

SM811 (for PM865) Classic

System 800xA hardware selector



The prime function of SM811, is to provide intelligent supervision of a controller during non-SIL and SIL1-2 operations, and together with a PM865 form a 1oo2 diverse structure for SIL3 applications.

For high availability applications it is possible to have redundant SM811 's that work together with any of the two redundant CPUs. SM811 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 SM811s in a redundant setup.

The SM811 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

- MPC862P Microprocessor running at 96 Mhz
- 32 MB RAM
- Provides supervision of the PM865 controller during SIL1-2 operations and together with the PM865 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 | 3BSE018173R1 |
| Life cycle status | Classic |
| Redundancy | Yes |
| High Integrity | Yes |
| Clock Frequency | 96 Mhz |
| Performance, 1000 boolean operations | - |
| Performance | - |
| Memory | 32 MB |
| RAM available for application | - |
| Flash memory for storage | No |

| Detailed data | |
|---------------------------------|------------------------|
| Processor type | MPC862P |
| 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 typ. | 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 |
| Altitude | 2000 m 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 |
| Emission & Immunity | EN 61000-6-4, EN 61000-6-2 |
| Environmental conditions | Industrial |
| CE- marking | 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 |
| TUV Approval | Yes |
| RoHS compliance | - |
| 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 | 0.7 kg (1.5 lbs) |

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