ABB PM891K01 Manual

Brand	ABB
Product Series	ABB
Product Type	PM891K01 Processor Unit

Description

Manufacturer : ABB

Product No : 3BSE053241R1

Product type : PM891K01 Processor Unit

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

Ethernet channels : 2

Package including:
- PM891 CPU Module
- TB850, CEX-bus terminator
- TB853, RCU Control Link Terminator
- No license included

Clock Frequency : 450 MHz

Memory : 256 MB

Only compatible for 800xA 6.0.2 and onwards.

Performance : 0.043 ms

Processor type : MPC8270

Dimensions (HxWxD), approx : 18.6cm x 17.4cm x 9.4cm

Weight: 2.1 Kg

General info
Article number 3BSE053241R1 (PM891K01)
Redundancy No
High Integrity No
Clock Frequency 450 MHz
Performance, 1000 boolean operations 0.043 ms
Performance 0.043 ms
Memory 256 MB
RAM available for application 208.985 MB

Flash memory for storage Yes
Detailed data
Processor type MPC8270
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 16 MB
Power supply 24 V DC (19.2-30 V DC)
Power consumption +24 V typ/max 660/750 mA
Power dissipation 15.8 W (18 W max)
Redundant power supply status input Yes
Built-in back-up battery No
Clock synchronization 1 ms between AC800M 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 0 eletrical + 7 optical
I/O clusters on Modulebus with red. CPU 0 eletrical + 7 optical
I/O capacity on Modulebus Max 84 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 10/100 Mbit/s
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 50 ppm (approx 0.5h / year)
RS-232C interface 1 for service tool (COM 4)
RS-232C interface (COM3) (non red. only) Not supported
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 -
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 50 V
Dielectric test voltage 500 V a.c.
Protection class IP 20 according to EN 60529, IEC 529
Altitude 2000 m (6562 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
Marine certificates ABS, BV, DNV-GL, LR
TUV Approval No
RoHS compliance EN 50581:2012
WEEE compliance DIRECTIVE/2012/19/EU
Dimensions
Width 174 mm (6.85 in.)
Height 186 mm (7.32 in.)
Depth 94 mm (3.70 in.)
Weight (including base) 1600 g (3.5 lbs)