MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

ABB

CI871K01

FIELDBUS INTERFACE KIT

Used with the applicable AC 800M PROFINET IO configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

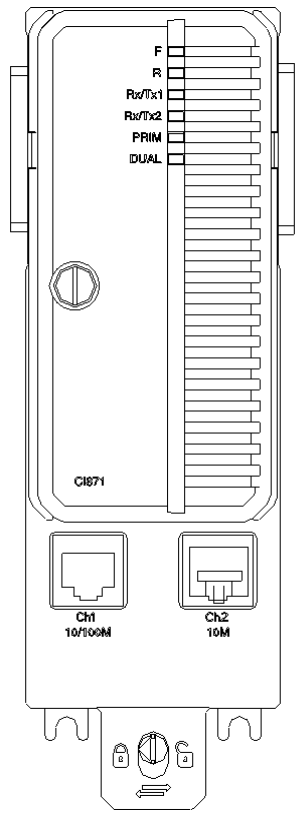
Selected official manufacturer pages follow this cover.

Source: ABB AC 800M Controller Hardware 3BSE036351-600 A

CI871 and TP867 – PROFINET IO Interface

Key Features

- Provides one 10/100 Mbps fast Ethernet port for PROFINET IO (RJ45 connector located on the TP867 base plate).
- Simple DIN-rail mounting.
- Provides communication with PROFINET IO protocol through Ethernet with 100 Mbps.
- Preset, two letter Alpha code locking device installed in the unit base, which prevents mounting of incompatible components.
- Supports hot swap.



Description

The CI871 can be used to connect an AC 800M controller to PROFINET IO devices.

The TP867 Baseplate has two RJ45 Ethernet connectors. CH1 connector supports 10 Mbps or 100 Mbps. CH2 connector supports only 10 Mbps.

By default, the CH1 connector is used in PROFINET IO as it supports 100 Mbps.

The Ethernet cable must be connected to the PROFINET IO network through an Ethernet switch. The baseplate has a code lock (refer Table 4 on page 81), which prevents the installation of an incorrect type of unit onto the TP867 baseplate.

The CI871 expansion unit contains the CEX-Bus logic, a communication unit, and a DC/DC converter that supplies the required voltage from +24 V supply through the CEX-Bus.

Functional Block Diagram

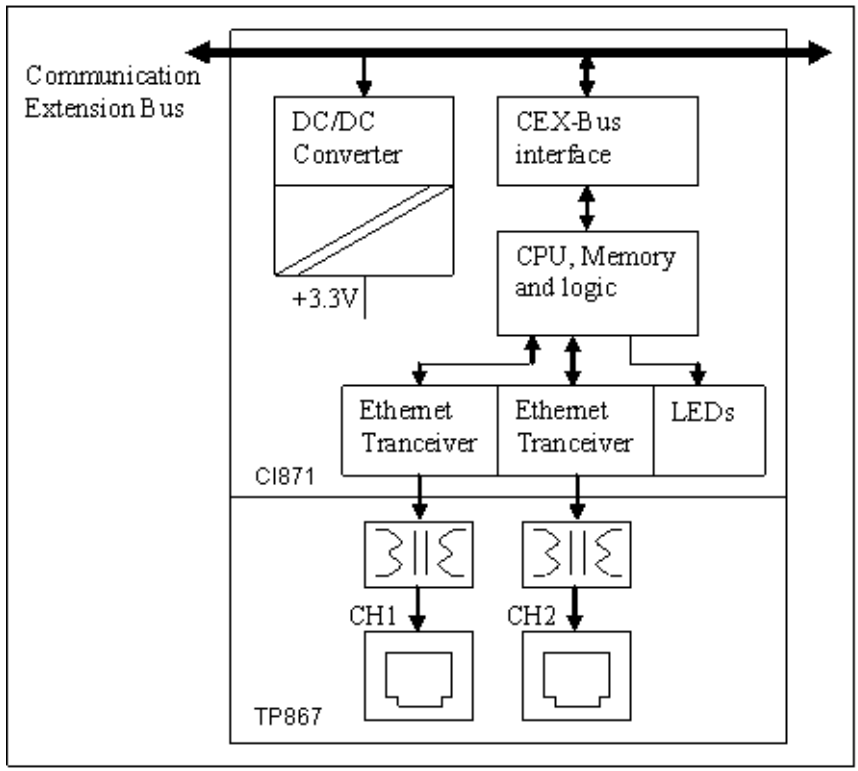


Figure 91. Block Diagram – CI871

Indicators

There are six LED indicators on the front panel of CI871 to indicate various states and conditions of CI871.

Table 112. PROFINET IO Interface CI871 - LED indicators

Designation/Color	Function
F(ault) / Red	The red F(ault) LED indicates a fault condition on CI871. Reset turns the LED on. Software can turn it on and off through a register in the CEX-Bus controller.
R(un) / Green	The green R(un) LED indicates that the CI871 is operational. Reset turns the LED off. Software can turn the LED on and off through a register in the CEX-Bus controller.
RxTx1 / Yellow	The yellow Rx/Tx1 LED is intended to be ON to indicate a receiving/transmitting telegram at CH1. The LED is controlled by Ethernet PHY. It is turned off by reset.
RxTx2 / Yellow	The yellow Rx/Tx2 LED is intended to be ON to indicate a receiving/transmitting telegram at CH2. The LED is controlled by Ethernet PHY. It is turned off by reset.
PRIM (ary)	The yellow LED indicates if the module is active or not. It does not describe the redundancy configuration of a module.
DUAL	The LED is ON when CI871 is operational in redundant configuration. This LED is always OFF as redundancy is not supported.

Technical Data

Table 113. PROFINET IO Interface CI871 - Technical Specification

Item	Value
Type	Ethernet unit
Protocol	PROFINET IO
Communication speed CH1	10 Mbps / 100 Mbps defined in IEEE 802.3u 10/100 Base-Tx.
Status indicators	Running normally: Green. Exceptional fault: Red. Two traffic indicators – RxTx1 and RxTx2(LED is always switched off) controlled by traffic pace: Flashing Yellow. Running as primary: Yellow. Running in a redundant configuration: Yellow.
Connectors	RJ45
Current consumption (from CEX-Bus 24VDC)	160 mA typical (250 mA max).
Power dissipation	3.8 W typical (6 W max).
Protection Rating	IP20 according to EN60529, IEC 529.
Weight	500 g (700 g with package) (package CI871K01 with CI871 and TP867).
Dimensions	W 59 x H 185 x D 127.5 mm. (W 2.9 x H 7.3 x D 5.0 in).