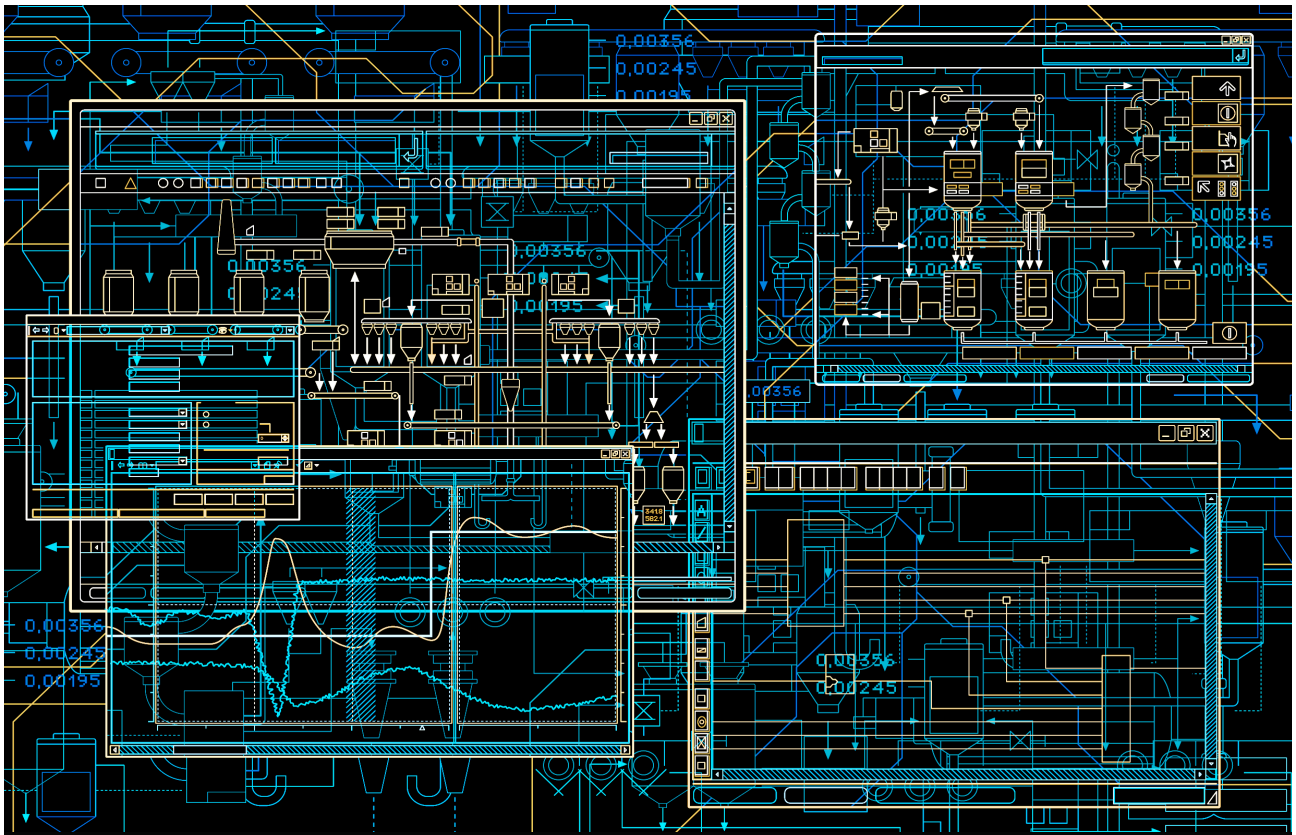


AC 800M

Controller Hardware
Product Guide

System Version 5.1

Power and productivity
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Table 2. Interfaces Available on the CEX-Bus

Interface	Number of Interfaces on CEX-Bus		Number of ports per Interface
	Maximum of each interface	Maximum total on CEX-Bus(1)(2)	
CI851 (PROFIBUS DP)	12	12	1
CI852 (FOUNDATION Fieldbus H1)	12		1
CI853 (RS-232C)	12		2
CI854/CI854A (PROFIBUS DP)	12		2
CI855 (Ethernet for MasterBus 300)	12		2
CI856 (S100)	12		1
CI857 (INSUM)	6		1
CI858 (DriveBus)	2		3
CI860 (FOUNDATION Fieldbus HSE)	12		1
CI862 (TRIO)	4		1
CI865 (Satt I/O)	4		1
CI867 (MODBUS TCP)	12		2
CI868 (IEC 61850)	4		2(3)
CI869 (AF100)	12		2
CI871 (PROFINET IO)	12		2(3)
CI873 (EtherNet/IP)	4		2(3)

(1) PM851/PM851A is restricted to a maximum of one CEX module.
(2) The maximum total limit on CEX-Bus is the electrical one, there might be further limitations due to performance for a particular unit.
(3) Only one port (CH1) is used in the interfaces CI868, CI871, and CI873

PROFIBUS DP Interface - CI851 and TP851

The CI851 and TP851 assemblies, shown in Figure 25 on page 73, are used for connecting remote I/O and fieldbus instruments via PROFIBUS DP. The TP851 base plate has one female DB9 connector for connecting PROFIBUS DP. The base plate has a preset, two letter Alpha code lock to prevent the installation of an incorrect type of unit onto the TP851 base plate.

The CI851 is powered by the processor unit, via the CEX-Bus, and therefore does not require any additional external power source.

The PROFIBUS DP must be terminated at the two outermost nodes. ABB recommend the use of connectors with built-in termination, since the fieldbus will then always be terminated, even if it is disconnected from the unit.

It is also possible to connect PROFIBUS PA to the CI851 via the PROFIBUS linking device LD 800P, see Appendix B, Recommended Components.



It is not possible to change the CI851 via Hot swap and it is not allowed to perform an online upgrade of firmware in a system containing CI851.



CI851 cannot be used in a High Integrity controller.



CI851 has been replaced by the CI854 communication interface. CI851 is only described for legacy reasons.

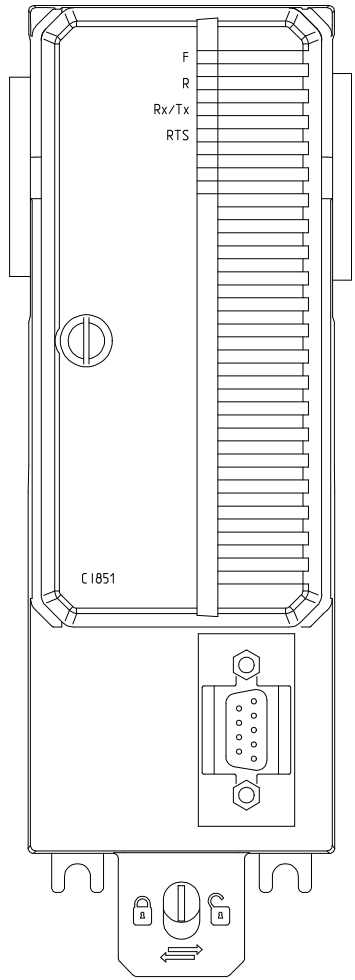


Figure 25. PROFIBUS DP Communication Interface

RS-232C Interface - CI853 and TP853

The CI853/TP853 assemblies, shown in Figure 26 on page 75, should be used when an extension of the processor unit, onboard RS-232C ports, is required.

An RS-232C channel, with full modem support, can be connected to each of the COM1 and COM2 ports. The two ports on a C1853/TP853, can be configured for different protocols.

The CI853 is powered by the processor unit, via the CEX-Bus, and therefore does not require any additional external power source.

If the cable lengths are required to be extended beyond 15 meters, a short distance modem, TC562, must be used. The TC562 is connected to the TP853 base plate or the TP830 base plate, using TK853 cable.

TC562 short distance modem allows cable lengths to be extended (depending on the modem transmission speed selected) to a distance of 18000 m (19700 yds) at 600 bit/s.

Table 3. TC562 Short Distance Modem - Technical Data

Item	Value
Type	TC562 - Short Distance Modem Manufacturer - Westermo - MD-12DC
Transfer	Asynchronous, full/half duplex/simplex, maximum 19200 baud
Power Supply	24V d.c. (Min. 12V d.c.- Max 36V d.c.)
Power Consumption	3W

PROFIBUS DP Interface - CI851 and TP851

CI851 cannot be used in an AC 800M High Integrity controller.

Table 8. PROFIBUS DP Interface - CI851 and TP851

Item	Value
Type	DP Master Class I
Protocol	PROFIBUS DP
Communication speed	9.6, 19.2, 93.75, 187.5, 500, 1500, 3000, 6000, or 12000 kbit/s
Bus Capacity (one segment)	Max 32 nodes
Galvanic Isolation	Yes
Status Indicators	Red LED for error Green LED for run Yellow LED for traffic
Connector	DB9, female on TP851
Current Consumption from CEX-Bus 24 V d.c.	Typical 150 mA
Power Dissipation	3.6 W typical
Weight	700 g (1.5 lb) (package CI851K01)
Dimensions	W 59 x H 185 x D 127.5 mm (W 2.3 x H 7.3 x D 5.0 inches)
Protective Rating	IP20 according to EN60529, IEC 529.
Certification	UL508 and UL60079-15 Hazardous location Class 1 Zone 2
Hot swap	Not supported

RS-232C Interface - CI853 and TP853

Table 9. CI853 - RS-232C Communication Interface Specifications

Item	Description
Type	Double unisolated RS-232C ports with Hayes modem signals. **Protocol specific restrictions may apply.**
Number of Channels	2 channels
Protocol	Determined by software, application and licenses. Intended for Modbus, Siemens 3964R, COMLI and custom designed protocols.
Communication speed	Selectable in steps from 75 to 19200 baud. 75, 110, 134.5, 150, 300, 600, 1200, 1800, 2000, 2400, 9600, 19200 baud. **Protocol specific restrictions apply.**
Galvanic Isolation	Non-isolated
Status Indicators	Red LED for error Green LED for run Yellow LED for traffic
Connector	Two RJ45 connectors on TP853
Current Consumption	Typical 100 mA
Power Dissipation	2.4 W typical
Weight	700 g (1.5 lb) (package CI853K01)
Dimensions	W 59 x H 185 x D 127.5 mm (W 2.9 x H 7.3 x D 5.0 inches)
Protective Rating	IP20 according to EN60529, IEC 529.
Certification	UL508 and UL60079-15 Hazardous location Class 1 Zone 2
Hot swap	Supported