



Numerical Protection Relay

MELPRO™-D Series

IEC 61850
Signal Assigned Map (Instance Table)

TYPE: CMP1-A41D1

MELPRO-D Series CMP1-A41D1

LD (Logical device)	LN (Logical node)	FC (Function constraint)	Data object name	CDC (Common data class)	Data attribute name	Signal Name	Comments
Relay	LLN0	ST	Loc	SPS	stVal	CB_LR	
		CO	LEDRs	SPC	ctlVal	LED_RESET	LED reset by C key on front panel or demand from IEC61850
	LPHD	ST	Phyhealth	INS	stVal	RUN ALARM-L	Abnormal condition of constant supervision (non alarm light alarm)
	PTRC1 Trip	ST	OpCntRs	INC	stVal	Trip-Counter	trip counter
			Tr	ACT	general	ALLEL_O	trip signal
	PTOC1 OC1	ST	Str	ACD (Unknown)	general	OC1-3D_O	OC1 detection signal.
			Op	ACT	general	OC1_3_O	OC1 operate signal.
					phsA	OC1-A	OC1 phaseA operate signal.
					phsB	OC1-B	OC1 phaseB operate signal.
	phsC	OC1-C	OC1 phaseC operate signal.				
	PTOC2 OCG1	ST	Str	ACD (Unknown)	general	OC1-GD	OCG1 detection signal.
			Op	ACT	general	OC1-G	OCG1 operate signal.
	PTOC3 OC2	ST	Str	ACD (Unknown)	general	OC2-3D_O	OC2 detection signal.
			Op	ACT	general	OC2-3_O	OC2 operate signal.
					phsA	OC2-A	OC2 phaseA operate signal.
					phsB	OC2-B	OC2 phaseB operate signal.
	phsC	OC2-C	OC2 phaseC operate signal.				
	PTOC4 OCG2	ST	Str	ACD (Unknown)	general	OC2-GD	OCG2 detection signal.
			Op	ACT	general	OC2-G	OCG2 operate signal.
	PTOC5 OC3	ST	Str	ACD (Unknown)	general	OC3-3D_O	OC3 detection signal.
			Op	ACT	general	OC3-3_O	OC3 operate signal.
					phsA	OC3-A	OC3 phaseA operate signal.
					phsB	OC3-B	OC3 phaseB operate signal.
	phsC	OC3-C	OC3 phaseC operate signal.				
	PTOC6 NOC1	ST	Str	ACD (Unknown)	general	NOC1-D	NOC1 detection signal.
			Op	ACT	general	NOC1	NOC1 operate signal.
	PTOC7 NOC2	ST	Str	ACD (Unknown)	general	NOC2-D	NOC2 detection signal.
			Op	ACT	general	NOC2	NOC2 operate signal.
	PTOC8 NOC3	ST	Str	ACD (Unknown)	general	NOC3-D	NOC3 detection signal.
			Op	ACT	general	NOC3	NOC3 operate signal.
	PTOC9 DIRG1	ST	Str	ACD (Forward)	general	DIRG1_D	DIRG1 detection signal.
			Op	ACT	general	DIRG1	DIRG1 operate signal.
	PTOC10 DIRG2	ST	Str	ACD (Forward)	general	DIRG2_D	DIRG2 detection signal.
			Op	ACT	general	DIRG2	DIRG2 operate signal.
	PTTR1 THOL	ST	Str	ACD (Unknown)	general	THOL-D	THOL detection signal.
			Op	ACT	general	THOL	THOL operate signal.
	PTTR2 RTD1	ST	Str	ACD (Unknown)	general	RTD1_3D_O	RTD1 detection signal.
			Op	ACT	general	RTD1-3_O	RTD1 operate signal.
					phsA	RTD1-A	RTD1 phaseA operate signal.
					phsB	RTD1-B	RTD1 phaseB operate signal.
	phsC	RTD1-C	RTD1 phaseC operate signal.				
	PTTR3 RTD2	ST	Str	ACD (Unknown)	general	RTD2_3D_O	RTD2 detection signal.
			Op	ACT	general	RTD2-3_O	RTD2 operate signal.
					phsA	RTD2-A	RTD2 phaseA operate signal.
					phsB	RTD2-B	RTD2 phaseB operate signal.
	phsC	RTD2-C	RTD2 phaseC operate signal.				
	PTUC1 UC1	ST	Str	ACD (Unknown)	general	UC1-3D_O	UC1 detection signal.
			Op	ACT	general	UC1-3_O	UC1 operate signal.
					phsA	UC1-A	UC1 phaseA operate signal.
					phsB	CU1-B	UC1 phaseB operate signal.
phsC	CU1-C	UC1 phaseC operate signal.					
PTUC2 UC2	ST	Str		general	UC2-3D_O	UC2 detection signal.	
		Op	ACT	general	UC2-3_O	UC2 operate signal.	
				phsA	UC2-A	UC2 phaseA operate signal.	
				phsB	UC2-B	UC2 phaseB operate signal.	
phsC	UC2-C	UC2 phaseC operate signal.					
RBRF1 CBF	ST	Str	ACD (Unknown)	general	CBF-3D_O	CBF detection signal.	
		OpEx	ACT	general	CBF-3_O	CBF trip signal.	
				phsA	CBF-A	CBF phaseA operate signal.	
				phsB	CBF-B	CBF phaseB operate signal.	
phsC	CBF-C	CBF phaseC operate signal.					

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LD (Logical device)	LN (Logical node)	FC (Function constraint)	Data object name	CDC (Common data class)	Data attribute name	Signal Name	Comments
	RBRF2	ST	Str	ACD (Unknown)	general	CBF-GD	CBFG detection signal.
	CBFG		OpEx	ACT	general	CBF-G	CBFG operate signal.
	PTUV1	ST	Str	ACD (Unknown)	general	UV1-3D O	UV1 phase to earth detection signal.
	UV1		Op	ACT	general	UV1-3 O	UV1 phase to earth operate signal.
			phsA			UV1-A	UV1 phaseA or AB operate signal.
			phsB			UV1-B	UV1 phaseB or BC operate signal.
		phsC			UV1-C	UV1 phaseC or CA operate signal.	
	PTUV2	ST	Str	ACD (Unknown)	general	UV2-3D O	UV2 phase to phase detection signal.
	UV2		Op	ACT	general	UV2-3 O	UV2 phase to phase operate signal.
			phsA			UV2-A	UV2 phaseA or AB operate signal.
			phsB			UV2-B	UV2 phaseB or BC operate signal.
		phsC			UV2-C	UV2 phaseC or CA operate signal.	
	PTOV1	ST	Str	ACD (Unknown)	general	OV1-3D O	OV1 detection signal.
	OV1		Op	ACT	general	OV1-3 O	OV1 operate signal.
			phsA			OV1-A	OV1 phaseA or AB operate signal.
			phsB			OV1-B	OV1 phaseB or BC operate signal.
		phsC			OV1-C	OV1 phaseC or CA operate signal.	
	PTOV2	ST	Str	ACD (Unknown)	general	OV2-3D O	OV2 detection signal.
	OV2		Op	ACT	general	OV2-3 O	OV2 operate signal.
			phsA			OV2-A	OV2 phaseA or AB operate signal.
			phsB			OV2-B	OV2 phaseB or BC operate signal.
		phsC			OV2-C	OV2 phaseC or CA operate signal.	
	PTOV3	ST	Str	ACD (Unknown)	general	OVG1-D	OVN1 detection signal.
	OVG1		Op	ACT	general	OVG1	OVN1 operate signal.
	PTOV4	ST	Str	ACD (Unknown)	general	OVG2-D	OVN2 detection signal.
	OVG2		Op	ACT	general	OVG2	OVN2 operate signal.
	PTOV5	ST	Str	ACD (Unknown)	general	NOV1-D	NOV1 detection signal.
	NOV1		Op	ACT	general	NOV1	NOV1 operate signal.
	PTOV6	ST	Str	ACD (Unknown)	general	NOV2-D	NOV2 detection signal.
	NOV2		Op	ACT	general	NOV2	NOV2 operate signal.
	PTUF1	ST	Str	ACD (Unknown)	general	UF1-D	UF1 detection signal.
	UF1		Op	ACT	general	UF1	UF1 operation signal. This signal is used for DO output logic.
	PTUF2	ST	Str	ACD (Unknown)	general	UF2-D	UF2 detection signal.
	UF2		Op	ACT	general	UF2	UF2 operation signal. This signal is used for DO output logic.
	PTUF3	ST	Str	ACD (Unknown)	general	UF3-D	UF3 detection signal.
	UF3		Op	ACT	general	UF3	UF3 operation signal. This signal is used for DO output logic.
	PTOF1	ST	Str	ACD (Unknown)	general	OF1-D	OF1 detection signal.
	OF1		Op	ACT	general	OF1	OF1 operation signal. This signal is used for DO output logic.
	PTOF2	ST	Str	ACD (Unknown)	general	OF2-D	OF2 detection signal.
	OF2		Op	ACT	general	OF2	OF2 operation signal. This signal is used for DO output logic.
PTOF3	ST	Str	ACD (Unknown)	general	OF3-D	OF3 detection signal.	
OF3		Op	ACT	general	OF3	OF3 operation signal. This signal is used for DO output logic.	
PMSS1	ST	Str	ACD (Unknown)	general	MST1-D	MST1 detection signal.	
MST1		Op	ACT	general	MST1	MST1 operate signal.	
PMSS2	ST	Str	ACD (Unknown)	general	MST2-D	MST2 detection signal.	
MST2		Op	ACT	general	MST2	MST2 operate signal.	
PUPF1	ST	Str	ACD (Unknown)	general	UP1-D	UP1 detection signal.	
UP1		Op	ACT	general	UP1	UP1 operate signal.	
PUPF2	ST	Str	ACD (Unknown)	general	UP2-D	UP2 detection signal.	
UP2		Op	ACT	general	UP2	UP2 operate signal.	
CILO1 Interlock	ST	EnaOpn	SPS	stVal	INT_LK_OP	Enable Open	
		EnaCls	SPS	stVal	INT_LK_CL	Enable Close	
		ElemEna	SPS	stVal	43INT_FLG	Status INTERLOCK	
	CO	ElemEna	SPC	Oper.ctlVal	INTERLOCK	INTERLOCK OFF(no use) / ON(use)	
CSWI1	ST	Pos	DPS	stVal	CBa1	Status of switch position (intermediate-state off on bad-state)	
CB control	CO	Pos	DPC	Oper.ctlVal	CTL_ON	Use API of HMIR	
XCBR1 Circuit breaker	ST	Loc	SPS	stVal	False(FIX)	Local operation (local means without substation automation communication, hardwired direct control)	
		OpCnt	INS	stVal	0(FIX)	Value 0 Fix, Operation counter (Count by DI input isn't done in D40)	
		Pos	DPC	stVal	CBa1	Status of switch position (intermediate-state off on bad-state)	
		BlkOpn	SPS	stVal	CTL_BLOP1	Status value of the Block opening	
	CO	BlkOpn	SPC	Oper.ctlVal	OPEN_BLK1	Control value of the Block opening OFF(no use) / ON(use)	
	ST	BlkCls	SPS	stVal	CTL_BLCL1	Status value of the Block closing	

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		CO	BlkCls	SPC	Oper.ctlVal	CLOSE_BLK1	Control value of the Block closing OFF(no use) / ON(use)
		ST	CBOpCap	INS	stVal	1(FIX)	Value 1 Fix, Circuit breaker operating capability
	RDRE1	ST	RcdMade	SPS	stVal	RcdMade	Recording made M
			FltNum	INS	stVal	FltNum	Fault Number
	MMXU1	MX	PhV.phsA	WYE.CMV	cval.mag.f cval.ang.f q	Va Va phase Va,Va Phase	Phase to ground voltages Phase A Phase between reference phase(setting) and voltage phase A Quality is judged by application
			PhV.phsB	WYE.CMV	cval.mag.f cval.ang.f q	Vb Vb phase Vb,Vb Phase	Phase to ground voltages Phase B Phase between reference phase(setting) and voltage phase B Quality is judged by application
			PhV.phsC	WYE.CMV	cval.mag.f cval.ang.f q	Vc Vc phase Vc,Vc Phase	Phase to ground voltages Phase C Phase between reference phase(setting) and voltage phase C Quality is judged by application
			V0	CMV	cval.mag.f cval.ang.f q	VG VG Phase VG,VG Phase	Zero phase voltage Phase between reference phase(setting) and current phase VG Quality is judged by application
			PPV.phsA	DEL.CMV	cval.mag.f cval.ang.f q	Vab Vbc Vca	Phase to phase voltages Phase AB Phase between reference phase(setting) and voltage phase AB Quality is judged by application
			PPV.phsB	DEL.CMV	cval.mag.f cval.ang.f q	Vab Phase Vbc Phase Vca Phase	Phase to phase voltages Phase BC Phase between reference phase(setting) and voltage phase BC Quality is judged by application
			PPV.phsC	DEL.CMV	cval.mag.f cval.ang.f q	Vab,Vab Phase Vbc,Vbc Phase Vca,Vca Phase	Phase to phase voltages Phase CA Phase between reference phase(setting) and voltage phase CA Quality is judged by application
			A.phsA	WYE.CMV	cval.mag.f cval.ang.f q	Ia Ia Phase Ia,Ia Phase	Phase currents Phase A Phase between reference phase(setting) and current phase A Quality is judged by application
			A.phsB	WYE.CMV	cval.mag.f cval.ang.f q	Ib Ib Phase Ib,Ib Phase	Phase currents Phase B Phase between reference phase(setting) and current phase B Quality is judged by application
			A.phsC	WYE.CMV	cval.mag.f cval.ang.f q	Ic Ic Phase Ic,Ic Phase	Phase currents Phase C Phase between reference phase(setting) and current phase C Quality is judged by application
			I0	CMV	cVal cVal q	IG IG Phase IG,IG Phase	Zero phase current Phase between reference phase(setting) and current phase IG Quality is judged by application
			TotW	MV	mag q	P P	Total Active Power Quality is judged by application
			TotVAr	MV	mag q	Q Q	Total Reactive Power Quality is judged by application
			TotVA	MV	mag q	S S	Total Apparent Power Quality is judged by application
			TotPF	MV	mag q	PF PF	Average Power factor Quality is judged by application
			Hz	MV	mag q	F F	Frequency Quality is judged by application
	MSQI	MX	SeqA.c1	SEQ.CMV	cval.mag.f q	I1 I1	Positive Sequence Current Quality is judged by application
			SeqA.c2	SEQ.CMV	cval.mag.f q	I2 I2	Negative Sequence Current Quality is judged by application
			SeqA.c3	SEQ.CMV	cval.mag.f q	I0 I0	Zero Sequence Current Quality is judged by application
			SeqV.c1	SEQ.CMV	cval.mag.f q	V1 V1	Positive Sequence Voltage Quality is judged by application
			SeqV.c2	SEQ.CMV	cval.mag.f q	V2 V2	Negative Sequence Voltage Quality is judged by application
			SeqV.c3	SEQ.CMV	cval.mag.f q	V0 V0	Zero Sequence Voltage Quality is judged by application
	MMTR1	ST	SupWh	BCR	actVal q	+Pt +Pt	Real energy supply (direction: + Wh) Quality is judged by application
			SupVArh	BCR	actVal	+Qt	Reactive energy supply (direction: + Varh)

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LD (Logical device)	LN (Logical node)	FC (Function constraint)	Data object name	CDC (Common data class)	Data attribute name	Signal Name	Comments
					q	+Qt	Quality is judged by application
			DmdWh	BCR	actVal	-Pt	Real energy demand (direction: - Wh)
					q	-Pt	Quality is judged by application
			DmdVArh	BCR	actVal	-Qt	Reactive energy demand (direction: - Varh)
					q	-Qt	Quality is judged by application
	GGIO1 DI	ST	Ind1	SPS	stVal	DI1	DI1-1
			Ind2	SPS	stVal	DI2	DI1-2
			Ind3	SPS	stVal	DI3	DI1-3
			Ind4	SPS	stVal	DI4	DI1-4
			Ind5	SPS	stVal	DI5	DI1-5
			Ind6	SPS	stVal	DI6	DI1-6
			Ind7	SPS	stVal	DI7	DI1-7
			Ind8	SPS	stVal	DI8	DI1-8
	GGIO2 DO	ST	Ind1	SPS	stVal	DO1	DO-1
			Ind2	SPS	stVal	DO2	DO-2
			Ind3	SPS	stVal	DO3	DO-3
			Ind4	SPS	stVal	DO4	DO-4
			Ind5	SPS	stVal	DO5	DO-5
			Ind6	SPS	stVal	DO6	DO-6
			Ind7	SPS	stVal	DO7	DO-7
			Ind8	SPS	stVal	DO8	DO-8
	GGIO4 PLC	ST	Ind1	SPS	stVal	COMM0	The internal signals can be assigned to this communication port on PLC function in PC-HMI. The assigned signals are published via IEC 61850.
			Ind2	SPS	stVal	COMM1	The internal signals can be assigned to this communication port on PLC function in PC-HMI. The assigned signals are published via IEC 61850.
			Ind3	SPS	stVal	COMM2	The internal signals can be assigned to this communication port on PLC function in PC-HMI. The assigned signals are published via IEC 61850.
			Ind4	SPS	stVal	COMM3	The internal signals can be assigned to this communication port on PLC function in PC-HMI. The assigned signals are published via IEC 61850.
			Ind5	SPS	stVal	COMM4	The internal signals can be assigned to this communication port on PLC function in PC-HMI. The assigned signals are published via IEC 61850.
			Ind6	SPS	stVal	COMM5	The internal signals can be assigned to this communication port on PLC function in PC-HMI. The assigned signals are published via IEC 61850.
			Ind7	SPS	stVal	COMM6	The internal signals can be assigned to this communication port on PLC function in PC-HMI. The assigned signals are published via IEC 61850.
			Ind8	SPS	stVal	COMM7	The internal signals can be assigned to this communication port on PLC function in PC-HMI. The assigned signals are published via IEC 61850.
	GGIO100 GOOSE	ST	Ind1	SPS	stVal	GOOSE1	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind2	SPS	stVal	GOOSE2	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind3	SPS	stVal	GOOSE3	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind4	SPS	stVal	GOOSE4	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind5	SPS	stVal	GOOSE5	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind6	SPS	stVal	GOOSE6	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind7	SPS	stVal	GOOSE7	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind8	SPS	stVal	GOOSE8	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind9	SPS	stVal	GOOSE9	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind10	SPS	stVal	GOOSE10	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind11	SPS	stVal	GOOSE11	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind12	SPS	stVal	GOOSE12	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind13	SPS	stVal	GOOSE13	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind14	SPS	stVal	GOOSE14	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind15	SPS	stVal	GOOSE15	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind16	SPS	stVal	GOOSE16	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind17	SPS	stVal	GOOSE17	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind18	SPS	stVal	GOOSE18	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind19	SPS	stVal	GOOSE19	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind20	SPS	stVal	GOOSE20	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind21	SPS	stVal	GOOSE21	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind22	SPS	stVal	GOOSE22	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.
			Ind23	SPS	stVal	GOOSE23	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.

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LD (Logical device)	LN (Logical node)	FC (Function constraint)	Data object name	CDC (Common data class)	Data attribute name	Signal Name	Comments		
			Ind24	SPS	stVal	GOOSE24	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.		
			Ind25	SPS	stVal	GOOSE25	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.		
			Ind26	SPS	stVal	GOOSE26	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.		
			Ind27	SPS	stVal	GOOSE27	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.		
			Ind28	SPS	stVal	GOOSE28	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.		
			Ind29	SPS	stVal	GOOSE29	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.		
			Ind30	SPS	stVal	GOOSE30	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.		
			Ind31	SPS	stVal	GOOSE31	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.		
			Ind32	SPS	stVal	GOOSE32	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.		
			Ind33	SPS	stVal	GOOSE33	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.		
			Ind34	SPS	stVal	GOOSE34	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.		
			Ind35	SPS	stVal	GOOSE35	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.		
			Ind36	SPS	stVal	GOOSE36	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.		
			Ind37	SPS	stVal	GOOSE37	The received signal from GOOSE. This signal can be use as an internal signals on PLC function in PC-HMI.		
			Ind38	SPS	stVal	G_TRIP1	When this signal recieve other relay operation condition, the CBF/CBFG element in own device are operated (activated). This signal via IEC 61850 is used instead of digital input (hardwire).		
			Ind39	SPS	stVal	G_TRIP2	When this signal recieve other relay operation condition, the CBF/CBFG element in own device are operated (activated). This signal via IEC 61850 is used instead of digital input (hardwire).		
			Ind40	SPS	stVal	G_TRIP3	When this signal recieve other relay operation condition, the CBF/CBFG element in own device are operated (activated). This signal via IEC 61850 is used instead of digital input (hardwire).		
			GGIO200 Alarm	ST	Alm1	SPS	stVal	TCNT_ALM	trip counter limit over
					Alm2	SPS	stVal	TCOIL_ALM	trip coil supervision
					Alm3	SPS	stVal	V0SV_ALM	V0 supervision
Alm4	SPS	stVal			I0SV_ALM	I0 supervision (Residual current only)			
Alm5	SPS	stVal			MTR_ALM	Moter Run Time			
Alm6	SPS	stVal			VTF	VTF operate signal			