ABB PM867K02 Manual

Brand	ABB
Product Series	ABB
Product Type	PM867K02 Redundant Processor Unit HI

Description

3BSE081638R1 | ABB | PM867K02 Redundant Processor Unit HI

Manufacturer : ABB

Product No : 3BSE081638R1

Product type : PM867K02 Redundant Processor Unit HI

Number of batteries : 2

High integrity, certified for SIL3. Requires configuration according to Safety Manual. Local organizations must comply with the Qualifications to secure successful sales of ABB safety systems, to order safety equipment.

High integrity, certified for SIL3. Requires configuration according to Safety Manual.

Package including:
- 2 pcs PM867, CPU
- 2 pcs TP830, Baseplate
- 2 pcs TB807, ModuleBus terminator
- TK850, CEX-bus extension cable
- TK851, RCU-Link cable
- 2 pcs Battery for memory backup (4943013-6)
- No license included

Clock Frequency : 133MHz

Memory : 64MB

Only compatible for 800xA 6.0.2 and onwards.

Performance : 0.09 ms

Processor type : MPC866

Power supply : 24 V DC (19.2-30 V DC)

Weight: 2.7 Kg

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 PM867 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).

The high integrity functionality is enabled by the addition of an SM812 module and the SIL-certified software. The AC 800M High-Integrity also offers IEC 61508 and TÜV-certified control environment for combining safety and business-critical process control in one controller unit without sacrificing the safety integrity. Only compatible for 800xA 6.0.2 and onwards. Please see Product Update for more information.

Package including:
2 pcs PM867, CPU
2 pcs TP830, Baseplate, width = 115mm
2 pcs TB807, ModuleBus terminator
1 pcs TK850, CEX-bus expansion cable
1 pcs TK851, RCU-Link cable
2 pcs Battery for memory backup (49043013-6) 1 for each CPU

General info
Article number 3BSE081638R1 (PM867K02)
Redundancy Yes
High Integrity Yes
Clock Frequency 133 MHz
Performance, 1000 boolean operations 0.09 ms
Performance 0.09 ms
Memory 64 MB
RAM available for application 46.559 MB
Flash memory for storage No
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 18 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 0 eletrical + 7 optical
I/O capacity on Modulebus Max 96 (single PM867) or 84 (red. PM867) 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 0 to +55 °C (+32 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 (6 562 ft) 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 UL 60079-15, cULus Class 1, Zone 2, AEx nA IIC T4, ExnA IIC T4Gc X
ISA Secure certified Yes
Marine certificates ABS, BV, DNV-GL (LR, Lloyd (Pending)
TUV Approval Yes
RoHS compliance EU RoHS, UAE RoHS, CN RoHS
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) K01 1200 g (2.6 lbs) / K02 2700 g (5.95 lbs)