ABB ABB Series Service Manual

CI867A

1. Description

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3. Product Information

MODBUS TCP is an open industry standard widely spread due to its ease of use. It is a request-response protocol and offers services specified by function codes.

MODBUS TCP combines the MODBUS RTU with standard Ethernet and the universal networking standard TCP. It is an application-layer messaging protocol, positioned at level 7 of the OSI model. The CI867A/TP867 is used for connection between an AC 800M controller and external Ethernet devices using Modbus TCP protocol.

The CI867 expansion unit contains the CEX-Bus logic, a communication unit, and a DC/DC converter that supplies appropriate voltages from the +24 V supply via the CEX-Bus. The Ethernet cable must be connected to the main network through an Ethernet switch.

The CI867A only uses one Ethernet port (100 Mbit/s) compared with the earlier CI867, where two Ethernet ports could be used (100 Mbit/s and 10 Mbit/s). The CI867A module will only work with System 800xA 6.0.3.3, 6.1.1, and subsequent versions.

Features and benefits

The CI867A can be set redundant and supports hot swap.

CI867A is a single channel Ethernet unit; Ch1 supports full duplex with 100 Mbps speed. Both master and slave functionality are supported.

A maximum of 70 slave and 8 master units per CI867A can be used.

General info

Article number 3BSE092689R1

Communication protocol MODBUS TCP

Master or slave Master/Slave

Number of channels 1 channel

Transmission speed 10/100 Mbit/s (Ch1)

Line redundancy No

Module redundancy Yes

Hot Swap Yes

Used together with HI Controller Yes

Detailed data

Max units on CEX bus 12

Connector RJ-45 female (8-pin)

Environment and certification

Temperature, Operating +5 to +55 °C (+41 to +131 °F)

Temperature, Storage -40 to +70 °C (-40 to +158 °F)

Altitude 2000 m according to IEC/EN 61131-2

Pollution degree Degree 2 according to IEC/EN 61131-2

Corrosion protection G3 compliant to ISA 71.04

Relative humidity 5 to 95 %, non-condensing

Protection class IP20 according to EN60529, IEC 529

CE- marking Yes

Electrical Safety UL 61010-1, UL 61010-2-201

Hazardous location UL 60079-15, cULus Class 1, Zone 2, AEx nA IIC T4, ExnA IIC T4Gc X

Marine certificates DNV-GL, (Pending: ABS, BV, LR)

RoHS compliance DIRECTIVE/2011/65/EU (EN 50581:2012)

WEEE compliance DIRECTIVE/2012/19/EU

Dimensions

Width 59 mm (2.3 in.)

Height 185 mm (7.3 in.)

Depth 127.5 mm (5.0 in.)

Weight (including base) 700 g (1.5 lbs)