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MCDIN-S model 1

safety-related digital input card, 24 input channels

D-Sub terminals



SIL3 / PLe

The MCDIN-S card is a digital input card for safety-related digital field signals. It is certified for use in safety functions up to SIL3.
The card has an internally redundant design with hardware fault tolerance HFT=1.
Digital inputs are handled as analog signals, to allow extensive signal diagnostics.

Safety application programs can run directly on this card.

Diagnostic functions with the redundant on-board micro-controllers include:
walking zero, ramp test with 2 D/A converters, temperature monitoring, voltage monitoring, window watchdog, program flow control, background memory test, mutual monitoring of self-tests, ...

Technical data

- input channels: 1x 24 (simplex)
  or: 2x 12 (redundant)

- 3 card types with different input standards: NAMUR, 24VDC active / passive, 24VDC passive

- signal detection: analog with 2x ADC
- resolution: 12-Bit
- sampling time: 5 msec per channel
- precision of current detection: +/- 0,25%
- internal analog diagnostic inputs: 20 redundant

NAMUR:
- load voltage: 8,2V redundant
- internal resistance of power supply NAMUR: 100 Ohm
- signal current, low: 0,05mA ... 1,2mA
- signal current, high: 2,1mA ... 7mA
- cable failure detection: < 0,02 mA
- short-cut detection: >7mA
- inputs NAMUR compatible according to EN 60947-5-6

24VDC standard:
in accordance to IEC61131-2

- electrical isolation between input-side and backplane interface
- hot replaceable
- card with spring-cage terminals will be refered with the suffix ***ST*** (MCDIN-S mod.1 type x ***ST)***

- dimensions for card with D-Sub connector: 4 TE , 3 HE, 175mm (WxHxD)
- dimensions for card with spring-cage terminals: 6 TE , 4 HE, 235mm (WxHxD)

- operating temperature range: -20°C ... 70°C
- relative humidity: 10 ... 90%, non-condensing
- shelf life: unlimited

applied standards:
IEC 61508, EN ISO 13849, IEC 62061, IEC 61511, IEC 61131-2, EN 50178, EN 50155, EN 50156, IEC 61326, EN 54, EN 50130, EN 298, EN 61373, NFPA 72, IEC 60747-5-6

DATASHEET