Switchgear
Technical Data
TD280016EN

Effective July 2015
Supersedes R280-90-19 8/2012

COOPER POWER
SERIES

Communications Point Data Base

for Communications Protocol 2179

For use with Eaton's Cooper Power series
Form 6 Recloser Control

Powering Business Worldwide

Form 6 Cooper 2179 Map Points

July 9, 2015 v3.0

Document	Date	Description
1.00	5/8/2002	Initial release.
1.01	3/15/2004	Added triple single basic scan and SBO definitions.
1.02	7/26/2005	Changed the Analog Scale Factor for the Instantaneous Power Factors to 10000.
1.03	10/28/2005	Minor edits in the Basic Scan, Status tab.
2.00	8/24/2012	Updates and re-release for ProView 5.0
3.00	7/9/2015	Updates and re-release for ProView 5.1

2179 Point Sequence Range	Minimum	Maximum
2-Bit Status	0 (0x0)	31 (0x1F)
Simple Bit Status	48 (0x30)	63 (0x3F)
Pulse Accumulators	64 (0x40)	95 (0x5F)
Analog Inputs	128 (0x80)	255 (0xFF)
Special Calculations	0 (0x0)	127 (0x7F)
Control Output	0 (0x0)	255 (0xFF)

INPUT SUBSYSTEM

Binary Input Status

Description	Register	Bit ID	2-Bit Status Sequence	Simple Status Sequence
Recloser Closed	00	***00***	**0 (0x0)**	**48(0x30)**
Recloser Open	01	***01***		
Control is Locked Out	02	***02***		
Any Control or System Alarm	03	***03***		
Above Minimum Trip	04	***04***		
Supervisory Off	05	***05***		
Non-Reclosing	06	***06***		
Ground Trip Blocked	07	***07***		
SEF Blocked	08	***08***	**1 (0x1)**	
CLPU Blocked	09	***09***		
Fast Trips Blocked	10	***10***		
Profile Selected (Normal)	11	***11***		
Profile Selected (Alt1)	12	***12***		
Profile Selected (Alt2)	13	***13***		
Profile Selected (Alt3)	14	***14***		
Hot Line Tag	15	***15***		
Bus Voltage Present (Phase A)	16	***00***	**2 (0x2)**	**49(0x31)**
Bus Voltage Present (Phase B)	17	***01***		
Bus Voltage Present (Phase C)	18	***02***		
Reverse Power Flow	19	***03***		
Battery Test in Progress	20	***04***		
No AC Power	21	***05***		
Battery Alarm	22	***06***		
ci8:Alt1 (TB3:9-10)	23	***07***		
ci9:Alt2 (TB3:11-12)	24	***08***	**3 (0x3)**	
ci10:Alt3 (TB3:13-14)	25	***09***		
ci11:Nrml (TB3:15-16)	26	***10***		
co1:aux (TB1:11-12,13)	27	***11***		
co2:ok (TB1:14-15)	28	***12***		
co3:hlt (TB1:16-17)	29	***13***		
co4:gtb (TB1:18-19)	30	***14***		
ss1:lo (TB1:9-10)	31	***15***		
co5:nr (TB3:17-18)	32	***00***	**4 (0x4)**	
co6:alm (TB3:19-20,21)	33	***01***		
co7:nrm (TB4:1-2)	34	***02***		
co8:alt1 (TB4:3-4)	35	***03***		
co9:alt2 (TB4:5-6)	36	***04***		
co10:alt3 (TB4:7-8)	37	***05***		

INPUT SUBSYSTEM

Binary Input Status

Description	Register	Bit ID	2-Bit Status Sequence	Simple Status Sequence
co11:frq (TB4:9-10)	38	***06***		**50(0x32)**
co12:vlt (TB4:11-12,13)	39	***07***		
Reclose Retry Enabled	40	***08***	**5 (0x5)**	
A Phase Fault Trip	41	***09***		
B Phase Fault Trip	42	***10***		
C Phase Fault Trip	43	***11***		
Ground Fault Trip	44	***12***		
SEF Trip	45	***13***		
ci1:RTrip (TB1:3-4)	46	***14***		
ci2:SClose (TB1:5-6)	47	***15***		
ci3:STrip (TB1:7-8)	48	***00***	**6 (0x6)**	**51(0x33)**
ci4:GTB (TB3:1-2)	49	***01***		
ci5:NRecl (TB3:3-4)	50	***02***		
ci6:TargR (TB3:5-6)	51	***03***		
ci7 (TB3:7-8)	52	***04***		
Ground Overcurrent Alarm	53	***05***		
Phase Overcurrent Alarm	54	***06***		
Negative Sequence Overcurrent Alarm	55	***07***		
Hot Line Tag On from Configurable Logic	56	***08***	**7 (0x7)**	
Hot Line Tag On from Communications	57	***09***		
Hot Line Tag On from Front Panel Switch	58	***10***		
Control Circuit Interrupted	59	***11***		
USEF Blocked	60	***12***		
Profile Selected (Alt 4)	61	***13***		
Profile Selected (Alt 5)	62	***14***		
Not Used	63	***15***		

INPUT SUBSYSTEM

Binary Input Status (Triple-Single)

Description	Register	Bit ID	2-Bit Status Sequence	Simple Status Sequence
Recloser Closed (Phase A)	00	***00***	**0 (0x0)**	**48(0x30)**
Recloser Open (Phase A)	01	***01***		
Control is Locked Out (Phase A)	02	***02***		
Any Control or System Alarm	03	***03***		
Above Minimum Trip	04	***04***		
Supervisory Off	05	***05***		
Non-Reclosing	06	***06***		
Ground Trip Blocked	07	***07***		
SEF Blocked	08	***08***	**1 (0x1)**	
CLPU Blocked	09	***09***		
Fast Trips Blocked	10	***10***		
Profile Selected (Normal)	11	***11***		
Profile Selected (Alt1)	12	***12***		
Profile Selected (Alt2)	13	***13***		
Profile Selected (Alt3)	14	***14***		
Hot Line Tag	15	***15***		
Bus Voltage Present (Phase A)	16	***00***	**2 (0x2)**	**49(0x31)**
Bus Voltage Present (Phase B)	17	***01***		
Bus Voltage Present (Phase C)	18	***02***		
Reverse Power Flow	19	***03***		
Battery Test in Progress	20	***04***		
No AC Power	21	***05***		
Battery Alarm	22	***06***		
ci8:Alt1 (TB3:9-10)	23	***07***		
ci9:Alt2 (TB3:11-12)	24	***08***	**3 (0x3)**	
ci10:Alt3 (TB3:13-14)	25	***09***		
ci11:Nrml (TB3:15-16)	26	***10***		
co1:aux (TB1:11-12,13)	27	***11***		
co2:ok (TB1:14-15)	28	***12***		
co3:hlt (TB1:16-17)	29	***13***		
co4:gtb (TB1:18-19)	30	***14***		
ss1:lo (TB1:9-10)	31	***15***		
co5:nr (TB3:17-18)	32	***00***	**4 (0x4)**	
co6:alm (TB3:19-20,21)	33	***01***		
co7:nrm (TB4:1-2)	34	***02***		
co8:alt1 (TB4:3-4)	35	***03***		
co9:alt2 (TB4:5-6)	36	***04***		
co10:alt3 (TB4:7-8)	37	***05***		

INPUT SUBSYSTEM

Binary Input Status (Triple-Single)

Description	Register	Bit ID	2-Bit Status Sequence	Simple Status Sequence
co11:frq (TB4:9-10)	38	***06***		**50(0x32)**
co12:vlt (TB4:11-12,13)	39	***07***		
Reclose Retry Enabled	40	***08***	**5 (0x5)**	
A Phase Fault Trip	41	***09***		
B Phase Fault Trip	42	***10***		
C Phase Fault Trip	43	***11***		
Ground Fault Trip	44	***12***		
SEF Trip	45	***13***		
ci1:RTrip (TB1:3-4)	46	***14***		
ci2:SClose (TB1:5-6)	47	***15***		
ci3:STrip (TB1:7-8)	48	***00***	**6 (0x6)**	**51(0x33)**
ci4:GTB (TB3:1-2)	49	***01***		
ci5:NRecl (TB3:3-4)	50	***02***		
ci6:TargR (TB3:5-6)	51	***03***		
ci7 (TB3:7-8)	52	***04***		
Ground Overcurrent Alarm	53	***05***		
Phase A Overcurrent Alarm	54	***06***		
Negative Sequence Overcurrent Alarm	55	***07***		
Hot Line Tag On from Configurable Logic	56	***08***	**7 (0x7)**	
Hot Line Tag On from Communications	57	***09***		
Hot Line Tag On from Front Panel Switch	58	***10***		
Control Circuit Interrupted (Phase A)	59	***11***		
Recloser Closed (Phase B)	60	***12***		
Recloser Open (Phase B)	61	***13***		
Control is Locked Out (Phase B)	62	***14***		
Control Circuit Interrupted (Phase B)	63	***15***		
Recloser Closed (Phase C)	64	***00***	**8 (0x8)**	**52(0x34)**
Recloser Open (Phase C)	65	***01***		
Control is Locked Out (Phase C)	66	***02***		
Control Circuit Interrupted (Phase C)	67	***03***		
Phase B Overcurrent Alarm	68	***04***		
Phase C Overcurrent Alarm	69	***05***		
Ganged Mode	70	***06***		
1-3 Mode	71	***07***		
1-1 Mode	72	***08***	**9 (0x9)**	
USEF Blocked	73	***09***		
Profile Selected (Alt 4)	74	***10***		
Profile Selected (Alt 5)	75	***11***		
Not Used	76	***12***		

INPUT SUBSYSTEM

Binary Input Status (Triple-Single)

Description	Register	Bit ID	2-Bit Status Sequence	Simple Status Sequence
Not Used	77	***13***		
Not Used	78	***14***		
Not Used	79	***15***		

INPUT SUBSYSTEM

Counters

Description	Index	Sequence
Trip Counter (Phase A)	00	64 (0x40)
Trip Counter (Phase B)	01	65 (0x41)
Trip Counter (Phase C)	02	66 (0x42)
Trip Counter (Ground)	03	67 (0x43)
Trip Counter (SEF)	04	68 (0x44)
Total Trip Counter	05	69 (0x45)

INPUT SUBSYSTEM

Counters (Triple-Single)

Description	Index	Sequence
Trip Counter (Phase A)	00	64 (0x40)
Trip Counter (Phase B)	01	65 (0x41)
Trip Counter (Phase C)	02	66 (0x42)
Trip Counter (Ground)	03	67 (0x43)
Trip Counter (SEF)	04	68 (0x44)
Total Trip Counter	05	69 (0x45)
Operations Counter (Phase A)	06	70 (0x46)
Operations Counter (Phase B)	07	71 (0x47)
Operations Counter (Phase C)	08	72 (0x48)

INPUT SUBSYSTEM

Analog Inputs

Description	Index	Sequence	Scale Factor	Units
90% Full Scale Value (hardcoded to 29491)	00	128 (0x80)	1	
Zero-Reference Value (hardcoded to 0)	01	129 (0x81)	1	
A Phase Primary Current Magnitude	02	130 (0x82)	10	Amps
B Phase Primary Current Magnitude	03	131 (0x83)	10	Amps
C Phase Primary Current Magnitude	04	132 (0x84)	10	Amps
3I0 Primary Current Magnitude	05	133 (0x85)	10	Amps
A Phase Primary Voltage Magnitude	06	134 (0x86)	1	Volts
B Phase Primary Voltage Magnitude	07	135 (0x87)	1	Volts
C Phase Primary Voltage Magnitude	08	136 (0x88)	1	Volts
A Phase Power Factor	09	137 (0x89)	10000	
B Phase Power Factor	10	138 (0x8a)	10000	
C Phase Power Factor	11	139 (0x8b)	10000	
A Phase Primary Apparent Power	12	140 (0x8c)	1	kVA
B Phase Primary Apparent Power	13	141 (0x8d)	1	kVA
C Phase Primary Apparent Power	14	142 (0x8e)	1	kVA
A Phase Primary Real Power	15	143 (0x8f)	1	kW
B Phase Primary Real Power	16	144 (0x90)	1	kW
C Phase Primary Real Power	17	145 (0x91)	1	kW
A Phase Primary Reactive Power	18	146 (0x92)	1	kvar
B Phase Primary Reactive Power	19	147 (0x93)	1	kvar
C Phase Primary Reactive Power	20	148 (0x94)	1	kvar
Line Frequency	21	149 (0x95)	100	Hz
A Phase Primary Demand Currents	22	150 (0x96)	10	Amps
B Phase Primary Demand Currents	23	151 (0x97)	10	Amps
C Phase Primary Demand Currents	24	152 (0x98)	10	Amps
Battery Voltage	25	153 (0x99)	100	Volts
Battery Current	26	154 (0x9a)	1000	Amps

OUTPUT SUBSYSTEM

Select-Before-Operate Points

Description	Register	Sequence	Conditioned by Supervisory State (Factory Default)
* Close Mechanism	00	0 (0x0)	Yes
* Trip Mechanism	01	1 (0x1)	Yes
Block Reclosing	02	2 (0x2)	Yes
Block Ground Trip	03	3 (0x3)	Yes
Block SEF	04	4 (0x4)	Yes
Block CLPU	05	5 (0x5)	Yes
Block Fast Trips	06	6 (0x6)	Yes
* Profile - Normal	07	7 (0x7)	Yes
* Profile - Alt1	08	8 (0x8)	Yes
* Profile - Alt2	09	9 (0x9)	Yes
* Profile - Alt3	10	10 (0xA)	Yes
* Reset Targets	11	11 (0xB)	Yes
* Reset Demand Meters	12	12 (0xC)	Yes
* Reset Alarms	13	13 (0xD)	Yes
* Test Battery	14	14 (0xE)	Yes
* Hot Line Tag Set	15	15 (0xF)	Yes
* Hot Line Tag Reset	16	16 (0x10)	Yes
Enable Reclose Retry	17	17 (0x11)	Yes
Enable Sync Check	18	18 (0x12)	Yes
Block USEF	19	19 (0x13)	Yes
* Profile - Alt4	20	20 (0x14)	Yes
* Profile - Alt5	21	21 (0x15)	Yes
Not Used	22	22 (0x16)	Yes
Not Used	23	23 (0x17)	Yes
Not Used	24	24 (0x18)	Yes
Not Used	25	25 (0x19)	Yes
Not Used	26	26 (0x1A	Yes
Not Used	27	27 (0x1B)	Yes
Not Used	28	28 (0x1C)	Yes
Not Used	29	29 (0x1D)	Yes
Not Used	30	30 (0x1E)	Yes
Not Used	31	31 (0x1F)	Yes

* Momentary/Self Resetting

Crosshatch indicates point is supervised regardless of setting

OUTPUT SUBSYSTEM

Select-Before-Operate Points (Triple-Single)

Description	Register	Sequence	Conditioned by Supervisory State (Factory Default)
* Close Mechanism (Phase A)	00	0 (0x0)	Yes
* Trip Mechanism (Phase A)	01	1 (0x1)	Yes
Block Reclosing	02	2 (0x2)	Yes
Block Ground Trip	03	3 (0x3)	Yes
Block SEF	04	4 (0x4)	Yes
Block CLPU	05	5 (0x5)	Yes
Block Fast Trips	06	6 (0x6)	Yes
* Profile - Normal	07	7 (0x7)	Yes
* Profile - Alt1	08	8 (0x8)	Yes
* Profile - Alt2	09	9 (0x9)	Yes
* Profile - Alt3	10	10 (0xA)	Yes
* Reset Targets	11	11 (0xB)	Yes
* Reset Demand Meters	12	12 (0xC)	Yes
* Reset Alarms	13	13 (0xD)	Yes
* Test Battery	14	14 (0xE)	Yes
* Hot Line Tag Set	15	15 (0xF)	Yes
* Hot Line Tag Reset	16	16 (0x10)	Yes
Enable Reclose Retry	17	17 (0x11)	Yes
Enable Sync Check	18	18 (0x12)	Yes
* Trip Mechanism (Phase B)	19	19 (0x13)	Yes
* Trip Mechanism (Phase C)	20	20 (0x14)	Yes
* Close Mechanism (Phase B)	21	21 (0x15)	Yes
* Close Mechanism (Phase C)	22	22 (0x16)	Yes
* Activate Ganged Mode	23	23 (0x17)	Yes
* Activate 1-3 Mode	24	24 (0x18)	Yes
* Activate 1-1 Mode	25	25 (0x19)	Yes
* Trip All Phases	26	26 (0x1A)	Yes
* Close All Phases	27	27 (0x1B)	Yes
Block USEF	28	28 (0x1C)	Yes
* Profile - Alt4	29	29 (0x1D)	Yes
* Profile - Alt5	30	30 (0x1E)	Yes
Not Used	31	31 (0x1F)	Yes

* Momentary/Self Resetting

Crosshatch indicates point is supervised regardless of setting

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