ABB ABB Series Service Manual

SM812

1. Description

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3. Product Information

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For high availability applications it is possible to have redundant SM812´s that work together with any of the two redundant CPUs. SM812 has a dedicated synchronization link to synchronize active and redundant SM for hot-insert and online upgrade. It is needed during hot-insert and online upgrade situations to copy data between two SM812s in a redundant setup.

The SM812 has a connector with three digital inputs and two digital outputs that can be used for safety-related digital I/O (not process I/O).

Features and benefits

MPC866 Microprocessor running at 133 Mhz

64 MB RAM

Provides supervision of the PM857, PM863 and PM867 controller during SIL1-2 operations and together with the PM857, PM863 and PM867 forms a 1oo2 diverse architecture for SIL3 applications

Over voltage monitoring

Internal voltage monitoring

Supports hot swap

Supports redundancy

SM Link for synchronization of redundant pair

General info

Article number 3BSE072270R1

Redundancy Yes

High Integrity Yes

Clock Frequency 133 Mhz

Performance -

Memory 64 MB

RAM available for application -

Flash memory for storage No

Detailed data

Processor type MPC866

Switch over time in red. conf. Max 10 ms

Flash PROM for firmware storage 4 MB

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

Power consumption +24 V typ/max 160 / 250 mA

Power dissipation 3.8 W

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

Marine certificates ABS, BV, DNV-GL (LR, Lloyd (Pending)

TUV Approval Yes

RoHS compliance EN 50581:2012

WEEE compliance DIRECTIVE/2012/19/EU

Dimensions

Width 59 mm (2.9 in.)

Height 186 mm (7.3 in.)

Depth 127.5 (5.0 in.)

Weight (including base) 0.7 kg (1.5 lbs)