ABB PM862K01

The CPU board contains the microprocessor and RAM memory, a real-time clock, LED indicators, INIT push button, and a CompactFlash interface.
The base plate of the PM862 controller has two RJ45 Ethernet ports (CN1, CN2) for connection to the Control Network, and two RJ45 serial ports (COM3, COM4). One of the serial ports (COM3) is an RS-232C port with modem control signals, whereas the other port (COM4) is isolated and used for the connection of a configuration tool. The controller supports CPU redundancy for higher availability (CPU, CEX-Bus, communication interfaces and S800 I/O).

Simple DIN rail attachment / detachment procedures, using the unique slide & lock mechanism. All base plates are provided with a unique Ethernet address which provides every CPU with a hardware identity. The address can be found on the Ethernet address label attached to the TP830 base plate.

(Only compatible with System 800xA 6.0.2, Compact Control Builder 6.0.0-1 and onwards. Please see Product Update for more information.)

Features and benefits

- ISA Secure certified - Read more
- Reliability and simple fault diagnosis procedures
- Modularity, allowing for step-by-step expansion
- IP20 Class protection without the requirement for enclosures
- The controller can be configured with 800xA control builder
- The controller has full EMC certification
- Sectioned CEX-Bus using a pair of BC810 / BC820
- Hardware based on standards for optimum communication connectivity (Ethernet, PROFIBUS DP, etc.)
- Built-in redundant Ethernet Communication ports

General info
Article number 3BSE076940R1 (PM862K01)
Redundancy No
High Integrity No
Clock Frequency 67 Mhz
Performance, 1000 boolean operations 0.18 ms
Performance 0.18 ms
Memory 32 MB
RAM available for application 23.521 MB
Flash memory for storage Yes
Detailed data

Processor type MPC866
Switch over time in red. conf. max 10 ms
No. of applications per controller 32
No. of programs per application 64
No. of diagrams per application 128
No. of tasks per controller 32
Number of different cycle times 32
Cycle time per application programs Down to 1 ms
Flash PROM for firmware storage 4 MB
Power supply 24 V DC (19.2-30 V DC)
Power consumption +24 V typ/max 210 / 360 mA
Power dissipation 5.1 W (8.6 W max)
Redundant power supply status input Yes
Built-in back-up battery Lithium, 3.6 V
Clock synchronization 1 ms between AC 800M controllers by CNCP protocol
Event queue in controller per OPC client Up to 3000 events
AC 800M transm. speed to OPC server 36-86 events/sec, 113-143 data messages/sec
Comm. modules on CEX bus 12
Supply current on CEX bus Max 2.4 A
I/O clusters on Modulebus with non-red. CPU 1 electrical + 7 optical
I/O clusters on Modulebus with red. CPU 7 optical
I/O capacity on Modulebus Max 96 (single PM862) or 84 (red. PM862) I/O modules
Modulebus scan rate 0 - 100 ms (actual time depending on number of I/O modules)
Supply current on Electrical Modulebus 24 V : max 1.0 A
5 V : max 1.5 A
Ethernet channels 2
Ethernet interface Ethernet (IEEE 802.3), 10 Mbit/s, RJ-45, female (8-pole)
Control Network protocol MMS (Manufacturing Message Service) and IAC (Inter Application Communication)
Recommended Control Network backbone 100 Mbit/s switched Ethernet
Real-time clock stability 100 ppm (approx. 1 h/year)
RS-232C interface 2 (one general, 1 for service tool)
RS-232C interface (COM3) (non red. only) RS-232C, 75-19 200 baud, RJ-45 female (8-pole), not opto isolated, full RTS-CTS support
RS-232C interface (COM4) (non red. only) RS-232C, 9 600 baud, RJ-45 female (8-pole), opto isolated, no RTS-CTS support
Environment and certification
Temperature, Operating +5 to +55 ° C (+41 to +131 ° F)
Temperature, Storage -40 to +70 ° C (-40 to +158 ° F)
Temperature changes 3 ° C/minutes 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
Emitted noise < 55 dB (A)
Vibration 10 < f < 50 Hz: 0.0375 mm amplitude, 50 < f < 150 Hz: 0.5 g acceleration, 5 < f < 500 Hz: 0.2 g acceleration
Rated Isolation Voltage 500 V a.c.
Dielectric test voltage 50 V
Protection class IP20 according to EN 60529, IEC 529
Altitude 2000 m according to IEC/EN 61131-2
Emission & Immunity EN 61000-6-4, EN 61000-6-2
Environmental conditions Industrial
CE Mark Yes
Electrical Safety EN 50178, IEC 61131-2, UL 61010-1, UL 61010-2-201
Hazardous location cULus Class 1, Zone 2, AEx nA IIC T4, ExnA IIC T4Gc X
ISA Secure certified Yes
Marine certificates DNV-GL
TUV Approval No
RoHS compliance EN 50581:2012
WEEE compliance DIRECTIVE/2012/19/EU
Dimensions
Width 119 mm (4.7 in.)
Height 186 mm (7.3 in.)
Depth 135 mm (5.3 in.)
Weight (including base) 1200 g (2.6 lbs)