

CI850K01

ABB Ability™ Symphony® Plus Hardware Selector



The CI850 Communication Interface module provides real-time communications between SPCxxx controllers and IEDs (Intelligent Electronic Devices) that communicate using IEC61850 electrical integration protocol.

CI850 enables switchgear and other electrical equipment to be directly integrated with SPCxxx controllers.

CI850K01 is a redundant communication interface kit that includes: 1x CI850 module + 1x MB855 base.

Features and benefits

- CI850 IEC61850 communications interface module features include:
- Data modeling according to IEC 61850-7-3 /4
- MMS client functionality according to IEC 61850-7-2
- GOOSE publisher & subscriber functions
- Ability to send Single, Double and Select Before Operate Commands
- Support for up to 20 IEDs

General info	
Article number	CI850K01
Life cycle status	ACTIVE
Protocol	IEC 61850 MMS client IEC 61850 GOOSE
Communication type	F. O. Repeater
Capacity	60 HN800 devices (SD Series IO or Communications modules)
Transmission speed	100 MBps
Communication connection(s)	2x RJ45 Ethernet ports on module front plate
Communication physical layer	100 MPS Ethernet TCP
Diagnostics port	1x mini USB form factor on module front plate
Line redundancy	No
Module redundancy	No
Hot Swap	Yes
Form factor	Full-size (190mm)
Mounting	Horizontal Row
HN800 bus length	150 mm
MTBF (per MIL-HDBK-217-FN2)	CI850 PR: B = 85,543 hours, MB855 PR: B = 9,411,178 hours
MTTR (Hours)	CI850 MTTR = 1 hour, MB855 MTTR = 8 hours

Detailed data	
Processor type	MCF54418 @ 250 Mhz + MCF5475 @ 256 MHz
Memory	64 MB DRAM, 2MB NVRAM, 4MB Flash ROM
Module power requirements	200 mA (typical) @ 24 VDC (+16%/-10%) per module
Module power connection(s)	POWER TB on cHBX01L
Overvoltage category	Category 1 for power. Tested according to IEC/EN 61010-1
Mounting details	MB855 mounting base for 1 CI850 module

Environment and certification	
Temperature, Operating	'40 to +70 °C Tested according to IEC/EN 60068-2-1, IEC/EN 60068-2-2
Temperature, Storage	-40 to +85 °C Tested according to MIL-STD-810G
Relative humidity	20% to 95% @ 40°C (104°F) non-condensing. Tested according to IEC/EN 60068-2-78, IEC/EN 61298-3
Protection class	IP20 according to EN 60529, IEC 529
Vibration (operational sinusoidal)	5 to 60 Hz 0.137 mm (0.0054 in.), 60 to 150 Hz 1.0 G. Tested according to IEC/EN 60068-2-6
Vibration (transportation)	10 to 500 Hz. Tested according to MIL-STD-810G
Shock (storage)	15 G, 11 msec. Tested according to IEC/EN 60068-2-27
Drop	100 mm. Tested according to IEC/EN 60068-2-31
Altitude (operational)	Sea level to 3,048 meters (10,000 ft.) Tested according to MIL-STD-810G
Altitude (storage)	Sea level to 12,192 meters (40,000 ft.) Tested according to MIL-STD-810G
Air quality	ISA S71.04 G1 (Standard), cRBX01A (Enhanced) ISA S71.04 G3 compliant version modules are also available
ESD immunity	Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-2, Severity level 3
Surge immunity	Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-5, Severity level 3
Electrical fast transient immunity	Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-4, Severity level 3
Radiated RFI immunity	Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-3, Severity level 3
Conducted Immunity	Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-6, Severity level 3
Magnetic field immunity	Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-8, Severity level 4
Radiated emission	Tested according to IEC/EN 61000-6-4, CISPR 11 + A1, CISPR 16-1-1, Group 1, Class A, ISM equipment
Conducted emission	Tested according to IEC/EN 61000-6-4, CISPR 11 + A1, CISPR 16-1-1, Group 1, Class A, ISM equipment
Voltage dips and interruption immunity	Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-11
CSA non-hazardous locations	Certified for use as process control equipment in an ordinary (non-hazardous) location
CSA hazardous, nonincendive locations	Class I, Division 2, Groups A, B, C, D
CE Mark	CE Mark EMC directive 2014/30/EU & Low voltage directive 2014/35/EU
RoHS compliance	RoHS Directive 2015/863
WEEE compliance	DIRECTIVE/2012/19/EU

Dimensions	
Width	45 mm
Height	190 mm
Depth	135 mm
Weight (include base)	630 g

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