



Always install a fresh internal or external battery at the end of the installation phase. The original battery is heavily utilized due to frequent blackouts during system installation.

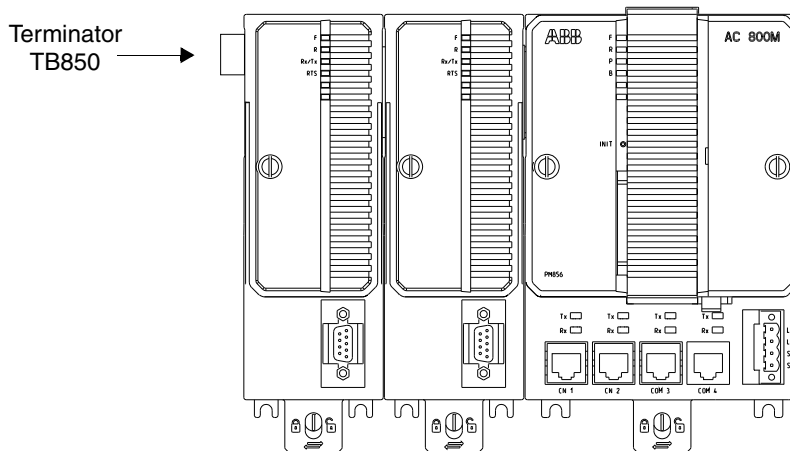


Figure 25. TB850 Terminator for CEX-Bus (male)



A TB850 male CEX-Bus termination unit is supplied with each package (PM851K01, PM851AK01, PM856K01, PM856AK01, PM858K01, PM860K01, PM860AK01, PM861K01, PM861AK01, PM862K01, PM864K01, PM864AK01, PM865K01, PM866K01, PM866AK01, and PM867K01) of the PM8xx/TP830 processor unit.

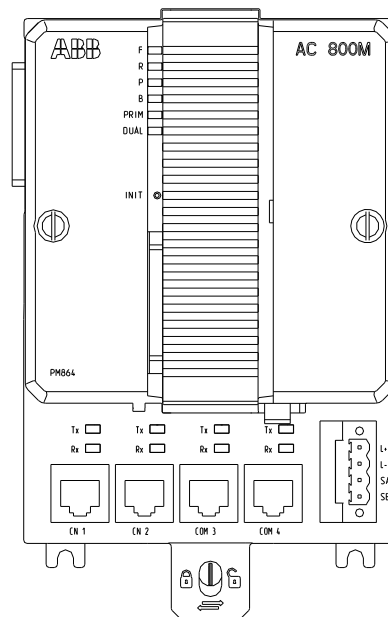


PM851/PM851A is restricted to a maximum of one CEX module.

PM864/PM864A and TP830 – Processor Unit

Key Features

- MPC862 Microprocessor running at 96 MHz.
- 32 MB RAM with internal or external battery back-up facility.
- 12 x S800 I/O units can be connected to the electrical ModuleBus.
- Four on-board communication ports:
 - CN1 + CN2, Ethernet ports (IEEE 802.3, 10BaseT)
 - COM3, serial port (RS-232C) with modem support
 - COM4, serial port (RS-232C) for service tool
- Basic communication is extendable by using additional communication interface units.
- Redundancy Control Link, for use in redundancy configuration.
- Compact Flash interface which supports loading of application and cold retain data storage.



Technical Data

For technical data on PM864 and TP830, see [Table 60](#) on page 270.

Table 60. PM864 and TP830 – Technical data

Item	Value
Memory	2 MB flash PROM (firmware storage). 32 MB of SDRAM.
Power Dissipation	6.9 W typical 11.9 W typical (incl. full supply to ModuleBus and CEX-Bus, see Appendix B, Power Consumption).
Current Consumption	287 mA typical (487 mA max.) (excl. supply of ModuleBus and CEX-Bus, see Appendix B, Power Consumption).
Power Input Connector	Four pin, screw connector L+, L–, SA and SB.
Power Supply Requirements	Inputs designated L+ and L– 24 V nominal, variation between 19.2 V DC and 30 V DC.
Redundant Power Supply Status Inputs	Inputs designated SA, SB - Max input voltage 30 V - Min. input voltage for high level 15 V - Max input voltage for low level 8 V These inputs are status inputs. The threshold levels are logical "0" or "1" input limits, not power fail limits.
Power Reservoir	The processor unit has an internal 5ms power reservoir, sufficient for the CPU to make a controlled power down.
Protection Rating	IP20 according to EN60529, IEC 529.

Table 60. PM864 and TP830 – Technical data (Continued)

Item	Value
Weight	1200 g (2.6 lb) (package PM864K01). 2800 g (6.1 lb) (package PM864K02).
Dimensions	W 119 x H 186 x D 135 mm (4.7 x 7.3 x 5.3 in) Width is measured along the DIN-rail, depth from the wall, and height vertically, including lock mechanism.

Communication Ports and Interfaces

Technical data for communication ports and interfaces is described in [Table 47](#) on page 247.

Battery

The memory content is backed up with either an internal or external battery unit (SB821). For back-up time see [Table 61](#) on page 271.



The figures in [Table 61](#) on page 271 are valid if the batteries have been installed after a normal CPU power-up, allowing for the memory back-up function to be activated.

Table 61. Back-up times for PM864 and PM864A

Source	Back-up time	
	PM864	PM864A
Internal battery	Minimum 36 hours	Minimum 235 hours
External battery SB821	Minimum 3 weeks	Minimum 24 weeks
External battery SB822 Note: Recharge time for an empty battery is approximately 7 hours.	Minimum 85 hours when fully charged	Minimum 3 weeks when fully charged

[Table 49](#) on page 249 shows internal battery data. For external battery data, see [SB821 External Battery – AC 800M Memory Back-up](#) on page 417 and [SB822 Rechargeable External Battery – AC 800M Memory Back-up](#) on page 419.

Electro-magnetic Compatibility and Electrical Safety

PM864/TP830 meets the requirements specified in EMC Directive EMCD 2004/108/EC.

For more information regarding electrical safety, see [Appendix D, Directive Considerations](#).

LED Indicators

See [Table 19](#) on page 188.

Performance Data

The PM864 processor unit, in single configuration, has performance data which theoretically peaks at twice the performance compared to the PM860. The useful sustained performance improvement is, however, a bit lower and somewhat dependent on the actual application program but can be expected to be 10 to 50% compared to PM860. In redundant configuration the execution performance is somewhat lower than in single configuration.

Switch over time from Primary CPU to Backup CPU, in redundant configuration, is less than 10 ms.