Elements	NA
BI_107	Binary Input 107	Range = Maximum of 1 Digital Elements	NA
BI_108	Binary Input 108	Range = Maximum of 1 Digital Elements	NA
BI_109	Binary Input 109	Range = Maximum of 1 Digital Elements	NA
BI_110	Binary Input 110	Range = Maximum of 1 Digital Elements	NA
BI_111	Binary Input 111	Range = Maximum of 1 Digital Elements	NA
BI_112	Binary Input 112	Range = Maximum of 1 Digital Elements	NA
BI_113	Binary Input 113	Range = Maximum of 1 Digital Elements	NA
BI_114	Binary Input 114	Range = Maximum of 1 Digital Elements	NA
BI_115	Binary Input 115	Range = Maximum of 1 Digital Elements	NA
BI_116	Binary Input 116	Range = Maximum of 1 Digital Elements	NA
BI_117	Binary Input 117	Range = Maximum of 1 Digital Elements	NA
BI_118	Binary Input 118	Range = Maximum of 1 Digital Elements	NA
BI_119	Binary Input 119	Range = Maximum of 1 Digital Elements	NA
BI_120	Binary Input 120	Range = Maximum of 1 Digital Elements	NA
BI_121	Binary Input 121	Range = Maximum of 1 Digital Elements	NA
BI_122	Binary Input 122	Range = Maximum of 1	NA

		Digital Elements	
BI_123	Binary Input 123	Range = Maximum of 1 Digital Elements	NA
BI_124	Binary Input 124	Range = Maximum of 1 Digital Elements	NA
BI_125	Binary Input 125	Range = Maximum of 1 Digital Elements	NA
BI_126	Binary Input 126	Range = Maximum of 1 Digital Elements	NA
BI_127	Binary Input 127	Range = Maximum of 1 Digital Elements	NA
BI_128	Binary Input 128	Range = Maximum of 1 Digital Elements	NA
BI_129	Binary Input 129	Range = Maximum of 1 Digital Elements	NA
BI_130	Binary Input 130	Range = Maximum of 1 Digital Elements	NA
BI_131	Binary Input 131	Range = Maximum of 1 Digital Elements	NA
BI_132	Binary Input 132	Range = Maximum of 1 Digital Elements	NA
BI_133	Binary Input 133	Range = Maximum of 1 Digital Elements	NA
BI_134	Binary Input 134	Range = Maximum of 1 Digital Elements	NA
BI_135	Binary Input 135	Range = Maximum of 1 Digital Elements	NA
BI_136	Binary Input 136	Range = Maximum of 1 Digital Elements	NA
BI_137	Binary Input 137	Range = Maximum of 1 Digital Elements	NA
BI_138	Binary Input 138	Range = Maximum of 1 Digital Elements	NA
BI_139	Binary Input 139	Range = Maximum of 1 Digital Elements	NA
BI_140	Binary Input 140	Range = Maximum of 1 Digital Elements	NA
BI_141	Binary Input 141	Range = Maximum of 1 Digital Elements	NA
BI_142	Binary Input 142	Range = Maximum of 1 Digital Elements	NA
BI_143	Binary Input 143	Range = Maximum of 1 Digital Elements	NA
BI_144	Binary Input 144	Range = Maximum of 1 Digital Elements	NA
BI_145	Binary Input 145	Range = Maximum of 1 Digital Elements	NA
BI_146	Binary Input 146	Range = Maximum of 1 Digital Elements	NA
BI_147	Binary Input 147	Range = Maximum of 1	NA

		Digital Elements	
BI_148	Binary Input 148	Range = Maximum of 1 Digital Elements	NA
BI_149	Binary Input 149	Range = Maximum of 1 Digital Elements	NA
BI_150	Binary Input 150	Range = Maximum of 1 Digital Elements	NA
BI_151	Binary Input 151	Range = Maximum of 1 Digital Elements	NA
BI_152	Binary Input 152	Range = Maximum of 1 Digital Elements	NA
BI_153	Binary Input 153	Range = Maximum of 1 Digital Elements	NA
BI_154	Binary Input 154	Range = Maximum of 1 Digital Elements	NA
BI_155	Binary Input 155	Range = Maximum of 1 Digital Elements	NA
BI_156	Binary Input 156	Range = Maximum of 1 Digital Elements	NA
BI_157	Binary Input 157	Range = Maximum of 1 Digital Elements	NA
BI_158	Binary Input 158	Range = Maximum of 1 Digital Elements	NA
BI_159	Binary Input 159	Range = Maximum of 1 Digital Elements	NA
BI_160	Binary Input 160	Range = Maximum of 1 Digital Elements	NA
BI_161	Binary Input 161	Range = Maximum of 1 Digital Elements	NA
BI_162	Binary Input 162	Range = Maximum of 1 Digital Elements	NA
BI_163	Binary Input 163	Range = Maximum of 1 Digital Elements	NA
BI_164	Binary Input 164	Range = Maximum of 1 Digital Elements	NA
BI_165	Binary Input 165	Range = Maximum of 1 Digital Elements	NA
BI_166	Binary Input 166	Range = Maximum of 1 Digital Elements	NA
BI_167	Binary Input 167	Range = Maximum of 1 Digital Elements	NA
BI_168	Binary Input 168	Range = Maximum of 1 Digital Elements	NA
BI_169	Binary Input 169	Range = Maximum of 1 Digital Elements	NA
BI_170	Binary Input 170	Range = Maximum of 1 Digital Elements	NA
BI_171	Binary Input 171	Range = Maximum of 1 Digital Elements	NA
BI_172	Binary Input 172	Range = Maximum of 1	NA

		Digital Elements	
BI_173	Binary Input 173	Range = Maximum of 1 Digital Elements	NA
BI_174	Binary Input 174	Range = Maximum of 1 Digital Elements	NA
BI_175	Binary Input 175	Range = Maximum of 1 Digital Elements	NA
BI_176	Binary Input 176	Range = Maximum of 1 Digital Elements	NA
BI_177	Binary Input 177	Range = Maximum of 1 Digital Elements	NA
BI_178	Binary Input 178	Range = Maximum of 1 Digital Elements	NA
BI_179	Binary Input 179	Range = Maximum of 1 Digital Elements	NA
BI_180	Binary Input 180	Range = Maximum of 1 Digital Elements	NA
BI_181	Binary Input 181	Range = Maximum of 1 Digital Elements	NA
BI_182	Binary Input 182	Range = Maximum of 1 Digital Elements	NA
BI_183	Binary Input 183	Range = Maximum of 1 Digital Elements	NA
BI_184	Binary Input 184	Range = Maximum of 1 Digital Elements	NA
BI_185	Binary Input 185	Range = Maximum of 1 Digital Elements	NA
BI_186	Binary Input 186	Range = Maximum of 1 Digital Elements	NA
BI_187	Binary Input 187	Range = Maximum of 1 Digital Elements	NA
BI_188	Binary Input 188	Range = Maximum of 1 Digital Elements	NA
BI_189	Binary Input 189	Range = Maximum of 1 Digital Elements	NA
BI_190	Binary Input 190	Range = Maximum of 1 Digital Elements	NA
BI_191	Binary Input 191	Range = Maximum of 1 Digital Elements	NA
BI_192	Binary Input 192	Range = Maximum of 1 Digital Elements	NA
BI_193	Binary Input 193	Range = Maximum of 1 Digital Elements	NA
BI_194	Binary Input 194	Range = Maximum of 1 Digital Elements	NA
BI_195	Binary Input 195	Range = Maximum of 1 Digital Elements	NA
BI_196	Binary Input 196	Range = Maximum of 1 Digital Elements	NA
BI_197	Binary Input 197	Range = Maximum of 1	NA

		Digital Elements	
BI_198	Binary Input 198	Range = Maximum of 1 Digital Elements	NA
BI_199	Binary Input 199	Range = Maximum of 1 Digital Elements	NA
BO_000	Binary Output 0	Range = Maximum of 2 Digital Elements	RB1
BO_001	Binary Output 1	Range = Maximum of 2 Digital Elements	RB2
BO_002	Binary Output 2	Range = Maximum of 2 Digital Elements	RB3
BO_003	Binary Output 3	Range = Maximum of 2 Digital Elements	RB4
BO_004	Binary Output 4	Range = Maximum of 2 Digital Elements	RB5
BO_005	Binary Output 5	Range = Maximum of 2 Digital Elements	RB6
BO_006	Binary Output 6	Range = Maximum of 2 Digital Elements	RB7
BO_007	Binary Output 7	Range = Maximum of 2 Digital Elements	RB8
BO_008	Binary Output 8	Range = Maximum of 2 Digital Elements	RB9
BO_009	Binary Output 9	Range = Maximum of 2 Digital Elements	RB10
BO_010	Binary Output 10	Range = Maximum of 2 Digital Elements	RB11
BO_011	Binary Output 11	Range = Maximum of 2 Digital Elements	RB12
BO_012	Binary Output 12	Range = Maximum of 2 Digital Elements	RB13
BO_013	Binary Output 13	Range = Maximum of 2 Digital Elements	RB14
BO_014	Binary Output 14	Range = Maximum of 2 Digital Elements	RB15
BO_015	Binary Output 15	Range = Maximum of 2 Digital Elements	RB16
BO_016	Binary Output 16	Range = Maximum of 2 Digital Elements	OC
BO_017	Binary Output 17	Range = Maximum of 2 Digital Elements	CC
BO_018	Binary Output 18	Range = Maximum of 2 Digital Elements	DRST_DEM
BO_019	Binary Output 19	Range = Maximum of 2 Digital Elements	DRST_PDM
BO_020	Binary Output 20	Range = Maximum of 2 Digital Elements	DRST_ENE
BO_021	Binary Output 21	Range = Maximum of 2 Digital Elements	DRST_BK
BO_022	Binary Output 22	Range = Maximum of 2	DRST_TAR

		Digital Elements	
BO_023	Binary Output 23	Range = Maximum of 2 Digital Elements	NXTEVE
BO_024	Binary Output 24	Range = Maximum of 2 Digital Elements	RB1:RB2
BO_025	Binary Output 25	Range = Maximum of 2 Digital Elements	RB3:RB4
BO_026	Binary Output 26	Range = Maximum of 2 Digital Elements	RB5:RB6
BO_027	Binary Output 27	Range = Maximum of 2 Digital Elements	RB7:RB8
BO_028	Binary Output 28	Range = Maximum of 2 Digital Elements	RB9:RB10
BO_029	Binary Output 29	Range = Maximum of 2 Digital Elements	RB11:RB12
BO_030	Binary Output 30	Range = Maximum of 2 Digital Elements	RB13:RB14
BO_031	Binary Output 31	Range = Maximum of 2 Digital Elements	RB15:RB16
BO_032	Binary Output 32	Range = Maximum of 2 Digital Elements	OC:CC
AI_000	Analog Input 0	Range = Maximum of 1 Analog Elements	FTYPE
AI_001	Analog Input 1	Range = Maximum of 1 Analog Elements	FLOC
AI_002	Analog Input 2	Range = Maximum of 1 Analog Elements	FI
AI_003	Analog Input 3	Range = Maximum of 1 Analog Elements	NA
AI_004	Analog Input 4	Range = Maximum of 1 Analog Elements	NA
AI_005	Analog Input 5	Range = Maximum of 1 Analog Elements	NA
AI_006	Analog Input 6	Range = Maximum of 1 Analog Elements	NA
AI_007	Analog Input 7	Range = Maximum of 1 Analog Elements	NA
AI_008	Analog Input 8	Range = Maximum of 1 Analog Elements	NA
AI_009	Analog Input 9	Range = Maximum of 1 Analog Elements	NA
AI_010	Analog Input 10	Range = Maximum of 1 Analog Elements	NA
AI_011	Analog Input 11	Range = Maximum of 1 Analog Elements	NA
AI_012	Analog Input 12	Range = Maximum of 1 Analog Elements	NA
AI_013	Analog Input 13	Range = Maximum of 1 Analog Elements	NA
AI_014	Analog Input 14	Range = Maximum of 1	NA

		Analog Elements	
AI_015	Analog Input 15	Range = Maximum of 1 Analog Elements	NA
AI_016	Analog Input 16	Range = Maximum of 1 Analog Elements	NA
AI_017	Analog Input 17	Range = Maximum of 1 Analog Elements	NA
AI_018	Analog Input 18	Range = Maximum of 1 Analog Elements	NA
AI_019	Analog Input 19	Range = Maximum of 1 Analog Elements	NA
AI_020	Analog Input 20	Range = Maximum of 1 Analog Elements	NA
AI_021	Analog Input 21	Range = Maximum of 1 Analog Elements	NA
AI_022	Analog Input 22	Range = Maximum of 1 Analog Elements	NA
AI_023	Analog Input 23	Range = Maximum of 1 Analog Elements	NA
AI_024	Analog Input 24	Range = Maximum of 1 Analog Elements	NA
AI_025	Analog Input 25	Range = Maximum of 1 Analog Elements	NA
AI_026	Analog Input 26	Range = Maximum of 1 Analog Elements	NA
AI_027	Analog Input 27	Range = Maximum of 1 Analog Elements	NA
AI_028	Analog Input 28	Range = Maximum of 1 Analog Elements	NA
AI_029	Analog Input 29	Range = Maximum of 1 Analog Elements	NA
AI_030	Analog Input 30	Range = Maximum of 1 Analog Elements	NA
AI_031	Analog Input 31	Range = Maximum of 1 Analog Elements	NA
AI_032	Analog Input 32	Range = Maximum of 1 Analog Elements	NA
AI_033	Analog Input 33	Range = Maximum of 1 Analog Elements	NA
AI_034	Analog Input 34	Range = Maximum of 1 Analog Elements	NA
AI_035	Analog Input 35	Range = Maximum of 1 Analog Elements	NA
AI_036	Analog Input 36	Range = Maximum of 1 Analog Elements	NA
AI_037	Analog Input 37	Range = Maximum of 1 Analog Elements	NA
AI_038	Analog Input 38	Range = Maximum of 1 Analog Elements	NA
AI_039	Analog Input 39	Range = Maximum of 1	NA

		Analog Elements	
AI_040	Analog Input 40	Range = Maximum of 1 Analog Elements	NA
AI_041	Analog Input 41	Range = Maximum of 1 Analog Elements	NA
AI_042	Analog Input 42	Range = Maximum of 1 Analog Elements	NA
AI_043	Analog Input 43	Range = Maximum of 1 Analog Elements	NA
AI_044	Analog Input 44	Range = Maximum of 1 Analog Elements	NA
AI_045	Analog Input 45	Range = Maximum of 1 Analog Elements	NA
AI_046	Analog Input 46	Range = Maximum of 1 Analog Elements	NA
AI_047	Analog Input 47	Range = Maximum of 1 Analog Elements	NA
AI_048	Analog Input 48	Range = Maximum of 1 Analog Elements	NA
AI_049	Analog Input 49	Range = Maximum of 1 Analog Elements	NA
AI_050	Analog Input 50	Range = Maximum of 1 Analog Elements	NA
AI_051	Analog Input 51	Range = Maximum of 1 Analog Elements	NA
AI_052	Analog Input 52	Range = Maximum of 1 Analog Elements	NA
AI_053	Analog Input 53	Range = Maximum of 1 Analog Elements	NA
AI_054	Analog Input 54	Range = Maximum of 1 Analog Elements	NA
AI_055	Analog Input 55	Range = Maximum of 1 Analog Elements	NA
AI_056	Analog Input 56	Range = Maximum of 1 Analog Elements	NA
AI_057	Analog Input 57	Range = Maximum of 1 Analog Elements	NA
AI_058	Analog Input 58	Range = Maximum of 1 Analog Elements	NA
AI_059	Analog Input 59	Range = Maximum of 1 Analog Elements	NA
AI_060	Analog Input 60	Range = Maximum of 1 Analog Elements	NA
AI_061	Analog Input 61	Range = Maximum of 1 Analog Elements	NA
AI_062	Analog Input 62	Range = Maximum of 1 Analog Elements	NA
AI_063	Analog Input 63	Range = Maximum of 1 Analog Elements	NA
AI_064	Analog Input 64	Range = Maximum of 1	NA

		Analog Elements	
AI_065	Analog Input 65	Range = Maximum of 1 Analog Elements	NA
AI_066	Analog Input 66	Range = Maximum of 1 Analog Elements	NA
AI_067	Analog Input 67	Range = Maximum of 1 Analog Elements	NA
AI_068	Analog Input 68	Range = Maximum of 1 Analog Elements	NA
AI_069	Analog Input 69	Range = Maximum of 1 Analog Elements	NA
AI_070	Analog Input 70	Range = Maximum of 1 Analog Elements	NA
AI_071	Analog Input 71	Range = Maximum of 1 Analog Elements	NA
AI_072	Analog Input 72	Range = Maximum of 1 Analog Elements	NA
AI_073	Analog Input 73	Range = Maximum of 1 Analog Elements	NA
AI_074	Analog Input 74	Range = Maximum of 1 Analog Elements	NA
AI_075	Analog Input 75	Range = Maximum of 1 Analog Elements	NA
AI_076	Analog Input 76	Range = Maximum of 1 Analog Elements	NA
AI_077	Analog Input 77	Range = Maximum of 1 Analog Elements	NA
AI_078	Analog Input 78	Range = Maximum of 1 Analog Elements	NA
AI_079	Analog Input 79	Range = Maximum of 1 Analog Elements	NA
AI_080	Analog Input 80	Range = Maximum of 1 Analog Elements	NA
AI_081	Analog Input 81	Range = Maximum of 1 Analog Elements	NA
AI_082	Analog Input 82	Range = Maximum of 1 Analog Elements	NA
AI_083	Analog Input 83	Range = Maximum of 1 Analog Elements	NA
AI_084	Analog Input 84	Range = Maximum of 1 Analog Elements	NA
AI_085	Analog Input 85	Range = Maximum of 1 Analog Elements	NA
AI_086	Analog Input 86	Range = Maximum of 1 Analog Elements	NA
AI_087	Analog Input 87	Range = Maximum of 1 Analog Elements	NA
AI_088	Analog Input 88	Range = Maximum of 1 Analog Elements	NA
AI_089	Analog Input 89	Range = Maximum of 1	NA

		Analog Elements	
AI_090	Analog Input 90	Range = Maximum of 1 Analog Elements	NA
AI_091	Analog Input 91	Range = Maximum of 1 Analog Elements	NA
AI_092	Analog Input 92	Range = Maximum of 1 Analog Elements	NA
AI_093	Analog Input 93	Range = Maximum of 1 Analog Elements	NA
AI_094	Analog Input 94	Range = Maximum of 1 Analog Elements	NA
AI_095	Analog Input 95	Range = Maximum of 1 Analog Elements	NA
AI_096	Analog Input 96	Range = Maximum of 1 Analog Elements	NA
AI_097	Analog Input 97	Range = Maximum of 1 Analog Elements	NA
AI_098	Analog Input 98	Range = Maximum of 1 Analog Elements	NA
AI_099	Analog Input 99	Range = Maximum of 1 Analog Elements	NA
AI_100	Analog Input 100	Range = Maximum of 1 Analog Elements	NA
AI_101	Analog Input 101	Range = Maximum of 1 Analog Elements	NA
AI_102	Analog Input 102	Range = Maximum of 1 Analog Elements	NA
AI_103	Analog Input 103	Range = Maximum of 1 Analog Elements	NA
AI_104	Analog Input 104	Range = Maximum of 1 Analog Elements	NA
AI_105	Analog Input 105	Range = Maximum of 1 Analog Elements	NA
AI_106	Analog Input 106	Range = Maximum of 1 Analog Elements	NA
AI_107	Analog Input 107	Range = Maximum of 1 Analog Elements	NA
AI_108	Analog Input 108	Range = Maximum of 1 Analog Elements	NA
AI_109	Analog Input 109	Range = Maximum of 1 Analog Elements	NA
AI_110	Analog Input 110	Range = Maximum of 1 Analog Elements	NA
AI_111	Analog Input 111	Range = Maximum of 1 Analog Elements	NA
AI_112	Analog Input 112	Range = Maximum of 1 Analog Elements	NA
AI_113	Analog Input 113	Range = Maximum of 1 Analog Elements	NA
AI_114	Analog Input 114	Range = Maximum of 1	NA

		Analog Elements	
AI_115	Analog Input 115	Range = Maximum of 1 Analog Elements	NA
AI_116	Analog Input 116	Range = Maximum of 1 Analog Elements	NA
AI_117	Analog Input 117	Range = Maximum of 1 Analog Elements	NA
AI_118	Analog Input 118	Range = Maximum of 1 Analog Elements	NA
AI_119	Analog Input 119	Range = Maximum of 1 Analog Elements	NA
AI_120	Analog Input 120	Range = Maximum of 1 Analog Elements	NA
AI_121	Analog Input 121	Range = Maximum of 1 Analog Elements	NA
AI_122	Analog Input 122	Range = Maximum of 1 Analog Elements	NA
AI_123	Analog Input 123	Range = Maximum of 1 Analog Elements	NA
AI_124	Analog Input 124	Range = Maximum of 1 Analog Elements	NA
AI_125	Analog Input 125	Range = Maximum of 1 Analog Elements	NA
AI_126	Analog Input 126	Range = Maximum of 1 Analog Elements	NA
AI_127	Analog Input 127	Range = Maximum of 1 Analog Elements	NA
AI_128	Analog Input 128	Range = Maximum of 1 Analog Elements	NA
AI_129	Analog Input 129	Range = Maximum of 1 Analog Elements	NA
AI_130	Analog Input 130	Range = Maximum of 1 Analog Elements	NA
AI_131	Analog Input 131	Range = Maximum of 1 Analog Elements	NA
AI_132	Analog Input 132	Range = Maximum of 1 Analog Elements	NA
AI_133	Analog Input 133	Range = Maximum of 1 Analog Elements	NA
AI_134	Analog Input 134	Range = Maximum of 1 Analog Elements	NA
AI_135	Analog Input 135	Range = Maximum of 1 Analog Elements	NA
AI_136	Analog Input 136	Range = Maximum of 1 Analog Elements	NA
AI_137	Analog Input 137	Range = Maximum of 1 Analog Elements	NA
AI_138	Analog Input 138	Range = Maximum of 1 Analog Elements	NA
AI_139	Analog Input 139	Range = Maximum of 1	NA

		Analog Elements	
AI_140	Analog Input 140	Range = Maximum of 1 Analog Elements	NA
AI_141	Analog Input 141	Range = Maximum of 1 Analog Elements	NA
AI_142	Analog Input 142	Range = Maximum of 1 Analog Elements	NA
AI_143	Analog Input 143	Range = Maximum of 1 Analog Elements	NA
AI_144	Analog Input 144	Range = Maximum of 1 Analog Elements	NA
AI_145	Analog Input 145	Range = Maximum of 1 Analog Elements	NA
AI_146	Analog Input 146	Range = Maximum of 1 Analog Elements	NA
AI_147	Analog Input 147	Range = Maximum of 1 Analog Elements	NA
AI_148	Analog Input 148	Range = Maximum of 1 Analog Elements	NA
AI_149	Analog Input 149	Range = Maximum of 1 Analog Elements	NA
AI_150	Analog Input 150	Range = Maximum of 1 Analog Elements	NA
AI_151	Analog Input 151	Range = Maximum of 1 Analog Elements	NA
AI_152	Analog Input 152	Range = Maximum of 1 Analog Elements	NA
AI_153	Analog Input 153	Range = Maximum of 1 Analog Elements	NA
AI_154	Analog Input 154	Range = Maximum of 1 Analog Elements	NA
AI_155	Analog Input 155	Range = Maximum of 1 Analog Elements	NA
AI_156	Analog Input 156	Range = Maximum of 1 Analog Elements	NA
AI_157	Analog Input 157	Range = Maximum of 1 Analog Elements	NA
AI_158	Analog Input 158	Range = Maximum of 1 Analog Elements	NA
AI_159	Analog Input 159	Range = Maximum of 1 Analog Elements	NA
AI_160	Analog Input 160	Range = Maximum of 1 Analog Elements	NA
AI_161	Analog Input 161	Range = Maximum of 1 Analog Elements	NA
AI_162	Analog Input 162	Range = Maximum of 1 Analog Elements	NA
AI_163	Analog Input 163	Range = Maximum of 1 Analog Elements	NA
AI_164	Analog Input 164	Range = Maximum of 1	NA

		Analog Elements	
AI_165	Analog Input 165	Range = Maximum of 1 Analog Elements	NA
AI_166	Analog Input 166	Range = Maximum of 1 Analog Elements	NA
AI_167	Analog Input 167	Range = Maximum of 1 Analog Elements	NA
AI_168	Analog Input 168	Range = Maximum of 1 Analog Elements	NA
AI_169	Analog Input 169	Range = Maximum of 1 Analog Elements	NA
AI_170	Analog Input 170	Range = Maximum of 1 Analog Elements	NA
AI_171	Analog Input 171	Range = Maximum of 1 Analog Elements	NA
AI_172	Analog Input 172	Range = Maximum of 1 Analog Elements	NA
AI_173	Analog Input 173	Range = Maximum of 1 Analog Elements	NA
AI_174	Analog Input 174	Range = Maximum of 1 Analog Elements	NA
AI_175	Analog Input 175	Range = Maximum of 1 Analog Elements	NA
AI_176	Analog Input 176	Range = Maximum of 1 Analog Elements	NA
AI_177	Analog Input 177	Range = Maximum of 1 Analog Elements	NA
AI_178	Analog Input 178	Range = Maximum of 1 Analog Elements	NA
AI_179	Analog Input 179	Range = Maximum of 1 Analog Elements	NA
AI_180	Analog Input 180	Range = Maximum of 1 Analog Elements	NA
AI_181	Analog Input 181	Range = Maximum of 1 Analog Elements	NA
AI_182	Analog Input 182	Range = Maximum of 1 Analog Elements	NA
AI_183	Analog Input 183	Range = Maximum of 1 Analog Elements	NA
AI_184	Analog Input 184	Range = Maximum of 1 Analog Elements	NA
AI_185	Analog Input 185	Range = Maximum of 1 Analog Elements	NA
AI_186	Analog Input 186	Range = Maximum of 1 Analog Elements	NA
AI_187	Analog Input 187	Range = Maximum of 1 Analog Elements	NA
AI_188	Analog Input 188	Range = Maximum of 1 Analog Elements	NA
AI_189	Analog Input 189	Range = Maximum of 1	NA

		Analog Elements	
AI_190	Analog Input 190	Range = Maximum of 1 Analog Elements	NA
AI_191	Analog Input 191	Range = Maximum of 1 Analog Elements	NA
AI_192	Analog Input 192	Range = Maximum of 1 Analog Elements	NA
AI_193	Analog Input 193	Range = Maximum of 1 Analog Elements	NA
AI_194	Analog Input 194	Range = Maximum of 1 Analog Elements	NA
AI_195	Analog Input 195	Range = Maximum of 1 Analog Elements	NA
AI_196	Analog Input 196	Range = Maximum of 1 Analog Elements	NA
AI_197	Analog Input 197	Range = Maximum of 1 Analog Elements	NA
AI_198	Analog Input 198	Range = Maximum of 1 Analog Elements	NA
AI_199	Analog Input 199	Range = Maximum of 1 Analog Elements	NA
AO_000	Analog Input 0	Range = Maximum of 1 Digital Elements	ACTGRP
AO_001	Analog Input 1	Range = Maximum of 1 Digital Elements	NA
AO_002	Analog Input 2	Range = Maximum of 1 Digital Elements	NA
AO_003	Analog Input 3	Range = Maximum of 1 Digital Elements	NA
AO_004	Analog Input 4	Range = Maximum of 1 Digital Elements	NA
AO_005	Analog Input 5	Range = Maximum of 1 Digital Elements	NA
AO_006	Analog Input 6	Range = Maximum of 1 Digital Elements	NA
AO_007	Analog Input 7	Range = Maximum of 1 Digital Elements	NA
CO_000	Counter 0	Range = Maximum of 1 Analog Elements	ACTGRP
CO_001	Counter 1	Range = Maximum of 1 Analog Elements	INTTR
CO_002	Counter 2	Range = Maximum of 1 Analog Elements	EXTTR
CO_003	Counter 3	Range = Maximum of 1 Analog Elements	NA
CO_004	Counter 4	Range = Maximum of 1 Analog Elements	NA
CO_005	Counter 5	Range = Maximum of 1 Analog Elements	NA
CO_006	Counter 6	Range = Maximum of 1	NA

		Analog Elements	
CO_007	Counter 7	Range = Maximum of 1 Analog Elements	NA
BO_033	Binary Output 33	Range = Maximum of 2 Digital Elements	NA
BO_034	Binary Output 34	Range = Maximum of 2 Digital Elements	NA
BO_035	Binary Output 35	Range = Maximum of 2 Digital Elements	NA
BO_036	Binary Output 36	Range = Maximum of 2 Digital Elements	NA
BO_037	Binary Output 37	Range = Maximum of 2 Digital Elements	NA
BO_038	Binary Output 38	Range = Maximum of 2 Digital Elements	NA
BO_039	Binary Output 39	Range = Maximum of 2 Digital Elements	NA
BO_040	Binary Output 40	Range = Maximum of 2 Digital Elements	NA
BO_041	Binary Output 41	Range = Maximum of 2 Digital Elements	NA
BO_042	Binary Output 42	Range = Maximum of 2 Digital Elements	NA
BO_043	Binary Output 43	Range = Maximum of 2 Digital Elements	NA
BO_044	Binary Output 44	Range = Maximum of 2 Digital Elements	NA
BO_045	Binary Output 45	Range = Maximum of 2 Digital Elements	NA
BO_046	Binary Output 46	Range = Maximum of 2 Digital Elements	NA
BO_047	Binary Output 47	Range = Maximum of 2 Digital Elements	NA
BO_048	Binary Output 48	Range = Maximum of 2 Digital Elements	NA
BO_049	Binary Output 49	Range = Maximum of 2 Digital Elements	NA
BO_050	Binary Output 50	Range = Maximum of 2 Digital Elements	NA
BO_051	Binary Output 51	Range = Maximum of 2 Digital Elements	NA
BO_052	Binary Output 52	Range = Maximum of 2 Digital Elements	NA
BO_053	Binary Output 53	Range = Maximum of 2 Digital Elements	NA
BO_054	Binary Output 54	Range = Maximum of 2 Digital Elements	NA
BO_055	Binary Output 55	Range = Maximum of 2 Digital Elements	NA
BO_056	Binary Output 56	Range = Maximum of 2	NA

		Digital Elements	
BO_057	Binary Output 57	Range = Maximum of 2 Digital Elements	NA
BO_058	Binary Output 58	Range = Maximum of 2 Digital Elements	NA
BO_059	Binary Output 59	Range = Maximum of 2 Digital Elements	NA
BO_060	Binary Output 60	Range = Maximum of 2 Digital Elements	NA
BO_061	Binary Output 61	Range = Maximum of 2 Digital Elements	NA
BO_062	Binary Output 62	Range = Maximum of 2 Digital Elements	NA
BO_063	Binary Output 63	Range = Maximum of 2 Digital Elements	NA
BO_064	Binary Output 64	Range = Maximum of 2 Digital Elements	NA
BO_065	Binary Output 65	Range = Maximum of 2 Digital Elements	NA
BO_066	Binary Output 66	Range = Maximum of 2 Digital Elements	NA
BO_067	Binary Output 67	Range = Maximum of 2 Digital Elements	NA
BO_068	Binary Output 68	Range = Maximum of 2 Digital Elements	NA
BO_069	Binary Output 69	Range = Maximum of 2 Digital Elements	NA
BO_070	Binary Output 70	Range = Maximum of 2 Digital Elements	NA
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Setting	Description	Range	Value
BI_000	Binary Input 0	Range = Maximum of 1 Digital Elements	TLED18
BI_001	Binary Input 1	Range = Maximum of 1 Digital Elements	RLYDIS
BI_002	Binary Input 2	Range = Maximum of 1 Digital Elements	TLED26
BI_003	Binary Input 3	Range = Maximum of 1 Digital Elements	TLED25
BI_004	Binary Input 4	Range = Maximum of 1 Digital Elements	TLED24
BI_005	Binary Input 5	Range = Maximum of 1 Digital Elements	TLED23
BI_006	Binary Input 6	Range = Maximum of 1 Digital Elements	TLED22
BI_007	Binary Input 7	Range = Maximum of 1 Digital Elements	TLED21
BI_008	Binary Input 8	Range = Maximum of 1 Digital Elements	TLED20
BI_009	Binary Input 9	Range = Maximum of 1 Digital Elements	TLED19
BI_010	Binary Input 10	Range = Maximum of 1 Digital Elements	UNRDEV
BI_011	Binary Input 11	Range = Maximum of 1 Digital Elements	NA
BI_012	Binary Input 12	Range = Maximum of 1 Digital Elements	NA
BI_013	Binary Input 13	Range = Maximum of 1 Digital Elements	NA
BI_014	Binary Input 14	Range = Maximum of 1 Digital Elements	NA
BI_015	Binary Input 15	Range = Maximum of 1 Digital Elements	NA
BI_016	Binary Input 16	Range = Maximum of 1 Digital Elements	NA
BI_017	Binary Input 17	Range = Maximum of 1 Digital Elements	NA
BI_018	Binary Input 18	Range = Maximum of 1 Digital Elements	NA
BI_019	Binary Input 19	Range = Maximum of 1 Digital Elements	NA
BI_020	Binary Input 20	Range = Maximum of 1 Digital Elements	NA
BI_021	Binary Input 21	Range = Maximum of 1 Digital Elements	NA
		Range = Maximum of 1	

BI_022	Binary Input 22	Digital Elements	NA
BI_023	Binary Input 23	Range = Maximum of 1 Digital Elements	NA
BI_024	Binary Input 24	Range = Maximum of 1 Digital Elements	NA
BI_025	Binary Input 25	Range = Maximum of 1 Digital Elements	NA
BI_026	Binary Input 26	Range = Maximum of 1 Digital Elements	NA
BI_027	Binary Input 27	Range = Maximum of 1 Digital Elements	NA
BI_028	Binary Input 28	Range = Maximum of 1 Digital Elements	NA
BI_029	Binary Input 29	Range = Maximum of 1 Digital Elements	NA
BI_030	Binary Input 30	Range = Maximum of 1 Digital Elements	NA
BI_031	Binary Input 31	Range = Maximum of 1 Digital Elements	NA
BI_032	Binary Input 32	Range = Maximum of 1 Digital Elements	NA
BI_033	Binary Input 33	Range = Maximum of 1 Digital Elements	NA
BI_034	Binary Input 34	Range = Maximum of 1 Digital Elements	NA
BI_035	Binary Input 35	Range = Maximum of 1 Digital Elements	NA
BI_036	Binary Input 36	Range = Maximum of 1 Digital Elements	NA
BI_037	Binary Input 37	Range = Maximum of 1 Digital Elements	NA
BI_038	Binary Input 38	Range = Maximum of 1 Digital Elements	NA
BI_039	Binary Input 39	Range = Maximum of 1 Digital Elements	NA
BI_040	Binary Input 40	Range = Maximum of 1 Digital Elements	NA
BI_041	Binary Input 41	Range = Maximum of 1 Digital Elements	NA
BI_042	Binary Input 42	Range = Maximum of 1 Digital Elements	NA
BI_043	Binary Input 43	Range = Maximum of 1 Digital Elements	NA
BI_044	Binary Input 44	Range = Maximum of 1 Digital Elements	NA
BI_045	Binary Input 45	Range = Maximum of 1 Digital Elements	NA
BI_046	Binary Input 46	Range = Maximum of 1 Digital Elements	NA
BI_047	Binary Input 47	Range = Maximum of 1	NA

		Digital Elements	
BI_048	Binary Input 48	Range = Maximum of 1 Digital Elements	NA
BI_049	Binary Input 49	Range = Maximum of 1 Digital Elements	NA
BI_050	Binary Input 50	Range = Maximum of 1 Digital Elements	NA
BI_051	Binary Input 51	Range = Maximum of 1 Digital Elements	NA
BI_052	Binary Input 52	Range = Maximum of 1 Digital Elements	NA
BI_053	Binary Input 53	Range = Maximum of 1 Digital Elements	NA
BI_054	Binary Input 54	Range = Maximum of 1 Digital Elements	NA
BI_055	Binary Input 55	Range = Maximum of 1 Digital Elements	NA
BI_056	Binary Input 56	Range = Maximum of 1 Digital Elements	NA
BI_057	Binary Input 57	Range = Maximum of 1 Digital Elements	NA
BI_058	Binary Input 58	Range = Maximum of 1 Digital Elements	NA
BI_059	Binary Input 59	Range = Maximum of 1 Digital Elements	NA
BI_060	Binary Input 60	Range = Maximum of 1 Digital Elements	NA
BI_061	Binary Input 61	Range = Maximum of 1 Digital Elements	NA
BI_062	Binary Input 62	Range = Maximum of 1 Digital Elements	NA
BI_063	Binary Input 63	Range = Maximum of 1 Digital Elements	NA
BI_064	Binary Input 64	Range = Maximum of 1 Digital Elements	NA
BI_065	Binary Input 65	Range = Maximum of 1 Digital Elements	NA
BI_066	Binary Input 66	Range = Maximum of 1 Digital Elements	NA
BI_067	Binary Input 67	Range = Maximum of 1 Digital Elements	NA
BI_068	Binary Input 68	Range = Maximum of 1 Digital Elements	NA
BI_069	Binary Input 69	Range = Maximum of 1 Digital Elements	NA
BI_070	Binary Input 70	Range = Maximum of 1 Digital Elements	NA
BI_071	Binary Input 71	Range = Maximum of 1 Digital Elements	NA
BI_072	Binary Input 72	Range = Maximum of 1	NA

		Digital Elements	
BI_073	Binary Input 73	Range = Maximum of 1 Digital Elements	NA
BI_074	Binary Input 74	Range = Maximum of 1 Digital Elements	NA
BI_075	Binary Input 75	Range = Maximum of 1 Digital Elements	NA
BI_076	Binary Input 76	Range = Maximum of 1 Digital Elements	NA
BI_077	Binary Input 77	Range = Maximum of 1 Digital Elements	NA
BI_078	Binary Input 78	Range = Maximum of 1 Digital Elements	NA
BI_079	Binary Input 79	Range = Maximum of 1 Digital Elements	NA
BI_080	Binary Input 80	Range = Maximum of 1 Digital Elements	NA
BI_081	Binary Input 81	Range = Maximum of 1 Digital Elements	NA
BI_082	Binary Input 82	Range = Maximum of 1 Digital Elements	NA
BI_083	Binary Input 83	Range = Maximum of 1 Digital Elements	NA
BI_084	Binary Input 84	Range = Maximum of 1 Digital Elements	NA
BI_085	Binary Input 85	Range = Maximum of 1 Digital Elements	NA
BI_086	Binary Input 86	Range = Maximum of 1 Digital Elements	NA
BI_087	Binary Input 87	Range = Maximum of 1 Digital Elements	NA
BI_088	Binary Input 88	Range = Maximum of 1 Digital Elements	NA
BI_089	Binary Input 89	Range = Maximum of 1 Digital Elements	NA
BI_090	Binary Input 90	Range = Maximum of 1 Digital Elements	NA
BI_091	Binary Input 91	Range = Maximum of 1 Digital Elements	NA
BI_092	Binary Input 92	Range = Maximum of 1 Digital Elements	NA
BI_093	Binary Input 93	Range = Maximum of 1 Digital Elements	NA
BI_094	Binary Input 94	Range = Maximum of 1 Digital Elements	NA
BI_095	Binary Input 95	Range = Maximum of 1 Digital Elements	NA
BI_096	Binary Input 96	Range = Maximum of 1 Digital Elements	NA
BI_097	Binary Input 97	Range = Maximum of 1	NA

		Digital Elements	
BI_098	Binary Input 98	Range = Maximum of 1 Digital Elements	NA
BI_099	Binary Input 99	Range = Maximum of 1 Digital Elements	NA
BI_100	Binary Input 100	Range = Maximum of 1 Digital Elements	NA
BI_101	Binary Input 101	Range = Maximum of 1 Digital Elements	NA
BI_102	Binary Input 102	Range = Maximum of 1 Digital Elements	NA
BI_103	Binary Input 103	Range = Maximum of 1 Digital Elements	NA
BI_104	Binary Input 104	Range = Maximum of 1 Digital Elements	NA
BI_105	Binary Input 105	Range = Maximum of 1 Digital Elements	NA
BI_106	Binary Input 106	Range = Maximum of 1 Digital Elements	NA
BI_107	Binary Input 107	Range = Maximum of 1 Digital Elements	NA
BI_108	Binary Input 108	Range = Maximum of 1 Digital Elements	NA
BI_109	Binary Input 109	Range = Maximum of 1 Digital Elements	NA
BI_110	Binary Input 110	Range = Maximum of 1 Digital Elements	NA
BI_111	Binary Input 111	Range = Maximum of 1 Digital Elements	NA
BI_112	Binary Input 112	Range = Maximum of 1 Digital Elements	NA
BI_113	Binary Input 113	Range = Maximum of 1 Digital Elements	NA
BI_114	Binary Input 114	Range = Maximum of 1 Digital Elements	NA
BI_115	Binary Input 115	Range = Maximum of 1 Digital Elements	NA
BI_116	Binary Input 116	Range = Maximum of 1 Digital Elements	NA
BI_117	Binary Input 117	Range = Maximum of 1 Digital Elements	NA
BI_118	Binary Input 118	Range = Maximum of 1 Digital Elements	NA
BI_119	Binary Input 119	Range = Maximum of 1 Digital Elements	NA
BI_120	Binary Input 120	Range = Maximum of 1 Digital Elements	NA
BI_121	Binary Input 121	Range = Maximum of 1 Digital Elements	NA
BI_122	Binary Input 122	Range = Maximum of 1	NA

		Digital Elements	
BI_123	Binary Input 123	Range = Maximum of 1 Digital Elements	NA
BI_124	Binary Input 124	Range = Maximum of 1 Digital Elements	NA
BI_125	Binary Input 125	Range = Maximum of 1 Digital Elements	NA
BI_126	Binary Input 126	Range = Maximum of 1 Digital Elements	NA
BI_127	Binary Input 127	Range = Maximum of 1 Digital Elements	NA
BI_128	Binary Input 128	Range = Maximum of 1 Digital Elements	NA
BI_129	Binary Input 129	Range = Maximum of 1 Digital Elements	NA
BI_130	Binary Input 130	Range = Maximum of 1 Digital Elements	NA
BI_131	Binary Input 131	Range = Maximum of 1 Digital Elements	NA
BI_132	Binary Input 132	Range = Maximum of 1 Digital Elements	NA
BI_133	Binary Input 133	Range = Maximum of 1 Digital Elements	NA
BI_134	Binary Input 134	Range = Maximum of 1 Digital Elements	NA
BI_135	Binary Input 135	Range = Maximum of 1 Digital Elements	NA
BI_136	Binary Input 136	Range = Maximum of 1 Digital Elements	NA
BI_137	Binary Input 137	Range = Maximum of 1 Digital Elements	NA
BI_138	Binary Input 138	Range = Maximum of 1 Digital Elements	NA
BI_139	Binary Input 139	Range = Maximum of 1 Digital Elements	NA
BI_140	Binary Input 140	Range = Maximum of 1 Digital Elements	NA
BI_141	Binary Input 141	Range = Maximum of 1 Digital Elements	NA
BI_142	Binary Input 142	Range = Maximum of 1 Digital Elements	NA
BI_143	Binary Input 143	Range = Maximum of 1 Digital Elements	NA
BI_144	Binary Input 144	Range = Maximum of 1 Digital Elements	NA
BI_145	Binary Input 145	Range = Maximum of 1 Digital Elements	NA
BI_146	Binary Input 146	Range = Maximum of 1 Digital Elements	NA
BI_147	Binary Input 147	Range = Maximum of 1	NA

		Digital Elements	
BI_148	Binary Input 148	Range = Maximum of 1 Digital Elements	NA
BI_149	Binary Input 149	Range = Maximum of 1 Digital Elements	NA
BI_150	Binary Input 150	Range = Maximum of 1 Digital Elements	NA
BI_151	Binary Input 151	Range = Maximum of 1 Digital Elements	NA
BI_152	Binary Input 152	Range = Maximum of 1 Digital Elements	NA
BI_153	Binary Input 153	Range = Maximum of 1 Digital Elements	NA
BI_154	Binary Input 154	Range = Maximum of 1 Digital Elements	NA
BI_155	Binary Input 155	Range = Maximum of 1 Digital Elements	NA
BI_156	Binary Input 156	Range = Maximum of 1 Digital Elements	NA
BI_157	Binary Input 157	Range = Maximum of 1 Digital Elements	NA
BI_158	Binary Input 158	Range = Maximum of 1 Digital Elements	NA
BI_159	Binary Input 159	Range = Maximum of 1 Digital Elements	NA
BI_160	Binary Input 160	Range = Maximum of 1 Digital Elements	NA
BI_161	Binary Input 161	Range = Maximum of 1 Digital Elements	NA
BI_162	Binary Input 162	Range = Maximum of 1 Digital Elements	NA
BI_163	Binary Input 163	Range = Maximum of 1 Digital Elements	NA
BI_164	Binary Input 164	Range = Maximum of 1 Digital Elements	NA
BI_165	Binary Input 165	Range = Maximum of 1 Digital Elements	NA
BI_166	Binary Input 166	Range = Maximum of 1 Digital Elements	NA
BI_167	Binary Input 167	Range = Maximum of 1 Digital Elements	NA
BI_168	Binary Input 168	Range = Maximum of 1 Digital Elements	NA
BI_169	Binary Input 169	Range = Maximum of 1 Digital Elements	NA
BI_170	Binary Input 170	Range = Maximum of 1 Digital Elements	NA
BI_171	Binary Input 171	Range = Maximum of 1 Digital Elements	NA
BI_172	Binary Input 172	Range = Maximum of 1	NA

		Digital Elements	
BI_173	Binary Input 173	Range = Maximum of 1 Digital Elements	NA
BI_174	Binary Input 174	Range = Maximum of 1 Digital Elements	NA
BI_175	Binary Input 175	Range = Maximum of 1 Digital Elements	NA
BI_176	Binary Input 176	Range = Maximum of 1 Digital Elements	NA
BI_177	Binary Input 177	Range = Maximum of 1 Digital Elements	NA
BI_178	Binary Input 178	Range = Maximum of 1 Digital Elements	NA
BI_179	Binary Input 179	Range = Maximum of 1 Digital Elements	NA
BI_180	Binary Input 180	Range = Maximum of 1 Digital Elements	NA
BI_181	Binary Input 181	Range = Maximum of 1 Digital Elements	NA
BI_182	Binary Input 182	Range = Maximum of 1 Digital Elements	NA
BI_183	Binary Input 183	Range = Maximum of 1 Digital Elements	NA
BI_184	Binary Input 184	Range = Maximum of 1 Digital Elements	NA
BI_185	Binary Input 185	Range = Maximum of 1 Digital Elements	NA
BI_186	Binary Input 186	Range = Maximum of 1 Digital Elements	NA
BI_187	Binary Input 187	Range = Maximum of 1 Digital Elements	NA
BI_188	Binary Input 188	Range = Maximum of 1 Digital Elements	NA
BI_189	Binary Input 189	Range = Maximum of 1 Digital Elements	NA
BI_190	Binary Input 190	Range = Maximum of 1 Digital Elements	NA
BI_191	Binary Input 191	Range = Maximum of 1 Digital Elements	NA
BI_192	Binary Input 192	Range = Maximum of 1 Digital Elements	NA
BI_193	Binary Input 193	Range = Maximum of 1 Digital Elements	NA
BI_194	Binary Input 194	Range = Maximum of 1 Digital Elements	NA
BI_195	Binary Input 195	Range = Maximum of 1 Digital Elements	NA
BI_196	Binary Input 196	Range = Maximum of 1 Digital Elements	NA
BI_197	Binary Input 197	Range = Maximum of 1	NA

		Digital Elements	
BI_198	Binary Input 198	Range = Maximum of 1 Digital Elements	NA
BI_199	Binary Input 199	Range = Maximum of 1 Digital Elements	NA
BO_000	Binary Output 0	Range = Maximum of 2 Digital Elements	NXTEVE
BO_001	Binary Output 1	Range = Maximum of 2 Digital Elements	DRST_TAR
BO_002	Binary Output 2	Range = Maximum of 2 Digital Elements	NA
BO_003	Binary Output 3	Range = Maximum of 2 Digital Elements	NA
BO_004	Binary Output 4	Range = Maximum of 2 Digital Elements	NA
BO_005	Binary Output 5	Range = Maximum of 2 Digital Elements	NA
BO_006	Binary Output 6	Range = Maximum of 2 Digital Elements	NA
BO_007	Binary Output 7	Range = Maximum of 2 Digital Elements	NA
BO_008	Binary Output 8	Range = Maximum of 2 Digital Elements	NA
BO_009	Binary Output 9	Range = Maximum of 2 Digital Elements	NA
BO_010	Binary Output 10	Range = Maximum of 2 Digital Elements	NA
BO_011	Binary Output 11	Range = Maximum of 2 Digital Elements	NA
BO_012	Binary Output 12	Range = Maximum of 2 Digital Elements	NA
BO_013	Binary Output 13	Range = Maximum of 2 Digital Elements	NA
BO_014	Binary Output 14	Range = Maximum of 2 Digital Elements	NA
BO_015	Binary Output 15	Range = Maximum of 2 Digital Elements	NA
BO_016	Binary Output 16	Range = Maximum of 2 Digital Elements	NA
BO_017	Binary Output 17	Range = Maximum of 2 Digital Elements	NA
BO_018	Binary Output 18	Range = Maximum of 2 Digital Elements	NA
BO_019	Binary Output 19	Range = Maximum of 2 Digital Elements	NA
BO_020	Binary Output 20	Range = Maximum of 2 Digital Elements	NA
BO_021	Binary Output 21	Range = Maximum of 2 Digital Elements	NA
BO_022	Binary Output 22	Range = Maximum of 2	NA

		Digital Elements	
BO_023	Binary Output 23	Range = Maximum of 2 Digital Elements	NA
BO_024	Binary Output 24	Range = Maximum of 2 Digital Elements	NA
BO_025	Binary Output 25	Range = Maximum of 2 Digital Elements	NA
BO_026	Binary Output 26	Range = Maximum of 2 Digital Elements	NA
BO_027	Binary Output 27	Range = Maximum of 2 Digital Elements	NA
BO_028	Binary Output 28	Range = Maximum of 2 Digital Elements	NA
BO_029	Binary Output 29	Range = Maximum of 2 Digital Elements	NA
BO_030	Binary Output 30	Range = Maximum of 2 Digital Elements	NA
BO_031	Binary Output 31	Range = Maximum of 2 Digital Elements	NA
BO_032	Binary Output 32	Range = Maximum of 2 Digital Elements	NA
AI_000	Analog Input 0	Range = Maximum of 1 Analog Elements	FTYPE
AI_001	Analog Input 1	Range = Maximum of 1 Analog Elements	FLOC
AI_002	Analog Input 2	Range = Maximum of 1 Analog Elements	FIA
AI_003	Analog Input 3	Range = Maximum of 1 Analog Elements	FIB
AI_004	Analog Input 4	Range = Maximum of 1 Analog Elements	FIC
AI_005	Analog Input 5	Range = Maximum of 1 Analog Elements	NA
AI_006	Analog Input 6	Range = Maximum of 1 Analog Elements	NA
AI_007	Analog Input 7	Range = Maximum of 1 Analog Elements	NA
AI_008	Analog Input 8	Range = Maximum of 1 Analog Elements	NA
AI_009	Analog Input 9	Range = Maximum of 1 Analog Elements	NA
AI_010	Analog Input 10	Range = Maximum of 1 Analog Elements	NA
AI_011	Analog Input 11	Range = Maximum of 1 Analog Elements	NA
AI_012	Analog Input 12	Range = Maximum of 1 Analog Elements	NA
AI_013	Analog Input 13	Range = Maximum of 1 Analog Elements	NA
AI_014	Analog Input 14	Range = Maximum of 1	NA

		Analog Elements	
AI_015	Analog Input 15	Range = Maximum of 1 Analog Elements	NA
AI_016	Analog Input 16	Range = Maximum of 1 Analog Elements	NA
AI_017	Analog Input 17	Range = Maximum of 1 Analog Elements	NA
AI_018	Analog Input 18	Range = Maximum of 1 Analog Elements	NA
AI_019	Analog Input 19	Range = Maximum of 1 Analog Elements	NA
AI_020	Analog Input 20	Range = Maximum of 1 Analog Elements	NA
AI_021	Analog Input 21	Range = Maximum of 1 Analog Elements	NA
AI_022	Analog Input 22	Range = Maximum of 1 Analog Elements	NA
AI_023	Analog Input 23	Range = Maximum of 1 Analog Elements	NA
AI_024	Analog Input 24	Range = Maximum of 1 Analog Elements	NA
AI_025	Analog Input 25	Range = Maximum of 1 Analog Elements	NA
AI_026	Analog Input 26	Range = Maximum of 1 Analog Elements	NA
AI_027	Analog Input 27	Range = Maximum of 1 Analog Elements	NA
AI_028	Analog Input 28	Range = Maximum of 1 Analog Elements	NA
AI_029	Analog Input 29	Range = Maximum of 1 Analog Elements	NA
AI_030	Analog Input 30	Range = Maximum of 1 Analog Elements	NA
AI_031	Analog Input 31	Range = Maximum of 1 Analog Elements	NA
AI_032	Analog Input 32	Range = Maximum of 1 Analog Elements	NA
AI_033	Analog Input 33	Range = Maximum of 1 Analog Elements	NA
AI_034	Analog Input 34	Range = Maximum of 1 Analog Elements	NA
AI_035	Analog Input 35	Range = Maximum of 1 Analog Elements	NA
AI_036	Analog Input 36	Range = Maximum of 1 Analog Elements	NA
AI_037	Analog Input 37	Range = Maximum of 1 Analog Elements	NA
AI_038	Analog Input 38	Range = Maximum of 1 Analog Elements	NA
AI_039	Analog Input 39	Range = Maximum of 1	NA

		Analog Elements	
AI_040	Analog Input 40	Range = Maximum of 1 Analog Elements	NA
AI_041	Analog Input 41	Range = Maximum of 1 Analog Elements	NA
AI_042	Analog Input 42	Range = Maximum of 1 Analog Elements	NA
AI_043	Analog Input 43	Range = Maximum of 1 Analog Elements	NA
AI_044	Analog Input 44	Range = Maximum of 1 Analog Elements	NA
AI_045	Analog Input 45	Range = Maximum of 1 Analog Elements	NA
AI_046	Analog Input 46	Range = Maximum of 1 Analog Elements	NA
AI_047	Analog Input 47	Range = Maximum of 1 Analog Elements	NA
AI_048	Analog Input 48	Range = Maximum of 1 Analog Elements	NA
AI_049	Analog Input 49	Range = Maximum of 1 Analog Elements	NA
AI_050	Analog Input 50	Range = Maximum of 1 Analog Elements	NA
AI_051	Analog Input 51	Range = Maximum of 1 Analog Elements	NA
AI_052	Analog Input 52	Range = Maximum of 1 Analog Elements	NA
AI_053	Analog Input 53	Range = Maximum of 1 Analog Elements	NA
AI_054	Analog Input 54	Range = Maximum of 1 Analog Elements	NA
AI_055	Analog Input 55	Range = Maximum of 1 Analog Elements	NA
AI_056	Analog Input 56	Range = Maximum of 1 Analog Elements	NA
AI_057	Analog Input 57	Range = Maximum of 1 Analog Elements	NA
AI_058	Analog Input 58	Range = Maximum of 1 Analog Elements	NA
AI_059	Analog Input 59	Range = Maximum of 1 Analog Elements	NA
AI_060	Analog Input 60	Range = Maximum of 1 Analog Elements	NA
AI_061	Analog Input 61	Range = Maximum of 1 Analog Elements	NA
AI_062	Analog Input 62	Range = Maximum of 1 Analog Elements	NA
AI_063	Analog Input 63	Range = Maximum of 1 Analog Elements	NA
AI_064	Analog Input 64	Range = Maximum of 1	NA

		Analog Elements	
AI_065	Analog Input 65	Range = Maximum of 1 Analog Elements	NA
AI_066	Analog Input 66	Range = Maximum of 1 Analog Elements	NA
AI_067	Analog Input 67	Range = Maximum of 1 Analog Elements	NA
AI_068	Analog Input 68	Range = Maximum of 1 Analog Elements	NA
AI_069	Analog Input 69	Range = Maximum of 1 Analog Elements	NA
AI_070	Analog Input 70	Range = Maximum of 1 Analog Elements	NA
AI_071	Analog Input 71	Range = Maximum of 1 Analog Elements	NA
AI_072	Analog Input 72	Range = Maximum of 1 Analog Elements	NA
AI_073	Analog Input 73	Range = Maximum of 1 Analog Elements	NA
AI_074	Analog Input 74	Range = Maximum of 1 Analog Elements	NA
AI_075	Analog Input 75	Range = Maximum of 1 Analog Elements	NA
AI_076	Analog Input 76	Range = Maximum of 1 Analog Elements	NA
AI_077	Analog Input 77	Range = Maximum of 1 Analog Elements	NA
AI_078	Analog Input 78	Range = Maximum of 1 Analog Elements	NA
AI_079	Analog Input 79	Range = Maximum of 1 Analog Elements	NA
AI_080	Analog Input 80	Range = Maximum of 1 Analog Elements	NA
AI_081	Analog Input 81	Range = Maximum of 1 Analog Elements	NA
AI_082	Analog Input 82	Range = Maximum of 1 Analog Elements	NA
AI_083	Analog Input 83	Range = Maximum of 1 Analog Elements	NA
AI_084	Analog Input 84	Range = Maximum of 1 Analog Elements	NA
AI_085	Analog Input 85	Range = Maximum of 1 Analog Elements	NA
AI_086	Analog Input 86	Range = Maximum of 1 Analog Elements	NA
AI_087	Analog Input 87	Range = Maximum of 1 Analog Elements	NA
AI_088	Analog Input 88	Range = Maximum of 1 Analog Elements	NA
AI_089	Analog Input 89	Range = Maximum of 1	NA

		Analog Elements	
AI_090	Analog Input 90	Range = Maximum of 1 Analog Elements	NA
AI_091	Analog Input 91	Range = Maximum of 1 Analog Elements	NA
AI_092	Analog Input 92	Range = Maximum of 1 Analog Elements	NA
AI_093	Analog Input 93	Range = Maximum of 1 Analog Elements	NA
AI_094	Analog Input 94	Range = Maximum of 1 Analog Elements	NA
AI_095	Analog Input 95	Range = Maximum of 1 Analog Elements	NA
AI_096	Analog Input 96	Range = Maximum of 1 Analog Elements	NA
AI_097	Analog Input 97	Range = Maximum of 1 Analog Elements	NA
AI_098	Analog Input 98	Range = Maximum of 1 Analog Elements	NA
AI_099	Analog Input 99	Range = Maximum of 1 Analog Elements	NA
AI_100	Analog Input 100	Range = Maximum of 1 Analog Elements	NA
AI_101	Analog Input 101	Range = Maximum of 1 Analog Elements	NA
AI_102	Analog Input 102	Range = Maximum of 1 Analog Elements	NA
AI_103	Analog Input 103	Range = Maximum of 1 Analog Elements	NA
AI_104	Analog Input 104	Range = Maximum of 1 Analog Elements	NA
AI_105	Analog Input 105	Range = Maximum of 1 Analog Elements	NA
AI_106	Analog Input 106	Range = Maximum of 1 Analog Elements	NA
AI_107	Analog Input 107	Range = Maximum of 1 Analog Elements	NA
AI_108	Analog Input 108	Range = Maximum of 1 Analog Elements	NA
AI_109	Analog Input 109	Range = Maximum of 1 Analog Elements	NA
AI_110	Analog Input 110	Range = Maximum of 1 Analog Elements	NA
AI_111	Analog Input 111	Range = Maximum of 1 Analog Elements	NA
AI_112	Analog Input 112	Range = Maximum of 1 Analog Elements	NA
AI_113	Analog Input 113	Range = Maximum of 1 Analog Elements	NA
AI_114	Analog Input 114	Range = Maximum of 1	NA

		Analog Elements	
AI_115	Analog Input 115	Range = Maximum of 1 Analog Elements	NA
AI_116	Analog Input 116	Range = Maximum of 1 Analog Elements	NA
AI_117	Analog Input 117	Range = Maximum of 1 Analog Elements	NA
AI_118	Analog Input 118	Range = Maximum of 1 Analog Elements	NA
AI_119	Analog Input 119	Range = Maximum of 1 Analog Elements	NA
AI_120	Analog Input 120	Range = Maximum of 1 Analog Elements	NA
AI_121	Analog Input 121	Range = Maximum of 1 Analog Elements	NA
AI_122	Analog Input 122	Range = Maximum of 1 Analog Elements	NA
AI_123	Analog Input 123	Range = Maximum of 1 Analog Elements	NA
AI_124	Analog Input 124	Range = Maximum of 1 Analog Elements	NA
AI_125	Analog Input 125	Range = Maximum of 1 Analog Elements	NA
AI_126	Analog Input 126	Range = Maximum of 1 Analog Elements	NA
AI_127	Analog Input 127	Range = Maximum of 1 Analog Elements	NA
AI_128	Analog Input 128	Range = Maximum of 1 Analog Elements	NA
AI_129	Analog Input 129	Range = Maximum of 1 Analog Elements	NA
AI_130	Analog Input 130	Range = Maximum of 1 Analog Elements	NA
AI_131	Analog Input 131	Range = Maximum of 1 Analog Elements	NA
AI_132	Analog Input 132	Range = Maximum of 1 Analog Elements	NA
AI_133	Analog Input 133	Range = Maximum of 1 Analog Elements	NA
AI_134	Analog Input 134	Range = Maximum of 1 Analog Elements	NA
AI_135	Analog Input 135	Range = Maximum of 1 Analog Elements	NA
AI_136	Analog Input 136	Range = Maximum of 1 Analog Elements	NA
AI_137	Analog Input 137	Range = Maximum of 1 Analog Elements	NA
AI_138	Analog Input 138	Range = Maximum of 1 Analog Elements	NA
AI_139	Analog Input 139	Range = Maximum of 1	NA

		Analog Elements	
AI_140	Analog Input 140	Range = Maximum of 1 Analog Elements	NA
AI_141	Analog Input 141	Range = Maximum of 1 Analog Elements	NA
AI_142	Analog Input 142	Range = Maximum of 1 Analog Elements	NA
AI_143	Analog Input 143	Range = Maximum of 1 Analog Elements	NA
AI_144	Analog Input 144	Range = Maximum of 1 Analog Elements	NA
AI_145	Analog Input 145	Range = Maximum of 1 Analog Elements	NA
AI_146	Analog Input 146	Range = Maximum of 1 Analog Elements	NA
AI_147	Analog Input 147	Range = Maximum of 1 Analog Elements	NA
AI_148	Analog Input 148	Range = Maximum of 1 Analog Elements	NA
AI_149	Analog Input 149	Range = Maximum of 1 Analog Elements	NA
AI_150	Analog Input 150	Range = Maximum of 1 Analog Elements	NA
AI_151	Analog Input 151	Range = Maximum of 1 Analog Elements	NA
AI_152	Analog Input 152	Range = Maximum of 1 Analog Elements	NA
AI_153	Analog Input 153	Range = Maximum of 1 Analog Elements	NA
AI_154	Analog Input 154	Range = Maximum of 1 Analog Elements	NA
AI_155	Analog Input 155	Range = Maximum of 1 Analog Elements	NA
AI_156	Analog Input 156	Range = Maximum of 1 Analog Elements	NA
AI_157	Analog Input 157	Range = Maximum of 1 Analog Elements	NA
AI_158	Analog Input 158	Range = Maximum of 1 Analog Elements	NA
AI_159	Analog Input 159	Range = Maximum of 1 Analog Elements	NA
AI_160	Analog Input 160	Range = Maximum of 1 Analog Elements	NA
AI_161	Analog Input 161	Range = Maximum of 1 Analog Elements	NA
AI_162	Analog Input 162	Range = Maximum of 1 Analog Elements	NA
AI_163	Analog Input 163	Range = Maximum of 1 Analog Elements	NA
AI_164	Analog Input 164	Range = Maximum of 1	NA

		Analog Elements	
AI_165	Analog Input 165	Range = Maximum of 1 Analog Elements	NA
AI_166	Analog Input 166	Range = Maximum of 1 Analog Elements	NA
AI_167	Analog Input 167	Range = Maximum of 1 Analog Elements	NA
AI_168	Analog Input 168	Range = Maximum of 1 Analog Elements	NA
AI_169	Analog Input 169	Range = Maximum of 1 Analog Elements	NA
AI_170	Analog Input 170	Range = Maximum of 1 Analog Elements	NA
AI_171	Analog Input 171	Range = Maximum of 1 Analog Elements	NA
AI_172	Analog Input 172	Range = Maximum of 1 Analog Elements	NA
AI_173	Analog Input 173	Range = Maximum of 1 Analog Elements	NA
AI_174	Analog Input 174	Range = Maximum of 1 Analog Elements	NA
AI_175	Analog Input 175	Range = Maximum of 1 Analog Elements	NA
AI_176	Analog Input 176	Range = Maximum of 1 Analog Elements	NA
AI_177	Analog Input 177	Range = Maximum of 1 Analog Elements	NA
AI_178	Analog Input 178	Range = Maximum of 1 Analog Elements	NA
AI_179	Analog Input 179	Range = Maximum of 1 Analog Elements	NA
AI_180	Analog Input 180	Range = Maximum of 1 Analog Elements	NA
AI_181	Analog Input 181	Range = Maximum of 1 Analog Elements	NA
AI_182	Analog Input 182	Range = Maximum of 1 Analog Elements	NA
AI_183	Analog Input 183	Range = Maximum of 1 Analog Elements	NA
AI_184	Analog Input 184	Range = Maximum of 1 Analog Elements	NA
AI_185	Analog Input 185	Range = Maximum of 1 Analog Elements	NA
AI_186	Analog Input 186	Range = Maximum of 1 Analog Elements	NA
AI_187	Analog Input 187	Range = Maximum of 1 Analog Elements	NA
AI_188	Analog Input 188	Range = Maximum of 1 Analog Elements	NA
AI_189	Analog Input 189	Range = Maximum of 1	NA

		Analog Elements	
AI_190	Analog Input 190	Range = Maximum of 1 Analog Elements	NA
AI_191	Analog Input 191	Range = Maximum of 1 Analog Elements	NA
AI_192	Analog Input 192	Range = Maximum of 1 Analog Elements	NA
AI_193	Analog Input 193	Range = Maximum of 1 Analog Elements	NA
AI_194	Analog Input 194	Range = Maximum of 1 Analog Elements	NA
AI_195	Analog Input 195	Range = Maximum of 1 Analog Elements	NA
AI_196	Analog Input 196	Range = Maximum of 1 Analog Elements	NA
AI_197	Analog Input 197	Range = Maximum of 1 Analog Elements	NA
AI_198	Analog Input 198	Range = Maximum of 1 Analog Elements	NA
AI_199	Analog Input 199	Range = Maximum of 1 Analog Elements	NA
AO_000	Analog Input 0	Range = Maximum of 1 Digital Elements	ACTGRP
AO_001	Analog Input 1	Range = Maximum of 1 Digital Elements	NA
AO_002	Analog Input 2	Range = Maximum of 1 Digital Elements	NA
AO_003	Analog Input 3	Range = Maximum of 1 Digital Elements	NA
AO_004	Analog Input 4	Range = Maximum of 1 Digital Elements	NA
AO_005	Analog Input 5	Range = Maximum of 1 Digital Elements	NA
AO_006	Analog Input 6	Range = Maximum of 1 Digital Elements	NA
AO_007	Analog Input 7	Range = Maximum of 1 Digital Elements	NA
CO_000	Counter 0	Range = Maximum of 1 Analog Elements	ACTGRP
CO_001	Counter 1	Range = Maximum of 1 Analog Elements	INTTR
CO_002	Counter 2	Range = Maximum of 1 Analog Elements	EXTTR
CO_003	Counter 3	Range = Maximum of 1 Analog Elements	NA
CO_004	Counter 4	Range = Maximum of 1 Analog Elements	NA
CO_005	Counter 5	Range = Maximum of 1 Analog Elements	NA
CO_006	Counter 6	Range = Maximum of 1	NA

		Analog Elements	
CO_007	Counter 7	Range = Maximum of 1 Analog Elements	NA
BO_033	Binary Output 33	Range = Maximum of 2 Digital Elements	NA
BO_034	Binary Output 34	Range = Maximum of 2 Digital Elements	NA
BO_035	Binary Output 35	Range = Maximum of 2 Digital Elements	NA
BO_036	Binary Output 36	Range = Maximum of 2 Digital Elements	NA
BO_037	Binary Output 37	Range = Maximum of 2 Digital Elements	NA
BO_038	Binary Output 38	Range = Maximum of 2 Digital Elements	NA
BO_039	Binary Output 39	Range = Maximum of 2 Digital Elements	NA
BO_040	Binary Output 40	Range = Maximum of 2 Digital Elements	NA
BO_041	Binary Output 41	Range = Maximum of 2 Digital Elements	NA
BO_042	Binary Output 42	Range = Maximum of 2 Digital Elements	NA
BO_043	Binary Output 43	Range = Maximum of 2 Digital Elements	NA
BO_044	Binary Output 44	Range = Maximum of 2 Digital Elements	NA
BO_045	Binary Output 45	Range = Maximum of 2 Digital Elements	NA
BO_046	Binary Output 46	Range = Maximum of 2 Digital Elements	NA
BO_047	Binary Output 47	Range = Maximum of 2 Digital Elements	NA
BO_048	Binary Output 48	Range = Maximum of 2 Digital Elements	NA
BO_049	Binary Output 49	Range = Maximum of 2 Digital Elements	NA
BO_050	Binary Output 50	Range = Maximum of 2 Digital Elements	NA
BO_051	Binary Output 51	Range = Maximum of 2 Digital Elements	NA
BO_052	Binary Output 52	Range = Maximum of 2 Digital Elements	NA
BO_053	Binary Output 53	Range = Maximum of 2 Digital Elements	NA
BO_054	Binary Output 54	Range = Maximum of 2 Digital Elements	NA
BO_055	Binary Output 55	Range = Maximum of 2 Digital Elements	NA
BO_056	Binary Output 56	Range = Maximum of 2	NA

		Digital Elements	
BO_057	Binary Output 57	Range = Maximum of 2 Digital Elements	NA
BO_058	Binary Output 58	Range = Maximum of 2 Digital Elements	NA
BO_059	Binary Output 59	Range = Maximum of 2 Digital Elements	NA
BO_060	Binary Output 60	Range = Maximum of 2 Digital Elements	NA
BO_061	Binary Output 61	Range = Maximum of 2 Digital Elements	NA
BO_062	Binary Output 62	Range = Maximum of 2 Digital Elements	NA
BO_063	Binary Output 63	Range = Maximum of 2 Digital Elements	NA
BO_064	Binary Output 64	Range = Maximum of 2 Digital Elements	NA
BO_065	Binary Output 65	Range = Maximum of 2 Digital Elements	NA
BO_066	Binary Output 66	Range = Maximum of 2 Digital Elements	NA
BO_067	Binary Output 67	Range = Maximum of 2 Digital Elements	NA
BO_068	Binary Output 68	Range = Maximum of 2 Digital Elements	NA
BO_069	Binary Output 69	Range = Maximum of 2 Digital Elements	NA
BO_070	Binary Output 70	Range = Maximum of 2 Digital Elements	NA
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Setting	Description	Range	Value
PTCONN	Phase PT Connection	Select: DELTA, WYE	WYE
TGR	Group Change Delay (cyc)	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	YMD
FP_TO	Front Panel Timeout (mins)	Range = 1 to 30, OFF	15
SCROLLD	Display Update Rate in seconds (seconds)	Range = 1 to 60	2
FPNGD	Front Panel Neutral/Ground Display	Select: OFF, IN, IG	IG
LER	Length of Event Report (cyc)	Select: 15, 30, 60, 180	180
PRE	Cycle Length of Prefault in Event Report (cyc)	Range = 1 to 179	14
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 IN_ Debounce cycles (cyc)	Range = 0,00 to 2,00, AC	0,00
IN102D	Input IN_ Debounce cycles (cyc)	Range = 0,00 to 2,00, AC	0,00
IN103D	Input IN_ Debounce cycles (cyc)	Range = 0,00 to 2,00, AC	0,00
IN104D	Input IN_ Debounce cycles (cyc)	Range = 0,00 to 2,00, AC	0,00
IN105D	Input IN_ Debounce cycles (cyc)	Range = 0,00 to 2,00, AC	0,00
IN106D	Input IN_ Debounce cycles (cyc)	Range = 0,00 to 2,00, AC	0,00
IN201D	Input IN_ Debounce cycles (cyc)	Range = 0,00 to 2,00, AC	0,00
IN202D	Input IN_ Debounce cycles (cyc)	Range = 0,00 to 2,00, AC	0,00
IN203D	Input IN_ Debounce cycles (cyc)	Range = 0,00 to 2,00, AC	0,00
IN204D	Input IN_ Debounce cycles (cyc)	Range = 0,00 to 2,00, AC	0,00
IN205D	Input IN_ Debounce cycles (cyc)	Range = 0,00 to 2,00, AC	0,00
IN206D	Input IN_ Debounce cycles (cyc)	Range = 0,00 to 2,00, AC	0,00
IN207D	Input IN_ Debounce cycles (cyc)	Range = 0,00 to 2,00, AC	0,00
IN208D	Input IN_ Debounce cycles (cyc)	Range = 0,00 to 2,00, AC	0,00
EBMON	Breaker Monitor	Select: Y, N	Y
COSP1	Close/Open Operations Set Pt. 1-max	Range = 0 to 65000	10000
COSP2	Close/Open Operations Set Pt. 2-mid	Range = 0 to 65000	150
COSP3	Close/Open Operations Set Pt. 3-min	Range = 0 to 65000	12
KASP1	kA(pri) Interrupted Set Pt. 1-min (kA)	Range = 0,00 to 999,00	1,20
KASP2	kA(pri) Interrupted Set Pt. 2-mid (kA)	Range = 0,00 to 999,00	8,00
KASP3	kA(pri) Interrupted Set Pt. 3-max (kA)	Range = 0,00 to 999,00	20,00
ESTRT	Electrical Slow Trip Alarm Threshold (ms)	Range = 1 to 999	50
ESCLT	Electrical Slow Close Alarm Threshold (ms)	Range = 1 to 999	120
MSTRT	Mechanical Slow Trip Alarm Threshold (ms)	Range = 1 to 999	50
MSCLT	Mechanical Slow Close Alarm Threshold (ms)	Range = 1 to 999	120

EPMU	Synchronized Phasor Measurement	Select: Y, N	N
EVELOCK	Event Summary Lock Period in Seconds (seconds)	Range = 0 to 1000	0
DNPSRC	DNP Session Time Base	Select: LOCAL, UTC	UTC
BOOPTCC	DNP BO Close/Trip Behavior	Select: SET, PULSE	PULSE
BOOPPUL	DNP BO Pulse On Behavior	Select: SET, PULSE	PULSE
IRIGC	IRIG-B Control Bits Definition	Select: NONE, C37.118	NONE
UTC_OFF	Offset from UTC (hr)	Range = -24,00 to 24,00	0,00
DST_BEGM	Month To Begin DST	Range = 1 to 12, NA	NA
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Setting	Description	Range	Value
TR	Other Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	$M2PT + Z2GT + (51QT * F32QG) + (51PT * F32QG) + (51GT * F32QG)$
TRQUAL	Qualified Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	$M1P + Z1G$
TRCOMM	Communications-Assisted Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	$M2P + Z2G$
TRSOTF	Switch-Onto-Fault Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	$M2P + Z2G + 50P1$
DTT	Direct Transfer Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
ULTR	Unlatch Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	$!(50L + 51G)$
PT1	Permissive Trip 1 Equation (used for ECOMM = POTT, DCUB1, or DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	IN102
PT2	Permissive Trip 2 Equation (used for ECOMM = DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LOG1	Loss-of-Guard 1 Equation (used for ECOMM = DCUB1 or DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LOG2	Loss-of-Guard 2 Equation (used for ECOMM = DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
BT	Block Trip Equation (used for ECOMM = DCB) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
52A	Circuit Breaker Status Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	IN101
		Valid range = Boolean	

CL	Close Conditions Equation (other than automatic reclosing) (SELogic)	equation using word bit elements and the legal operators: !/\()*+	CC
ULCL	Unlatch Close Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	TRIP
79RI	Reclose Initiate Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	TRIP
79RIS	Reclose Initiate Supervision Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	52A + 79CY
79DTL	Drive-to-Lockout Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	OC
79DLS	Drive-to-Last Shot Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	79LO
79SKP	Skip Shot Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
79STL	Stall Open Interval Timing Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	TRIP
79BRS	Block Reset Timing Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	TRIP
79SEQ	Sequence Coordination Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
79CLS	Reclose Supervision Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
SET1	Set Latch Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET2	Set Latch Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET3	Set Latch Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0

SET4	Set Latch Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET5	Set Latch Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET6	Set Latch Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET7	Set Latch Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET8	Set Latch Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET9	Set Latch Bit 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET10	Set Latch Bit 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET11	Set Latch Bit 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET12	Set Latch Bit 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET13	Set Latch Bit 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET14	Set Latch Bit 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET15	Set Latch Bit 15 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET16	Set Latch Bit 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
RST1	Reset Latch Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
RST2	Reset Latch Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST3	Reset Latch Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST4	Reset Latch Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST5	Reset Latch Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST6	Reset Latch Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST7	Reset Latch Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST8	Reset Latch Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST9	Reset Latch Bit 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST10	Reset Latch Bit 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST11	Reset Latch Bit 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST12	Reset Latch Bit 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST13	Reset Latch Bit 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST14	Reset Latch Bit 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

RST15	Reset Latch Bit 15 Equation (SELogic)	elements and the legal operators: !/\() * +	0
RST16	Reset Latch Bit 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
67P1TC	Level 1 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67P2TC	Level 2 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67P3TC	Level 3 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67P4TC	Level 4 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G1TC	Level 1 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G2TC	Level 2 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G3TC	Level 3 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G4TC	Level 4 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q1TC	Level 1 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q2TC	Level 2 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q3TC	Level 3 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q4TC	Level 4 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
		Valid range = Boolean	

51PTC	Phase Equation (SELogic)	equation using word bit elements and the legal operators: !/\()* +	1
51GTC	Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
51QTC	Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
BFI	Three-Pole Breaker Failure Initiate Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
BFTR	Breaker Failure Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
BFULTR	Breaker Failure Unlatch Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV1	Logic Variable Equation 1 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV2	Logic Variable Equation 2 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV3	Logic Variable Equation 3 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV4	Logic Variable Equation 4 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV5	Logic Variable Equation 5 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV6	Logic Variable Equation 6 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV7	Logic Variable Equation 7 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV8	Logic Variable Equation 8 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0

LV9	Logic Variable Equation 9 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV10	Logic Variable Equation 10 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV11	Logic Variable Equation 11 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV12	Logic Variable Equation 12 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV13	Logic Variable Equation 13 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV14	Logic Variable Equation 14 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV15	Logic Variable Equation 15 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV16	Logic Variable Equation 16 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV17	Logic Variable Equation 17 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV18	Logic Variable Equation 18 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV19	Logic Variable Equation 19 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV20	Logic Variable Equation 20 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV21	Logic Variable Equation 21 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV22	Logic Variable Equation 22 (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
LV23	Logic Variable Equation 23 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV24	Logic Variable Equation 24 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV25	Logic Variable Equation 25 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV26	Logic Variable Equation 26 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV27	Logic Variable Equation 27 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV28	Logic Variable Equation 28 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV29	Logic Variable Equation 29 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV30	Logic Variable Equation 30 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV31	Logic Variable Equation 31 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV32	Logic Variable Equation 32 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV1	SELogic Control Equation Variable 1 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV2	SELogic Control Equation Variable 2 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV3	SELogic Control Equation Variable 3 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

SV4	SELogic Control Equation Variable 4 (SELogic)	elements and the legal operators: !/\() * +	0
SV5	SELogic Control Equation Variable 5 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV6	SELogic Control Equation Variable 6 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV7	SELogic Control Equation Variable 7 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV8	SELogic Control Equation Variable 8 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV9	SELogic Control Equation Variable 9 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV10	SELogic Control Equation Variable 10 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV11	SELogic Control Equation Variable 11 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV12	SELogic Control Equation Variable 12 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV13	SELogic Control Equation Variable 13 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV14	SELogic Control Equation Variable 14 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV15	SELogic Control Equation Variable 15 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV16	SELogic Control Equation Variable 16 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
OUT101	Output Contact 101 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	TRIP
		Valid range = Boolean	

OUT102	Output Contact 102 Equation (SELogic)	equation using word bit elements and the legal operators: !/\() * +	TRIP
OUT103	Output Contact 103 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	CLOSE
OUT104	Output Contact 104 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	KEY
OUT105	Output Contact 105 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M1PT + M2PT + Z1GT + Z2GT + Z1T + Z2T
OUT106	Output Contact 106 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	(51QT * F32QG) + (51PT * F32QG) + (51GT * F32QG)
OUT107	Output Contact 107 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
ALRMOUT	Output Contact ALARM Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	!(SALARM + HALARM)
OUT201	Output Contact 201 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
OUT202	Output Contact 202 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
OUT203	Output Contact 203 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
OUT204	Output Contact 204 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
OUT205	Output Contact 205 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
OUT206	Output Contact 206 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
OUT207	Output Contact 207 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0

OUT208	Output Contact 208 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT209	Output Contact 209 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT210	Output Contact 210 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT211	Output Contact 211 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT212	Output Contact 212 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP1	Display Point 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	52A
DP2	Display Point 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP3	Display Point 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP4	Display Point 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP5	Display Point 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP6	Display Point 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP7	Display Point 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP8	Display Point 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP9	Display Point 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
DP10	Display Point 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP11	Display Point 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP12	Display Point 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP13	Display Point 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP14	Display Point 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP15	Display Point 15 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP16	Display Point 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS1	Select Setting Group 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS2	Select Setting Group 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS3	Select Setting Group 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS4	Select Setting Group 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS5	Select Setting Group 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS6	Select Setting Group 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	/M2P + /Z2G

ER	Event Report Trigger Conditions Equation (SELogic)	elements and the legal operators: !/\() * +	+ /51G + /51Q + /50P1 + /LOP
FAULT	Fault Indication Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	51G + 51Q + M2P + Z2G
BSYNCH	Block Synchronism Check Elements Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	52A
CLMON	Close Bus Monitor Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
BKMON	Breaker Monitor Initiation Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	TRIP
BKCLS	Breaker Monitor Close Initiation Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	CLOSE
E32IV	Enable for V0 Polarized and IN Polarized Elements Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
Z1XPEC	Zone 1 Phase External Control Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
Z1XGEC	Zone 1 Ground External Control Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SALARM	Software Alarm Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	BADPASS + CHGPASS + SETCHG + GRPSW + ACCESSP + PASNVAL
TMB1A	Channel A, Transmit Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB2A	Channel A, Transmit Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB3A	Channel A, Transmit Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB4A	Channel A, Transmit Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
TMB5A	Channel A, Transmit Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB6A	Channel A, Transmit Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB7A	Channel A, Transmit Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB8A	Channel A, Transmit Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB1B	Channel B, Transmit Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB2B	Channel B, Transmit Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB3B	Channel B, Transmit Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB4B	Channel B, Transmit Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB5B	Channel B, Transmit Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB6B	Channel B, Transmit Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB7B	Channel B, Transmit Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB8B	Channel B, Transmit Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RSTTRGT	Target Reset Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

RST_DEM	Reset Demand Data Equation (SELogic)	elements and the legal operators: !/\() * +	0
RST_PDM	Reset Peak Demand Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_BK	Reset Breaker Monitor Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_HIS	Reset Event History Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_ENE	Reset Energy Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_MML	Reset Max/Min Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_HAL	Reset Hardware Alarm Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RSTDNPE	Reset DNP Event Queue Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
PMTRIG	PM Trigger Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA1	Trigger Reason 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA2	Trigger Reason 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA3	Trigger Reason 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA4	Trigger Reason 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
Logic 1			
			Top

Logic 2			
Top			
Setting	Description	Range	Value
TR	Other Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M2PT + Z2GT + 51GT + 51QT + OC
TRQUAL	Qualified Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M1P + Z1G
TRCOMM	Communications-Assisted Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M2P + Z2G
TRSOTF	Switch-Onto-Fault Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M2P + Z2G + 50P1
DTT	Direct Transfer Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
ULTR	Unlatch Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	!(50L + 51G)
PT1	Permissive Trip 1 Equation (used for ECOMM = POTT, DCUB1, or DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	IN102
PT2	Permissive Trip 2 Equation (used for ECOMM = DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LOG1	Loss-of-Guard 1 Equation (used for ECOMM = DCUB1 or DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LOG2	Loss-of-Guard 2 Equation (used for ECOMM = DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
BT	Block Trip Equation (used for ECOMM = DCB) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
52A	Circuit Breaker Status Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	IN101
		Valid range = Boolean	

CL	Close Conditions Equation (other than automatic reclosing) (SELogic)	equation using word bit elements and the legal operators: !/\()* +	CC
ULCL	Unlatch Close Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79RI	Reclose Initiate Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79RIS	Reclose Initiate Supervision Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	52A + 79CY
79DTL	Drive-to-Lockout Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	OC
79DLS	Drive-to-Last Shot Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	79LO
79SKP	Skip Shot Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
79STL	Stall Open Interval Timing Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79BRS	Block Reset Timing Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79SEQ	Sequence Coordination Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
79CLS	Reclose Supervision Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
SET1	Set Latch Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET2	Set Latch Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET3	Set Latch Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0

SET4	Set Latch Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET5	Set Latch Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET6	Set Latch Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET7	Set Latch Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET8	Set Latch Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET9	Set Latch Bit 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET10	Set Latch Bit 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET11	Set Latch Bit 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET12	Set Latch Bit 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET13	Set Latch Bit 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET14	Set Latch Bit 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET15	Set Latch Bit 15 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET16	Set Latch Bit 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
RST1	Reset Latch Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
RST2	Reset Latch Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST3	Reset Latch Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST4	Reset Latch Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST5	Reset Latch Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST6	Reset Latch Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST7	Reset Latch Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST8	Reset Latch Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST9	Reset Latch Bit 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST10	Reset Latch Bit 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST11	Reset Latch Bit 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST12	Reset Latch Bit 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST13	Reset Latch Bit 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST14	Reset Latch Bit 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

RST15	Reset Latch Bit 15 Equation (SELogic)	elements and the legal operators: !/\() * +	0
RST16	Reset Latch Bit 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
67P1TC	Level 1 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67P2TC	Level 2 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67P3TC	Level 3 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67P4TC	Level 4 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G1TC	Level 1 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G2TC	Level 2 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G3TC	Level 3 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G4TC	Level 4 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q1TC	Level 1 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q2TC	Level 2 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q3TC	Level 3 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q4TC	Level 4 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
		Valid range = Boolean	

51PTC	Phase Equation (SELogic)	equation using word bit elements and the legal operators: !/\()*+	1
51GTC	Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
51QTC	Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
BFI	Three-Pole Breaker Failure Initiate Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
BFTR	Breaker Failure Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
BFULTR	Breaker Failure Unlatch Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV1	Logic Variable Equation 1 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV2	Logic Variable Equation 2 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV3	Logic Variable Equation 3 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV4	Logic Variable Equation 4 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV5	Logic Variable Equation 5 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV6	Logic Variable Equation 6 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV7	Logic Variable Equation 7 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV8	Logic Variable Equation 8 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0

LV9	Logic Variable Equation 9 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV10	Logic Variable Equation 10 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV11	Logic Variable Equation 11 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV12	Logic Variable Equation 12 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV13	Logic Variable Equation 13 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV14	Logic Variable Equation 14 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV15	Logic Variable Equation 15 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV16	Logic Variable Equation 16 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV17	Logic Variable Equation 17 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV18	Logic Variable Equation 18 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV19	Logic Variable Equation 19 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV20	Logic Variable Equation 20 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV21	Logic Variable Equation 21 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV22	Logic Variable Equation 22 (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
LV23	Logic Variable Equation 23 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV24	Logic Variable Equation 24 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV25	Logic Variable Equation 25 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV26	Logic Variable Equation 26 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV27	Logic Variable Equation 27 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV28	Logic Variable Equation 28 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV29	Logic Variable Equation 29 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV30	Logic Variable Equation 30 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV31	Logic Variable Equation 31 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV32	Logic Variable Equation 32 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV1	SELogic Control Equation Variable 1 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV2	SELogic Control Equation Variable 2 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV3	SELogic Control Equation Variable 3 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

SV4	SELogic Control Equation Variable 4 (SELogic)	elements and the legal operators: !/\() * +	0
SV5	SELogic Control Equation Variable 5 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV6	SELogic Control Equation Variable 6 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV7	SELogic Control Equation Variable 7 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV8	SELogic Control Equation Variable 8 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV9	SELogic Control Equation Variable 9 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV10	SELogic Control Equation Variable 10 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV11	SELogic Control Equation Variable 11 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV12	SELogic Control Equation Variable 12 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV13	SELogic Control Equation Variable 13 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV14	SELogic Control Equation Variable 14 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV15	SELogic Control Equation Variable 15 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV16	SELogic Control Equation Variable 16 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
OUT101	Output Contact 101 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	TRIP
		Valid range = Boolean	

OUT102	Output Contact 102 Equation (SELogic)	equation using word bit elements and the legal operators: !/\()* +	TRIP
OUT103	Output Contact 103 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	CLOSE
OUT104	Output Contact 104 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	KEY
OUT105	Output Contact 105 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT106	Output Contact 106 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT107	Output Contact 107 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
ALRMOUT	Output Contact ALARM Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	!(SALARM + HALARM)
OUT201	Output Contact 201 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT202	Output Contact 202 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT203	Output Contact 203 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT204	Output Contact 204 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT205	Output Contact 205 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT206	Output Contact 206 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT207	Output Contact 207 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0

OUT208	Output Contact 208 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT209	Output Contact 209 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT210	Output Contact 210 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT211	Output Contact 211 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT212	Output Contact 212 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP1	Display Point 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	52A
DP2	Display Point 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP3	Display Point 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP4	Display Point 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP5	Display Point 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP6	Display Point 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP7	Display Point 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP8	Display Point 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP9	Display Point 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
DP10	Display Point 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP11	Display Point 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP12	Display Point 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP13	Display Point 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP14	Display Point 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP15	Display Point 15 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP16	Display Point 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS1	Select Setting Group 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS2	Select Setting Group 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS3	Select Setting Group 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS4	Select Setting Group 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS5	Select Setting Group 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS6	Select Setting Group 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	/M2P + /Z2G

ER	Event Report Trigger Conditions Equation (SELogic)	elements and the legal operators: !/\() * +	+ /51G + /51Q + /50P1 + /LOP
FAULT	Fault Indication Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	51G + 51Q + M2P + Z2G
BSYNCH	Block Synchronism Check Elements Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	52A
CLMON	Close Bus Monitor Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
BKMON	Breaker Monitor Initiation Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	TRIP
BKCLS	Breaker Monitor Close Initiation Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	CLOSE
E32IV	Enable for V0 Polarized and IN Polarized Elements Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
Z1XPEC	Zone 1 Phase External Control Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
Z1XGEC	Zone 1 Ground External Control Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SALARM	Software Alarm Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	BADPASS + CHGPASS + SETCHG + GRPSW + ACCESSP + PASNVAL
TMB1A	Channel A, Transmit Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB2A	Channel A, Transmit Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB3A	Channel A, Transmit Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB4A	Channel A, Transmit Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
TMB5A	Channel A, Transmit Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB6A	Channel A, Transmit Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB7A	Channel A, Transmit Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB8A	Channel A, Transmit Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB1B	Channel B, Transmit Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB2B	Channel B, Transmit Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB3B	Channel B, Transmit Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB4B	Channel B, Transmit Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB5B	Channel B, Transmit Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB6B	Channel B, Transmit Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB7B	Channel B, Transmit Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB8B	Channel B, Transmit Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RSTTRGT	Target Reset Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

RST_DEM	Reset Demand Data Equation (SELogic)	elements and the legal operators: !/\() * +	0
RST_PDM	Reset Peak Demand Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_BK	Reset Breaker Monitor Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_HIS	Reset Event History Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_ENE	Reset Energy Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_MML	Reset Max/Min Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_HAL	Reset Hardware Alarm Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RSTDNPE	Reset DNP Event Queue Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
PMTRIG	PM Trigger Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA1	Trigger Reason 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA2	Trigger Reason 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA3	Trigger Reason 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA4	Trigger Reason 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
Logic 2			
			Top

Logic 3			
Top			
Setting	Description	Range	Value
TR	Other Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M2PT + Z2GT + 51GT + 51QT + OC
TRQUAL	Qualified Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M1P + Z1G
TRCOMM	Communications-Assisted Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M2P + Z2G
TRSOTF	Switch-Onto-Fault Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M2P + Z2G + 50P1
DTT	Direct Transfer Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
ULTR	Unlatch Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	!(50L + 51G)
PT1	Permissive Trip 1 Equation (used for ECOMM = POTT, DCUB1, or DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	IN102
PT2	Permissive Trip 2 Equation (used for ECOMM = DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LOG1	Loss-of-Guard 1 Equation (used for ECOMM = DCUB1 or DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LOG2	Loss-of-Guard 2 Equation (used for ECOMM = DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
BT	Block Trip Equation (used for ECOMM = DCB) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
52A	Circuit Breaker Status Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	IN101
		Valid range = Boolean	

CL	Close Conditions Equation (other than automatic reclosing) (SELogic)	equation using word bit elements and the legal operators: !/\()* +	CC
ULCL	Unlatch Close Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79RI	Reclose Initiate Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79RIS	Reclose Initiate Supervision Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	52A + 79CY
79DTL	Drive-to-Lockout Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	OC
79DLS	Drive-to-Last Shot Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	79LO
79SKP	Skip Shot Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
79STL	Stall Open Interval Timing Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79BRS	Block Reset Timing Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79SEQ	Sequence Coordination Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
79CLS	Reclose Supervision Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
SET1	Set Latch Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET2	Set Latch Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET3	Set Latch Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0

SET4	Set Latch Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET5	Set Latch Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET6	Set Latch Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET7	Set Latch Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET8	Set Latch Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET9	Set Latch Bit 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET10	Set Latch Bit 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET11	Set Latch Bit 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET12	Set Latch Bit 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET13	Set Latch Bit 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET14	Set Latch Bit 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET15	Set Latch Bit 15 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET16	Set Latch Bit 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
RST1	Reset Latch Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
RST2	Reset Latch Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST3	Reset Latch Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST4	Reset Latch Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST5	Reset Latch Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST6	Reset Latch Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST7	Reset Latch Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST8	Reset Latch Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST9	Reset Latch Bit 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST10	Reset Latch Bit 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST11	Reset Latch Bit 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST12	Reset Latch Bit 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST13	Reset Latch Bit 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST14	Reset Latch Bit 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

RST15	Reset Latch Bit 15 Equation (SELogic)	elements and the legal operators: !/\()* +	0
RST16	Reset Latch Bit 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
67P1TC	Level 1 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
67P2TC	Level 2 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
67P3TC	Level 3 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
67P4TC	Level 4 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
67G1TC	Level 1 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
67G2TC	Level 2 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
67G3TC	Level 3 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
67G4TC	Level 4 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
67Q1TC	Level 1 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
67Q2TC	Level 2 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
67Q3TC	Level 3 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
67Q4TC	Level 4 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
		Valid range = Boolean	

51PTC	Phase Equation (SELogic)	equation using word bit elements and the legal operators: !/\()* +	1
51GTC	Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
51QTC	Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
BFI	Three-Pole Breaker Failure Initiate Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
BFTR	Breaker Failure Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
BFULTR	Breaker Failure Unlatch Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV1	Logic Variable Equation 1 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV2	Logic Variable Equation 2 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV3	Logic Variable Equation 3 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV4	Logic Variable Equation 4 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV5	Logic Variable Equation 5 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV6	Logic Variable Equation 6 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV7	Logic Variable Equation 7 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV8	Logic Variable Equation 8 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0

LV9	Logic Variable Equation 9 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV10	Logic Variable Equation 10 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV11	Logic Variable Equation 11 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV12	Logic Variable Equation 12 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV13	Logic Variable Equation 13 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV14	Logic Variable Equation 14 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV15	Logic Variable Equation 15 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV16	Logic Variable Equation 16 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV17	Logic Variable Equation 17 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV18	Logic Variable Equation 18 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV19	Logic Variable Equation 19 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV20	Logic Variable Equation 20 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV21	Logic Variable Equation 21 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV22	Logic Variable Equation 22 (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
LV23	Logic Variable Equation 23 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV24	Logic Variable Equation 24 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV25	Logic Variable Equation 25 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV26	Logic Variable Equation 26 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV27	Logic Variable Equation 27 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV28	Logic Variable Equation 28 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV29	Logic Variable Equation 29 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV30	Logic Variable Equation 30 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV31	Logic Variable Equation 31 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV32	Logic Variable Equation 32 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV1	SELogic Control Equation Variable 1 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV2	SELogic Control Equation Variable 2 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV3	SELogic Control Equation Variable 3 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

SV4	SELogic Control Equation Variable 4 (SELogic)	elements and the legal operators: !/\() * +	0
SV5	SELogic Control Equation Variable 5 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV6	SELogic Control Equation Variable 6 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV7	SELogic Control Equation Variable 7 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV8	SELogic Control Equation Variable 8 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV9	SELogic Control Equation Variable 9 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV10	SELogic Control Equation Variable 10 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV11	SELogic Control Equation Variable 11 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV12	SELogic Control Equation Variable 12 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV13	SELogic Control Equation Variable 13 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV14	SELogic Control Equation Variable 14 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV15	SELogic Control Equation Variable 15 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV16	SELogic Control Equation Variable 16 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
OUT101	Output Contact 101 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	TRIP
		Valid range = Boolean	

OUT102	Output Contact 102 Equation (SELogic)	equation using word bit elements and the legal operators: !/\()* +	TRIP
OUT103	Output Contact 103 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	CLOSE
OUT104	Output Contact 104 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	KEY
OUT105	Output Contact 105 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT106	Output Contact 106 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT107	Output Contact 107 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
ALRMOUT	Output Contact ALARM Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	!(SALARM + HALARM)
OUT201	Output Contact 201 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT202	Output Contact 202 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT203	Output Contact 203 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT204	Output Contact 204 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT205	Output Contact 205 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT206	Output Contact 206 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT207	Output Contact 207 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0

OUT208	Output Contact 208 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT209	Output Contact 209 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT210	Output Contact 210 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT211	Output Contact 211 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT212	Output Contact 212 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP1	Display Point 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	52A
DP2	Display Point 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP3	Display Point 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP4	Display Point 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP5	Display Point 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP6	Display Point 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP7	Display Point 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP8	Display Point 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP9	Display Point 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
DP10	Display Point 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP11	Display Point 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP12	Display Point 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP13	Display Point 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP14	Display Point 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP15	Display Point 15 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP16	Display Point 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS1	Select Setting Group 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS2	Select Setting Group 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS3	Select Setting Group 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS4	Select Setting Group 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS5	Select Setting Group 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS6	Select Setting Group 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	/M2P + /Z2G

ER	Event Report Trigger Conditions Equation (SELogic)	elements and the legal operators: !/\() * +	+ /51G + /51Q + /50P1 + /LOP
FAULT	Fault Indication Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	51G + 51Q + M2P + Z2G
BSYNCH	Block Synchronism Check Elements Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	52A
CLMON	Close Bus Monitor Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
BKMON	Breaker Monitor Initiation Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	TRIP
BKCLS	Breaker Monitor Close Initiation Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	CLOSE
E32IV	Enable for V0 Polarized and IN Polarized Elements Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
Z1XPEC	Zone 1 Phase External Control Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
Z1XGEC	Zone 1 Ground External Control Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SALARM	Software Alarm Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	BADPASS + CHGPASS + SETCHG + GRPSW + ACCESSP + PASNVAL
TMB1A	Channel A, Transmit Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB2A	Channel A, Transmit Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB3A	Channel A, Transmit Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB4A	Channel A, Transmit Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
TMB5A	Channel A, Transmit Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB6A	Channel A, Transmit Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB7A	Channel A, Transmit Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB8A	Channel A, Transmit Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB1B	Channel B, Transmit Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB2B	Channel B, Transmit Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB3B	Channel B, Transmit Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB4B	Channel B, Transmit Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB5B	Channel B, Transmit Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB6B	Channel B, Transmit Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB7B	Channel B, Transmit Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB8B	Channel B, Transmit Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RSTTRGT	Target Reset Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

RST_DEM	Reset Demand Data Equation (SELogic)	elements and the legal operators: !/\(\) * +	0
RST_PDM	Reset Peak Demand Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
RST_BK	Reset Breaker Monitor Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
RST_HIS	Reset Event History Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
RST_ENE	Reset Energy Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
RST_MML	Reset Max/Min Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
RST_HAL	Reset Hardware Alarm Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
RSTDNPE	Reset DNP Event Queue Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
PMTRIG	PM Trigger Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
TREA1	Trigger Reason 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
TREA2	Trigger Reason 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
TREA3	Trigger Reason 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
TREA4	Trigger Reason 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
Logic 3			
Top			

Logic 4			
Top			
Setting	Description	Range	Value
TR	Other Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M2PT + Z2GT + 51GT + 51QT + OC
TRQUAL	Qualified Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M1P + Z1G
TRCOMM	Communications-Assisted Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M2P + Z2G
TRSOTF	Switch-Onto-Fault Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M2P + Z2G + 50P1
DTT	Direct Transfer Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
ULTR	Unlatch Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	!(50L + 51G)
PT1	Permissive Trip 1 Equation (used for ECOMM = POTT, DCUB1, or DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	IN102
PT2	Permissive Trip 2 Equation (used for ECOMM = DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LOG1	Loss-of-Guard 1 Equation (used for ECOMM = DCUB1 or DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LOG2	Loss-of-Guard 2 Equation (used for ECOMM = DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
BT	Block Trip Equation (used for ECOMM = DCB) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
52A	Circuit Breaker Status Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	IN101
		Valid range = Boolean	

CL	Close Conditions Equation (other than automatic reclosing) (SELogic)	equation using word bit elements and the legal operators: !/\()* +	CC
ULCL	Unlatch Close Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79RI	Reclose Initiate Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79RIS	Reclose Initiate Supervision Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	52A + 79CY
79DTL	Drive-to-Lockout Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	OC
79DLS	Drive-to-Last Shot Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	79LO
79SKP	Skip Shot Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
79STL	Stall Open Interval Timing Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79BRS	Block Reset Timing Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79SEQ	Sequence Coordination Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
79CLS	Reclose Supervision Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
SET1	Set Latch Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET2	Set Latch Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET3	Set Latch Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0

SET4	Set Latch Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET5	Set Latch Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET6	Set Latch Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET7	Set Latch Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET8	Set Latch Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET9	Set Latch Bit 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET10	Set Latch Bit 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET11	Set Latch Bit 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET12	Set Latch Bit 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET13	Set Latch Bit 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET14	Set Latch Bit 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET15	Set Latch Bit 15 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET16	Set Latch Bit 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
RST1	Reset Latch Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
RST2	Reset Latch Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST3	Reset Latch Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST4	Reset Latch Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST5	Reset Latch Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST6	Reset Latch Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST7	Reset Latch Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST8	Reset Latch Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST9	Reset Latch Bit 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST10	Reset Latch Bit 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST11	Reset Latch Bit 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST12	Reset Latch Bit 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST13	Reset Latch Bit 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST14	Reset Latch Bit 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

RST15	Reset Latch Bit 15 Equation (SELogic)	elements and the legal operators: !/\() * +	0
RST16	Reset Latch Bit 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
67P1TC	Level 1 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67P2TC	Level 2 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67P3TC	Level 3 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67P4TC	Level 4 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G1TC	Level 1 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G2TC	Level 2 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G3TC	Level 3 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G4TC	Level 4 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q1TC	Level 1 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q2TC	Level 2 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q3TC	Level 3 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q4TC	Level 4 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
		Valid range = Boolean	

51PTC	Phase Equation (SELogic)	equation using word bit elements and the legal operators: !/\()*+	1
51GTC	Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
51QTC	Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
BFI	Three-Pole Breaker Failure Initiate Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
BFTR	Breaker Failure Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
BFULTR	Breaker Failure Unlatch Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV1	Logic Variable Equation 1 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV2	Logic Variable Equation 2 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV3	Logic Variable Equation 3 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV4	Logic Variable Equation 4 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV5	Logic Variable Equation 5 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV6	Logic Variable Equation 6 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV7	Logic Variable Equation 7 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV8	Logic Variable Equation 8 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0

LV9	Logic Variable Equation 9 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV10	Logic Variable Equation 10 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV11	Logic Variable Equation 11 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV12	Logic Variable Equation 12 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV13	Logic Variable Equation 13 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV14	Logic Variable Equation 14 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV15	Logic Variable Equation 15 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV16	Logic Variable Equation 16 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV17	Logic Variable Equation 17 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV18	Logic Variable Equation 18 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV19	Logic Variable Equation 19 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV20	Logic Variable Equation 20 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV21	Logic Variable Equation 21 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV22	Logic Variable Equation 22 (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
LV23	Logic Variable Equation 23 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV24	Logic Variable Equation 24 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV25	Logic Variable Equation 25 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV26	Logic Variable Equation 26 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV27	Logic Variable Equation 27 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV28	Logic Variable Equation 28 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV29	Logic Variable Equation 29 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV30	Logic Variable Equation 30 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV31	Logic Variable Equation 31 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV32	Logic Variable Equation 32 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV1	SELogic Control Equation Variable 1 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV2	SELogic Control Equation Variable 2 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV3	SELogic Control Equation Variable 3 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

SV4	SELogic Control Equation Variable 4 (SELogic)	elements and the legal operators: !/\() * +	0
SV5	SELogic Control Equation Variable 5 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV6	SELogic Control Equation Variable 6 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV7	SELogic Control Equation Variable 7 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV8	SELogic Control Equation Variable 8 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV9	SELogic Control Equation Variable 9 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV10	SELogic Control Equation Variable 10 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV11	SELogic Control Equation Variable 11 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV12	SELogic Control Equation Variable 12 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV13	SELogic Control Equation Variable 13 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV14	SELogic Control Equation Variable 14 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV15	SELogic Control Equation Variable 15 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV16	SELogic Control Equation Variable 16 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
OUT101	Output Contact 101 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	TRIP
		Valid range = Boolean	

OUT102	Output Contact 102 Equation (SELogic)	equation using word bit elements and the legal operators: !/\()* +	TRIP
OUT103	Output Contact 103 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	CLOSE
OUT104	Output Contact 104 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	KEY
OUT105	Output Contact 105 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT106	Output Contact 106 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT107	Output Contact 107 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
ALRMOUT	Output Contact ALARM Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	!(SALARM + HALARM)
OUT201	Output Contact 201 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT202	Output Contact 202 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT203	Output Contact 203 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT204	Output Contact 204 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT205	Output Contact 205 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT206	Output Contact 206 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT207	Output Contact 207 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0

OUT208	Output Contact 208 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT209	Output Contact 209 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT210	Output Contact 210 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT211	Output Contact 211 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT212	Output Contact 212 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP1	Display Point 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	52A
DP2	Display Point 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP3	Display Point 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP4	Display Point 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP5	Display Point 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP6	Display Point 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP7	Display Point 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP8	Display Point 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP9	Display Point 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
DP10	Display Point 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP11	Display Point 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP12	Display Point 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP13	Display Point 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP14	Display Point 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP15	Display Point 15 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP16	Display Point 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS1	Select Setting Group 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS2	Select Setting Group 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS3	Select Setting Group 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS4	Select Setting Group 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS5	Select Setting Group 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS6	Select Setting Group 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	/M2P + /Z2G

ER	Event Report Trigger Conditions Equation (SELogic)	elements and the legal operators: !/\() * +	+ /51G + /51Q + /50P1 + /LOP
FAULT	Fault Indication Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	51G + 51Q + M2P + Z2G
BSYNCH	Block Synchronism Check Elements Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	52A
CLMON	Close Bus Monitor Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
BKMON	Breaker Monitor Initiation Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	TRIP
BKCLS	Breaker Monitor Close Initiation Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	CLOSE
E32IV	Enable for V0 Polarized and IN Polarized Elements Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
Z1XPEC	Zone 1 Phase External Control Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
Z1XGEC	Zone 1 Ground External Control Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SALARM	Software Alarm Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	BADPASS + CHGPASS + SETCHG + GRPSW + ACCESSP + PASNVAL
TMB1A	Channel A, Transmit Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB2A	Channel A, Transmit Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB3A	Channel A, Transmit Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB4A	Channel A, Transmit Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
TMB5A	Channel A, Transmit Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB6A	Channel A, Transmit Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB7A	Channel A, Transmit Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB8A	Channel A, Transmit Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB1B	Channel B, Transmit Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB2B	Channel B, Transmit Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB3B	Channel B, Transmit Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB4B	Channel B, Transmit Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB5B	Channel B, Transmit Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB6B	Channel B, Transmit Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB7B	Channel B, Transmit Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB8B	Channel B, Transmit Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RSTTRGT	Target Reset Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

RST_DEM	Reset Demand Data Equation (SELogic)	elements and the legal operators: !/\() * +	0
RST_PDM	Reset Peak Demand Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_BK	Reset Breaker Monitor Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_HIS	Reset Event History Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_ENE	Reset Energy Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_MML	Reset Max/Min Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_HAL	Reset Hardware Alarm Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RSTDNPE	Reset DNP Event Queue Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
PMTRIG	PM Trigger Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA1	Trigger Reason 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA2	Trigger Reason 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA3	Trigger Reason 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA4	Trigger Reason 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
Logic 4			
			Top

Logic 5			
Top			
Setting	Description	Range	Value
TR	Other Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M2PT + Z2GT + 51GT + 51QT + OC
TRQUAL	Qualified Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M1P + Z1G
TRCOMM	Communications-Assisted Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M2P + Z2G
TRSOTF	Switch-Onto-Fault Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M2P + Z2G + 50P1
DTT	Direct Transfer Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
ULTR	Unlatch Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	!(50L + 51G)
PT1	Permissive Trip 1 Equation (used for ECOMM = POTT, DCUB1, or DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	IN102
PT2	Permissive Trip 2 Equation (used for ECOMM = DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LOG1	Loss-of-Guard 1 Equation (used for ECOMM = DCUB1 or DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LOG2	Loss-of-Guard 2 Equation (used for ECOMM = DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
BT	Block Trip Equation (used for ECOMM = DCB) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
52A	Circuit Breaker Status Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	IN101
		Valid range = Boolean	

CL	Close Conditions Equation (other than automatic reclosing) (SELogic)	equation using word bit elements and the legal operators: !/\()* +	CC
ULCL	Unlatch Close Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79RI	Reclose Initiate Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79RIS	Reclose Initiate Supervision Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	52A + 79CY
79DTL	Drive-to-Lockout Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	OC
79DLS	Drive-to-Last Shot Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	79LO
79SKP	Skip Shot Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
79STL	Stall Open Interval Timing Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79BRS	Block Reset Timing Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79SEQ	Sequence Coordination Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
79CLS	Reclose Supervision Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
SET1	Set Latch Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET2	Set Latch Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET3	Set Latch Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0

SET4	Set Latch Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET5	Set Latch Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET6	Set Latch Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET7	Set Latch Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET8	Set Latch Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET9	Set Latch Bit 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET10	Set Latch Bit 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET11	Set Latch Bit 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET12	Set Latch Bit 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET13	Set Latch Bit 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET14	Set Latch Bit 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET15	Set Latch Bit 15 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET16	Set Latch Bit 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
RST1	Reset Latch Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
RST2	Reset Latch Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST3	Reset Latch Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST4	Reset Latch Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST5	Reset Latch Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST6	Reset Latch Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST7	Reset Latch Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST8	Reset Latch Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST9	Reset Latch Bit 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST10	Reset Latch Bit 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST11	Reset Latch Bit 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST12	Reset Latch Bit 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST13	Reset Latch Bit 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST14	Reset Latch Bit 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

RST15	Reset Latch Bit 15 Equation (SELogic)	elements and the legal operators: !/\() * +	0
RST16	Reset Latch Bit 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
67P1TC	Level 1 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67P2TC	Level 2 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67P3TC	Level 3 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67P4TC	Level 4 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G1TC	Level 1 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G2TC	Level 2 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G3TC	Level 3 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67G4TC	Level 4 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q1TC	Level 1 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q2TC	Level 2 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q3TC	Level 3 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
67Q4TC	Level 4 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
		Valid range = Boolean	

51PTC	Phase Equation (SELogic)	equation using word bit elements and the legal operators: !/\()* +	1
51GTC	Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
51QTC	Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
BFI	Three-Pole Breaker Failure Initiate Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
BFTR	Breaker Failure Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
BFULTR	Breaker Failure Unlatch Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV1	Logic Variable Equation 1 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV2	Logic Variable Equation 2 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV3	Logic Variable Equation 3 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV4	Logic Variable Equation 4 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV5	Logic Variable Equation 5 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV6	Logic Variable Equation 6 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV7	Logic Variable Equation 7 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
LV8	Logic Variable Equation 8 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0

LV9	Logic Variable Equation 9 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV10	Logic Variable Equation 10 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV11	Logic Variable Equation 11 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV12	Logic Variable Equation 12 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV13	Logic Variable Equation 13 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV14	Logic Variable Equation 14 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV15	Logic Variable Equation 15 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV16	Logic Variable Equation 16 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV17	Logic Variable Equation 17 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV18	Logic Variable Equation 18 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV19	Logic Variable Equation 19 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV20	Logic Variable Equation 20 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV21	Logic Variable Equation 21 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV22	Logic Variable Equation 22 (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
LV23	Logic Variable Equation 23 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV24	Logic Variable Equation 24 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV25	Logic Variable Equation 25 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV26	Logic Variable Equation 26 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV27	Logic Variable Equation 27 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV28	Logic Variable Equation 28 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV29	Logic Variable Equation 29 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV30	Logic Variable Equation 30 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV31	Logic Variable Equation 31 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV32	Logic Variable Equation 32 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV1	SELogic Control Equation Variable 1 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV2	SELogic Control Equation Variable 2 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV3	SELogic Control Equation Variable 3 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

SV4	SELogic Control Equation Variable 4 (SELogic)	elements and the legal operators: !/\() * +	0
SV5	SELogic Control Equation Variable 5 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV6	SELogic Control Equation Variable 6 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV7	SELogic Control Equation Variable 7 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV8	SELogic Control Equation Variable 8 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV9	SELogic Control Equation Variable 9 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV10	SELogic Control Equation Variable 10 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV11	SELogic Control Equation Variable 11 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV12	SELogic Control Equation Variable 12 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV13	SELogic Control Equation Variable 13 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV14	SELogic Control Equation Variable 14 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV15	SELogic Control Equation Variable 15 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV16	SELogic Control Equation Variable 16 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
OUT101	Output Contact 101 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	TRIP
		Valid range = Boolean	

OUT102	Output Contact 102 Equation (SELogic)	equation using word bit elements and the legal operators: !/\()* +	TRIP
OUT103	Output Contact 103 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	CLOSE
OUT104	Output Contact 104 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	KEY
OUT105	Output Contact 105 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT106	Output Contact 106 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT107	Output Contact 107 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
ALRMOUT	Output Contact ALARM Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	!(SALARM + HALARM)
OUT201	Output Contact 201 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT202	Output Contact 202 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT203	Output Contact 203 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT204	Output Contact 204 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT205	Output Contact 205 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT206	Output Contact 206 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT207	Output Contact 207 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0

OUT208	Output Contact 208 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT209	Output Contact 209 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT210	Output Contact 210 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT211	Output Contact 211 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT212	Output Contact 212 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP1	Display Point 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	52A
DP2	Display Point 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP3	Display Point 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP4	Display Point 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP5	Display Point 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP6	Display Point 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP7	Display Point 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP8	Display Point 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP9	Display Point 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
DP10	Display Point 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP11	Display Point 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP12	Display Point 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP13	Display Point 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP14	Display Point 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP15	Display Point 15 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP16	Display Point 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS1	Select Setting Group 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS2	Select Setting Group 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS3	Select Setting Group 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS4	Select Setting Group 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS5	Select Setting Group 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS6	Select Setting Group 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	/M2P + /Z2G

ER	Event Report Trigger Conditions Equation (SELogic)	elements and the legal operators: !/\() * +	+ /51G + /51Q + /50P1 + /LOP
FAULT	Fault Indication Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	51G + 51Q + M2P + Z2G
BSYNCH	Block Synchronism Check Elements Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	52A
CLMON	Close Bus Monitor Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
BKMON	Breaker Monitor Initiation Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	TRIP
BKCLS	Breaker Monitor Close Initiation Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	CLOSE
E32IV	Enable for V0 Polarized and IN Polarized Elements Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
Z1XPEC	Zone 1 Phase External Control Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
Z1XGEC	Zone 1 Ground External Control Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SALARM	Software Alarm Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	BADPASS + CHGPASS + SETCHG + GRPSW + ACCESSP + PASNVAL
TMB1A	Channel A, Transmit Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB2A	Channel A, Transmit Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB3A	Channel A, Transmit Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB4A	Channel A, Transmit Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
TMB5A	Channel A, Transmit Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB6A	Channel A, Transmit Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB7A	Channel A, Transmit Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB8A	Channel A, Transmit Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB1B	Channel B, Transmit Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB2B	Channel B, Transmit Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB3B	Channel B, Transmit Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB4B	Channel B, Transmit Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB5B	Channel B, Transmit Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB6B	Channel B, Transmit Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB7B	Channel B, Transmit Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB8B	Channel B, Transmit Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RSTTRGT	Target Reset Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

RST_DEM	Reset Demand Data Equation (SELogic)	elements and the legal operators: !/\() * +	0
RST_PDM	Reset Peak Demand Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_BK	Reset Breaker Monitor Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_HIS	Reset Event History Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_ENE	Reset Energy Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_MML	Reset Max/Min Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_HAL	Reset Hardware Alarm Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RSTDNPE	Reset DNP Event Queue Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
PMTRIG	PM Trigger Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA1	Trigger Reason 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA2	Trigger Reason 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA3	Trigger Reason 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA4	Trigger Reason 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
Logic 5			
Top			

Logic 6			
Top			
Setting	Description	Range	Value
TR	Other Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M2PT + Z2GT + 51GT + 51QT + OC
TRQUAL	Qualified Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M1P + Z1G
TRCOMM	Communications-Assisted Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M2P + Z2G
TRSOTF	Switch-Onto-Fault Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	M2P + Z2G + 50P1
DTT	Direct Transfer Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
ULTR	Unlatch Trip Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	!(50L + 51G)
PT1	Permissive Trip 1 Equation (used for ECOMM = POTT, DCUB1, or DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	IN102
PT2	Permissive Trip 2 Equation (used for ECOMM = DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LOG1	Loss-of-Guard 1 Equation (used for ECOMM = DCUB1 or DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LOG2	Loss-of-Guard 2 Equation (used for ECOMM = DCUB2) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
BT	Block Trip Equation (used for ECOMM = DCB) (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
52A	Circuit Breaker Status Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	IN101
		Valid range = Boolean	

CL	Close Conditions Equation (other than automatic reclosing) (SELogic)	equation using word bit elements and the legal operators: !/\()* +	CC
ULCL	Unlatch Close Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79RI	Reclose Initiate Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79RIS	Reclose Initiate Supervision Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	52A + 79CY
79DTL	Drive-to-Lockout Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	OC
79DLS	Drive-to-Last Shot Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	79LO
79SKP	Skip Shot Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
79STL	Stall Open Interval Timing Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79BRS	Block Reset Timing Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	TRIP
79SEQ	Sequence Coordination Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
79CLS	Reclose Supervision Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
SET1	Set Latch Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET2	Set Latch Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
SET3	Set Latch Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0

SET4	Set Latch Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET5	Set Latch Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET6	Set Latch Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET7	Set Latch Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET8	Set Latch Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET9	Set Latch Bit 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET10	Set Latch Bit 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET11	Set Latch Bit 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET12	Set Latch Bit 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET13	Set Latch Bit 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET14	Set Latch Bit 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET15	Set Latch Bit 15 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
SET16	Set Latch Bit 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
RST1	Reset Latch Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
RST2	Reset Latch Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST3	Reset Latch Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST4	Reset Latch Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST5	Reset Latch Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST6	Reset Latch Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST7	Reset Latch Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST8	Reset Latch Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST9	Reset Latch Bit 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST10	Reset Latch Bit 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST11	Reset Latch Bit 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST12	Reset Latch Bit 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST13	Reset Latch Bit 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST14	Reset Latch Bit 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

RST15	Reset Latch Bit 15 Equation (SELogic)	elements and the legal operators: !/\()*+	0
RST16	Reset Latch Bit 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
67P1TC	Level 1 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
67P2TC	Level 2 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
67P3TC	Level 3 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
67P4TC	Level 4 Phase Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
67G1TC	Level 1 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
67G2TC	Level 2 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
67G3TC	Level 3 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
67G4TC	Level 4 Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
67Q1TC	Level 1 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
67Q2TC	Level 2 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
67Q3TC	Level 3 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
67Q4TC	Level 4 Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
		Valid range = Boolean	

51PTC	Phase Equation (SELogic)	equation using word bit elements and the legal operators: !/\()*+	1
51GTC	Residual Ground Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
51QTC	Negative-Sequence Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	1
BFI	Three-Pole Breaker Failure Initiate Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
BFTR	Breaker Failure Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
BFULTR	Breaker Failure Unlatch Trip Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV1	Logic Variable Equation 1 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV2	Logic Variable Equation 2 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV3	Logic Variable Equation 3 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV4	Logic Variable Equation 4 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV5	Logic Variable Equation 5 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV6	Logic Variable Equation 6 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV7	Logic Variable Equation 7 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV8	Logic Variable Equation 8 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0

LV9	Logic Variable Equation 9 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV10	Logic Variable Equation 10 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV11	Logic Variable Equation 11 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV12	Logic Variable Equation 12 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV13	Logic Variable Equation 13 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV14	Logic Variable Equation 14 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV15	Logic Variable Equation 15 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV16	Logic Variable Equation 16 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV17	Logic Variable Equation 17 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV18	Logic Variable Equation 18 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV19	Logic Variable Equation 19 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV20	Logic Variable Equation 20 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV21	Logic Variable Equation 21 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()*+	0
LV22	Logic Variable Equation 22 (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
LV23	Logic Variable Equation 23 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV24	Logic Variable Equation 24 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV25	Logic Variable Equation 25 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV26	Logic Variable Equation 26 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV27	Logic Variable Equation 27 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV28	Logic Variable Equation 28 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV29	Logic Variable Equation 29 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV30	Logic Variable Equation 30 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV31	Logic Variable Equation 31 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
LV32	Logic Variable Equation 32 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV1	SELogic Control Equation Variable 1 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV2	SELogic Control Equation Variable 2 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV3	SELogic Control Equation Variable 3 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

SV4	SELogic Control Equation Variable 4 (SELogic)	elements and the legal operators: !/\() * +	0
SV5	SELogic Control Equation Variable 5 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV6	SELogic Control Equation Variable 6 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV7	SELogic Control Equation Variable 7 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV8	SELogic Control Equation Variable 8 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV9	SELogic Control Equation Variable 9 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV10	SELogic Control Equation Variable 10 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV11	SELogic Control Equation Variable 11 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV12	SELogic Control Equation Variable 12 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV13	SELogic Control Equation Variable 13 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV14	SELogic Control Equation Variable 14 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV15	SELogic Control Equation Variable 15 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SV16	SELogic Control Equation Variable 16 (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
OUT101	Output Contact 101 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	TRIP
		Valid range = Boolean	

OUT102	Output Contact 102 Equation (SELogic)	equation using word bit elements and the legal operators: !/\()* +	TRIP
OUT103	Output Contact 103 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	CLOSE
OUT104	Output Contact 104 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	KEY
OUT105	Output Contact 105 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT106	Output Contact 106 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT107	Output Contact 107 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
ALRMOUT	Output Contact ALARM Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	!(SALARM + HALARM)
OUT201	Output Contact 201 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT202	Output Contact 202 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT203	Output Contact 203 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT204	Output Contact 204 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT205	Output Contact 205 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT206	Output Contact 206 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT207	Output Contact 207 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0

OUT208	Output Contact 208 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT209	Output Contact 209 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT210	Output Contact 210 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT211	Output Contact 211 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
OUT212	Output Contact 212 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP1	Display Point 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	52A
DP2	Display Point 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP3	Display Point 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP4	Display Point 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP5	Display Point 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP6	Display Point 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP7	Display Point 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP8	Display Point 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
DP9	Display Point 9 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
DP10	Display Point 10 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP11	Display Point 11 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP12	Display Point 12 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP13	Display Point 13 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP14	Display Point 14 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP15	Display Point 15 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
DP16	Display Point 16 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS1	Select Setting Group 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS2	Select Setting Group 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS3	Select Setting Group 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS4	Select Setting Group 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS5	Select Setting Group 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SS6	Select Setting Group 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	/M2P + /Z2G

ER	Event Report Trigger Conditions Equation (SELogic)	elements and the legal operators: !/\() * +	+ /51G + /51Q + /50P1 + /LOP
FAULT	Fault Indication Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	51G + 51Q + M2P + Z2G
BSYNCH	Block Synchronism Check Elements Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	52A
CLMON	Close Bus Monitor Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
BKMON	Breaker Monitor Initiation Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	TRIP
BKCLS	Breaker Monitor Close Initiation Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	CLOSE
E32IV	Enable for V0 Polarized and IN Polarized Elements Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	1
Z1XPEC	Zone 1 Phase External Control Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
Z1XGEC	Zone 1 Ground External Control Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
SALARM	Software Alarm Conditions Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	BADPASS + CHGPASS + SETCHG + GRPSW + ACCESSP + PASNVAL
TMB1A	Channel A, Transmit Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB2A	Channel A, Transmit Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB3A	Channel A, Transmit Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB4A	Channel A, Transmit Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\() * +	
TMB5A	Channel A, Transmit Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB6A	Channel A, Transmit Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB7A	Channel A, Transmit Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB8A	Channel A, Transmit Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB1B	Channel B, Transmit Bit 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB2B	Channel B, Transmit Bit 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB3B	Channel B, Transmit Bit 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB4B	Channel B, Transmit Bit 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB5B	Channel B, Transmit Bit 5 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB6B	Channel B, Transmit Bit 6 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB7B	Channel B, Transmit Bit 7 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TMB8B	Channel B, Transmit Bit 8 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RSTTRGT	Target Reset Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
		Valid range = Boolean equation using word bit	

RST_DEM	Reset Demand Data Equation (SELogic)	elements and the legal operators: !/\() * +	0
RST_PDM	Reset Peak Demand Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_BK	Reset Breaker Monitor Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_HIS	Reset Event History Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_ENE	Reset Energy Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_MML	Reset Max/Min Data Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RST_HAL	Reset Hardware Alarm Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
RSTDNPE	Reset DNP Event Queue Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
PMTRIG	PM Trigger Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA1	Trigger Reason 1 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA2	Trigger Reason 2 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA3	Trigger Reason 3 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
TREA4	Trigger Reason 4 Equation (SELogic)	Valid range = Boolean equation using word bit elements and the legal operators: !/\() * +	0
Logic 6			
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Modbus			
			Top
Setting	Description	Range	Value
MOD_001	USER REG#1	Range = Maximum of 1 Digital Elements	IA
MOD_002	USER REG#2	Range = Maximum of 1 Digital Elements	IAFA
MOD_003	USER REG#3	Range = Maximum of 1 Digital Elements	IB
MOD_004	USER REG#4	Range = Maximum of 1 Digital Elements	IBFA
MOD_005	USER REG#5	Range = Maximum of 1 Digital Elements	IC
MOD_006	USER REG#6	Range = Maximum of 1 Digital Elements	ICFA
MOD_007	USER REG#7	Range = Maximum of 1 Digital Elements	IG
MOD_008	USER REG#8	Range = Maximum of 1 Digital Elements	IGFA
MOD_009	USER REG#9	Range = Maximum of 1 Digital Elements	IN
MOD_010	USER REG#10	Range = Maximum of 1 Digital Elements	INFA
MOD_011	USER REG#11	Range = Maximum of 1 Digital Elements	VA
MOD_012	USER REG#12	Range = Maximum of 1 Digital Elements	RESERVED
MOD_013	USER REG#13	Range = Maximum of 1 Digital Elements	VAFA
MOD_014	USER REG#14	Range = Maximum of 1 Digital Elements	VB
MOD_015	USER REG#15	Range = Maximum of 1 Digital Elements	RESERVED
MOD_016	USER REG#16	Range = Maximum of 1 Digital Elements	VBFA
MOD_017	USER REG#17	Range = Maximum of 1 Digital Elements	VC
MOD_018	USER REG#18	Range = Maximum of 1 Digital Elements	RESERVED
MOD_019	USER REG#19	Range = Maximum of 1 Digital Elements	VCFA
MOD_020	USER REG#20	Range = Maximum of 1 Digital Elements	VS
MOD_021	USER REG#21	Range = Maximum of 1 Digital Elements	RESERVED
MOD_022	USER REG#22	Range = Maximum of 1 Digital Elements	VSFA
		Range = Maximum of 1	

MOD_023	USER REG#23	Digital Elements	KW3
MOD_024	USER REG#24	Range = Maximum of 1 Digital Elements	RESERVED
MOD_025	USER REG#25	Range = Maximum of 1 Digital Elements	KVAR3
MOD_026	USER REG#26	Range = Maximum of 1 Digital Elements	RESERVED
MOD_027	USER REG#27	Range = Maximum of 1 Digital Elements	PF3
MOD_028	USER REG#28	Range = Maximum of 1 Digital Elements	LDPF3
MOD_029	USER REG#29	Range = Maximum of 1 Digital Elements	FREQ
MOD_030	USER REG#30	Range = Maximum of 1 Digital Elements	VDC
MOD_031	USER REG#31	Range = Maximum of 1 Digital Elements	MWH3I
MOD_032	USER REG#32	Range = Maximum of 1 Digital Elements	RESERVED
MOD_033	USER REG#33	Range = Maximum of 1 Digital Elements	MWH3O
MOD_034	USER REG#34	Range = Maximum of 1 Digital Elements	RESERVED
MOD_035	USER REG#35	Range = Maximum of 1 Digital Elements	MVRH3I
MOD_036	USER REG#36	Range = Maximum of 1 Digital Elements	RESERVED
MOD_037	USER REG#37	Range = Maximum of 1 Digital Elements	MVRH3O
MOD_038	USER REG#38	Range = Maximum of 1 Digital Elements	RESERVED
MOD_039	USER REG#39	Range = Maximum of 1 Digital Elements	ACTGRP
MOD_040	USER REG#40	Range = Maximum of 1 Digital Elements	ROW_0
MOD_041	USER REG#41	Range = Maximum of 1 Digital Elements	ROW_1
MOD_042	USER REG#42	Range = Maximum of 1 Digital Elements	ROW_31
MOD_043	USER REG#43	Range = Maximum of 1 Digital Elements	ROW_19
MOD_044	USER REG#44	Range = Maximum of 1 Digital Elements	NA
MOD_045	USER REG#45	Range = Maximum of 1 Digital Elements	NA
MOD_046	USER REG#46	Range = Maximum of 1 Digital Elements	NA
MOD_047	USER REG#47	Range = Maximum of 1 Digital Elements	NA
MOD_048	USER REG#48	Range = Maximum of 1	NA

		Digital Elements	
MOD_049	USER REG#49	Range = Maximum of 1 Digital Elements	NA
MOD_050	USER REG#50	Range = Maximum of 1 Digital Elements	NA
MOD_051	USER REG#51	Range = Maximum of 1 Digital Elements	NA
MOD_052	USER REG#52	Range = Maximum of 1 Digital Elements	NA
MOD_053	USER REG#53	Range = Maximum of 1 Digital Elements	NA
MOD_054	USER REG#54	Range = Maximum of 1 Digital Elements	NA
MOD_055	USER REG#55	Range = Maximum of 1 Digital Elements	NA
MOD_056	USER REG#56	Range = Maximum of 1 Digital Elements	NA
MOD_057	USER REG#57	Range = Maximum of 1 Digital Elements	NA
MOD_058	USER REG#58	Range = Maximum of 1 Digital Elements	NA
MOD_059	USER REG#59	Range = Maximum of 1 Digital Elements	NA
MOD_060	USER REG#60	Range = Maximum of 1 Digital Elements	NA
MOD_061	USER REG#61	Range = Maximum of 1 Digital Elements	NA
MOD_062	USER REG#62	Range = Maximum of 1 Digital Elements	NA
MOD_063	USER REG#63	Range = Maximum of 1 Digital Elements	NA
MOD_064	USER REG#64	Range = Maximum of 1 Digital Elements	NA
MOD_065	USER REG#65	Range = Maximum of 1 Digital Elements	NA
MOD_066	USER REG#66	Range = Maximum of 1 Digital Elements	NA
MOD_067	USER REG#67	Range = Maximum of 1 Digital Elements	NA
MOD_068	USER REG#68	Range = Maximum of 1 Digital Elements	NA
MOD_069	USER REG#69	Range = Maximum of 1 Digital Elements	NA
MOD_070	USER REG#70	Range = Maximum of 1 Digital Elements	NA
MOD_071	USER REG#71	Range = Maximum of 1 Digital Elements	NA
MOD_072	USER REG#72	Range = Maximum of 1 Digital Elements	NA
MOD_073	USER REG#73	Range = Maximum of 1	NA

		Digital Elements	
MOD_074	USER REG#74	Range = Maximum of 1 Digital Elements	NA
MOD_075	USER REG#75	Range = Maximum of 1 Digital Elements	NA
MOD_076	USER REG#76	Range = Maximum of 1 Digital Elements	NA
MOD_077	USER REG#77	Range = Maximum of 1 Digital Elements	NA
MOD_078	USER REG#78	Range = Maximum of 1 Digital Elements	NA
MOD_079	USER REG#79	Range = Maximum of 1 Digital Elements	NA
MOD_080	USER REG#80	Range = Maximum of 1 Digital Elements	NA
MOD_081	USER REG#81	Range = Maximum of 1 Digital Elements	NA
MOD_082	USER REG#82	Range = Maximum of 1 Digital Elements	NA
MOD_083	USER REG#83	Range = Maximum of 1 Digital Elements	NA
MOD_084	USER REG#84	Range = Maximum of 1 Digital Elements	NA
MOD_085	USER REG#85	Range = Maximum of 1 Digital Elements	NA
MOD_086	USER REG#86	Range = Maximum of 1 Digital Elements	NA
MOD_087	USER REG#87	Range = Maximum of 1 Digital Elements	NA
MOD_088	USER REG#88	Range = Maximum of 1 Digital Elements	NA
MOD_089	USER REG#89	Range = Maximum of 1 Digital Elements	NA
MOD_090	USER REG#90	Range = Maximum of 1 Digital Elements	NA
MOD_091	USER REG#91	Range = Maximum of 1 Digital Elements	NA
MOD_092	USER REG#92	Range = Maximum of 1 Digital Elements	NA
MOD_093	USER REG#93	Range = Maximum of 1 Digital Elements	NA
MOD_094	USER REG#94	Range = Maximum of 1 Digital Elements	NA
MOD_095	USER REG#95	Range = Maximum of 1 Digital Elements	NA
MOD_096	USER REG#96	Range = Maximum of 1 Digital Elements	NA
MOD_097	USER REG#97	Range = Maximum of 1 Digital Elements	NA
MOD_098	USER REG#98	Range = Maximum of 1	NA

		Digital Elements	
MOD_099	USER REG#99	Range = Maximum of 1 Digital Elements	NA
MOD_100	USER REG#100	Range = Maximum of 1 Digital Elements	NA
MOD_101	USER REG#101	Range = Maximum of 1 Digital Elements	NA
MOD_102	USER REG#102	Range = Maximum of 1 Digital Elements	NA
MOD_103	USER REG#103	Range = Maximum of 1 Digital Elements	NA
MOD_104	USER REG#104	Range = Maximum of 1 Digital Elements	NA
MOD_105	USER REG#105	Range = Maximum of 1 Digital Elements	NA
MOD_106	USER REG#106	Range = Maximum of 1 Digital Elements	NA
MOD_107	USER REG#107	Range = Maximum of 1 Digital Elements	NA
MOD_108	USER REG#108	Range = Maximum of 1 Digital Elements	NA
MOD_109	USER REG#109	Range = Maximum of 1 Digital Elements	NA
MOD_110	USER REG#110	Range = Maximum of 1 Digital Elements	NA
MOD_111	USER REG#111	Range = Maximum of 1 Digital Elements	NA
MOD_112	USER REG#112	Range = Maximum of 1 Digital Elements	NA
MOD_113	USER REG#113	Range = Maximum of 1 Digital Elements	NA
MOD_114	USER REG#114	Range = Maximum of 1 Digital Elements	NA
MOD_115	USER REG#115	Range = Maximum of 1 Digital Elements	NA
MOD_116	USER REG#116	Range = Maximum of 1 Digital Elements	NA
MOD_117	USER REG#117	Range = Maximum of 1 Digital Elements	NA
MOD_118	USER REG#118	Range = Maximum of 1 Digital Elements	NA
MOD_119	USER REG#119	Range = Maximum of 1 Digital Elements	NA
MOD_120	USER REG#120	Range = Maximum of 1 Digital Elements	NA
MOD_121	USER REG#121	Range = Maximum of 1 Digital Elements	NA
MOD_122	USER REG#122	Range = Maximum of 1 Digital Elements	NA
MOD_123	USER REG#123	Range = Maximum of 1	NA

		Digital Elements	
MOD_124	USER REG#124	Range = Maximum of 1 Digital Elements	NA
MOD_125	USER REG#125	Range = Maximum of 1 Digital Elements	NA
MOD_126	USER REG#126	Range = Maximum of 1 Digital Elements	NA
MOD_127	USER REG#127	Range = Maximum of 1 Digital Elements	NA
MOD_128	USER REG#128	Range = Maximum of 1 Digital Elements	NA
MOD_129	USER REG#129	Range = Maximum of 1 Digital Elements	NA
MOD_130	USER REG#130	Range = Maximum of 1 Digital Elements	NA
MOD_131	USER REG#131	Range = Maximum of 1 Digital Elements	NA
MOD_132	USER REG#132	Range = Maximum of 1 Digital Elements	NA
MOD_133	USER REG#133	Range = Maximum of 1 Digital Elements	NA
MOD_134	USER REG#134	Range = Maximum of 1 Digital Elements	NA
MOD_135	USER REG#135	Range = Maximum of 1 Digital Elements	NA
MOD_136	USER REG#136	Range = Maximum of 1 Digital Elements	NA
MOD_137	USER REG#137	Range = Maximum of 1 Digital Elements	NA
MOD_138	USER REG#138	Range = Maximum of 1 Digital Elements	NA
MOD_139	USER REG#139	Range = Maximum of 1 Digital Elements	NA
MOD_140	USER REG#140	Range = Maximum of 1 Digital Elements	NA
MOD_141	USER REG#141	Range = Maximum of 1 Digital Elements	NA
MOD_142	USER REG#142	Range = Maximum of 1 Digital Elements	NA
MOD_143	USER REG#143	Range = Maximum of 1 Digital Elements	NA
MOD_144	USER REG#144	Range = Maximum of 1 Digital Elements	NA
MOD_145	USER REG#145	Range = Maximum of 1 Digital Elements	NA
MOD_146	USER REG#146	Range = Maximum of 1 Digital Elements	NA
MOD_147	USER REG#147	Range = Maximum of 1 Digital Elements	NA
MOD_148	USER REG#148	Range = Maximum of 1	NA

		Digital Elements	
MOD_149	USER REG#149	Range = Maximum of 1 Digital Elements	NA
MOD_150	USER REG#150	Range = Maximum of 1 Digital Elements	NA
MOD_151	USER REG#151	Range = Maximum of 1 Digital Elements	NA
MOD_152	USER REG#152	Range = Maximum of 1 Digital Elements	NA
MOD_153	USER REG#153	Range = Maximum of 1 Digital Elements	NA
MOD_154	USER REG#154	Range = Maximum of 1 Digital Elements	NA
MOD_155	USER REG#155	Range = Maximum of 1 Digital Elements	NA
MOD_156	USER REG#156	Range = Maximum of 1 Digital Elements	NA
MOD_157	USER REG#157	Range = Maximum of 1 Digital Elements	NA
MOD_158	USER REG#158	Range = Maximum of 1 Digital Elements	NA
MOD_159	USER REG#159	Range = Maximum of 1 Digital Elements	NA
MOD_160	USER REG#160	Range = Maximum of 1 Digital Elements	NA
MOD_161	USER REG#161	Range = Maximum of 1 Digital Elements	NA
MOD_162	USER REG#162	Range = Maximum of 1 Digital Elements	NA
MOD_163	USER REG#163	Range = Maximum of 1 Digital Elements	NA
MOD_164	USER REG#164	Range = Maximum of 1 Digital Elements	NA
MOD_165	USER REG#165	Range = Maximum of 1 Digital Elements	NA
MOD_166	USER REG#166	Range = Maximum of 1 Digital Elements	NA
MOD_167	USER REG#167	Range = Maximum of 1 Digital Elements	NA
MOD_168	USER REG#168	Range = Maximum of 1 Digital Elements	NA
MOD_169	USER REG#169	Range = Maximum of 1 Digital Elements	NA
MOD_170	USER REG#170	Range = Maximum of 1 Digital Elements	NA
MOD_171	USER REG#171	Range = Maximum of 1 Digital Elements	NA
MOD_172	USER REG#172	Range = Maximum of 1 Digital Elements	NA
MOD_173	USER REG#173	Range = Maximum of 1	NA

		Digital Elements	
MOD_174	USER REG#174	Range = Maximum of 1 Digital Elements	NA
MOD_175	USER REG#175	Range = Maximum of 1 Digital Elements	NA
MOD_176	USER REG#176	Range = Maximum of 1 Digital Elements	NA
MOD_177	USER REG#177	Range = Maximum of 1 Digital Elements	NA
MOD_178	USER REG#178	Range = Maximum of 1 Digital Elements	NA
MOD_179	USER REG#179	Range = Maximum of 1 Digital Elements	NA
MOD_180	USER REG#180	Range = Maximum of 1 Digital Elements	NA
MOD_181	USER REG#181	Range = Maximum of 1 Digital Elements	NA
MOD_182	USER REG#182	Range = Maximum of 1 Digital Elements	NA
MOD_183	USER REG#183	Range = Maximum of 1 Digital Elements	NA
MOD_184	USER REG#184	Range = Maximum of 1 Digital Elements	NA
MOD_185	USER REG#185	Range = Maximum of 1 Digital Elements	NA
MOD_186	USER REG#186	Range = Maximum of 1 Digital Elements	NA
MOD_187	USER REG#187	Range = Maximum of 1 Digital Elements	NA
MOD_188	USER REG#188	Range = Maximum of 1 Digital Elements	NA
MOD_189	USER REG#189	Range = Maximum of 1 Digital Elements	NA
MOD_190	USER REG#190	Range = Maximum of 1 Digital Elements	NA
MOD_191	USER REG#191	Range = Maximum of 1 Digital Elements	NA
MOD_192	USER REG#192	Range = Maximum of 1 Digital Elements	NA
MOD_193	USER REG#193	Range = Maximum of 1 Digital Elements	NA
MOD_194	USER REG#194	Range = Maximum of 1 Digital Elements	NA
MOD_195	USER REG#195	Range = Maximum of 1 Digital Elements	NA
MOD_196	USER REG#196	Range = Maximum of 1 Digital Elements	NA
MOD_197	USER REG#197	Range = Maximum of 1 Digital Elements	NA
MOD_198	USER REG#198	Range = Maximum of 1	NA

		Digital Elements	
MOD_199	USER REG#199	Range = Maximum of 1 Digital Elements	NA
MOD_200	USER REG#200	Range = Maximum of 1 Digital Elements	NA
MOD_201	USER REG#201	Range = Maximum of 1 Digital Elements	NA
MOD_202	USER REG#202	Range = Maximum of 1 Digital Elements	NA
MOD_203	USER REG#203	Range = Maximum of 1 Digital Elements	NA
MOD_204	USER REG#204	Range = Maximum of 1 Digital Elements	NA
MOD_205	USER REG#205	Range = Maximum of 1 Digital Elements	NA
MOD_206	USER REG#206	Range = Maximum of 1 Digital Elements	NA
MOD_207	USER REG#207	Range = Maximum of 1 Digital Elements	NA
MOD_208	USER REG#208	Range = Maximum of 1 Digital Elements	NA
MOD_209	USER REG#209	Range = Maximum of 1 Digital Elements	NA
MOD_210	USER REG#210	Range = Maximum of 1 Digital Elements	NA
MOD_211	USER REG#211	Range = Maximum of 1 Digital Elements	NA
MOD_212	USER REG#212	Range = Maximum of 1 Digital Elements	NA
MOD_213	USER REG#213	Range = Maximum of 1 Digital Elements	NA
MOD_214	USER REG#214	Range = Maximum of 1 Digital Elements	NA
MOD_215	USER REG#215	Range = Maximum of 1 Digital Elements	NA
MOD_216	USER REG#216	Range = Maximum of 1 Digital Elements	NA
MOD_217	USER REG#217	Range = Maximum of 1 Digital Elements	NA
MOD_218	USER REG#218	Range = Maximum of 1 Digital Elements	NA
MOD_219	USER REG#219	Range = Maximum of 1 Digital Elements	NA
MOD_220	USER REG#220	Range = Maximum of 1 Digital Elements	NA
MOD_221	USER REG#221	Range = Maximum of 1 Digital Elements	NA
MOD_222	USER REG#222	Range = Maximum of 1 Digital Elements	NA
MOD_223	USER REG#223	Range = Maximum of 1	NA

		Digital Elements	
MOD_224	USER REG#224	Range = Maximum of 1 Digital Elements	NA
MOD_225	USER REG#225	Range = Maximum of 1 Digital Elements	NA
MOD_226	USER REG#226	Range = Maximum of 1 Digital Elements	NA
MOD_227	USER REG#227	Range = Maximum of 1 Digital Elements	NA
MOD_228	USER REG#228	Range = Maximum of 1 Digital Elements	NA
MOD_229	USER REG#229	Range = Maximum of 1 Digital Elements	NA
MOD_230	USER REG#230	Range = Maximum of 1 Digital Elements	NA
MOD_231	USER REG#231	Range = Maximum of 1 Digital Elements	NA
MOD_232	USER REG#232	Range = Maximum of 1 Digital Elements	NA
MOD_233	USER REG#233	Range = Maximum of 1 Digital Elements	NA
MOD_234	USER REG#234	Range = Maximum of 1 Digital Elements	NA
MOD_235	USER REG#235	Range = Maximum of 1 Digital Elements	NA
MOD_236	USER REG#236	Range = Maximum of 1 Digital Elements	NA
MOD_237	USER REG#237	Range = Maximum of 1 Digital Elements	NA
MOD_238	USER REG#238	Range = Maximum of 1 Digital Elements	NA
MOD_239	USER REG#239	Range = Maximum of 1 Digital Elements	NA
MOD_240	USER REG#240	Range = Maximum of 1 Digital Elements	NA
MOD_241	USER REG#241	Range = Maximum of 1 Digital Elements	NA
MOD_242	USER REG#242	Range = Maximum of 1 Digital Elements	NA
MOD_243	USER REG#243	Range = Maximum of 1 Digital Elements	NA
MOD_244	USER REG#244	Range = Maximum of 1 Digital Elements	NA
MOD_245	USER REG#245	Range = Maximum of 1 Digital Elements	NA
MOD_246	USER REG#246	Range = Maximum of 1 Digital Elements	NA
MOD_247	USER REG#247	Range = Maximum of 1 Digital Elements	NA
MOD_248	USER REG#248	Range = Maximum of 1	NA

		Digital Elements	
MOD_249	USER REG#249	Range = Maximum of 1 Digital Elements	NA
MOD_250	USER REG#250	Range = Maximum of 1 Digital Elements	NA
Modbus			
Top			

Port 2			
Top			
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
PROTO	Protocol	Select: SEL, LMD, DNP, MOD, MBA, MBB, MB8A, MB8B, MBGA, MBGB	DNP
SPEED	Baud Rate	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400, 57600	19200
PARITY	Parity	Select: O, E, N	N
STOP	Stop Bits	Select: 1, 2	1
DNPADR	DNP Address	Range = 0 to 65519	5
REPADR	DNP Address to Report to	Range = 0 to 65519	23
DNPMAP	DNP Session Map	Select: 1-3	3
DVARAI	Analog Input Default Variation	Select: 1-6	4
ECLASSB	Class for Binary Event Data	Select: 0-3	1
ECLASSC	Class for Counter Event Data	Select: 0-3	0
ECLASSA	Class for Analog Event Data	Select: 0-3	2
DECPLA	Currents Scaling Decimal Places	Select: 0-3	1
DECPLV	Voltages Scaling Decimal Places	Select: 0-3	1
DECPLM	Misc Data Scaling Decimal Places	Select: 0-3	1
ANADBA	Amps Reporting Deadband Counts	Range = 0 to 32767	100
ANADBV	Volts Reporting Deadband Counts	Range = 0 to 32767	100
ANADBM	Misc Data Reporting Deadband Counts	Range = 0 to 32767	100
TIMERQ	Minutes for Request Interval (min)	Range = 1 to 32767, I, M	2
STIMEO	Seconds to Select/Operate Time-out (seconds)	Range = 0,0 to 30,0	1,0
DRETRY	Data Link Retries	Range = 0 to 15	0
ETIMEO	Event Message Confirm Time-out (seconds)	Range = 1 to 50	5
UNSOL	Enable Unsolicited Reporting	Select: Y, N	N
MINDLY	Minimum Seconds from DCD to Tx (seconds)	Range = 0,00 to 1,00	0,05
MAXDLY	Maximum Seconds from DCD to Tx (seconds)	Range = 0,00 to 1,00	0,10
PREDLY	Settle Time from RTS ON to Tx (seconds)	Range = 0,00 to 30,00, OFF	0,00
PSTDLY	Settle Time from Tx to RTS OFF (seconds)	Range = 0,00 to 30,00	0,00
MINDIST	Event Min Fault Loc	Range = -10000,0 to 10000,0, OFF	OFF
MAXDIST	Event Max Fault Loc	Range = -10000,0 to 10000,0, OFF	OFF
EVEMODE	Event Mode	Select: SINGLE, MULTI	SINGLE
RPEVTYP	Event Report Type	Select: TRIP, ALL	ALL
Port 2			

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Port 3[Top](#)

Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
PROTO	Protocol	Select: SEL, LMD, DNP, MOD, MBA, MBB, MB8A, MB8B, MBGA, MBGB	SEL
MAXACC	Maximum Access Level	Select: 0, 1, B, 2, C	2
SPEED	Baud Rate	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400, 57600	9600
BITS	Data Bits	Select: 6-8	8
PARITY	Parity	Select: O, E, N	N
STOP	Stop Bits	Select: 1, 2	1
RTSCTS	Enable Hardware Handshaking	Select: Y, N	N
T_OUT	Minutes to Port Time-out (min)	Range = 0 to 30	15
AUTO	Send Auto Messages to Port	Select: Y, N, DTA	N
FASTOP	Fast Operate Enable	Select: Y, N	N

Port 3[Top](#)

Port F Top			
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
PROTO	Protocol	Select: SEL, LMD, DNP, MBA, MBB, MB8A, MB8B, MBGA, MBGB	SEL
MAXACC	Maximum Access Level	Select: 1, B, 2, C	C
SPEED	Baud Rate	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400, 57600	19200
BITS	Data Bits	Select: 6-8	8
PARITY	Parity	Select: O, E, N	N
STOP	Stop Bits	Select: 1, 2	1
RTSCTS	Enable Hardware Handshaking	Select: Y, N	N
T_OUT	Minutes to Port Time-out (min)	Range = 0 to 30	15
AUTO	Send Auto Messages to Port	Select: Y, N, DTA	N
FASTOP	Fast Operate Enable	Select: Y, N	N
Port F Top			

Port 5			
Top			
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
IPADDR	Device IP Address (zzz.yyy.xxx.www)	Range = ASCII string with a maximum length of 19.	172.16.20.40
SUBNETM	Subnet Mask (zzz.yyy.xxx.www)	Range = ASCII string with a maximum length of 19.	255.255.255.0
DEFRTR	Default Router (zzz.yyy.xxx.www)	Range = ASCII string with a maximum length of 19.	172.16.20.1
ETCPKA	Enable TCP Keep-Alive	Select: Y, N	Y
KAIDLE	TCP Keep-Alive Idle Range (seconds)	Range = 1 to 20	10
KAINTV	TCP Keep-Alive Interval Range (seconds)	Range = 1 to 20	10
KACNT	TCP Keep-Alive Count Range	Range = 1 to 20	5
NET5SPD	Port 5 Speed (Mbps)	Select: AUTO, 10, 100	AUTO
ETELNET	Enable Telnet	Select: Y, N	Y
MAXACC	Maximum Access Level	Select: 0, 1, B, 2, C	2
TPORT	Telnet Port	Range = 1025 to 65534, 23	23
TCBAN	Telnet Connect Banner (254 char; NA to NULL)	Range = ASCII string with a maximum length of 254.	TERMINAL SERVER
TIDLE	Telnet Port Time-out (min)	Range = 1 to 30	15
AUTO	Send Auto Messages to Port	Select: Y, N	N
FASTOP	Fast Operate Enable	Select: Y, N	N
EFTPSERV	Enable FTP	Select: Y, N	N
EHTTP	Enable HTTP Server	Select: Y, N	N
EDNP	Enable DNP Sessions	Select: 0-6	0
ESNTP	Enable SNTP Client	Select: OFF, UNICAST, MANYCAST, BROADCAST	OFF
EMODBUS	Enable Modbus	Select: 0-3	0
Port 5			
Top			

Report Top			
Setting	Description	Range	Value
SER1	24 elements max. (enter NA to null)	Valid range = 0, NA or a list of relay elements.	M1P, Z1G, M2P, Z2G, M3P, Z3G, 51G, 51Q, 50P1
SER2	24 elements max. (enter NA to null)	Valid range = 0, NA or a list of relay elements.	IN101, IN102, OUT101, OUT102, OUT103, OUT104, LOP
SER3	24 elements max. (enter NA to null)	Valid range = 0, NA or a list of relay elements.	KEY, Z3RB, PTRX
Report Top			

Text			
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Setting	Description	Range	Value
NLB1	Local Bit LB_ Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	
CLB1	Clear Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
SLB1	Set Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
PLB1	Pulse Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
NLB2	Local Bit LB_ Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	
CLB2	Clear Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
SLB2	Set Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
PLB2	Pulse Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
NLB3	Local Bit LB_ Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	
CLB3	Clear Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
SLB3	Set Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
PLB3	Pulse Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
NLB4	Local Bit LB_ Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	
CLB4	Clear Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
SLB4	Set Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
PLB4	Pulse Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
NLB5	Local Bit LB_ Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	
CLB5	Clear Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
SLB5	Set Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
PLB5	Pulse Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
NLB6	Local Bit LB_ Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	
CLB6	Clear Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
		Range = ASCII string with	

SLB6	Set Local Bit LB_ Label (7 char; enter NA to null)	a maximum length of 7.	
PLB6	Pulse Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
NLB7	Local Bit LB_ Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	
CLB7	Clear Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
SLB7	Set Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
PLB7	Pulse Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
NLB8	Local Bit LB_ Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	
CLB8	Clear Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
SLB8	Set Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
PLB8	Pulse Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
NLB9	Local Bit LB_ Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	
CLB9	Clear Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
SLB9	Set Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
PLB9	Pulse Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
NLB10	Local Bit LB_ Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	
CLB10	Clear Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
SLB10	Set Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
PLB10	Pulse Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
NLB11	Local Bit LB_ Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	
CLB11	Clear Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
SLB11	Set Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
PLB11	Pulse Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
NLB12	Local Bit LB_ Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	
CLB12	Clear Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
SLB12	Set Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
PLB12	Pulse Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with	

		a maximum length of 7.	
NLB13	Local Bit LB_ Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	
CLB13	Clear Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
SLB13	Set Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
PLB13	Pulse Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
NLB14	Local Bit LB_ Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	
CLB14	Clear Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
SLB14	Set Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
PLB14	Pulse Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
NLB15	Local Bit LB_ Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	
CLB15	Clear Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
SLB15	Set Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
PLB15	Pulse Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
NLB16	Local Bit LB_ Name (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	
CLB16	Clear Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
SLB16	Set Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
PLB16	Pulse Local Bit LB_ Label (7 char; enter NA to null)	Range = ASCII string with a maximum length of 7.	
DP1_1	Display Point DP_ Label (displays if DP_ = logical 1; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP1_0	Display Point DP_ Label (displays if DP_ = logical 0; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	SE CATEMU
DP2_1	Display Point DP_ Label (displays if DP_ = logical 1; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP2_0	Display Point DP_ Label (displays if DP_ = logical 0; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP3_1	Display Point DP_ Label (displays if DP_ = logical 1; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP3_0	Display Point DP_ Label (displays if DP_ = logical 0; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP4_1	Display Point DP_ Label (displays if DP_ = logical 1; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP4_0	Display Point DP_ Label (displays if DP_ = logical 0; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP5_1	Display Point DP_ Label (displays if DP_ = logical 1; 16	Range = ASCII string with	

	char; enter NA to null)	a maximum length of 16.	
DP5_0	Display Point DP_ Label (displays if DP_ = logical 0; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP6_1	Display Point DP_ Label (displays if DP_ = logical 1; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP6_0	Display Point DP_ Label (displays if DP_ = logical 0; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP7_1	Display Point DP_ Label (displays if DP_ = logical 1; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP7_0	Display Point DP_ Label (displays if DP_ = logical 0; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP8_1	Display Point DP_ Label (displays if DP_ = logical 1; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP8_0	Display Point DP_ Label (displays if DP_ = logical 0; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP9_1	Display Point DP_ Label (displays if DP_ = logical 1; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP9_0	Display Point DP_ Label (displays if DP_ = logical 0; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP10_1	Display Point DP_ Label (displays if DP_ = logical 1; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP10_0	Display Point DP_ Label (displays if DP_ = logical 0; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP11_1	Display Point DP_ Label (displays if DP_ = logical 1; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP11_0	Display Point DP_ Label (displays if DP_ = logical 0; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP12_1	Display Point DP_ Label (displays if DP_ = logical 1; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP12_0	Display Point DP_ Label (displays if DP_ = logical 0; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP13_1	Display Point DP_ Label (displays if DP_ = logical 1; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP13_0	Display Point DP_ Label (displays if DP_ = logical 0; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP14_1	Display Point DP_ Label (displays if DP_ = logical 1; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP14_0	Display Point DP_ Label (displays if DP_ = logical 0; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP15_1	Display Point DP_ Label (displays if DP_ = logical 1; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP15_0	Display Point DP_ Label (displays if DP_ = logical 0; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP16_1	Display Point DP_ Label (displays if DP_ = logical 1; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
DP16_0	Display Point DP_ Label (displays if DP_ = logical 0; 16 char; enter NA to null)	Range = ASCII string with a maximum length of 16.	
79LL	Last Shot Label (14 char; enter NA to null)	Range = ASCII string with a maximum length of 14.	SET RECLOSURES
79SL	Shot Counter Label (14 char; enter NA to null)	Range = ASCII string with	RECLOSE COUNT

	a maximum length of 14.	
Text		
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Cabildo, miércoles 04 de Diciembre de 2024

Señor
Nicolás Andrés García Moraga
Ingeniero Departamento de Análisis de la Operación
Gerencia de Operación
COORDINADOR ELÉCTRICO NACIONAL
Presente

Ref.: Informe de Falla por Interrupción Forzada por protecciones en la Línea 44 kV Catemu – Los Ángeles 14-11-2024

Estimado Señor García:

En respuesta a la solicitud de información, le enviamos la presente carta informe con respecto a la referencia y las afectaciones a nuestra faena. Se debe aclarar que la falla corresponde a una falla externa por parte del proveedor Chilquinta.

- Ámbito de las causas del Evento

El evento sucede en la línea de transmisión externa a nuestra faena. Según información proporcionada telefónicamente por parte de Chilquinta el día del evento, se debió a que actuó una de las protecciones eléctricas de Chilquinta, específicamente en su estructura 137 se les dañó un aislador que procedieron a reparar (informan que a las 15:45 llegan al lugar y que la reparación tardaría de 2 a 3 horas). La causa informada fue que se dañó un aislador, información que se corrobora al revisar el informe IF 2024005132 que se encuentra en la plataforma digital www.coordinador.cl realizado por Chilquinta.

- Ámbito de las consecuencias del Evento

- No operan protecciones Eléctricas en nuestra faena.
- El evento tuvo una afectación total en nuestra Faena, dejando todos los sectores sin energía, desde el punto desde donde comienza la transmisión de Energía en la subestación los Ángeles. La potencia interrumpida es de 3,5 MW.
- El corte de energía tuvo una duración aproximada de 6,4 horas por los que la energía interrumpida es de 22,4 MWh aproximadamente.
- Por información otorgada por CDC Chilquinta el evento comienza a las 12:18 horas. El término y por tanto la hora de normalización de las instalaciones, se informa a las 18:40 horas previa coordinación con los encargados en Faena Cerro Negro. Se retroalimenta a Chilquinta con las mediciones de nuestros medidores, que indicaron la normalización de la energía.
- Tras maniobras de normalización internas en nuestra faena, finalmente se conecta con carga al sistema a las 19:15 horas.
- Como se menciona en puntos anteriores, se recupera el 100% de la energía por parte de Chilquinta en nuestra faena, es decir se retoma la potencia de 3,5 MW aproximadamente (las diferencias

pueden darse en las primeras horas al ir poniendo en marcha nuestros equipos). Aproximadamente a las 21:00 nuestra faena queda con plena carga normal en el sistema.

- Ámbito de los análisis del Evento

Por lo mencionado con anterioridad, no contamos con registros de ningún tipo, que pueda ir en ayuda de la causa del evento debido a que ninguna de nuestras protecciones eléctricas operó ni completa ni parcialmente. Nuestro sistema de protecciones internos no se vio afectado. El evento se produjo en la línea de transmisión externa a nuestra faena. Dentro de nuestros protocolos, se tuvo que revisar las protecciones eléctricas y se realizó patrullaje en los 7 kilómetros de nuestra línea, no encontrando anomalías. Chilquinta informó que fue una de sus protecciones que actuó, debido al daño de uno de sus aisladores.

Sin otro particular, se despide atentamente a usted.

Maritza Baeza Cervela
Gerente HSEC
Compañía Minera Cerro Negro