BECKWITH ELECTRIC®

M-7679 IEC 61850
Function Mapping Document
Device ID = 339/347
Rev. 00

HUBBELL®

PROTOCOL

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M-7679 IEC 61850 FUNCTION MAPPING DOCUMENT

FOR USE WITH FIRMWARE VERSION D-0347V03.38.12

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Initial Release

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Introduction

1. **Implementation of Setting Group Control Block**

   NumofSG: Four setting groups are implemented.

   ActSG: The active setting group (SG) used by the logical node denotes the current profile used by the control. All the setpoints under SG are read only.

   EditSG: The editable setting group (SE) which can be used to select the profile to be edited.

   CnfEdit: A Boolean value of True confirms to edit the setpoints under SE block.

   LAcTm: Identify the time the last active profile has been changed and processed.

2. **Implementation of Reporting**

   Buffered and unbuffered reporting is implemented.

   Note: Quality update trigger option is functional.

3. **Abbreviations**

   N or U – User defined, M – Mandatory, O– Optional, NA – Not Applicable.

Alarm Handling (CALH) Function

LN: Alarm Name: CALH (Named as CALH) Instance = 0

CALH Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Data				
Common Logical Node Information				
		LN shall inherit all Mandatory Data from Common Logical Node Class		
Controls				
Mod	INC	Enable/disable Implemented as group alarm status		M
Status Information				
GrAlm	SPS	Group Alarm	3794-3795	M
Settings				
TrCls	SPG	Trip close	6700 bit 0	U
ACPwrBatSt	SPG	AC power or Battery status	6700 bit 1	U
EeSPChkS	SPG	EEPROM checksum	6700 bit 2	U
DspWac	SPG	DSP watchdog	6700 bit 3	U
GasPres	SPG	GAS Pressure	6700 bit 4	U
EeCalbChkS	SPG	EEprom calibration checksum	6700 bit 5	U
DspFail	SPG	DSP Failure	6700 bit 6	U
FlashNFmtd	SPG	Flash Not Formatted	6700 bit 7	U
MaxBrkOp	SPG	Maximum Breaker operations	6700 bit 8	U
BatFailErr	SPG	Internal Battery Failure	6700 bit 9	U
LosSensStr	SPG	LOS Sence Alarm	6700 bit 14	U
HiCurAlm	SPG	Hi Current Alarm	6700 bit 15	U

Alarm Handling (LLN0) Function

LN: ANN Name: LLN0 Instance = 0

LLN0 Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Data				
Logical Node Information				
		LN shall inherit all Mandatory Data from Common Logical Node Class		
Status Information (ST)				
ACPwrFail	SPS	AC Power Failure	3798 bit 1	U
CtlCabDscon	SPS	Control Cable Disconnection	2052 bit 4	U
CtlCabDsconA	SPS	Control Cable Disconnection A	4864 bit 0	U
CtlCabDsconB	SPS	Control Cable Disconnection B	4864 bit 5	U
CtlCabDsconC	SPS	Control Cable Disconnection C	4864 bit 7	U
CtlStOk	SPS	Control Status Ok	1906 bit 0	U
ELLosPort2	SPS	Ethernet Loss Port2	2052 bit 0	U
ELLosPort3	SPS	Ethernet Loss Port3	2052 bit 1	U
LEDR1St	SPS	Led Red Status 1	2139 bit 0	U
LEDR2St	SPS	Led Red Status 2	2140 bit 0	U
LEDR3St	SPS	Led Red Status 3	2141 bit 0	U
LEDR4St	SPS	Led Red Status 4	2142 bit 0	U
LEDR5St	SPS	Led Red Status 5	2143 bit 0	U
LEDR6St	SPS	Led Red Status 6	2144 bit 0	U
LEDR7St	SPS	Led Red Status 7	2145 bit 0	U
LEDR8St	SPS	Led Red Status 8	2146 bit 0	U
LEDR9St	SPS	Led Red Status 9	2147 bit 0	U
LEDR10St	SPS	Led Red Status 10	2148 bit 0	U
LEDR11St	SPS	Led Red Status 11	2149 bit 0	U
LEDR12St	SPS	Led Red Status 12	2150 bit 0	U
LEDR13St	SPS	Led Red Status 13	2151 bit 0	U
LEDR14St	SPS	Led Red Status 14	2152 bit 0	U
LEDR15St	SPS	Led Red Status 15	2153 bit 0	U
LEDR16St	SPS	Led Red Status 16	2154 bit 0	U
LEDR17St	SPS	Led Red Status 17	2155 bit 0	U
LEDR18St	SPS	Led Red Status 18	2156 bit 0	U
LEDR19St	SPS	Led Red Status 19	2157 bit 0	U
LEDR20St	SPS	Led Red Status 20	2158 bit 0	U
LEDR21St	SPS	Led Red Status 21	2159 bit 0	U

Alarm Handling (LLN0) Function				
LN: ANN Name: LLN0 Instance = 0				
LLN0 Class				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
LEDR22St	SPS	Led Red Status 22	2160 bit 0	U
LEDR23St	SPS	Led Red Status 23	2161 bit 0	U
LEDGrn1St	SPS	Led Green Status 1	2139 bit 1	U
LEDGrn2St	SPS	Led Green Status 2	2140 bit 1	U
LEDGrn3St	SPS	Led Green Status 3	2141 bit 1	U
LEDGrn4St	SPS	Led Green Status 4	2142 bit 1	U
LEDGrn5St	SPS	Led Green Status 5	2143 bit 1	U
LEDGrn6St	SPS	Led Green Status 6	2144 bit 1	U
LEDGrn7St	SPS	Led Green Status 7	2145 bit 1	U
LEDGrn8St	SPS	Led Green Status 8	2146 bit 1	U
LEDGrn9St	SPS	Led Green Status 9	2147 bit 1	U
LEDGrn10St	SPS	Led Green Status 10	2148 bit 1	U
LEDGrn11St	SPS	Led Green Status 11	2149 bit 1	U
LEDGrn12St	SPS	Led Green Status 12	2150 bit 1	U
LEDGrn13St	SPS	Led Green Status 13	2151 bit 1	U
LEDGrn14St	SPS	Led Green Status 14	2152 bit 1	U
LEDGrn15St	SPS	Led Green Status 15	2153 bit 1	U
LEDGrn16St	SPS	Led Green Status 16	2154 bit 1	U
LEDGrn17St	SPS	Led Green Status 17	2155 bit 1	U
LEDGrn18St	SPS	Led Green Status 18	2156 bit 1	U
LEDGrn19St	SPS	Led Green Status 19	2157 bit 1	U
LEDGrn20St	SPS	Led Green Status 20	2158 bit 1	U
LEDGrn21St	SPS	Led Green Status 21	2159 bit 1	U
LEDGrn22St	SPS	Led Green Status 22	2160 bit 1	U
LEDGrn23St	SPS	Led Green Status 23	2161 bit 1	U
LEDAmb1St	SPS	Led Amber Status 1	2139 bit 2	U
LEDAmb2St	SPS	Led Amber Status 2	2140 bit 2	U
LEDAmb3St	SPS	Led Amber Status 3	2141 bit 2	U
LEDAmb4St	SPS	Led Amber Status 4	2142 bit 2	U
LEDAmb5St	SPS	Led Amber Status 5	2143 bit 2	U
LEDAmb6St	SPS	Led Amber Status 6	2144 bit 2	U
LEDAmb7St	SPS	Led Amber Status 7	2145 bit 2	U
LEDAmb8St	SPS	Led Amber Status 8	2146 bit 2	U
LEDAmb9St	SPS	Led Amber Status 9	2147 bit 2	U
LEDAmb10St	SPS	Led Amber Status 10	2148 bit 2	U

Alarm Handling (LLN0) Function

LN: ANN Name: LLN0 Instance = 0

LLN0 Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LEDAmb11St	SPS	Led Amber Status 11	2149 bit 2	U
LEDAmb12St	SPS	Led Amber Status 12	2150 bit 2	U
LEDAmb13St	SPS	Led Amber Status 13	2151 bit 2	U
LEDAmb14St	SPS	Led Amber Status 14	2152 bit 2	U
LEDAmb15St	SPS	Led Amber Status 15	2153 bit 2	U
LEDAmb16St	SPS	Led Amber Status 16	2154 bit 2	U
LEDAmb17St	SPS	Led Amber Status 17	2155 bit 2	U
LEDAmb18St	SPS	Led Amber Status 18	2156 bit 2	U
LEDAmb19St	SPS	Led Amber Status 19	2157 bit 2	U
LEDAmb20St	SPS	Led Amber Status 20	2158 bit 2	U
LEDAmb21St	SPS	Led Amber Status 21	2159 bit 2	U
LEDAmb22St	SPS	Led Amber Status 22	2160 bit 2	U
LEDAmb23St	SPS	Led Amber Status 23	2161 bit 2	U
Loc	SPS	Lock	1906 bit 12	U

Common Logical Node

LN: LLN Name: LLN Instance = 0

LLN Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Data				
Common Logical Node Information				
		LN shall inherit all Mandatory Data from Common Logical Node Class		M
Status Information (ST)				
BMConWea	ING	Breaker monitor Contacts wear	4894	U
SwOp69	INS	69Looper	64	U
Bat1St	INS	Battery Status 1	4897	U
Bat2St	INS	Battery Status 2	4898	U
BatChgStHubb	INS	Battery Charger Status Hubbell	4901	U
BatChgTmpSns	INS	Battery Charger Temperatue Sensor	4900	U

LN: Fault Locator Name: RFLO Instance = 1

RFLO Class

Attribute Name	Attr. Type	Explanation		M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Data				
		LN shall inherit all Mandatory Data from Common Logical Node Class		M
Measured values				
FltDis	MV	Fault Distance in km	1988	M
Status Information				
FltLoop	ENS	Fault Loop	1990	O

Recloser Relay (F79) Function

LN: Autoreclosing Name: RREC (RREC_0 for F79) Instance = 1

RREC Class										
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**							**M/O/U**
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)								
Status Information										
Op	ACT	Operate/Close	1906 bits 6-8							M
AutoRecSt	ENS	Auto Reclosing Status	2508							M
Attribute Name	**Attr. Type**	**Explanation**	**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Reclose Enable	8469	10769	13069	15369	17669	19969	22269	24569	U

LN: Autoreclosing Name: RREC (RREC1_0 for F79A) Instance = 1

RREC Class										
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**							**M/O/U**
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)								
Status Information										
Op	ACT	Operate/Close	1906 bits 6							M
AutoRecSt	ENS	Auto Reclosing Status	4552							M
Attribute Name	**Attr. Type**	**Explanation**	**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Reclose Enable	30924	33049	35174	37299	39424	41549	43674	45667	U

LN: Autoreclosing Name: RREC (RREC1_0 for F79B) Instance = 1

RREC Class										
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**							**M/O/U**
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)								
Status Information										
Op	ACT	Operate/Close	1906 bits 7							M
AutoRecSt	ENS	Auto Reclosing Status	4567							M
Attribute Name	**Attr. Type**	**Explanation**	**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	**M/O/U**
Mod	INC	Reclose Enable	30931	33056	35181	37306	39431	41556	43681	45674	U

Recloser Relay (F79) Function

LN: Autoreclosing Name: RREC (RREC1_0 for F79C) Instance = 1

RREC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Op	ACT	Operate/Close	1906 bit8	M
AutoRecSt	ENS	Auto Reclosing Status	4582	M

Attribute Name	Attr. Type	Explanation	Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	M/O/U
Mod	INC	Reclose Enable	30938	33063	35188	37313	39438	41563	43688	45681	U

LN: Autoreclosing Name: RREC (RREC1_0 for F79U) Instance = 1

RREC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Op	ACT	Operate/Close	1906 bit8	M
AutoRecSt	ENS	Auto Reclosing Status	4582	M

Attribute Name	Attr. Type	Explanation	Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Op	ACT	Operate/Close	1906 bit8								M
AutoRecSt	ENS	79 Reclose Status	2508								M
Str	ACD	79U Pickup Status	4702 Bit 9								M
OpSt	ACT	79U Timeout Status	4703 Bit 9								M
StrF50HCL	ACD	79 HCL Pickup Status	4702 Bit 15								M
StrF50HCT	ACD	79 50 HCT Pickup Status	4702 Bit 13								M
StrF51	ACD	79 51 Pickup Status	4702 Bit 11								M
OpF50HCL	ACT	79 HCL Timeout Status	4703 Bit 15								M
OpF50HCT	ACT	79 50 HCT Timeout Status	4703 Bit 13								M
OpF51	ACT	79 51 Timeout Status	4703 Bit 11								M
OpF51HCT	ACT	79 51 HCT Timeout Status	4703 Bit 13								M

Attribute Name	Attr. Type	Explanation	Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	M/O/U
Mod	INC	79U Enable	46451	48751	51051	53351	55651	57951	60251	62551	U

Recloser Relay (F79) Function

LN: Autoreclosing Name: RREC (RREC1_0 for F79U) Instance = 2

RREC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Op	ACT	Operate/Close	1906 bit8	M
AutoRecSt	ENS	79 Reclose Status	2508	M
Str	ACD	79U Pickup Status	4702 Bit 10	M
OpSt	ACT	79U Timeout Status	4703 Bit 10	M
StrF50HCL	ACD	79 HCL Pickup Status	4804 Bit 0	M
StrF50HCT	ACD	79 50 HCT Pickup Status	4702 Bit 14	M
StrF51	ACD	79 51 Pickup Status	4702 Bit 12	M
OpF50HCL	ACT	79 HCL Timeout Status	4804 Bit 0	M
OpF50HCT	ACT	79 50 HCT Timeout Status	4703 Bit 14	M
OpF51	ACT	79 51 Timeout Status	4703 Bit 12	M
OpF51HCT	ACT	79 51 HCT Timeout Status	4703 Bit 14	M

Attribute Name	Attr. Type	Explanation	Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	M/O/U
Mod	INC	79U Enable	46508	48808	51108	53408	55708	58008	60308	62608	U

Breaker Trip

LN: Switch Controller Name: CSWI (TROP) Instance = 1

CSWI Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
OpOpn	ACT	Operation open switch	2253 bit 0	O
Controls				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
OpCntRsA	INC	Resetable operation counter phase A (**Status: Modbus: 1166-1167**)	1166-1167	O
OpCntRsB	INC	Resetable operation counter phase B (**Status: Modbus: 1168-1189**)	1168-1189	O
OpCntRsC	INC	Resetable operation counter phase C (**Status: Modbus: 1170-1171**)	1170-1171	O
Pos	DPC	switch general (Remote Trip) (**Status: Modbus: 1906-2511**)	1400	M
PosA	DPC	Switch L1 (Remote Trip A) (**Status: Modbus: 1906-4555)**	1404	O
PosB	DPC	Switch L2 (Remote Trip B) (**Status: Modbus: 1906-4567)**	1405	O
PosC	DPC	Switch L3 (Remote Trip C) (**Status: Modbus: 1906-4582)**	1406	O
PosRst	DPC	Remote Reset (Remote Reset) (**Status: Modbus: 1906-2511)**	1403	O

Breaker Close

LN: Switch Controller Name: CSWI (CLOP) Instance = 1

CSWI Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
OpCls	ACT	Operation close switch	2253 bit 1	O
Controls				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
OpCntRsA	INC	Resetable operation counter phase A	1166-1167	O
OpCntRsB	INC	Resetable operation counter phase B	11681169	O
OpCntRsC	INC	Resetable operation counter phase C	1170-1171	O
Pos	DPC	Switch general (Remote Close) (**Status: Modbus: 1906-2511**)	1401	M
PosA	DPC	Switch L1 (Remote Close A) (**Status: Modbus: 1906-4555)**	1407	O
PosB	DPC	Switch L2 (Remote Close B) (**Status: Modbus: 1906-4567)**	1408	O
PosC	DPC	Switch L3 (Remote Close C) (**Status: Modbus: 1906-4582)**	1409	O

Common Logical Node

LN: Common Logical Node Name: LLN0 Instance = 1

LLN0 Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information (ST)				
IPSVirout1	SPS	IPSLogic Virtual Output 1	1501 bit 0	U
IPSVirout2	SPS	IPSLogic Virtual Output 2	1501 bit 1	U
IPSVirout3	SPS	IPSLogic Virtual Output 3	1501 bit 2	U
IPSVirout4	SPS	IPSLogic Virtual Output 4	1501 bit 3	U
IPSVirout5	SPS	IPSLogic Virtual Output 5	1501 bit 4	U
IPSVirout6	SPS	IPSLogic Virtual Output 6	1501 bit 5	U
IPSVirout7	SPS	IPSLogic Virtual Output 7	1501 bit 6	U
IPSVirout8	SPS	IPSLogic Virtual Output 8	1501 bit 7	U
IPSVirout9	SPS	IPSLogic Virtual Output 9	1501 bit 8	U
IPSVirout10	SPS	IPSLogic Virtual Output 10	1501 bit 9	U
IPSVirout11	SPS	IPSLogic Virtual Output 11	1501 bit 10	U
IPSVirout12	SPS	IPSLogic Virtual Output 12	1501 bit 11	U
IPSVirout13	SPS	IPSLogic Virtual Output 13	1501 bit 12	U
IPSVirout14	SPS	IPSLogic Virtual Output 14	1501 bit 13	U
IPSVirout15	SPS	IPSLogic Virtual Output 15	1501 bit 14	U
IPSVirout16	SPS	IPSLogic Virtual Output 16	1501 bit 15	U
IPSVirout17	SPS	IPSLogic Virtual Output 17	1502 bit 0	U
IPSVirout18	SPS	IPSLogic Virtual Output 18	1502 bit 1	U
IPSVirout19	SPS	IPSLogic Virtual Output 19	1502 bit 2	U
IPSVirout20	SPS	IPSLogic Virtual Output 20	1502 bit 3	U
IPSVirout21	SPS	IPSLogic Virtual Output 21	1502 bit 4	U
IPSVirout22	SPS	IPSLogic Virtual Output 22	1502 bit 5	U
IPSVirout23	SPS	IPSLogic Virtual Output 23	1502 bit 6	U
IPSVirout24	SPS	IPSLogic Virtual Output 24	1502 bit 7	U
IPSVirout25	SPS	IPSLogic Virtual Output 25	1502 bit 8	U
IPSVirout26	SPS	IPSLogic Virtual Output 26	1502 bit 9	U
IPSVirout27	SPS	IPSLogic Virtual Output 27	1502 bit 10	U
IPSVirout28	SPS	IPSLogic Virtual Output 28	1502 bit 11	U
IPSVirout29	SPS	IPSLogic Virtual Output 29	1502 bit 12	U
IPSVirout30	SPS	IPSLogic Virtual Output 30	1502 bit 13	U
IPSVirout31	SPS	IPSLogic Virtual Output 31	1502 bit 14	U
IPSVirout32	SPS	IPSLogic Virtual Output 32	1502 bit 15	U

Common Logical Node

LN: Common Logical Node Name: LLN0 Instance = 1

LLN0 Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
CIPSVirout1	SPS	Common IPSLogic Virtual Output 1	1503 bit 0	U
CIPSVirout2	SPS	Common IPSLogic Virtual Output 2	1503 bit 1	U
CIPSVirout3	SPS	Common IPSLogic Virtual Output 3	1503 bit 2	U
CIPSVirout4	SPS	Common IPSLogic Virtual Output 4	1503 bit 3	U
CIPSVirout5	SPS	Common IPSLogic Virtual Output 5	1503 bit 4	U
CIPSVirout6	SPS	Common IPSLogic Virtual Output 6	1503 bit 5	U
CIPSVirout7	SPS	Common IPSLogic Virtual Output 7	1503 bit 6	U
CIPSVirout8	SPS	Common IPSLogic Virtual Output 8	1503 bit 7	U
CIPSVirout9	SPS	Common IPSLogic Virtual Output 9	1503 bit 8	U
CIPSVirout10	SPS	Common IPSLogic Virtual Output 10	1503 bit 9	U
CIPSVirout11	SPS	Common IPSLogic Virtual Output 11	1503 bit 10	U
CIPSVirout12	SPS	Common IPSLogic Virtual Output 12	1503 bit 11	U
CIPSVirout13	SPS	Common IPSLogic Virtual Output 13	1503 bit 12	U
CIPSVirout14	SPS	Common IPSLogic Virtual Output 14	1503 bit 13	U
CIPSVirout15	SPS	Common IPSLogic Virtual Output 15	1503 bit 14	U
CIPSVirout16	SPS	Common IPSLogic Virtual Output 16	1503 bit 15	U
CIPSVirout17	SPS	Common IPSLogic Virtual Output 17	1504 bit 0	U
CIPSVirout18	SPS	Common IPSLogic Virtual Output 18	1504 bit 1	U
CIPSVirout19	SPS	Common IPSLogic Virtual Output 19	1504 bit 2	U
CIPSVirout20	SPS	Common IPSLogic Virtual Output 20	1504 bit 3	U
CIPSVirout21	SPS	Common IPSLogic Virtual Output 21	1504 bit 4	U
CIPSVirout22	SPS	Common IPSLogic Virtual Output 22	1504 bit 5	U
CIPSVirout23	SPS	Common IPSLogic Virtual Output 23	1504 bit 6	U
CIPSVirout24	SPS	Common IPSLogic Virtual Output 24	1504 bit 7	U
CIPSVirout25	SPS	Common IPSLogic Virtual Output 25	1504 bit 8	U
CIPSVirout26	SPS	Common IPSLogic Virtual Output 26	1504 bit 9	U
CIPSVirout27	SPS	Common IPSLogic Virtual Output 27	1504 bit 10	U
CIPSVirout28	SPS	Common IPSLogic Virtual Output 28	1504 bit 11	U
CIPSVirout29	SPS	Common IPSLogic Virtual Output 29	1504 bit 12	U
CIPSVirout30	SPS	Common IPSLogic Virtual Output 30	1504 bit 13	U
CIPSVirout31	SPS	Common IPSLogic Virtual Output 31	1504 bit 14	U
CIPSVirout32	SPS	Common IPSLogic Virtual Output 32	1504 bit 15	U
TrpFail3Ph	SPS	Trip to Fail 3 Phases_System StatusBit2	2050 bit	U
TrpFailPhA	SPS	Trip to Fail Phase A_ System StatusBit2_3	2050 bit3	U

Common Logical Node

LN: Common Logical Node Name: LLN0 Instance = 1

LLN0 Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
TrpFailPhB	SPS	Trip to Fail Phase B_ System StatusBit2_4	2050 bit4	U
TrpFailPhC	SPS	Trip to Fail Phase C_ System StatusBit2_5	2050 bit5	U
ClsFail3Ph	SPS	Close to Fail 3 Phases_System StatusBit2	2050 bit2	U
ClsFailPhA	SPS	Close to Fail Phase A_ System StatusBit2_6	2050 bit6	U
ClsFailPhB	SPS	Close to Fail Phase B_ System StatusBit2_7	2050 bit7	U
ClsFailPhC	SPS	Close to Fail Phase C_ System StatusBit2_8	2050 bit8	U
RecBlk3Ph	SPS	Recloser Block 3 Phases_System StatusBit2	2050 bit	U
RecBlkPhA	SPS	Recloser Block Phase A_System StatusBit2_0	2050 bit0	U
RecBlkPhB	SPS	Recloser Block Phase B_System StatusBit2_1	2050 bit1	U
RecBlkPhC	SPS	Recloser Block Phase C_System StatusBit2_2	2050 bit2	U
UnBalCrvSel1	INC	FAST_SLOW_UNBAL1_CRVSEL	1419	U
UnBalCrvSel2	INC	FAST_SLOW_UNBAL2_CRVSEL	1420	U
Settings (SP)				
IPSInp1	SPG	IPS logic inputs 1	1410 bit 0	U
IPSInp2	SPG	IPS logic inputs 2	1410 bit 1	U
IPSInp3	SPG	IPS logic inputs 3	1410 bit 2	U
IPSInp4	SPG	IPS logic inputs 4	1410 bit 3	U
IPSInp5	SPG	IPS logic inputs 5	1410 bit 4	U
IPSInp6	SPG	IPS logic inputs 6	1410 bit 5	U
IPSInp7	SPG	IPS logic inputs 7	1410 bit 6	U
IPSInp8	SPG	IPS logic inputs 8	1410 bit 7	U
IPSInp9	SPG	IPS logic inputs 9	1410 bit 8	U
IPSInp10	SPG	IPS logic inputs 10	1410 bit 9	U
IPSInp11	SPG	IPS logic inputs 11	1410 bit 10	U
IPSInp12	SPG	IPS logic inputs 12	1410 bit 11	U
IPSInp13	SPG	IPS logic inputs 13	1410 bit 12	U
IPSInp14	SPG	IPS logic inputs 14	1410 bit 13	U
IPSInp15	SPG	IPS logic inputs 15	1410 bit 14	U
IPSInp16	SPG	IPS logic inputs 16	1410 bit 15	U
IPSInp17	SPG	IPS logic inputs 17	1422 bit 0	U
IPSInp18	SPG	IPS logic inputs 18	1422 bit 1	U
IPSInp19	SPG	IPS logic inputs 19	1422 bit 2	U
IPSInp20	SPG	IPS logic inputs 20	1422 bit 3	U

Common Logical Node

LN: Common Logical Node Name: LLN0 Instance = 1

LLN0 Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
IPSInp21	SPG	IPS logic inputs 21	1422 bit 4	U
IPSInp22	SPG	IPS logic inputs 22	1422 bit 5	U
IPSInp23	SPG	IPS logic inputs 23	1422 bit 6	U
IPSInp24	SPG	IPS logic inputs 24	1422 bit 7	U
IPSInp25	SPG	IPS logic inputs 25	1422 bit 8	U
IPSInp26	SPG	IPS logic inputs 26	1422 bit 9	U
IPSInp27	SPG	IPS logic inputs 27	1422 bit 10	U
IPSInp28	SPG	IPS logic inputs 28	1422 bit 11	U
IPSInp29	SPG	IPS logic inputs 29	1422 bit 12	U
IPSInp30	SPG	IPS logic inputs 30	1422 bit 13	U
IPSInp31	SPG	IPS logic inputs 31	1422 bit 14	U
IPSInp32	SPG	IPS logic inputs 32	1422 bit 15	U
IPSInp33	SPG	IPS logic inputs 33	1423 bit 0	U
IPSInp34	SPG	IPS logic inputs 34	1423 bit 1	U
IPSInp35	SPG	IPS logic inputs 35	1423 bit 2	U
IPSInp36	SPG	IPS logic inputs 36	1423 bit 3	U
IPSInp37	SPG	IPS logic inputs 37	1423 bit 4	U
IPSInp38	SPG	IPS logic inputs 38	1423 bit 5	U
IPSInp39	SPG	IPS logic inputs 39	1423 bit 6	U
IPSInp40	SPG	IPS logic inputs 40	1423 bit 7	U
IPSInp41	SPG	IPS logic inputs 41	1423 bit 8	U
IPSInp42	SPG	IPS logic inputs 42	1423 bit 9	U
IPSInp43	SPG	IPS logic inputs 43	1423 bit 10	U
IPSInp44	SPG	IPS logic inputs 44	1423 bit 11	U
IPSInp45	SPG	IPS logic inputs 45	1423 bit 12	U
IPSInp46	SPG	IPS logic inputs 46	1423 bit 13	U
IPSInp47	SPG	IPS logic inputs 47	1423 bit 14	U
IPSInp48	SPG	IPS logic inputs 48	1423 bit 15	U
IPSInp49	SPG	IPS logic inputs 49	1424 bit 0	U
IPSInp50	SPG	IPS logic inputs 50	1424 bit 1	U
IPSInp51	SPG	IPS logic inputs 51	1424 bit 2	U
IPSInp52	SPG	IPS logic inputs 52	1424 bit 3	U
IPSInp53	SPG	IPS logic inputs 53	1424 bit 4	U
IPSInp54	SPG	IPS logic inputs 54	1424 bit 5	U

Common Logical Node

LN: Common Logical Node Name: LLN0 Instance = 1

LLN0 Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
IPSInp55	SPG	IPS logic inputs 55	1424 bit 6	U
IPSInp56	SPG	IPS logic inputs 56	1424 bit 7	U
IPSInp57	SPG	IPS logic inputs 57	1424 bit 8	U
IPSInp58	SPG	IPS logic inputs 58	1424 bit 9	U
IPSInp59	SPG	IPS logic inputs 59	1424 bit 10	U
IPSInp60	SPG	IPS logic inputs 60	1424 bit 11	U
IPSInp61	SPG	IPS logic inputs 61	1424 bit 12	U
IPSInp62	SPG	IPS logic inputs 62	1424 bit 13	U
IPSInp63	SPG	IPS logic inputs 63	1424 bit 14	U
IPSInp64	SPG	IPS logic inputs 64	1424 bit 15	U

Cold Load Pickup (FCLPR) Function

LN: Cold Load Pickup Name: RREC (CLPRREC_1 for CLPR) Instance = 1

RREC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
AutoRecSt	ENS	Reclose State	2508	M
CLPActPU	SPS	CLP Active Pickup	4869 bit 2	M
CLPActTmO	SPS	CLP Active Timeout	4869 bit 3	M
CLPArmPU	SPS	CLP Armed Pickup	4869 bit 0	M
CLPArmTmO	SPS	CLP Armed Timeout	4869 bit 1	M
CLPblk	SPS	CLP Block	4868 bit 1	M
CLPBMTPU	SPS	CLP BMT Pickup	4869 bit 10	M
CLPBMTTmO	SPS	CLP BMT Timeout	4869 bit 11	M
CLPInit	SPS	CLP Initiate	4868 bit 3	M
CLPLO79	SPS	CLP LO 79	4868 bit 4	M
CLPLoAGndPU	SPS	CLP Load Active Ground Pickup	4869 bit 6	M
CLPLoAGndT-mO	SPS	CLP Load Active Ground Timeout	4869 bit 7	M
CLPLoAPhPU	SPS	CLP Load Active Phase Pickup	4869 bit 3	M
CLPLoAPhTmO	SPS	CLP Load Active Phase Timeout	4869 bit 4	M
CLPLoAResPU	SPS	CLP Load Active Residual Pickup	4869 bit 12	M
CLPLoAResT-mO	SPS	CLP Load Active Residual Timeout	4869 bit 13	M
CLPOvActPU	SPS	CLP Override Active Pickup	4869 bit 8	M
CLPOvActTmO	SPS	CLP Override Active Timeout	4869 bit 9	M
CLPRs	SPS	CLP Reset	4868 bit 2	M
CLPSt	INS	CLP Status	4869	M
CLPStCmd	INS	CLP Status Cmd	4868	M
CLPStDrp	INS	CLP Status Drop	4870	M
CmdCLPInit	INS	CLP Initiate	4435, 4436	M
CLPBlkEna	SPG	CLP Block Enable	3942-3943 bit 18	O
Measured Values				
BMTGndTms		CLP BMT Ground Timer	4875	M
BMTPhsTms		CLP BMT Phase Timer	4874	M
BMTResTms		CLP BMT Residual Timer	4896	M

Cold Load Pickup (FCLPR) Function

LN: Cold Load Pickup Name: RREC (CLPRREC_1 for CLPR) Instance = 1

RREC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
InitActTms		CLP Initiate Active Timer	4873	M
MinGndStr		CLP Min Ground Pickup	4877	M
MinPhsStr		CLP Min Phase Pickup	4876	M
MinResStr		CLP Min Residual Pickup	4895	M
OpnToArmTms		CLP Open To Arm Timer	4871	M
OvActTms		CLP Override Active Timer	4872	M

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	CLP Enable	8608	10908	13208	15508	17808	20108	22408	24708	O

LN: Cold Load Pickup Name: RREC (CLPU_RREC1 for CLPU) Instance = 1

RREC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
AutoRecSt	ENS	Reclose State	2508								M
Str	ACD	CLPU Pickup Status	4804 Bit 3								M
Op	ACT	System StatusBIt1	1906								M
OPSt	ACT	CLPU Timeout Status	4806 Bit 3								M
HCLOEna	INC	HCL Enable	46577	48877	51177	53477	55777	58077	60377	62677	O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	CLPU Enable	46571	48871	51171	53471	55771	58071	60371	62671	O

Cold Load Pickup (FCLPU) Function

LN: Cold Load Pickup Name: RREC (CLPU_RREC2 for CLPU) Instance = 2

RREC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
AutoRecSt		Reclose State	2508								M
Str	ACD	CLPU Pickup Status	4804 Bit 7								M
Op	ACT	System StatusBIt1	1906								M
OPSt	ACT	CLPU Timeout Status	4806 Bit 7								M
HCLOEna	INC	HCL Enable	46600	48900	51200	53500	55800	58100	60400		O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	CLPU Enable	46594	48894	51194	53494	55794	58094	60394	62694	O

Metering				
LN: Measurement Name: MMXU Instance = 1				
MMXU Class				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Data				
Common Logical Node Information				
		LN shall inherit all Mandatory Data from Common Logical Node Class		M
EEHealth	INS	External equipment health (external sensor)		O
Measured values				
TotW	MV	Total Active Power (Total P)	2237-2238	O
TotVAr	MV	Total Reactive Power (Total Q)	2239-2240	O
TotVA	MV	Total Apparent Power (Total S)	2247-2248	O
TotPF	MV	Average Power factor (Total PF)	2252	O
Hz	MV	Frequency	2222	O
HzZ	MV	Frequency on Z ide	4654	O
HzRate	MV	Rate of Change of Frequency	2223-2224	O
HzRateZ	MV	Rate of Change of Frequency on Z Side	4655-4656	O
PhV	WYE	Phase to ground voltages (VL1ER, …)	2279-2282	O
PhVZ	WYE	Phase to ground voltages (VL1ER, …) Z Side	1942, 1958, 2282	
A	WYE	Phase currents (IL1, IL2, IL3)	2275-2278	O
W	WYE	Real Power(Phase A, B, C)	2225-2226, 2229-2230, 2233-2234	O
VAr	WYE	Reactive Power (Phase A, B, C)	2227-2228, 2231-2232, 2235-2236	O
VA	WYE	Apparent Power (Phase A, B, C)	2241-2246	O
PF	WYE	Power Factor (Phase A, B, C)	2249-2251	O
Z1Real	WYE	Positive Sequence Impedance Real	4657-4658	O
Z1React	MV	Positive Sequence Impedance Reactive	4659-4660	O
PressMeter	MV	Pressure Metering	1976	O
PriA	WYE	Primary Current	1800-1801	O
PriPhV	WYE	Primary Phase Voltage	1808-1809	O
PriPhVZ	WYE	Primary Phase Voltage Z	1814-1815	O
PriPPVy	WYE	Primary VABy	4757-4758	O
PriPPVz	WYE	Primary VABz	4763-4764	O

Metering				
LN: Measurement Name: MMXU Instance = 1				
MMXU Class				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
PriVA	WYE	Primary VA	1832-1833	O
PriVAr	WYE	Primary VAr	1818-1819	O
PriW	WYE	Primary Watts	1816-1817	O
PriTotVA	MV	S3PhPrimary	1838, 1839	O
PriTotVAr	MV	Q3PhPrimary	1830, 1831	O
PriTotW	MV	P3PhPrimary	1828, 1829	O
BMACCUMPhA	MV	Breaker Accumulator Status Phase A	1977-1978	O
BMACCUMPhB	MV	Breaker Accumulator Status Phase B	1979-1980	O
BMACCUMPhC	MV	Breaker Accumulator Status Phase C	1981-1982	O
BMConLifRPhA	MV	Breaker Monitor Contacts Life Remaining Phase A	4888	O
BMConLifRPhB	MV	Breaker Monitor Contacts Life Remaining Phase B	4889	O
BMConLifRPhC	MV	Breaker Monitor Contacts Life Remaining Phase C	4890	O
BMConLifUPhA	MV	Breaker Monitor Contacts Life Used Phase A	4885	O
BMConLifUPhB	MV	Breaker Monitor Contacts Life Used Phase B	4886	O
BMConLifUPhC	MV	Breaker Monitor Contacts Life Used Phase C	4887	O
SectCntPhA	MV	Sectionalizer Counter Phase A	2006	O
SectCntPhB	MV	Sectionalizer Counter Phase B	2007	O
SectCntPhC	MV	Sectionalizer Counter Phase C	2008	O
SectRsTmrPhA	MV	Sectionalizer Reset Timer Phase A	2009	O
SectRsTmrPhB	MV	Sectionalizer Reset Timer Phase B	2010	O
SectRsTmrPhC	MV	Sectionalizer Reset Timer Phase C	2011	O
SectRstTmPhA	MV	Sectionalizer Restraint Timer Phase A	2043	O
SectRstTmPhB	MV	Sectionalizer Restraint Timer Phase B	2044	O
SectRstTmPhC	MV	Sectionalizer Restraint Timer Phase C	2045	O
SectRstTmBlk	MV	SECT_RESTRAIN_TIMERBLK_G	2046	O
FltPriPhATr1	MV	Fault Primary A 1stT	4773-4774	O
FltPriPhBTr1	MV	Fault Primary B 1stT	4775-4776	O
FltPriPhCTr1	MV	Fault Primary C 1stT	4777-4778	O
FltPriGndTr1	MV	Fault Primary G 1stT	4779-4780	O

Metering				
LN: Measurement Name: MMXU Instance = 1				
MMXU Class				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
FltPriNTr1	MV	Fault Primary N 1stT	4781-4782	O
FltSecPhATr1	MV	Fault Secondary A 1stT	4783	O
FltSecPhBTr1	MV	Fault Secondary B 1stT	4784	O
FltSecPhCTr1	MV	Fault Secondary C 1stT	4785	O
FltSecGndTr1	MV	Fault Secondary G 1stT	4786	O
FltSecNTr1	MV	Fault Secondary N 1stT	4787	O
FltSecCurPhA	MV	Fault Secondary Amps PhA	4788-4789	O
FltSecCurPhB	MV	Fault Secondary Amps PhB	4790-4791	O
FltSecCurPhC	MV	Fault Secondary Amps PhC	4792-4793	O
FltSecCurGnd	MV	Fault Secondary Amps Gnd	4794-4795	O
FltSecCurN	MV	Fault Secondary Amps Neu	4796-4797	O
FltPriCurPhA	MV	Fault Primary Amps PhA	2059-2060	O
FltPriCurPhB	MV	Fault Primary Amps PhB	2061-2062	O
FltPriCurPhC	MV	Fault Primary Amps PhC	2063-2064	O
FltPriCurGnd	MV	Fault Primary Amps Gnd	2065-2066	O
FltPriCurMax	MV	Fault Primary Amps Max	2067-2068	O
DelGndAFund	MV	HIF DeltaIGF	29105	O
DelGndATHar	MV	HIF DeltaIGH	29104	O
GndACur	MV	HIF Harm_IG1_Real	29108	O
GndATHar	MV	HIF Harm_IG2_Real	29109	O

LN: MET Name: LLN0 Instance = 1				
MMTR Class				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status				
FltTyp1STT	ENS	Fault Type 1stT	4772	O

Metering				
LN: Harmonics and Interharmonics Name: MHAI Instance = 1				
MHAI Class				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Data				
Common Logical Node Information				
		LN shall inherit all Mandatory Data from Common Logical Node Class		M
EEHealth	INS	External equipment health (external sensor)		O
Measured values				
HA	HWYE	Sequence of harmonics or interharmonics current (Phase A, Phase B, Phase C)	3378, 3379, 3380	O
HPhV	HWYE	Sequence of harmonics or interharmonics Phase to ground Voltage (Phase A, Phase B, Phase C)	3381, 3382, 3383	O
IgAng1	MV	HIF ANGLEIG1	29106	O
IgAng2	MV	HIF ANGLEIG2	29107	O
ThdA	WYE2	Current total harmonic or Interharmonic Distortion (Phase A, Phase B, Phase C)	2216-2218	O
ThdPhV	WYE2	Voltage total harmonic or Interharmonic Distortion (different methods) for phase to ground(Phase A, Phase B, Phase C)	3769-3771	O
TddA	WYE2	Current total demand Distortion(Phase A, Phase B, Phase C)	3772-3774	O

LN: Sequence Components Name: MSQI Instance = 1				
MSQI Class				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Data				
Common Logical Node Information				
		LN shall inherit all Mandatory Data from Common Logical Node Class		M
EEHealth	INS	External equipment health (external sensor)		O
Measured values				
PriSeqA	SEQ	I1MagPrimary	1840, 1841	O
PriSeqV	SEQ	V1MagPrimary	1846, 1847	O
PriSeqVZ	SEQ	Vz1MagPrimary	4168, 4169	O
SeqA	SEQ	Pos Current	2219	O
SeqV	SEQ	Pos Voltage	2216	O
SeqVZ	SEQ	Pos Voltage	2216	O
I2I1Seq	SEQ	I2I1 Secondary Sequence	4861	O
PriI2I1Seq	SEQ	I2I1 Primary Sequence	4862-4863	O
PriSeq3IO	SEQ	Sequence 3IO Primary	2012-2013	O
Seq3IO	SEQ	Sequence 3IO	0	O

Metering (MMTR) Function				
LN: Metering Name: MMTR (Named as MMTR) Instance = 0				
MMTR Class				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Data				
Common Logical Node Information				
		LN shall inherit all Mandatory Data from Common Logical Node Class		M
Metered Values				
SupWhPhALd	BCR	Leading Watt Hours Phase A	1908-1909	O
SupWhPhALg	BCR	Lagging Watt Hours Phase A	1910-1911	O
SupWhPhBLd	BCR	Leading Watt Hours Phase B	1916-1917	O
SupWhPhBLg	BCR	Lagging Watt Hours Phase B	1918-1919	O
SupWhPhCLd	BCR	Leading Watt Hours Phase C	1924-1925	O
SupWhPhCLg	BCR	Lagging Watt Hours Phase C	1926-1927	O
SupVArhPhALd	BCR	Leading VAr Hours Phase A	1912-1913	O
SupVArhPhALg	BCR	Lagging VAr Hours Phase A	1914-1915	O
SupVArhPhBLd	BCR	Leading VAr Hours Phase B	1920-1921	O
SupVArhPhBLg	BCR	Lagging VAr Hours Phase B	1922-1923	O
SupVArhPhCLd	BCR	Leading VAr Hours Phase C	1928-1929	O
SupVArhPhCLg	BCR	Lagging VAr Hours Phase C	1930-1931	O

Common Logical Node				
LN: Generic Process I/O: GGIO (GGIO_0) Instance = 1				
PTUV Class				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
BinOutSt1	SPS	Blocking 1 Output Status	2254 bit 0	M
BinOutSt2	SPS	Blocking 2 Output Status	2254 bit 1	M
BinOutSt3	SPS	Blocking 3 Output Status	2254 bit 2	U
BinOutSt4	SPS	Blocking 4 Output Status	2254 bit 3	U
BinOutSt5	SPS	Blocking 5 Output Status	2254 bit 4	U
BinOutSt6	SPS	Blocking 6 Output Status	2254 bit 5	U
BinOutSt7	SPS	Blocking 7 Output Status	2254 bit 6	U
BinOutSt8	SPS	Blocking 8 Output Status	2254 bit 7	U
BinOutSt9	SPS	Blocking 9 Output Status	2254 bit 8	U
BinOutSt10	SPS	Blocking 10 Output Status	2254 bit 9	U
BinOutSt11	SPS	Blocking 11 Output Status	2254 bit 10	U
BinOutSt12	SPS	Blocking 12 Output Status	2254 bit 11	U
Ind1	SPS	Blocking 1 Input Status	4864 bit 0	U
Ind2	SPS	Blocking 2 Input Status	4864 bit 1	U
Ind3	SPS	Blocking 3 Input Status	4864 bit 2	U
Ind4	SPS	Blocking 4 Input Status	4864 bit 3	U
Ind5	SPS	Blocking 5 Input Status	4864 bit 4	U
Ind6	SPS	Blocking 6 Input Status	4864 bit 5	U
Ind7	SPS	Blocking 7 Input Status	4864 bit 6	U
Ind8	SPS	Blocking 8 Input Status	4864 bit 7	U
Ind9	SPS	Blocking 9 Input Status	4864 bit 8	U
Ind10	SPS	Blocking 10 Input Status	4864 bit 9	U
Ind11	SPS	Blocking 11 Input Status	4864 bit 10	U
Ind12	SPS	Blocking 12 Input Status	4864 bit 11	U
IndFL	SPS	Blocking Input Fuse Loss	4864 bit 12	U
VirInd1	SPS	V1 Virtual Input	4864 bit 13	U
VirInd2	SPS	V2 Virtual Input	4864 bit 14	U
VirInd3	SPS	V3 Virtual Input	4864 bit 15	U
VirInd4	SPS	V4 Virtual Input	4865 bit 0	U
VirInd5	SPS	V5 Virtual Input	4865 bit 1	U
VirInd6	SPS	V6 Virtual Input	4865 bit 2	U
VirInd7	SPS	V7 Virtual Input	4865 bit 3	U
VirInd8	SPS	V8 Virtual Input	4865 bit 4	U
VirInd9	SPS	V9 Virtual Input	4865 bit 5	U
VirInd10	SPS	V10 Virtual Input	4865 bit 6	U
VirInd11	SPS	V11 Virtual Input	4865 bit 7	U
VirInd12	SPS	V12 Virtual Input	4865 bit 8	U

Common Logical Node				
LN: Generic Process I/O: GGIO (GGIO_0) Instance = 1				
PTUV Class				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
VirInd13	SPS	V13 Virtual Input	4865 bit 9	U
VirInd14	SPS	V14 Virtual Input	4865 bit 10	U
VirInd15	SPS	V15 Virtual Input	4865 bit 11	U
VirInd16	SPS	V16 Virtual Input	4865 bit 12	U
VirInd17	SPS	V17 Virtual Input	4865 bit 13	U
VirInd18	SPS	V18 Virtual Input	4865 bit 14	U
VirInd19	SPS	V19 Virtual Input	4865 bit 15	U

Sync Check (F25) Function

LN: Synchronism-check or Synchronizing Name: RSYN for F25 Instance =1

RSYN Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Rel	SPS	Pickup Status	2255	M
RelS	SPS	Timeout Status	2265	M

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	7022	9322	11622	13922	16222	18522	20822	23122	U

LN: Synchronism-check or Synchronizing Name: RSYN for F25 Instance =2

RSYN Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Rel	SPS	Pickup Status	4804 Bit 1	M
RelS	SPS	Timeout Status	4806 Bit 1	U

Phase Undervoltage (F27) Function

LN: Undervoltage Name: PTUV (PTUV_1 for F27) Instance = 1

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 1								M
Op	ACT	operate	2265 bit 1								M
StrPhB	ACD	Start phase B	2255 bit 2								U
OpPhB	ACT	Operate phase B	2265 bit 2								U
StrPhC	ACD	Start phase C	2255 bit 3								U
OpPhC	ACT	Operate phase c	2265 bit 3								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7062	9362	11662	13962	16262	18562	20862	23162	O

LN: Undervoltage Name: PTUV (PTUV_1 for F27) Instance = 2

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 4								M
Op	ACT	operate	2265 bit 4								M
StrPhB	ACD	Start phase B	2255 bit 5								U
OpPhB	ACT	Operate phase B	2265 bit 5								U
StrPhC	ACD	Start phase C	2255 bit 6								U
OpPhC	ACT	Operate phase c	2265 bit 6								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7068	9368	11668	13968	16268	18568	20868	23168	O

LN: Undervoltage Name: PTUV (PTUV_1 for F27) Instance = 3

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 7								M
Op	ACT	operate	2265 bit 7								M
StrPhB	ACD	Start phase B	2255 bit 8								U
OpPhB	ACT	Operate phase B	2265 bit 8								U
StrPhC	ACD	Start phase C	2255 bit 9								U
OpPhC	ACT	Operate phase c	2265 bit 9								
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7074	9374	11674	13974	16274	18574	20874	23174	O

Phase Undervoltage (F27) Function

LN: Undervoltage Name: PTUV (PTUV_1 for F27) Instance = 4

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 10								M
Op	ACT	operate	2265 bit 10								M
StrPhB	ACD	Start phase B	2255 bit 11								U
OpPhB	ACT	Operate phase B	2265 bit 11								U
StrPhC	ACD	Start phase C	2255 bit 12								U
OpPhC	ACT	Operate phase c	2265 bit 12								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7080	9380	11680	13980	16280	18580	20880	23180	O

LN: Undervoltage Name: PTUV (PTUV_1 for F27) Instance = 5

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2085 Bit 14								M
Op	ACT	operate	2086 Bit 14								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46352	48652	50952	53252	55552	57852	60752	62452	O

LN: Undervoltage Name: PTUV (PTUV_1 for F27) Instance = 6

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2085 Bit 15								M
Op	ACT	operate	2086 Bit 15								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46357	48657	50957	53257	55557	57857	60157	62457	O

Phase Undervoltage (F27) Function

LN: Undervoltage Name: PTUV (PTUV_1 for F27) Instance = 7

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	4702 Bit 0								M
Op	ACT	operate	4703 Bit 0								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46362	48662	50962	53262	55562	57862	60162	62462	O

LN: Undervoltage Name: PTUV (PTUV_1 for F27) Instance = 8

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	4702 Bit 1								M
Op	ACT	operate	4703 Bit 1								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46367	48667	50967	53267	55567	57867	60167	62467	O

LN: Undervoltage Name: PTUV (PTUV_0 for F27A) Instance = 1

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 1								M
Op	ACT	operate	2265 bit 1								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7086	9386	11686	13986	16286	18586	20886	23186	O

LN: Undervoltage Name: PTUV (PTUV_0 for F27B) Instance = 1

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 2								M
Op	ACT	operate	2265 bit 2								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7091	9391	11691	13991	16291	18591	20891	23191	O

Phase Undervoltage (F27) Function

LN: Undervoltage Name: PTUV (PTUV_0 for F27C) Instance = 1

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 3								M
Op	ACT	operate	2265 bit 3								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7096	9396	11696	13996	16296	18596	20896	23196	O

LN: Undervoltage Name: PTUV (PTUV_0 for F27A) Instance = 2

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 4								M
Op	ACT	operate	2265 bit 4								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7101	9401	11701	14001	16301	18601	20901	23201	O

LN: Undervoltage Name: PTUV (PTUV_0 for F27B) Instance = 2

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 5								M
Op	ACT	operate	2265 bit 5								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7106	9406	11706	14006	16306	18606	20906	23206	O

Phase Undervoltage (F27) Function

LN: Undervoltage Name: PTUV (PTUV_0 for F27C) Instance = 2

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 6								M
Op	ACT	operate	2265 bit 6								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7111	9411	11711	14011	16311	18611	20911	23211	O

LN: Undervoltage Name: PTUV (PTUV_0 for F27A) Instance = 3

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 7								M
Op	ACT	operate	2265 bit 7								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7116	9416	11716	14016	16316	18616	20916	23216	O

LN: Undervoltage Name: PTUV (PTUV_0 for F27B) Instance = 3

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 8								M
Op	ACT	operate	2265 bit 8								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7121	9421	11721	14021	16321	18621	20921	23221	O

Phase Undervoltage (F27) Function

LN: Undervoltage Name: PTUV (PTUV_0 for F27C) Instance = 3

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 9								M
Op	ACT	operate	2265 bit 9								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7126	9426	11726	14026	16326	18626	20926	23226	O

LN: Undervoltage Name: PTUV (PTUV_0 for F27A) Instance = 4

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 10								M
Op	ACT	operate	2265 bit 10								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7131	9431	11731	14031	16331	18631	20931	23231	O

LN: Undervoltage Name: PTUV (PTUV_0 for F27B) Instance = 4

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 11								M
Op	ACT	operate	2265 bit 11								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7136	9436	11736	14036	16336	18636	20936	23236	O

Phase Undervoltage (F27) Function

LN: Undervoltage Name PTUV (PTUV_0 for F27C) Instance = 4

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 12								M
Op	ACT	operate	2265 bit 12								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7141	9441	11741	14041	16341	18641	20941	23241	O

Phase to Phase Undervoltage (F27PP) Function

LN: Undervoltage Name: PTUV (PTUV1_1 for F27PP) Instance = 1

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 13								M
Op	ACT	operate	2265 bit 13								M
StrPhB	ACD	Start phase B	2255 bit 14								U
OpPhB	ACT	Operate phase B	2265 bit 14								U
StrPhC	ACD	Start phase C	2255 bit 15								U
OpPhC	ACT	Operate phase c	2265 bit 15								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8696	10996	13296	15596	17896	20196	22496	24796	O

LN: Undervoltage Name: PTUV (PTUV1_0 for F27PPA) Instance = 1

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 13								M
Op	ACT	operate	2265 bit 13								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8702	11002	13302	15602	17902	20202	22502	24802	O

LN: Undervoltage Name: PTUV (PTUV1_0 for F27PPB) Instance = 1

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 14								M
Op	ACT	operate	2265 bit 14								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8707	11007	13307	15607	17907	20207	22507	24807	O

Phase to Phase Undervoltage (F27PP) Function											
LN: Undervoltage Name: PTUV (PTUV1_0 for F27PPC) Instance = 1											
PTUV Class											
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**								**M/O/U**
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2255 bit 15								M
Op	ACT	operate	2265 bit 15								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8712	11012	13312	15612	17912	20212	22512	24812	O

Vz1 Undervoltage (F27Vz1) Function

LN: Undervoltage Name: PTUV (PTUV1_0 for F27Vz) Instance = 1

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 bit 0								M
Op	ACT	operate	2266 bit 0								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8728	11028	13328	15628	17928	20228	22528	24828	O

LN: Undervoltage Name: PTUV (PTUV2_0 for F27Vz) Instance = 2

PTUV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	4804 bit 2								M
Op	ACT	operate	4806 bit 2								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8733	11033	13333	15633	17933	20233	22533	24833	O

Bus Side Voltage Supervision (F27 BSVS) Function

LN: Bus Side Supervision Voltage Name: BSVS for F27V_BSVS1 Instance = 1

BSVS Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8500	10800	13100	15400	17700	20000	22300	24600	U
BVSStPhABC	SPS	Bus Supervision Voltage Status ABC	2511 bit 10								U
BVSStPhA	SPS	Bus Supervision Voltage Status A	4555 bit 10								U
BVSStPhB	SPS	Bus Supervision Voltage Status B	4567 bit 10								U
BVSStPhC	SPS	Bus Supervision Voltage Status C	4582 bit 10								U

LN: Bus Side Supervision Voltage Name: BSVS for F27VA_BSVS1 Instance = 1

BSVS Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	31013	33138	35263	37388	39513	41638	43763	45756	U
BVSStPhA-BC	SPS	Bus Supervision Voltage Status ABC	2511 bit 10								U
BVSStPhA	SPS	Bus Supervision Voltage Status A	4555 bit 10								U
BVSStPhB	SPS	Bus Supervision Voltage Status B	4567 bit 10								U
BVSStPhC	SPS	Bus Supervision Voltage Status C	4582 bit 10								U

LN: Bus Side Supervision Voltage Name: BSVS for F27VB_BSVS1 Instance = 1

BSVS Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	31016	33141	35266	37391	39516	41641	43766	45759	U
BVSStPhABC	SPS	Bus Supervision Voltage Status ABC	2511 bit 10								U
BVSStPhA	SPS	Bus Supervision Voltage Status A	4555 bit 10								U
BVSStPhB	SPS	Bus Supervision Voltage Status B	4567 bit 10								U
BVSStPhC	SPS	Bus Supervision Voltage Status C	4582 bit 10								U

Bus Side Voltage Supervision (F27 BSVS) Function

LN: Bus Side Supervision Voltage Name: BSVS for F27VC_BSVS1 Instance = 1

BSVS Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	31019	33144	35269	37394	39519	41644	43769	45762	U
BVSStPhABC	SPS	Bus Supervision Voltage Status ABC	2511 bit 10								U
BVSStPhA	SPS	Bus Supervision Voltage Status A	4555 bit 10								U
BVSStPhB	SPS	Bus Supervision Voltage Status B	4567 bit 10								U
BVSStPhC	SPS	Bus Supervision Voltage Status C	4582 bit 10								U

LN: Bus Side Supervision Voltage Name: BSVS for FP1BV_BSVS1 Instance = 1

BSVS Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Str	ACD	27BSVS P1 Pickup	4804 bit 4								M
Op	ACT	27BSVS P1 Timeout	4806 bit 4								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46478	48778	51078	53378	55678	57978	60278	62578	U
BVSStPhABC	SPS	Bus Supervision Voltage Status ABC	2511 bit 10								U
BVSStPhA	SPS	Bus Supervision Voltage Status A	4555 bit 10								U
BVSStPhB	SPS	Bus Supervision Voltage Status B	4567 bit 10								U
BVSStPhC	SPS	Bus Supervision Voltage Status C	4582 bit 10								U

Bus Side Voltage Supervision (F27 BSVS) Function

LN: Bus Side Supervision Voltage Name: BSVS for FP1BV_BSVS2 Instance = 2

BSVS Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Str		27BSVS P2 Pickup	4804 bit 5								M
Op		27BSVS P2 Timeout	4806 bit 5								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46535	48835	51135	53435	55735	58035	60335	62635	U
BVSStPhABC	SPS	Bus Supervision Voltage Status ABC	2511 bit 10								U
BVSStPhA	SPS	Bus Supervision Voltage Status A	4555 bit 10								U
BVSStPhB	SPS	Bus Supervision Voltage Status B	4567 bit 10								U
BVSStPhC	SPS	Bus Supervision Voltage Status C	4582 bit 10								U

Directional Power (F32) Function

LN: Directional Overpower Name: PDOP (PDOP_0 for F32) Instance = 1

PDOP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 bit 1								M
Op	ACT	operate	2266 bit 1								M
StrPhB	ACD	Start phase B	2256 bit 2								U
OpPhB	ACT	Operate phase B	2266 bit 2								U
StrPhC	ACD	Start phase C	2256 bit 3								U
OpPhC	ACT	Operate phase c	2266 bit 3								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7152	9542	11752	14052	16352	18652	20952	23252	O

LN: Directional Overpower Name: PDOP (PDOP_0 for F32) Instance = 2

PDOP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 bit 4								M
Op	ACT	operate	2266 bit 4								M
StrPhB	ACD	Start phase B	2256 bit 5								U
OpPhB	ACT	Operate phase B	2266 bit 5								U
StrPhC	ACD	Start phase C	2256 bit 6								U
OpPhC	ACT	Operate phase c	2266 bit 6								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7160	9460	11760	14060	16360	18660	20960	23260	O

Directional Power (F32) Function

LN: Directional Overpower Name: PDOP (PDOP_0 for F32) Instance = 3

PDOP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 bit 7								M
Op	ACT	operate	2266 bit 7								M
StrPhB	ACD	Start phase B	2256 bit 8								U
OpPhB	ACT	Operate phase B	2266 bit 8								U
StrPhC	ACD	Start phase C	2256 bit 9								U
OpPhC	ACT	Operate phase c	2266 bit 9								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7168	9468	11768	14068	16368	18668	20968	23268	O

LN: Directional Overpower Name: PDOP (PDOP_0 for F32) Instance = 4

PDOP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 bit 10								M
Op	ACT	operate	2266 bit 10								M
StrPhB	ACD	Start phase B	2256 bit 11								U
OpPhB	ACT	Operate phase B	2266 bit 11								U
StrPhC	ACD	Start phase C	2256 bit 12								U
OpPhC	ACT	Operate phase c	2266 bit 12								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7176	9776	11776	14076	16376	18676	20976	23276	O

Directional Power (F32) Function

LN: Directional Overpower Name: PDOP (PDOP_0 for F32A) Instance = 1

PDOP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 Bit 1								M
Op	ACT	operate	2266 Bit 1								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7184	9484	11784	14084	16384	18684	20984	23284	O

LN: Directional Overpower Name: PDOP (PDOP_0 for F32B) Instance = 1

PDOP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 Bit 2								M
Op	ACT	operate	2266 Bit 2								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7191	9491	11791	14091	16391	18691	20991	23291	O

LN: Directional Overpower Name: PDOP (PDOP_0 for F32C) Instance = 1

PDOP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 Bit 3								M
Op	ACT	operate	2266 Bit 3								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7198	9498	11798	14098	16398	18698	20998	23998	O

Directional Power (F32) Function

LN: Directional Overpower Name: PDOP (PDOP_0 for F32A) Instance = 2

PDOP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 Bit 4								M
Op	ACT	operate	2266 Bit 4								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7205	9505	11805	14105	16405	18705	21005	23305	O

LN: Directional Overpower Name: PDOP (PDOP_0 for F32B) Instance = 2

PDOP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 Bit 5								M
Op	ACT	operate	2266 Bit 5								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7212	9512	11812	14112	16412	18712	21012	23312	O

LN: Directional Overpower Name: PDOP (PDOP_0 for F32C) Instance = 2

PDOP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 Bit 6								M
Op	ACT	operate	2266 Bit 6								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7219	9519	11819	14119	16419	18719	21019	23319	O

Directional Power (F32) Function

LN: Directional Overpower Name: PDOP (PDOP_0 for F32A) Instance = 3

PDOP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 Bit 7								M
Op	ACT	operate	2266 Bit 7								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7226	9526	11826	14126	16426	18726	21026	23326	O

LN: Directional Overpower Name: PDOP (PDOP_0 for F32B) Instance = 3

PDOP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 Bit 8								M
Op	ACT	operate	2266 Bit 8								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7233	9533	11833	14133	16433	18733	21033	23333	O

LN: Directional Overpower Name: PDOP (PDOP_0 for F32C) Instance = 3

PDOP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 Bit 9								M
Op	ACT	operate	2266 Bit 9								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7240	9540	11840	14140	16440	18740	21040	23340	O

Directional Power (F32) Function

LN: Directional Overpower Name: PDOP (PDOP_0 for F32A) Instance = 4

PDOP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 Bit 10								M
Op	ACT	operate	2266 Bit 10								M
Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	7247	9547	11847	14147	16447	18747	21047	23347	O

LN: Directional Overpower Name: PDOP (PDOP_0 for F32B) Instance = 4

PDOP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 Bit 11								M
Op	ACT	operate	2266 Bit 11								M
Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	7254	9554	11854	14154	16454	18754	21054	23354	O

LN: Directional Overpower Name: PDOP (PDOP_0 for F32C) Instance = 4

PDOP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2256 Bit 12								M
Op	ACT	operate	2266 Bit 12								M
Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	7261	9561	11861	14161	16461	18761	21061	23361	O

Negative Sequence Definite Time Overcurrent (F46DT) Function

LN: Time Overcurrent Name: PTOC (PTOC_0 for F46DT) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2258 bit 6								M
Op	ACT	operate	2268 bit 6								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7462	9762	12062	14362	16662	18962	21262	23562	O

LN: Time Overcurrent Name: PTOC (PTOC_0 for F46DT) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2258 bit 7								M
Op	ACT	operate	2268 bit 7								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7467	9767	12067	14367	16667	18967	21267	23567	O

LN: Time Overcurrent Name: PTOC (PTOC_0 for F46DT) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2258 bit 8								M
Op	ACT	operate	2268 bit 8								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7472	9772	12072	14372	16672	18972	21272	23572	O

Negative Sequence Definite Time Overcurrent (F46DT) Function

LN: Time Overcurrent Name: PTOC (PTOC_0 for F46DT) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2258 bit 9								M
Op	ACT	operate	2268 bit 9								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7477	9777	12077	14377	16677	18977	21277	23577	O

LN: Time Overcurrent Name: PTOC (PTOC_0 for F46DT) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2258 bit 10								M
Op	ACT	operate	2268 bit 10								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7482	9782	12082	14382	16682	18982	21282	23582	O

Negative Sequence Inverse Time Overcurrent (F46IT) Function

LN: Time Overcurrent Name: PTOC (PTOC1_0 for F46IT) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2260 bit 5								M
Op	ACT	operate	2270 bit 5								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7926	10226	12526	14826	17126	19426	21726	24026	O

LN: Time Overcurrent Name: PTOC (PTOC1_0 for F46IT) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2260 bit 6								M
Op	ACT	operate	2270 bit 6								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7939	10239	12539	14839	17139	19439	21739	24039	O

LN: Time Overcurrent Name: PTOC (PTOC1_0 for F46IT) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2260 bit 7								M
Op	ACT	operate	2270 bit 7								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	792	10252	12552	14852	17152	19452	21752	24052	O

Negative Sequence Inverse Time Overcurrent (F46IT) Function

LN: Time Overcurrent Name: PTOC (PTOC1_0 for F46IT) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2260 bit 8								M
Op	ACT	operate	2270 bit 8								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7965	10265	12565	14865	17165	19465	21765	24065	O

LN: Time Overcurrent Name: PTOC (PTOC1_0 for F46IT) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2260 bit 9								M
Op	ACT	operate	2270 bit 9								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7978	10278	12578	14878	17178	19478	21778	24078	O

Negative Sequence Overvoltage (F47) Function

LN: Overvoltage Name: PTOV (PTOV1_0 for F47) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	2261 bit 11								M
Op	ACT	operate	2271 bit 11								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8112	10412	12712	15012	17312	19612	21912	24212	O

Breaker Failure (F50BF) Function

LN: Breaker Failure Name: RBRF (RBRF_0 for F50BF) Instance = 1

RBRF Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2258 bit 11	O
OpEx	ACT	Operate failure trip	2268 bit 11	C

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	8814	11114	13414	15714	18014	20314	22614	24914	U

LN: Breaker Failure Name: RBRF (RBRF_1 for F50BFU) Instance = 1

RBRF Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2258 bit 11	O
OpEx	ACT	Operate failure trip	2268 bit 11	O

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	46622	48922	51222	53522	55822	58122	60422	62722	U

LN: Breaker Failure Name: RBRF (RBRF_1 for F50BFU) Instance = 2

RBRF Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	4804 bit 6	O
OpEx	ACT	Operate failure trip	4806 bit 6	C

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	46631	48931	51231	53531	55831	58131	60431	62731	U

Sensitive Ground Instantaneous/Definite Time Overcurrent (F50GS) Function

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50GS) Instance = 1

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2258 bit 1								O
Op	ACT	Operate failure trip	2268 bit 1								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8856	11156	13456	15756	18056	20356	22656	24956	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50GS) Instance = 2

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2258 bit 2								O
Op	ACT	Operate failure trip	2268 bit 2								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8861	11161	13461	15761	18061	20361	22661	24961	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50GS) Instance = 3

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2258 bit 3								O
Op	ACT	Operate failure trip	2268 bit 3								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8866	11166	13466	15766	18066	20366	22666	24966	O

Sensitive Ground Instantaneous/Definite Time Overcurrent (F50GS) Function

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50GS) Instance = 4

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2258 bit 4								O
Op	ACT	Operate failure trip	2268 bit 4								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8871	11171	13471	15771	18071	20371	22671	24971	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50GS) Instance = 5

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2258 bit 5								O
Op	ACT	Operate failure trip	2268 bit 5								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8876	11176	13476	15776	18076	20376	22676	24976	O

Hot Line Tag Maintenance Mode (F50GS)

LN: Hot Line Tag Name: HLTPIOC (HLTPIOC_0 for HT50GS) Inclass: PHLT

PHLT Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Str	ACD	Start, timer running	1996 bit 3								M
Op	ACT	Operate failure trip	1997 bit 3								M
HCLStPhABC	SPS	High Current Lockout Status Phase ABC	2511 bit 11								U
HCLStPhA	SPS	High Current Lockout Status Phase A	4555 bit 11								U
HCLStPhB	SPS	High Current Lockout Status Phase B	4567 bit 11								U
HCLStPhC	SPS	High Current Lockout Status Phase C	4588 bit 11								U

Residual Instantaneous/Definite Time Overcurrent (F50N) Function

LN: Instantaneous Overcurrent Name: PIOC (PIOC_0 for F50N) Instance = 1

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 12								O
Op	ACT	Operate failure trip	2267 bit 12								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7390	9690	11990	14290	16590	18890	21190	23490	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC_0 for F50N) Instance = 2

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 13								O
Op	ACT	Operate failure trip	2267 bit 13								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7395	9695	11995	14295	16595	18895	21195	23495	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC_0 for F50N) Instance = 3

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 14								O
Op	ACT	Operate failure trip	2267 bit 14								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7400	9700	12000	14300	16600	18900	21200	23500	O

Residual Instantaneous/Definite Time Overcurrent (F50N) Function

LN: Instantaneous Overcurrent Name: PIOC (PIOC_0 for F50N) Instance = 4

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 15								O
Op	ACT	Operate failure trip	2267 bit 15								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7405	9705	12005	14305	16605	18905	21205	23505	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC_0 for F50N) Instance = 5

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2258 bit 0								O
Op	ACT	Operate failure trip	2268 bit 0								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7410	9710	12010	14310	16610	18910	21210	23510	O

Hot Line Tag Maintenance Mode (F50N)

LN: Hot Line Tag PIOC Name: PHLT (HLTPIOC_0 for HT50N) Instance = 1

PHLT Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8804	11104	13404	15704	18004	20304	22604	24904	O
Status Information											
Str	ACD	Start, timer running	4702 bit 7								
Op	ACT	Operate failure trip	4703 bit 7								
HCLStPhABC	SPS	High Current Lockout Status Phase ABC	2511 bit 11								U
HCLStPhA	SPS	High Current Lockout Status Phase A	4555 bit 11								U
HCLStPhB	SPS	High Current Lockout Status Phase B	4570 bit 11								U
HCLStPhC	SPS	High Current Lockout Status Phase C	4585 bit 11								U

Phase Instantaneous/Definite Time Overcurrent (F50P) Function

LN: Instantaneous Overcurrent Name: PIOC (PIOC_1 for F50P) Instance = 1

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2256 bit 13								O
Op	ACT	Operate failure trip	2266 bit 13								M
StrPhB	ACD	Start phase B	2256 bit 14								U
OpPhB	ACT	Operate phase B	2266 bit 14								U
StrPhC	ACD	Start phase C	2256 bit 15								U
OpPhC	ACT	Operate phase C	2266 bit 15								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7274	9574	11874	14174	16474	18774	21074	23374	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC_1 for F50P) Instance = 2

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 0								O
Op	ACT	Operate failure trip	2267 bit 0								M
StrPhB	ACD	Start phase B	2257 bit 1								U
OpPhB	ACT	Operate phase B	2267 bit 1								U
StrPhC	ACD	Start phase C	2257 bit 2								U
OpPhC	ACT	Operate phase C	2267 bit 2								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7280	9580	11880	14180	16480	18780	21080	23380	O

Phase Instantaneous/Definite Time Overcurrent (F50P) Function

LN: Instantaneous Overcurrent Name: PIOC (PIOC_1 for F50P) Instance = 3

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 3								O
Op	ACT	Operate failure trip	2267 bit 3								M
StrPhB	ACD	Start phase B	2257 bit 4								U
OpPhB	ACT	Operate phase B	2267 bit 4								U
StrPhC	ACD	Start phase C	2257 bit 5								U
OpPhC	ACT	Operate phase C	2267 bit 5								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7286	9586	11886	14186	16486	18786	21086	23386	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC_1 for F50P) Instance = 4

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 6								O
Op	ACT	Operate failure trip	2267 bit 6								M
StrPhB	ACD	Start phase B	2257 bit 7								U
OpPhB	ACT	Operate phase B	2267 bit 7								U
StrPhC	ACD	Start phase C	2257 bit 8								U
OpPhC	ACT	Operate phase C	2267 bit 8								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7292	9592	11892	14192	16492	18792	21092	23392	O

Phase Instantaneous/Definite Time Overcurrent (F50P) Function

LN: Instantaneous Overcurrent Name: PIOC (PIOC_1 for F50P) Instance = 5

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 9								O
Op	ACT	Operate failure trip	2267 bit 9								M
StrPhB	ACD	Start phase B	2257 bit 10								U
OpPhB	ACT	Operate phase B	2267 bit 10								U
StrPhC	ACD	Start phase C	2257 bit 11								U
OpPhC	ACT	Operate phase C	2267 bit 11								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7298	9598	11898	14198	16498	18798	21098	23398	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50PA) Instance = 1

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2256 bit 13								O
Op	ACT	Operate failure trip	2266 bit 13								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7304	9604	11904	14204	16504	18804	21104	23404	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50PB) Instance = 1

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2256 bit 14								O
Op	ACT	Operate failure trip	2266 bit 14								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7309	9609	11909	14209	16509	18809	21109	23409	O

Phase Instantaneous/Definite Time Overcurrent (F50P) Function

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50PC) Instance = 1

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2256 bit 15								O
Op	ACT	Operate failure trip	2266 bit 15								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7314	9614	11914	14214	16514	18814	21114	23414	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for Prefix F50PA) Instance = 2

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 0								O
Op	ACT	Operate failure trip	2267 bit 0								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7319	9619	11919	14219	16519	18819	21119	23419	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50PB) Instance = 2

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 1								O
Op	ACT	Operate failure trip	2267 bit 1								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7324	9624	11924	14224	16524	18824	21124	23424	O

Phase Instantaneous/Definite Time Overcurrent (F50P) Function

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50PC) Instance = 2

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 2								O
Op	ACT	Operate failure trip	2267 bit 2								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7329	9629	11929	14229	16529	18829	21129	23429	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50PA) Instance = 3

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 3								O
Op	ACT	Operate failure trip	2267 bit 3								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7334	9634	11934	14234	16534	18834	21134	23434	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50PB) Instance = 3

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 4								O
Op	ACT	Operate failure trip	2267 bit 4								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7339	9639	11939	14239	16539	18839	21139	23439	O

Phase Instantaneous/Definite Time Overcurrent (F50P) Function

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50PC) Instance = 3

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 5								O
Op	ACT	Operate failure trip	2267 bit 5								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7344	9644	11944	14244	16544	18844	21144	23444	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50PA) Instance = 4

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 6								O
Op	ACT	Operate failure trip	2267 bit 6								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7349	9649	11949	14249	16549	18849	21149	23449	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50PB) Instance = 4

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 7								O
Op	ACT	Operate failure trip	2267 bit 7								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7354	9654	11954	14254	16554	18854	21154	23454	O

Phase Instantaneous/Definite Time Overcurrent (F50P) Function

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50PC) Instance = 4

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 8								O
Op	ACT	Operate failure trip	2267 bit 8								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7359	9659	11959	14259	16559	18859	21159	23459	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50PA) Instance = 5

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 9								O
Op	ACT	Operate failure trip	2267 bit 9								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7364	9664	11964	14264	16564	18864	21164	23464	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50PB) Instance = 5

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 10								O
Op	ACT	Operate failure trip	2267 bit 10								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7369	9669	11969	14269	16569	18869	21169	23469	O

Phase Instantaneous/Definite Time Overcurrent (F50P) Function

LN: Instantaneous Overcurrent Name: PIOC (PIOC1_0 for F50PC) Instance = 5

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2257 bit 11								O
Op	ACT	Operate failure trip	2267 bit 11								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7374	9674	11974	14274	16574	18874	21174	23474	O

Hot Line Tag Maintenance Mode (F50P)

LN: Hot Line Tag PIOC Name: HLTPIOC (HLTPIOC_1 for HT50P) Inclass PHLT Instance = 1

PHLT Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8774	11074	13374	15674	17974	20274	22574	24874	U
Str	ACD	Start, timer running	1996 bit 0								M
Op	ACT	Operate failure trip	1997 bit 0								M
HCLStPhABC	SPS	High Current Lockout Status Phase ABC	2511 bit 11								U
HCLStPhA	SPS	High Current Lockout Status Phase A	4555 bit 11								U
HCLStPhB	SPS	High Current Lockout Status Phase B	4567 bit 11								U
HCLStPhC	SPS	High Current Lockout Status Phase C	4588 bit 11								U

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46580	48880	51180	53480	55780	58080	60380	62680	U

Sensitive Ground Inverse Time Overcurrent (F51GS) Function

LN: Time Overcurrent Name: PTOC (PTOC1_0 for F51GS) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 0								M
Op	ACT	Operate failure trip	2270 bit 0								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8892	11192	13492	15792	18092	20392	22692	24992	O

LN: Time Overcurrent Name: PTOC (PTOC1_0 for F51GS) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 1								M
Op	ACT	Operate failure trip	2270 bit 1								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8905	11205	13505	15805	18105	20405	22705	25005	O

LN: Time Overcurrent Name: PTOC (PTOC1_0 for F51GS) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 2								M
Op	ACT	Operate failure trip	2270 bit 2								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8918	11218	13518	15818	18118	20418	22718	25018	O

Sensitive Ground Inverse Time Overcurrent (F51GS) Function

LN: Time Overcurrent Name: PTOC (PTOC1_0 for F51GS) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 3								M
Op	ACT	Operate failure trip	2270 bit 3								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8931	11231	13531	15831	18131	20431	22731	25031	O

LN: Time Overcurrent Name: PTOC (PTOC1_0 for F51GS) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 4								M
Op	ACT	Operate failure trip	2270 bit 4								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8944	11244	13544	15844	18144	20444	22744	25044	O

Hot Line Tag Maintenance Mode (F51GS)											
LN: Hot Line Tag PTOC Name: HLTPTOC (HLTPTOC_1 for HT51GS) Inclass: PHLT Instance = 1											
PHLT Class											
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**								**M/O/U**
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Str	ACD	Start, timer running	1996 bit 7								M
Op	ACT	Operate failure trip	1997 bit 7								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
HCLStPhABC	SPS	High Current Lockout Status Phase ABC	2511 bit 11								U
HCLStPhA	SPS	High Current Lockout Status Phase A	4555 bit 11								U
HCLStPhB	SPS	High Current Lockout Status Phase B	4567 bit 11								U
HCLStPhC	SPS	High Current Lockout Status Phase C	4588 bit 11								U

Residual Inverse Time Overcurrent (F51N) Function

LN: Time Overcurrent Name: PTOC (PTOC1_0 for F51N) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 11								M
Op	ACT	Operate failure trip	2269 bit 11								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7774	10074	12374	14674	16974	19274	21574	23874	O

LN: Time Overcurrent Name: PTOC (PTOC1_0 for F51N) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 12								M
Op	ACT	Operate failure trip	2269 bit 12								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7787	10087	12387	14687	16987	19287	21587	23587	O

LN: Time Overcurrent Name: PTOC (PTOC1_0 for F51N) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 13								M
Op	ACT	Operate failure trip	2269 bit 13								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7800	10100	12400	14700	17000	19300	21600	23900	O

Residual Inverse Time Overcurrent (F51N) Function

LN: Time Overcurrent Name: PTOC (PTOC1_0 for F51N) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 14								M
Op	ACT	Operate failure trip	2269 bit 14								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7813	10113	12413	14713	17013	19313	21613	23913	O

LN: Time Overcurrent Name: PTOC (PTOC1_0 for F51N) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 15								M
Op	ACT	Operate failure trip	2269 bit 15								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7826	10126	12426	14726	17026	19326	21626	23926	O

Hot Line Tag Maintenance Mode (F51N)

LN: Hot Line Tag PTOC Name: HLTPTOC (HLTPTOC_1 for HT51N) Inclass: PHLT Instance = 1

PHLT Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Str	ACD	Start, timer running	4702 bit 8								M
Op	ACT	Operate failure trip	4702 bit 8								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8807	11107	13407	15707	18007	20307	22607	24907	U
HCLStPhABC	SPS	High Current Lockout Status Phase ABC	2511 bit 11								U
HCLStPhA	SPS	High Current Lockout Status Phase A	4555 bit 11								U
HCLStPhB	SPS	High Current Lockout Status Phase B	4567 bit 11								U
HCLStPhC	SPS	High Current Lockout Status Phase C	4588 bit 11								U

Phase Inverse Time Overcurrent (F51P) Function

LN: Time Overcurrent Name: PTOC (PTOC2_1 for F51P) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2258 bit 12								M
Op	ACT	Operate failure trip	2268 bit 12								M
StrPhB	ACD	Start Phase B	2258 bit 13								U
OpPhB	ACT	Operate Phase B	2268 bit 13								U
StrPhC	ACD	Start Phase C	2258 bit 14								U
OpPhC	ACT	Operate Phase C	2268 bit 14								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7498	9798	12098	14398	16698	18998	21298	23598	O

LN: Time Overcurrent Name: PTOC (PTOC2_1 for F51P) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2258 bit 15								M
Op	ACT	Operate failure trip	2268 bit 15								M
StrPhB	ACD	Start Phase B	2259 bit 0								U
OpPhB	ACT	Operate Phase B	2269 bit 0								U
StrPhC	ACD	Start Phase C	2259 bit 1								U
OpPhC	ACT	Operate Phase C	2269 bit 1								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7512	9812	12112	14412	16712	19012	21312	23612	O

Phase Inverse Time Overcurrent (F51P) Function

LN: Time Overcurrent Name: PTOC (PTOC2_1 for F51P) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 2								M
Op	ACT	Operate failure trip	2269 bit 2								M
StrPhB	ACD	Start Phase B	2259 bit 3								U
OpPhB	ACT	Operate Phase B	2269 bit 3								U
StrPhC	ACD	Start Phase C	2259 bit 4								U
OpPhC	ACT	Operate Phase C	2269 bit 4								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7526	9826	12126	14426	16726	19026	21326	23626	O

LN: Time Overcurrent Name: PTOC (PTOC2_1 for F51P) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 5								M
Op	ACT	Operate failure trip	2269 bit 5								M
StrPhB	ACD	Start Phase B	2259 bit 6								U
OpPhB	ACT	Operate Phase B	2269 bit 6								U
StrPhC	ACD	Start Phase C	2259 bit 7								U
OpPhC	ACT	Operate Phase C	2269 bit 7								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7540	9840	12140	14440	16740	19040	21340	23640	O

Phase Inverse Time Overcurrent (F51P) Function

LN: Time Overcurrent Name: PTOC (PTOC2_1 for F51P) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2259 bit 8	M
Op	ACT	Operate failure trip	2269 bit 8	M
StrPhB	ACD	Start Phase B	2259 bit 9	U
OpPhB	ACT	Operate Phase B	2269 bit 9	U
StrPhC	ACD	Start Phase C	2259 bit 10	U
OpPhC	ACT	Operate Phase C	2269 bit 10	U

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	7554	9854	12154	14454	16754	19054	21354	23654	O

LN: Time Overcurrent Name: PTOC (PTOC2_0 for F51PA) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2258 bit 12	M
Op	ACT	Operate failure trip	2268 bit 12	M

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	7568	9868	12168	14468	16768	19068	21368	23668	O

LN: Time Overcurrent Name: PTOC (PTOC2_0 for F51PB) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2258 bit 13	M
Op	ACT	Operate failure trip	2268 bit 13	M

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	7581	9881	12181	14481	16781	19081	21381	23681	O

Phase Inverse Time Overcurrent (F51P) Function

LN: Time Overcurrent Name: PTOC (PTOC2_0 for F51PC) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2258 bit 14								M
Op	ACT	Operate failure trip	2268 bit 14								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7594	9894	12194	14494	16794	19094	21394	23694	O

LN: Time Overcurrent Name: PTOC (PTOC2_0 for F51PA) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2258 bit 15								M
Op	ACT	Operate failure trip	2268 bit 15								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7607	9907	12207	14507	16807	19107	21407	23707	O

LN: Time Overcurrent Name: PTOC (PTOC2_0 for F51PB) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 0								M
Op	ACT	Operate failure trip	2269 bit 0								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7620	9920	12220	14520	16820	19120	21420	23720	O

Phase Inverse Time Overcurrent (F51P) Function

LN: Time Overcurrent Name: PTOC (PTOC2_0 for F51PC) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 1								M
Op	ACT	Operate failure trip	2269 bit 1								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7633	9933	12233	14533	16833	19133	21433	23733	O

LN: Time Overcurrent Name: PTOC (PTOC2_0 for F51PA) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 2								M
Op	ACT	Operate failure trip	2269 bit 2								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7646	9946	12246	14546	16846	19146	21446	23746	O

LN: Time Overcurrent Name: PTOC (PTOC2_0 for F51PB) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 3								M
Op	ACT	Operate failure trip	2269 bit 3								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7659	9959	12259	14559	16859	19159	21459	23759	O

Phase Inverse Time Overcurrent (F51P) Function

LN: Time Overcurrent Name: PTOC (PTOC2_0 for F51PC) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 4								M
Op	ACT	Operate failure trip	2269 bit 4								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7672	9972	12272	14572	16872	19172	21472	23372	O

LN: Time Overcurrent Name: PTOC (PTOC2_0 for F51PA) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 5								M
Op	ACT	Operate failure trip	2269 bit 5								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7685	9985	12285	14585	16885	19185	21485	23785	O

LN: Time Overcurrent Name: PTOC (PTOC2_0 for F51PB) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 6								M
Op	ACT	Operate failure trip	2269 bit 6								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7698	9998	12298	14598	16898	19198	21498	23798	O

Phase Inverse Time Overcurrent (F51P) Function

LN: Time Overcurrent Name: PTOC (PTOC2_0 for F51PC) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 7								M
Op	ACT	Operate failure trip	2269 bit 7								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7711	10011	12311	14611	16911	19211	21511	23811	O

LN: Time Overcurrent Name: PTOC (PTOC2_0 for F51PA) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 8								M
Op	ACT	Operate failure trip	2269 bit 8								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7724	10024	12324	14624	16924	19224	21524	23824	O

LN: Time Overcurrent Name: PTOC (PTOC2_0 for F51PB) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 9								M
Op	ACT	Operate failure trip	2269 bit 9								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7737	10037	12337	14637	16937	19237	21537	23837	O

Phase Inverse Time Overcurrent (F51P) Function

LN: Time Overcurrent Name: PTOC (PTOC2_0 for F51PC) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2259 bit 10								M
Op	ACT	Operate failure trip	2269 bit 10								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7750	10050	12350	14650	16950	19250	21550	23850	O

Hot Line Tag Maintenance Mode (F51P)

LN: HLT PTOC Name: HLTPIOC (HLTPIOC_1 for HT51P) Inclass: PHLT Instance = 1

PHLT Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Str	ACD	Start, timer running	1996 bit 6								M
Op	ACT	Operate failure trip	1997 bit 6								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8780	11080	13380	15680	17980	20281	22580	24880	U
HCLStPhABC	SPS	High Current Lockout Status Phase ABC	2511 bit 11								U
HCLStPhA	SPS	High Current Lockout Status Phase A	4555 bit 11								U
HCLStPhB	SPS	High Current Lockout Status Phase B	4567 bit 11								U
HCLStPhC	SPS	High Current Lockout Status Phase C	4588 bit 11								U

Cold Load Pickup (FCLP) (F51P)

LN: CLP PTOC Name: CLPPIOC (CLPPIOC_1 for CP51P) Inclass: PCLP Instance = 1

PCLP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8624	10924	13224	15524	17824	20124	22424	24724	U
StrVal	ASG	Pickup	8625	10925	13225	15525	17825	20125	22425	24725	U
TmACrv	CURVE	Operating curve type	8626	10926	13226	15526	17826	20126	22426	24726	U
EMRsEna	SPG	Electromechanical Reset Enable	8627	10927	13227	15527	17827	20127	22427	24727	U
EMRs	ASG	Electromechanical Reset	8628	10928	13228	15528	17828	20728	22428	24728	U
TmMult	ASG	Time multiplier	8630	10930	13230	15530	17830	20730	22430	24730	U
TmsAdr	ASG	Time adder	8631	10931	13231	15531	17831	20731	22431	24731	U
MinTmsAdr	ASG	Minimum response time adder	8632	10932	13232	15532	17832	20732	22432	24732	U
CLDStPhABC	SPS	Cold Load Pickup Status Phase ABC	2511 bit 12								U
CLDStPhA	SPS	Cold Load Pickup Status Phase A	4555 bit 12								U
CLDStPhB	SPS	Cold Load Pickup Status Phase B	4567 bit 12								U
CLDStPhC	SPS	Cold Load Pickup Status Phase C	4588 bit 12								U

LN: CLP PTOC Name: CLPPIOC (CLPPIOC_1 for CL51P) Inclass: PCLPU Instance = 1

PCLP Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46583	48883	51183	53483	55783	58083	60383	62683	U

Phase to Phase Overvoltage (F59PP) Function

Name: PTUV (PTUV1_1 for F59PP) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 6								M
Op	ACT	Operate failure trip	2271 bit 6								O
StrPhB	ACD	Start Phase B	2261 bit 7								U
OpPhB	ACT	Operate Phase B	2271 bit 7								U
StrPhC	ACD	Start Phase C	2261 bit 8								U
OpPhC	ACT	Operate Phase C	2271 bit 8								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8744	11044	13344	15644	1794	20244	22544	24844	O

Name: PTUV (PTUV1_0 for F59PPA) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 6								M
Op	ACT	Operate failure trip	2271 bit 6								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8750	11050	13350	15650	17950	20250	22550	24850	O

Name: PTUV (PTUV1_0 for F59PPB) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 7								M
Op	ACT	Operate failure trip	2271 bit 7								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8755	11055	13355	15655	17955	20255	22555	24855	O

Phase to Phase Overvoltage (F59PP) Function

Name: PTUV (PTUV1_0 for F59PPC) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 8								M
Op	ACT	Operate failure trip	2271 bit 8								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8760	11060	13360	15660	17960	20260	22560	24860	O

Phase Overvoltage (F59) Function

LN: Overvoltage Name: PTOV (PTOV1_1 for F59) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2260 bit 10	M
Op	ACT	Operate failure trip	2270 bit 10	O
StrPhB	ACD	Start Phase B	2260 bit 11	U
OpPhB	ACT	Operate Phase B	2270 bit 11	U
StrPhC	ACD	Start Phase C	2260 bit 12	U
OpPhC	ACT	Operate Phase C	2270 bit 12	U

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	8002	10302	12602	14902	17202	19502	21802	24102	O

LN: Overvoltage Name: PTOV (PTOV1_1 for F59) Instance = 2

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2260 bit 13	M
Op	ACT	Operate failure trip	2270 bit 13	O
StrPhB	ACD	Start Phase B	2260 bit 14	U
OpPhB	ACT	Operate Phase B	2270 bit 14	U
StrPhC	ACD	Start Phase C	2260 bit 15	U
OpPhC	ACT	Operate Phase C	2270 bit 15	U

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	8008	10308	12608	14908	17208	19508	21808	24108	O

Phase Overvoltage (F59) Function

LN: Overvoltage Name: PTOV (PTOV1_1 for F59) Instance = 3

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2261 bit 0	M
Op	ACT	Operate failure trip	2271 bit 0	O
StrPhB	ACD	Start Phase B	2261 bit 1	U
OpPhB	ACT	Operate Phase B	2271 bit 1	U
StrPhC	ACD	Start Phase C	2261 bit 2	U
OpPhC	ACT	Operate Phase C	2271 bit 2	U

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	8014	10314	12614	14914	17214	19514	21814	24114	O

LN: Overvoltage Name: PTOV (PTOV1_1 for F59) Instance = 4

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2261 bit 3	M
Op	ACT	Operate failure trip	2271 bit 3	O
StrPhB	ACD	Start Phase B	2261 bit 4	U
OpPhB	ACT	Operate Phase B	2271 bit 4	U
StrPhC	ACD	Start Phase C	2261 bit 5	U
OpPhC	ACT	Operate Phase C	2271 bit 5	U

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	8020	10320	12620	14920	17220	19520	21820	24120	O

LN: Overvoltage Name: PTOV (PTOV1_0 for F59) Instance = 5

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	4702 Bit 2	M
Op	ACT	Operate failure trip	4703 Bit 2	O

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	46372	48672	50972	53272	55572	57872	60172	62472	O

Phase Overvoltage (F59) Function

LN: Overvoltage Name: PTOV (PTOV1_0 for F59) Instance = 6

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	4702 Bit 3								M
Op	ACT	Operate failure trip	4703 Bit 3								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46377	48677	50977	53277	55577	57877	60177	62477	O

LN: Overvoltage Name: PTOV (PTOV1_0 for F59) Instance = 7

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	4702 Bit 4								M
Op	ACT	Operate failure trip	4703 Bit 4								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46382	48682	50982	53282	55582	57882	60182	62482	O

LN: Overvoltage Name: PTOV (PTOV1_0 for F59) Instance = 8

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	4702 Bit 5								M
Op	ACT	Operate failure trip	4703 Bit 5								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46387	48687	50987	53287	55587	57887	60187	62487	O

Phase Overvoltage (F59) Function

LN: Overvoltage Name: PTOV (PTOV_0 for F59A) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 10								M
Op	ACT	Operate failure trip	2270 bit 10								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8026	10326	12626	14926	17226	19526	21826	24126	O

LN: Overvoltage Name: PTOV (PTOV_0 for F59B) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 11								M
Op	ACT	Operate failure trip	2270 bit 11								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8031	10331	12631	14931	17231	19531	21831	24131	O

LN: Overvoltage Name: PTOV (PTOV_0 for F59C) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 12								M
Op	ACT	Operate failure trip	2270 bit 12								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8036	10336	12636	14936	17236	19536	21836	24136	O

Phase Overvoltage (F59) Function

LN: Overvoltage Name: PTOV (PTOV_0 for F59A) Instance = 2

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 13								M
Op	ACT	Operate failure trip	2270 bit 13								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8041	10341	12641	14941	17241	19541	21841	24141	O

LN: Overvoltage Name: PTOV (PTOV_0 for F59B) Instance = 2

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 14								M
Op	ACT	Operate failure trip	2270 bit 14								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8046	10346	12646	14946	17246	19546	21846	24146	O

LN: Overvoltage Name: PTOV (PTOV_0 for F59C) Instance = 2

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 15								M
Op	ACT	Operate failure trip	2270 bit 15								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8051	10351	12651	14951	17251	19551	21851	24151	O

Phase Overvoltage (F59) Function

LN: Overvoltage Name: PTOV (PTOV_0 for Prefix F59A) Instance = 3

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 0								M
Op	ACT	Operate failure trip	2271 bit 0								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8056	10356	12656	14956	17256	19556	21856	24156	O

LN: Overvoltage Name: PTOV (PTOV_0 for F59B) Instance = 3

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 1								M
Op	ACT	Operate failure trip	2271 bit 1								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8061	10361	12661	14961	17261	19561	21861	24161	O

LN: Overvoltage Name: PTOV (PTOV_0 for F59C) Instance = 3

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 2								M
Op	ACT	Operate failure trip	2271 bit 2								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8066	10366	12666	14966	17266	19566	21866	24166	O

Phase Overvoltage (F59) Function

LN: Overvoltage Name: PTOV (PTOV_0 for F59A) Instance = 4

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 3								M
Op	ACT	Operate failure trip	2271 bit 3								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8071	10371	12671	14971	17271	19571	21871	24171	O

LN: Overvoltage Name: PTOV (PTOV_0 for F59B) Instance = 4

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 4								M
Op	ACT	Operate failure trip	2271 bit 4								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8076	10376	12676	14976	17276	19576	21876	24176	O

LN: Overvoltage Name: PTOV (PTOV_0 for F59C) Instance = 4

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 5								M
Op	ACT	Operate failure trip	2271 bit 5								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8081	10381	12681	14981	17281	19581	21881	24181	O

Residual Overvoltage (F59N) Function

LN: Overvoltage Name: PTOV (PTOV1_0 for F59N) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 9								M
Op	ACT	Operate failure trip	2271 bit 9								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8128	10428	12728	15028	17328	19628	21928	24228	O

LN: Overvoltage Name: PTOV (PTOV1_0 for F59N) Instance = 2

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2085 bit 2								M
Op	ACT	Operate failure trip	2086 bit 2								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8134	10434	12734	15034	17334	19634	21934	24234	O

Vz1 Overvoltage (F59Vz1) Function

LN: Overvoltage Name: PTOV (PTOV_0 for F59Vz) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 10								M
Op	ACT	Operate failure trip	2271 bit 10								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8096	10396	12696	14996	17296	19596	21896	24196	O

LN: Overvoltage Name: PTOV (PTOV_0 for F59Vz) Instance = 2

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	4804 bit 3								M
Op	ACT	Operate failure trip	4806 bit 3								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8101	10401	12701	15001	17301	19601	21901	24201	O

Peak Overvoltage (F59I) Function

LN: Overvoltage Name: PTOV (PTOV_1 for F59I) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	1935 bit 5								M
Op	ACT	Operate failure trip	1936 bit 5								O
StrPhB	ACD		1935 bit 6								U
OpPhB	ACT		1936 bit 6								U
StrPhC	ACD		1935 bit 7								U
OpPhC	ACT		1936 bit 7								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	9144	11444	13744	16044	18344	20644	22944	25244	O

LN: Overvoltage Name: PTOV (PTOV_0 for F59IA) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	1935 bit 5								M
Op	ACT	Operate failure trip	1936 bit 5								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	9150	11450	13750	16050	18350	20650	22950	25250	O

LN: Overvoltage Name: PTOV (PTOV_0 for F59IB) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	1935 bit 6								M
Op	ACT	Operate failure trip	1936 bit 6								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	9155	11455	13755	16055	18355	20655	22955	25255	O

Peak Overvoltage (F59I) Function

LN: Overvoltage Name: PTOV (PTOV_0 for F59IC) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	1935 bit 7								M
Op	ACT	Operate failure trip	1936 bit 7								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	9160	11460	13760	16060	18360	20660	22960	25260	O

VT Fuse Loss Detection (F60FL) Function

LN: Fuse Loss Name: PTOV (PFLD_0) for F60FL Instance = 1

PFLD/PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2264 bit 13	M
Op	ACT	Operate failure trip	2274 bit 13	O
Mod	INC	Enable	25487	

Sensitive Ground Directional Overcurrent (F67GS) Function

LN: Time Overcurrent Name: (PTOC3_0 for F67GS) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 0								M
Op	ACT	Operate failure trip	2273 bit 0								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8968	11268	13568	15868	18168	20468	22768	25068	O

LN: Time Overcurrent Name: (PTOC3_0 for F67GS) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 1								M
Op	ACT	Operate failure trip	2273 bit 1								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8976	11276	13576	15876	18176	20476	22776	25076	O

LN: Time Overcurrent Name: (PTOC3_0 for F67GS) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 2								M
Op	ACT	Operate failure trip	2273 bit 2								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8984	11284	13584	15884	18184	20484	22784	25084	O

Sensitive Ground Directional Overcurrent (F67GS) Function

LN: Time Overcurrent Name: (PTOC3_0 for F67GS) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 3								M
Op	ACT	Operate failure trip	2273 bit 3								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8992	11292	13592	15892	18192	20492	22792	25092	O

LN: Time Overcurrent Name: (PTOC3_0 for F67GS) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 4								M
Op	ACT	Operate failure trip	2273 bit 4								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	9000	11300	13600	15900	18200	20500	22800	25100	O

Residual Directional Overcurrent (F67N) Function

LN: Time Overcurrent Name: (PTOC3_0 for F67N) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 11								M
Op	ACT	Operate failure trip	2272 bit 11								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8320	10620	12920	15220	17520	19820	22120	24420	O

LN: Time Overcurrent Name: (PTOC3_0 for F67N) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 12								M
Op	ACT	Operate failure trip	2272 bit 12								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8328	10628	12928	15228	17528	19828	22128	24428	O

LN: Time Overcurrent Name: (PTOC3_0 for F67N) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 13								M
Op	ACT	Operate failure trip	2272 bit 13								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8336	10636	12936	15236	17536	19836	22136	24436	O

Residual Directional Overcurrent (F67N) Function

LN: Time Overcurrent Name: (PTOC3_0 for F67N) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 14								M
Op	ACT	Operate failure trip	2272 bit 14								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8344	10644	12944	15244	17544	19844	22144	24444	O

LN: Time Overcurrent Name: (PTOC3_0 for F67N) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 15								M
Op	ACT	Operate failure trip	2272 bit 15								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8352	10652	12952	15252	17552	19852	22152	24452	O

Negative Sequence Directional Overcurrent (F67Q) Function

LN: Time Overcurrent Name: (PTOC3_0 for F67Q) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 5								M
Op	ACT	Operate failure trip	2273 bit 5								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8420	10720	13020	15320	17620	19920	22220	24520	O

LN: Time Overcurrent Name: (PTOC3_0 for F67Q) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 6								M
Op	ACT	Operate failure trip	2273 bit 6								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8428	10728	13028	15328	17628	19928	22228	24528	O

LN: Time Overcurrent Name: (PTOC3_0 for F67Q) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 7								M
Op	ACT	Operate failure trip	2273 bit 7								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8436	10736	13036	15336	17636	19936	22236	24536	O

Negative Sequence Directional Overcurrent (F67Q) Function

LN: Time Overcurrent Name: (PTOC3_0 for F67Q) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 8								M
Op	ACT	Operate failure trip	2273 bit 8								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8444	10744	13044	15344	17644	19944	22244	24544	O

LN: Time Overcurrent Name: (PTOC3_0 for F67Q) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 9								M
Op	ACT	Operate failure trip	2273 bit 9								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8452	10752	13052	15352	17652	19952	22252	24552	O

Phase Directional Overcurrent (F67P) Function

LN: Time Overcurrent Name: (PTOC3_1 for F67P) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 12								M
Op	ACT	Operate failure trip	2271 bit 12								M
StrPhB	ACD	Start phase B	2261 bit 13								U
OpPhB	ACT	Operate phase B	2271 bit 13								U
StrPhC	ACD	Start phase C	2261 bit 14								U
OpPhC	ACT	Operate phase c	2271 bit 14								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8144	10444	12744	15044	17344	19644	21944	24244	O

LN: Time Overcurrent Name: (PTOC3_1 for F67P) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 15								M
Op	ACT	Operate failure trip	2271 bit 15								M
StrPhB	ACD	Start phase B	2262 bit 0								U
OpPhB	ACT	Operate phase B	2272 bit 0								U
StrPhC	ACD	Start phase C	2262 bit 1								U
OpPhC	ACT	Operate phase c	2272 bit 1								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8153	10453	12753	15053	17353	19653	21953	24253	O

Phase Directional Overcurrent (F67P) Function

LN: Time Overcurrent Name: (PTOC3_1 for F67P) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2262 bit 2	M
Op	ACT	Operate failure trip	2272 bit 2	M
StrPhB	ACD	Start phase B	2262 bit 3	U
OpPhB	ACT	Operate phase B	2272 bit 3	U
StrPhC	ACD	Start phase C	2262 bit 4	U
OpPhC	ACT	Operate phase c	2272 bit 4	U

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	8162	10462	12762	15062	17362	19662	21962	24262	O

LN: Time Overcurrent Name: (PTOC3_1 for F67P) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2262 bit 5	M
Op	ACT	Operate failure trip	2272 bit 5	M
StrPhB	ACD	Start phase B	2262 bit 6	U
OpPhB	ACT	Operate phase B	2272 bit 6	U
StrPhC	ACD	Start phase C	2262 bit 7	U
OpPhC	ACT	Operate phase c	2272 bit 7	U

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	8171	10471	12771	15071	17371	19671	21971	24271	O

Phase Directional Overcurrent (F67P) Function

LN: Time Overcurrent Name: (PTOC3_1 for F67P) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 8								M
Op	ACT	Operate failure trip	2272 bit 8								M
StrPhB	ACD	Start phase B	2262 bit 9								U
OpPhB	ACT	Operate phase B	2272 bit 9								U
StrPhC	ACD	Start phase C	2262 bit 10								U
OpPhC	ACT	Operate phase c	2272 bit 10								U
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8180	10480	12780	15080	17380	19680	21980	24280	O

LN: Time Overcurrent Name: (PTOC3_0 for F67PA) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 12								M
Op	ACT	Operate failure trip	2271 bit 12								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8189	10489	12789	15089	17389	19689	21989	24289	O

LN: Time Overcurrent Name: (PTOC3_0 for F67PA) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 15								M
Op	ACT	Operate failure trip	2271 bit 15								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8197	10497	12797	15097	17397	19697	21997	24297	O

Phase Directional Overcurrent (F67P) Function

LN: Time Overcurrent Name: (PTOC3_0 for F67PA) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 2								M
Op	ACT	Operate failure trip	2272 bit 2								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8205	10505	12805	15105	17405	19705	22005	24305	O

LN: Time Overcurrent Name: (PTOC3_0 for F67PA) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 5								M
Op	ACT	Operate failure trip	2272 bit 5								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8213	10513	12813	15113	17413	19713	22013	24313	O

LN: Time Overcurrent Name: (PTOC3_0 for F67PA) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 8								M
Op	ACT	Operate failure trip	2272 bit 8								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8221	10521	12821	15121	17421	19721	22021	24321	O

Phase Directional Overcurrent (F67P) Function

LN: Time Overcurrent Name: (PTOC3_0 for F67PB) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 13								M
Op	ACT	Operate failure trip	2271 bit 13								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8229	10529	12829	15129	17429	19729	22029	24329	O

LN: Time Overcurrent Name: (PTOC3_0 for F67PB) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 0								M
Op	ACT	Operate failure trip	2272 bit 0								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8237	10537	12837	15137	17437	19737	22037	24337	O

LN: Time Overcurrent Name: (PTOC3_0 for F67PB) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 3								M
Op	ACT	Operate failure trip	2272 bit 3								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8245	10545	12845	15145	17445	19745	22045	24345	O

Phase Directional Overcurrent (F67P) Function

LN: Time Overcurrent Name: (PTOC3_0 for F67PB) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 6								M
Op	ACT	Operate failure trip	2272 bit 6								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8253	10553	12853	15153	17453	19753	22053	24353	O

LN: Time Overcurrent Name: (PTOC3_0 for F67PB) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 9								M
Op	ACT	Operate failure trip	2272 bit 9								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8261	10561	12861	15161	17461	19761	22061	24361	O

LN: Time Overcurrent Name: (PTOC3_0 for F67PC) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2261 bit 14								M
Op	ACT	Operate failure trip	2271 bit 14								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8269	10569	12869	15169	17469	19769	22069	24369	O

Phase Directional Overcurrent (F67P) Function

LN: Time Overcurrent Name: (PTOC3_0 for F67PC) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 1								M
Op	ACT	Operate failure trip	2272 bit 1								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8277	10577	12877	15177	17477	19777	22077	24377	O

LN: Time Overcurrent Name: (PTOC3_0 for F67PC) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 4								M
Op	ACT	Operate failure trip	2272 bit 4								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8285	10585	12885	15185	17485	19785	22085	24385	O

LN: Time Overcurrent Name: (PTOC3_0 for F67PC) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 7								M
Op	ACT	Operate failure trip	2272 bit 7								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8293	10593	12893	15193	17493	19793	22093	24393	O

Phase Directional Overcurrent (F67P) Function

LN: Time Overcurrent Name: (PTOC3_0 for F67PC) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2262 bit 10								M
Op	ACT	Operate failure trip	2272 bit 10								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8301	10601	12901	15201	17501	19801	22101	24401	O

Frequency (F81) Function

LN: Frequency Name: PTOF (PTOF_0 for F81) Instance = 1

PTOF Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 13								M
Op	ACT	Operate failure trip	2273 bit 13								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8564	10864	13164	15464	17764	20064	22364	24664	O

LN: Frequency Name: PTOF (PTOF_0 for F81) Instance = 2

PTOF Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 14								M
Op	ACT	Operate failure trip	2273 bit 14								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8573	10873	13173	15473	17773	20073	22373	24673	O

LN: Frequency Name: PTOF (PTOF_0 for F81) Instance = 3

PTOF Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 15								M
Op	ACT	Operate failure trip	2273 bit 15								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8582	10882	13182	15482	17782	20082	22382	24682	O

Frequency (F81) Function

LN: Frequency Name: PTOF (PTOF_0 for F81) Instance = 4

PTOF Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2264 bit 0								M
Op	ACT	Operate failure trip	2274 bit 0								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8591	10891	13191	15491	17791	20091	22391	24691	O

LN: Frequency Name: PTOF (PTOF_0 for F81) Instance = 5

PTOF Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	4804 bit 15								M
Op	ACT	Operate failure trip	4806 bit 15								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46712	49012	51312	53612	55912	58212	60512	62812	O

LN: Frequency Name: PTOF (PTOF_0 for F81) Instance = 6

PTOF Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	4805 bit 0								M
Op	ACT	Operate failure trip	4807 bit 0								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46721	49021	51321	53621	55921	58221	60521	6281	O

Frequency (F81) Function

LN: Frequency Name: PTOF (PTOF_0 for F81) Instance = 7

PTOF Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	4805 bit 13								M
Op	ACT	Operate failure trip	4807 bit 13								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46730	49030	51330	53630	55930	58230	60530	62830	

LN: Frequency Name: PTOF (PTOF_0 for F81) Instance = 8

PTOF Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	4805 bit 14								M
Op	ACT	Operate failure trip	4807 bit 14								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46739	49039	51339	53639	55939	58239	60539	62839	O

Rate of Change of Frequency (F81R) Function

LN: Frequency Name: PTOF (PTOF1_0 for F81R) Instance = 1

PTOF Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2264 bit 1								M
Op	ACT	Operate failure trip	2274 bit 1								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8674	10974	13274	15574	17874	20174	22474	24774	O

LN: Frequency Name: PTOF (PTOF1_0 for F81R) Instance = 2

PTOF Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2264 bit 2								M
Op	ACT	Operate failure trip	2274 bit 2								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8683	10983	13283	15583	17883	20183	22483	24783	O

LN: Frequency Name: PTOF (PTOF1_0 for F81R) Instance = 3

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	4805 bit 15								M
Op	ACT	Operate failure trip	4807 bit 15								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46748	49048	51348	53648	55948	58248	60548	62848	O

Rate of Change of Frequency (F81R) Function

LN: Frequency Name: PTOF (PTOF1_0 for F81R) Instance = 4

PTOF Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	4847 bit 0								M
Op	ACT	Operate failure trip	4849 bit 0								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46758	49058	51358	53658	55958	58258	60558	62858	O

LN: Frequency Name: PTOF (PTOF1_0 for F81R) Instance = 4

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	4847 bit 1								M
Op	ACT	Operate failure trip	4849 bit 1								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46768	49068	51368	53668	55968	58268	60568	62868	O

LN: Frequency Name: PTOF (PTOF1_0 for F81R) Instance = 6

PTOF Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	4847 bit 2								M
Op	ACT	Operate failure trip	4849 bit 2								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46778	49078	51378	53678	55978	58278	60578	62878	O

Rate of Change of Frequency (F81R) Function

LN: Frequency Name: PTOF (PTOF1_0 for F81R) Instance = 7

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	4847 bit 3								M
Op	ACT	Operate failure trip	4849 bit 3								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46788	49088	51388	53688	55988	58288	60588	62888	O

LN: Frequency Name: PTOF (PTOF1_0 for F81R) Instance = 8

PTOF Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	4847 bit 4								M
Op	ACT	Operate failure trip	4849 bit 4								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46798	49098	51398	53698	55998	58298	60598	62898	O

Trip Circuit Monitoring (TCM) Function

LN: Trip Circuit Monitoring Name: RSYN (TCCM_0 for TCM) Instance = 1

RSYN Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2263 bit 10	O
Op	ACT	Operate failure trip	2273 bit 10	O
Settings				
Mod	INC	Enable	25432	U

Close Circuit Monitoring (CCM) Function

LN: Close Circuit Monitoring Name: RSYN (TCCM1_0 for CCM) Instance = 1

RSYN Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2263 bit 11	O
Op	ACT	Operate failure trip	2273 bit 11	O
Settings				
Mod	INC	Enable	25437	U

Total Harmonic/Total Demand Distortion (THD/TDD) Function

LN: THD/TDD Name: PTOC (THDTDD_1 for THD) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2264 bit 15	M
Op	ACT	Operate failure trip	2274 bit 15	M
StrPhB	ACD	Start phase B	1935 bit 0	U
OpPhB	ACT	Operate phase B	1936 bit 0	U
StrPhC	ACD	Start phase C	1935 bit 1	U
OpPhC	ACT	Operate phase c	1936 bit 1	U
Settings				
Mod	INC	Enable	28002	O
StrVal	ASG	Start value	28041	O

LN: THD/TDD Name: PTOC (THDTDD_1 for THD) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	1935 bit 2	M
Op	ACT	Operate failure trip	1936 bit 2	M
StrPhB	ACD	Start phase B	1935 bit 3	U
OpPhB	ACT	Operate phase B	1936 bit 3	U
StrPhC	ACD	Start phase C	1935 bit 4	U
OpPhC	ACT	Operate phase c	1936 bit 4	U
Settings				
Mod	INC	Enable	28009	O

Total Harmonic/Total Demand Distortion (THD/TDD) Function

LN: THD/TDD Name: PTOC (THDTDD_0 for THDA) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2264 bit 15	M
Op	ACT	Operate failure trip	2274 bit 15	M
Settings				
Mod	INC	Enable	28016	O

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	1935 bit 0	M
Op	ACT	Operate failure trip	1936 bit 0	M
Settings				
Mod	INC	Enable	28022	O

LN: THD/TDD Name: PTOC (THDTDD_0 for THDC) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	1935 bit 1	M
Op	ACT	Operate failure trip	1936 bit 1	M
Settings				
Mod	INC	Enable	28028	O

Total Harmonic/Total Demand Distortion (THD/TDD) Function

LN: THD/TDD Name: PTOC (THDTDD_0 for THDA) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	1935 bit 2	M
Op	ACT	Operate failure trip	1936 bit 2	M
Settings				
Mod	INC	Enable	28034	O

LN: THD/TDD Name: PTOC (THDTDD_0 for THDB) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	1935 bit 3	M
Op	ACT	Operate failure trip	1936 bit 3	M
Settings				
Mod	INC	Enable	28040	O

LN: THD/TDD Name: PTOC (THDTDD_0 for THDC) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	1935 bit 4	M
Op	ACT	Operate failure trip	1936 bit 4	M
Settings				
Mod	INC	Enable	28046	O

Breaker Monitoring (FBM) Function

LN: Breaker Failure Name: RBRF (RBRF_1 for FBM) Instance = 1

RBRF Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	1935 bit 15	O
Op	ACT	Operate failure trip	1936 bit 15	O
PctStr	SPS	BM1 Status	4891 bit 0	O
PctChgStr	SPS	BM1 Status	4891 bit 1	O
PctStrDrpOut	SPS	BM1 Status	4891 bit 2	O
PctTmOut	SPS	BM1 Status	4891 bit 3	O
PctTODrpOut	SPS	BM1 Status	4891 bit 4	O

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	46045	48345	50645	52945	55245	57545	59845	62145	U

LN: Breaker Failure Name: RBRF (RBRF_1 for FBM) Instance = 2

RBRF Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	4847 bit 6	O
Op	ACT	Operate failure trip	4849 bit 6	O
PctStr	SPS	BM1 Status	4892 bit 0	O
PctChgStr	SPS	BM1 Status	4892 bit 1	O
PctStrDrpOut	SPS	BM1 Status	4892 bit 2	O
PctTmOut	SPS	BM1 Status	4892 bit 3	O
PctTODrpOut	SPS	BM1 Status	4892 bit 4	O

Settings			Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6	Profile 7	Profile 8	
Mod	INC	Enable	47472	49772	52072	54372	56672	58972	61272	63622	U

Loss of Field (F40) Function

Name: PDIS (PDIS_0 for F40) Instance = 1

PDIS Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	1935 bit 11								O
Op	ACT	Operate failure trip	1936 bit 11								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46014	48314	50614	52914	55214	57514	59814	62114	O

Name: PDIS (PDIS_0 for F40) Instance = 2

PDIS Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	1935 bit 12								O
Op	ACT	Operate failure trip	1936 bit 12								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46020	48320	50620	52920	55220	57520	59820	62120	O

Name: PDIS_1 Inclass PDIS Prefix F40VC Instance = 1

PDIS Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	1935 bit 13								O
Op	ACT	Operate failure trip	1936 bit 13								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46026	48326	50626	52926	55226	57526	59826	62126	O

Loss of Field (F40) Function

Name: PDIS_1 Inclass PDIS Prefix F40VC Instance = 2

PDIS Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	1935 bit 14								O
Op	ACT	Operate failure trip	1936 bit 14								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46030	48330	50630	52930	55230	57530	59830	62130	O

IED Power Supply Monitor (PST) Function

Name: ZPST_0 Inclass ZPST Prefix PST Instance = 1

ZPST Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2264 bit 12	O
Op	ACT	Operate failure trip	1974 bit 12	O
Settings				
Mod	INC	Enable	25457	U

Battery Charger (BAT) Function

LN: Battery Name: ZBAT (ZBAT_0 for BAT) Instance = 1

ZBAT Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Measured value				
Vol	MV	Battery Voltage	2507	U
Status Information				
BatChaTstPrg	SPS	Battery Charger Test Program	3798 bit 6	M
BatChaModAsb	SPS	Battery Charger Mode Absorption	3798 bit 7	M
BatChaCapSt	SPS	Battery Charger Cap Status	3798 bit 8	M
BatChaModBlk	SPS	Battery Charger Mod Block	3798 bit 9	M
BatChaModflt	SPS	Battery Charger Mod Float	3798 bit 10	M
BatChaOn	SPS	Battery Charging On	4470 bit 6	M
BatChaInDrSt	SPS	Battery Charger InDr Status	4901 bit 0	M
BatChaExDrSt	SPS	Battery Charger ExDr Status	4901 bit 1	M
BatChaLoCapV	SPS	Battery Charger Low Cap Voltage	4901 bit 2	M
BatHiTmpAlm	SPS	Battery High Temp Alarm	4901 bit 3	M
LoBatAlm	SPS	Low Battery Alarm	4901 bit 4	M
Settings				
Mod	INC	Enable	6507	

Ground Instantaneous/Definite Time Overcurrent (F50G) Function

LN: Instantaneous Overcurrent Name: PIOC (PIOC_0 for F50G) Instance = 1

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2258 bit 1								O
Op	ACT	Operate failure trip	2268 bit 1								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7426	9726	12026	14326	16626	18926	21226	23526	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC_0 for F50G) Instance = 2

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2258 bit 2								O
Op	ACT	Operate failure trip	2268 bit 2								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7431	9731	12031	14331	16631	18931	21231	23531	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC_0 for F50G) Instance = 3

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2258 bit 3								O
Op	ACT	Operate failure trip	2268 bit 3								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7436	9736	12036	14336	16636	18936	21236	23536	O

Ground Instantaneous/Definite Time Overcurrent (F50G) Function

LN: Instantaneous Overcurrent Name: PIOC (PIOC_0 for F50G) Instance = 4

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2258 bit 4								O
Op	ACT	Operate failure trip	2268 bit 4								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7441	9741	12041	14341	16641	18941	21241	23541	O

LN: Instantaneous Overcurrent Name: PIOC (PIOC_0 for F50G) Instance = 5

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2258 bit 5								O
Op	ACT	Operate failure trip	2268 bit 5								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7446	9746	12046	14346	16646	18946	21246	23546	O

Hot Line Tag Maintenance Mode (F50G)

LN: Hot Line Tag PIOC Name: PHLT (HLTPIOC_0 for HT50G) Instance = 1

PIOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8777	11077	13377	15677	17977	20277	22577	24877	O
Status Information											
HCLStPhABC	SPS	High Current Lockout Status Phase ABC	2511 bit 11								U
HCLStPhA	SPS	High Current Lockout Status Phase A	4555 bit 11								U
HCLStPhB	SPS	High Current Lockout Status Phase B	4570 bit 11								U
HCLStPhC	SPS	High Current Lockout Status Phase C	4585 bit 11								U

Ground Inverse Time Overcurrent (F51G) Function

LN: Time Overcurrent Name:PTOC (PTOC1_0 for F51G) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 0								M
Op	ACT	Operate failure trip	2270 bit 0								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7850	10150	12450	14750	17050	19350	21650	23950	O

LN: Time Overcurrent Name:PTOC (PTOC1_0 for F51G) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 1								M
Op	ACT	Operate failure trip	2270 bit 1								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7863	10163	12463	14763	17063	19363	21663	23963	O

LN: Time Overcurrent Name:PTOC (PTOC1_0 for F51G) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 2								M
Op	ACT	Operate failure trip	2270 bit 2								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7876	10176	12476	14776	17076	19376	21676	23976	O

Ground Inverse Time Overcurrent (F51G) Function

LN: Time Overcurrent Name:PTOC (PTOC1_0 for F51G) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 3								M
Op	ACT	Operate failure trip	2270 bit 3								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7889	10189	12489	14789	17089	19389	21689	23989	O

LN: Time Overcurrent Name:PTOC (PTOC1_0 for F51G) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 4								M
Op	ACT	Operate failure trip	2270 bit 4								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	7902	10202	12502	14802	17102	19402	21702	24002	O

Hot Line Tag Maintenance Mode (F51G)

LN: Hot Line Tag PTOC Name: PTOC (HLTPTOC_0 for HT51G) Inclass: PHLT Instance = 1

PHLT Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8791	11091	13391	15691	17991	20291	22591	24891	O
HCLStPhABC	SPS	High Current Lockout Status Phase ABC	2511 bit 11								U
HCLStPhA	SPS	High Current Lockout Status Phase A	4555 bit 11								U
HCLStPhB	SPS	High Current Lockout Status Phase B	4570 bit 11								U
HCLStPhC	SPS	High Current Lockout Status Phase C	4585 bit 11								U

Ground Directional Overcurrent (F67G) Function

LN: Time Overcurrent Name: PTOC (PTOC3_0 for F67G) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 0								M
Op	ACT	Operate failure trip	2273 bit 0								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8370	10670	12970	15270	17570	19870	22170	24470	O

LN: Time Overcurrent Name: PTOC (PTOC3_0 for F67G) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 1								M
Op	ACT	Operate failure trip	2273 bit 1								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8378	10678	12978	15278	17578	19878	22178	24478	O

LN: Time Overcurrent Name: PTOC (PTOC3_0 for F67G) Instance = 3

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 2								M
Op	ACT	Operate failure trip	2273 bit 2								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8386	10686	12986	15286	17586	19886	22186	24486	O

Ground Directional Overcurrent (F67G) Function

LN: Time Overcurrent Name: PTOC (PTOC3_0 for F67G) Instance = 4

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 3								M
Op	ACT	Operate failure trip	2273 bit 3								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8394	10694	12994	15294	17594	19894	22194	24494	O

LN: Time Overcurrent Name: PTOC (PTOC3_0 for F67G) Instance = 5

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2263 bit 4								M
Op	ACT	Operate failure trip	2273 bit 4								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	8402	10702	13002	15302	17602	19902	22202	24502	O

Sectionalizer (FSC) Function

LN: Sectionalizer Name: SECT (SECT_0 for FSC) Instance = 0

SECT Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	1996 bit 8								M
Op	ACT	Operate failure trip	1997 bit 8								M
SectAct	SPS	Sectionalizer Enable	46136	48436	50736	53036	55336	57636	59936	62236	
SectSCMEna	SPS	Sectionalizer Trigger Restraint	46138	48438	50738	53038	55338	57638	59938	62238	
InitRstStA	SPS	Initiate Restraint Status Ph-A	3965 bit 13								U
InitRstStB	SPS	Initiate Restraint Status Ph-B	3965 bit 14								U
InitRstStC	SPS	Initiate Restraint Status Ph-C	3965 bit 15								U
CurRstStA	SPS	Current Restraint Status Ph-A	3965 bit 16								U
CurRstStB	SPS	Current Restraint Status Ph-B	3965 bit 17								U
CurRstStC	SPS	Current Restraint Status Ph-C	3965 bit 18								U
CurRstNeutSt	SPS	Current Restraint Status Neutral	3965 bit 19								U

Sectionalizer (FSCT) Function

LN: Sectionalizer Name: SECT (SECT_0 for FSCTA) Instance = 1

SECT Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	1996 bit 8								M
Op	ACT	Operate failure trip	1997 bit 8								M
SectAct	SPS	Sectionalizer Enable	46152	48452	50752	53052	55352	57652	59952	62252	
SectSCMEna	SPS	Sectionalizer Trigger Restraint	46154	48454	50754	53054	55354	57654	59954	62254	
InitRstStA	SPS	Initiate Restraint Status Ph-A	3965 bit 13								U
CurRstStA	SPS	Current Restraint Status Ph-A	3965 bit 16								U
CurRstNeutSt	SPS	Current Restraint Status Neutral	3965 bit 19								U

LN: Sectionalizer Name: SECT (SECT_0 for FSCTB) Instance = 1

SECT Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	1996 bit 8								M
Op	ACT	Operate failure trip	1997 bit 8								M
SectAct	SPS	Sectionalizer Enable	46168	48468	50768	53068	55368	57668	59968	62268	
SectSCMEna	SPS	Sectionalizer Trigger Restraint	46170	48470	50770	53070	55370	57670	59970	62270	
InitRstStB	SPS	Initiate Restraint Status Ph-B	3965 bit 14								U
CurRstStB	SPS	Current Restraint Status Ph-B	3965 bit 17								U
CurRstNeutSt	SPS	Current Restraint Status Neutral	3965 bit 19								U

Sectionalizer (FSCT) Function

LN: Sectionalizer Name: SECT (SECT_0 for FSCTC) Instance = 1

SECT Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	1996 bit 8								M
Op	ACT	Operate failure trip	1997 bit 8								M
SectAct	SPS	Sectionalizer Enable	46184	48484	50784	53084	55384	57684	59984	62284	
SectSCMEna	SPS	Sectionalizer Trigger Restraint	46186	48486	50786	53086	55386	57686	59986	62286	
InitRstStC	SPS	Initiate Restraint Status Ph-C	3965 bit 15								U
CurRstStC	SPS	Current Restraint Status Ph-C	3965 bit 18								U
CurRstNeutSt	SPS	Current Restraint Status Neutral	3965 bit 19								U

Sectionalizer (FSCU) Function										
LN: Sectionalizer Name: SECT (FSCU_SECT1) Instance = 1										
SECT Class										
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**							**M/O/U**
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)								
Status Information										
Str	ACD	Start, timer running	1996 bit 8							M
Op	ACT	Operate failure trip	1997 bit 8							M
CurRstSt	SPS	DSP Run Time Err	3965 Bit 16							M
InitRstSt	SPS	DSP Run Time Err	3965 Bit 13							M
StrF27	ACD	27ABC Pickup Status	4805 Bit 1							M
StrF50	ACD	50 SECTU Pickup Status	4805 Bit 3							M
StrF51	ACD	51 SECTU Pickup Status	4805 Bit 5							M
StrF59	ACD	59 Pickup Status	4805 Bit 7							M
OpF27	ACT	27ABC Timeout Status	4807 Bit 1							M
OpF50	ACT	50 SECTU Timeout Status	4807 Bit 3							M
OpF51	ACT	51 SECTU Timeout Status	4807 Bit 5							M
OpF59	ACT	59 Timeout Status	4807 Bit 7							M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	SECTU Enable	46657	48957	51257	53557	55857	58157	60457	62757	O

Sectionalizer (FSCU) Function

LN: Sectionalizer Name: SECT (FSCU_SECT2) Instance = 2

SECT Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	1996 bit 8								M
Op	ACT	Operate failure trip	1997 bit 8								M
CurRstSt	SPS	DSP Run Time Err	3965 Bit 17								M
InitRstSt	SPS	DSP Run Time Err	3965 Bit 14								M
StrF27	ACD	27ABC Pickup Status	4805 Bit 2								M
StrF50	ACD	50 SECTU Pickup Status	4805 Bit 4								M
StrF51	ACD	51 SECTU Pickup Status	4805 Bit 6								M
StrF59	ACD	59 Pickup Status	4805 Bit 8								M
OpF27	ACT	27ABC Timeout Status	4807 Bit 2								M
OpF50	ACT	50 SECTU Timeout Status	4807 Bit 4								M
OpF51	ACT	51 SECTU Timeout Status	4807 Bit 6								M
OpF59	ACT	59 Timeout Status	4807 Bit 8								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	SECTU Enable	46683	48983	51283	53583	55883	58183	60483	62783	O

Close Block (FCK) Function

LN: Close Block Name: FCK (FCK_CLBK1 for FCK) Instance = 1

CLBK Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	1996 bit 15	M
Op	ACT	Operate failure trip	1997 bit 15	M
StrPhB	ACD	Start, timer running	2085 bit 0	M
OpPhB	ACT	Operate failure trip	2085 bit 0	M
StrPhC	ACD	Start, timer running	2085 bit 1	M
OpPhC	ACT	Operate failure trip	2085 bit 1	M
Settings				
Mod	INC	Enable	28060	O

LN: Close Block Name: FCK (FCK_CLBK1 for FCKA) Instance = 1

CLBK Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	1996 bit 15	M
Op	ACT	Operate failure trip	1997 bit 15	M
Settings				
Mod	INC	Enable	28069	O

LN: Close Block Name: FCK (FCK_CLBK2 for FCKB) Instance = 1

CLBK Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2085 bit 0	M
Op	ACT	Operate failure trip	2085 bit 0	M
Settings				
Mod	INC	Enable	28078	O

LN: Close Block Name: FCK (FCK_CLBK3 for FCKC) Instance = 1				
CLBK Class				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2085 bit 1	M
Op	ACT	Operate failure trip	2085 bit 1	M
Settings				
Mod	INC	Enable	28087	O

Sensitive Ground Indicator (FSGI) Function				
LN: SGI Name: FSGI (FSGI_PSDE1 for FSGI) Instance = 1				
PSDE Class				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	1996 bit 8	M
Op	ACT	SGI.ENABLE	1997 bit 8	M
Settings				
Mod	INC	Enable	29052	O
HCurStrA1	SPS	HIF PICKUP_0	29100	U
HCurStrB1	SPS	HIF PICKUP_1	29100	U
HCurStrC1	SPS	HIF PICKUP_2	29100	U
HCurStrA2	SPS	HIF PICKUP_3	29100	U
HCurStrB2	SPS	HIF PICKUP_4	29100	U
HCurStrC2	SPS	HIF PICKUP_5	29100	U
HCurStrA3	SPS	HIF PICKUP_6	29100	U
HCurStrB3	SPS	HIF PICKUP_7	29100	U
HCurStrC3	SPS	HIF PICKUP_8	29100	U
HCurStrIg1	SPS	HIF PICKUP_18	29100	U
HCurStrIg2	SPS	HIF PICKUP_19	29100	U
HCurStrIgH	SPS	HIF PICKUP_22	29100	U
HCurStrIgF	SPS	HIF PICKUP_23	29100	U
HCurOpA1	SPS	HIF OPERATE_0	29102	U
HCurOpB1	SPS	HIF OPERATE_1	29102	U
HCurOpC1	SPS	HIF OPERATE_2	29102	U
HCurOpA2	SPS	HIF OPERATE_3	29102	U
HCurOpB2	SPS	HIF OPERATE_4	29102	U
HCurOpC2	SPS	HIF OPERATE_5	29102	U
HCurOpA3	SPS	HIF OPERATE_6	29102	U

Sensitive Ground Indicator (FSGI) Function

LN: SGI Name: FSGI (FSGI_PSDE1 for FSGI) Instance = 1

PSDE Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
HCurOpB3	SPS	HIF OPERATE_7	29102	U
HCurOpC3	SPS	HIF OPERATE_8	29102	U
HCurOpIg1	SPS	HIF OPERATE_18	29102	U
HCurOpIg2	SPS	HIF OPERATE_19	29102	U
HCurOpIgH	SPS	HIF OPERATE_22	29102	U
HCurOpIgF	SPS	HIF OPERATE_23	29102	U
HVStrA1	SPS	HIF PICKUP_9	29100	U
HVStrB1	SPS	HIF PICKUP_10	29100	U
HVStrC1	SPS	HIF PICKUP_11	29100	U
HVStrA2	SPS	HIF PICKUP_12	29100	U
HVStrB2	SPS	HIF PICKUP_13	29100	U
HVStrC2	SPS	HIF PICKUP_14	29100	U
HVStrA3	SPS	HIF PICKUP_15	29100	U
HVStrB3	SPS	HIF PICKUP_16	29100	U
HVStrC3	SPS	HIF PICKUP_17	29100	U
HVStrVg1	SPS	HIF PICKUP_20	29100	U
HVStrVg2	SPS	HIF PICKUP_21	29100	U
HAStrDirIg1	SPS	HIF PICKUP_24	29100	U
HAStrDirIg2	SPS	HIF PICKUP_25	29100	U
HVOpA1	SPS	HIF OPERATE_9	29102	U
HVOpB1	SPS	HIF OPERATE_10	29102	U
HVOpC1	SPS	HIF OPERATE_11	29102	U
HVOpA2	SPS	HIF OPERATE_12	29102	U
HVOpB2	SPS	HIF OPERATE_13	29102	U
HVOpC2	SPS	HIF OPERATE_14	29102	U
HVOpA3	SPS	HIF OPERATE_15	29102	U

Sensitive Ground Indicator (FSGI) Function				
LN: SGI Name: FSGI (FSGI_PSDE1 for FSGI) Instance = 1				
PSDE Class				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
HVOpB3	SPS	HIF OPERATE_16	29102	U
HVOpC3	SPS	HIF OPERATE_17	29102	U
HVOpVg1	SPS	HIF OPERATE_20	29102	U
HVOpVg2	SPS	HIF OPERATE_21	29102	U
HAOpDirIg1	SPS	HIF OPERATE_24	29102	U
HAOpDirIg2	SPS	HIF OPERATE_25	29102	U
AndGteEnaSt	SPS	SGI Status2 Bit 7	5058	U
BlkInActSt	SPS	SGI Status1 Bit 14	5057	U
ChgStrSt	SPS	Pust Change13 Bit 13	2087	U
ChgOpSt	SPS	Tost Change13 Bit 13	2088	U
DelGndAStrst	SPS	SGI Status1 Bit 15	5057	U
DelGndAPctHa	SPS	SGI Status2 Bit 3	5058	U
DelGndAOpSt	SPS	SGI Status2 Bit 0	5058	U
F50GSStrSt	SPS	SGI Status1 Bit 0	5057	U
F50GSOpSt	SPS	SGI Status1 Bit 1	5057	U
FrzTrgSt	SPS	SGI Status1 Bit 4	5057	U
GndATrgOpSt	SPS	SGI Status2 Bit 2	5058	U
GndATrgStrSt	SPS	SGI Status2 Bit 1	5058	U
InitStrSt	SPS	SGI Status1 Bit 10	5057	U
InitOpSt	SPS	SGI Status1 Bit 11	5057	U
IPSLRsSt	SPS	SGI Status1 Bit 2	5057	U
IPSLInitSt	SPS	SGI Status1 Bit 3	5057	U
LatRsTmrExp	SPS	SGI Status2 Bit 11	5058	U
LatRsTmrStr	SPS	SGI Status2 Bit 10	5058	U
RsCmdSt	SPS	SGI Status1 Bit 12	5057	U
RsFrzTmrExp	SPS	SGI Status2 Bit 6	5058	U
RsFrzTmrStr	SPS	SGI Status2 Bit 5	5058	U
RsTmrExpSt	SPS	SGI Status1 Bit 9	5057	U
RsTmrStrSt	SPS	SGI Status1 Bit 8	5057	U
SGIEnaSt	SPS	SGI Status1 Bit 13	5057	U
SGIInitSt	SPS	SGI Status1 Bit 5	5057	U
SgiTgt	SPS	System StatusBit3 Bit 5	2052, 2053	U

Global Logic (FCLG) Function

LN: Global Logic Name: (FCLG_IHMI1) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2260 bit 10	M
Op	ACT	Operate failure trip	2270 bit 10	O
Mod	INC	COMLOGIC#1.ENABLE	65002	

LN: Global Logic Name: (FCLG_IHMI2) Instance = 2

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2260 bit 10	M
Op	ACT	Operate failure trip	2270 bit 10	O
Mod	INC	COMLOGIC#2.ENABLE	65011	

LN: Global Logic Name: (FCLG_IHMI3) Instance = 3

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2260 bit 10	M
Op	ACT	Operate failure trip	2270 bit 10	O
Mod	INC	COMLOGIC#3.ENABLE	65020	

LN: Global Logic Name: (FCLG_IHMI4) Instance = 4

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2260 bit 10	M
Op	ACT	Operate failure trip	2270 bit 10	O
Mod	INC	COMLOGIC#4.ENABLE	65029	

Global Logic (FCLG) Function

LN: Global Logic Name: (FCLG_IHMI5) Instance = 5

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2260 bit 10	M
Op	ACT	Operate failure trip	2270 bit 10	O
Mod	INC	COMLOGIC#5.ENABLE	65038	

LN: Global Logic Name: (FCLG_IHMI6) Instance = 6

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2260 bit 10	M
Op	ACT	Operate failure trip	2270 bit 10	O
Mod	INC	COMLOGIC#6.ENABLE	65047	

LN: Global Logic Name: (FCLG_IHMI7) Instance = 7

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2260 bit 10	M
Op	ACT	Operate failure trip	2270 bit 10	O
Mod	INC	COMLOGIC#7.ENABLE	65056	

LN: Global Logic Name: (FCLG_IHMI8) Instance = 8

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS	M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	Start, timer running	2260 bit 10	M
Op	ACT	Operate failure trip	2270 bit 10	O
Mod	INC	COMLOGIC#8.ENABLE	65065	

IPSlogic (IPS) Function

LN: IPSlogic Name: (FIPS_IHMI1) Instance = 1

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 10								M
Op	ACT	Operate failure trip	2270 bit 10								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	IPSLOGIC#1.ENABLE	9102	11402	13702	16002	18302	20602	22902	25202	

LN: IPSlogic Name: (FIPS_IHMI2) Instance = 2

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 10								M
Op	ACT	Operate failure trip	2270 bit 10								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	IPSLOGIC#2.ENABLE	9106	11406	13706	16006	18306	20606	22906	25206	

LN: IPSlogic Name: (FIPS_IHMI3) Instance = 3

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 10								M
Op	ACT	Operate failure trip	2270 bit 10								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	IPSLOGIC#3.ENABLE	9110	11410	13710	16010	18310	20610	22910	25210	

LN: IPSlogic Name: (FIPS_IHMI4) Instance = 4

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 10								M
Op	ACT	Operate failure trip	2270 bit 10								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	IPSLOGIC#4.ENABLE	9114	11414	13714	16014	18314	20614	22914	25214	

IPSlogic (IPS) Function

LN: IPSlogic Name: (FIPS_IHMI5) Instance = 5

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 10								M
Op	ACT	Operate failure trip	2270 bit 10								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	IPSLOGIC#5.ENABLE	9118	11418	13718	16018	18318	20618	22918	25218	

LN: IPSlogic Name: (FIPS_IHMI6) Instance = 6

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 10								M
Op	ACT	Operate failure trip	2270 bit 10								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	IPSLOGIC#6.ENABLE	9122	11422	13722	16022	18322	20622	22922	25222	

LN: IPSlogic Name: (FIPS_IHMI7) Instance = 7

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 10								M
Op	ACT	Operate failure trip	2270 bit 10								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	IPSLOGIC#7.ENABLE	9126	11426	13726	16026	18326	20626	22926	25226	

LN: IPSlogic Name: (FIPS_IHMI8) Instance = 8

PTOV Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2260 bit 10								M
Op	ACT	Operate failure trip	2270 bit 10								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	IPSLOGIC#8.ENABLE	9130	11430	13730	16030	18330	20630	22930	25230	

Loop Scheme (FLS) Function

LN: Loop Scheme Name: (FLS_LPSH1) Instance = 1

LPSH Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	2085 Bit 2								M
Op	ACT	Operate failure trip	2086 Bit2								O
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Loop Scheme Enable	46319	48619	50919	53219	55519	57819	60119	62419	
DeaLinVy-TOSt	SPS	LoopScheme Status1	4700 Bit1								M
DeaLinVz-TOSt	SPS	LoopScheme Status1	4700 Bit 3								M
VRestrVy-TOSt	SPS	LoopScheme Status1	4700 Bit 5								M
VRestrVz-TOSt	SPS	LoopScheme Status1	4700 Bit 7								M
DeaLinYTOSt	SPS	LoopScheme Status1	4700 Bit 9								M
DeaLinZTOSt	SPS	LoopScheme Status1	4700 Bit 11								M
LivLinYTOSt	SPS	LoopScheme Status1	4700 Bit 13								M
LivLinZTOSt	SPS	LoopScheme Status1	4700 Bit 15								M
DeaLinYAc-tEx	SPS	LoopScheme Status2	4701 Bit 0								M
DeaLinZAc-tEx	SPS	LoopScheme Status2	4701 Bit 1								M
LivLinYActEx	SPS	LoopScheme Status2	4701 Bit 2								M
LivLinZActEx	SPS	LoopScheme Status2	4701 Bit 3								M
LSEna	SPS	LoopScheme Status2	4701 Bit 4								M
ActBrkTrp	SPS	LoopScheme Status2	4701 Bit 5								M
ActBrkCls	SPS	LoopScheme Status2	4701 Bit 6								M
ActGndTrpBlk	SPS	LoopScheme Status2	4701 Bit 7								M
ActRecBlk	SPS	LoopScheme Status2	4701 Bit 8								M
ActPrfSw	SPS	LoopScheme Status2	4701 Bit 9								M
LSRst	SPS	LoopScheme Status2	4701 Bit 10								M
SupvRvPwr-Det	SPS	LoopScheme Status2	4701 Bit 15								M
SectMod	SPS	LoopScheme Status3	4691 Bit 0								M
TieMod	SPS	LoopScheme Status3	4691 Bit 1								M
MidPtMod	SPS	LoopScheme Status3	4691 Bit 2								M
HlfVyDirSel	SPS	LoopScheme Status3	4691 Bit 3								M
HlfVzDirSel	SPS	LoopScheme Status3	4691 Bit 4								M

Loop Scheme (FLS) Function				
LN: Loop Scheme Name: (FLS_LPSH1) Instance = 1				
LPSH Class				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
FullLsSel	SPS	LoopScheme Status3	4691 Bit 5	M
LSRdy	SPS	LoopScheme Status3	4691 Bit 6	M
LSWaitRs	SPS	LoopScheme Status3	4691 Bit 7	M
LSStLO	SPS	LoopScheme Status3	4691 Bit 8	M
DualVLos	SPS	LoopScheme Status3	4691 Bit 9	M
SupvAuTrp-Cls	SPS	LoopScheme Status3	4691 Bit 10	M
TieAuClsBlk	SPS	LoopScheme Status3	4691 Bit 11	M
MidFwdPwr-Det	SPS	LoopScheme Status3	4691 Bit 14	M
TieDirPwrDet	SPS	LoopScheme Status3	4691 Bit 15	M

Loop Scheme (FLS) Function

LN: Loop Scheme (FLS) Name: (FLS_LPSH2) Instance = 2

LPSH Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	4804 Bit 8								M
Op	ACT	Operate failure trip	4805 Bit 8								O
Mod	INC	Loop Scheme2 Enable	46401	48701	51001	53301	55601	57901	60201	62501	U
DeaLinVyTOSt	SPS	LoopScheme2 Status1	4824 Bit 1								M
DeaLinVzTOSt	SPS	LoopScheme2 Status1	4824 Bit 3								M
VRestrVyTOSt	SPS	LoopScheme2 Status1	4824 Bit 5								M
VRestrVzTOSt	SPS	LoopScheme2 Status1	4824 Bit 7								M
DeaLinYTOSt	SPS	LoopScheme2 Status1	4824 Bit 9								M
DeaLinZTOSt	SPS	LoopScheme2 Status1	4824 Bit 11								M
LivLinYTOSt	SPS	LoopScheme2 Status1	4824 Bit 13								M
LivLinZTOSt	SPS	LoopScheme2 Status1	4824 Bit 15								M
DeaLinYActEx	SPS	LoopScheme2 Status2	4825 Bit 0								M
DeaLinZActEx	SPS	LoopScheme2 Status2	4825 Bit 1								M
LivLinYActEx	SPS	LoopScheme2 Status2	4825 Bit 2								M
LivLinZActEx	SPS	LoopScheme2 Status2	4825 Bit 3								M
LSEna	SPS	LoopScheme2 Status2	4825 Bit 4								M
ActBrkTrp	SPS	LoopScheme2 Status2	4825 Bit 5								M
ActBrkCls	SPS	LoopScheme2 Status2	4825 Bit 6								M
ActGndTrpBlk	SPS	LoopScheme2 Status2	4825 Bit 7								M
ActRecBlk	SPS	LoopScheme2 Status2	4825 Bit 8								M
ActPrfSw	SPS	LoopScheme2 Status2	4825 Bit 9								M
LSRst	SPS	LoopScheme2 Status2	4825 Bit 10								M
SectMod	SPS	LoopScheme2 Status3	4826 Bit 0								M
TieMod	SPS	LoopScheme2 Status3	4826 Bit 1								M
MidPtMod	SPS	LoopScheme2 Status3	4826 Bit 2								M
HlfVyDirSel	SPS	LoopScheme2 Status3	4826 Bit 3								M
HlfVzDirSel	SPS	LoopScheme2 Status3	4826 Bit 4								M
FullLsSel	SPS	LoopScheme2 Status3	4826 Bit 5								M
LSRdy	SPS	LoopScheme2 Status3	4826 Bit 6								M
LSWaitRs	SPS	LoopScheme2 Status3	4826 Bit 7								M
LSStLO	SPS	LoopScheme2 Status3	4826 Bit 8								M
DualVLos	SPS	LoopScheme2 Status3	4826 Bit 9								M

High Current Alarm (FHCA) Function

LN: High Current Name: PTOC (FHCA_PTOC1) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	4804 bit 13								M
Op	ACT	operate	4806 bit 13								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	HCA Enable	46650	48950	51250	53550	55850	58150	60450	62750	O

LN: High Current Name: PTOC (FHCA_ PTOC2) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	4804 bit 14								M
Op	ACT	operate	4806 bit 14								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	HCA Enable	46653	48953	51253	53553	55853	58153	60453	62753	O

Load Current Present (FLCP) Function

LN: Load Current Name: PTOC (FLCP_PTOC1) Instance = 1

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	4804 bit 9								M
Op	ACT	operate	4806 bit 9								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	LCP Enable	46640	48940	51240	53540	55840	58140	60440	62740	O

LN: Load Current Name: PTOC (FLCP_PTOC2) Instance = 2

PTOC Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	start	4804 bit 10								M
Op	ACT	operate	4806 bit 10								M
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	LCP Enable	46645	48945	51245	53545	55845	58145	60445	62745	O

Loss of Sensing (LOS) Function				
LN: Loss of Sensing Name: PLOS (FLOS_PLOS1) Instance = 1				
PLOS Class				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	start	4804 bit 11	M
Op	ACT	operate	4806 bit 11	M
Settings				
Mod	INC	LOS Enable	65080	O

LN: Loss of Sensing Name: PLOS (FLOS_PLOS2) Instance = 2				
PLOS Class				
Attribute Name	**Attr. Type**	**Explanation**	**MODBUS**	**M/O/U**
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)		
Status Information				
Str	ACD	start	4804 bit 12	M
Op	ACT	operate	4806 bit 12	M
Settings				
Mod	INC	LOS Enable	65084	O

Broken Conductor Detection (F46BC) Function

LN: Broken Conductor Detection Name: PTOC (F46BC_PTOC1) Instance = 1

RBRF Class

Attribute Name	Attr. Type	Explanation	MODBUS								M/O/U
LNName		Shall be inherited from Logical-Node Class (see IEC 61850-7-2)									
Status Information											
Str	ACD	Start, timer running	4847 bit 5								O
Op	ACT	Operate failure trip	4848 bit 5								C
Settings			**Profile 1**	**Profile 2**	**Profile 3**	**Profile 4**	**Profile 5**	**Profile 6**	**Profile 7**	**Profile 8**	
Mod	INC	Enable	46808	49108	51408	53708	56008	58308	60608	62908	U

BECKWITH ELECTRIC
6190 118th Avenue North • Largo, Florida 33773-3724 U.S.A.
PHONE (727) 544-2326
beckwithelectricsupport@hubbell.com
www.beckwithelectric.com
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