GEBHARDT Automation GmbH | Thüngenfeld 3 | D-58256 Ennepetal
info@gebhardt-automation.de www.gebhardt-automation.de

MCADA-S model 1

safety-related analog input and output card, 8 channels each

D-Sub terminals



SIL3 / PLe

The MCADA-S card is an analog input and output card for safety-related 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.

Safety application programs can run directly on this card.

Diagnostic functions with the redundant on-board micro-controllers include:
temperature monitoring, voltage monitoring, window watchdog, program flow control, background memory test, mutual monitoring of self-tests, ...

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

Technical data

- 2x 4 redundant analog current outputs (0 ... 24mA)
- 2x 4 redundant analog current inputs (0 ... 25mA)

Outputs:

- 16-Bit resolution and monotonicity for each channel
- sampling time: approx. 5 ms per channel
- full-scale settling to 0.1% occurs within 3 ms.
- online ramp-test for all outputs in redundancy architecture for each channel
- online monitoring of the output current, reverse current and the load by using 3 A/D-channels for each output channel with 15-Bit resolution
- on board arbitration for duplex and triplex architecture: fast signal switch-over (<3ms)

Inputs:

- 14-Bit resolution and monotonicity for each channel
- Delta Sigma A/D converter
- error detection: open, under-range, over-range, short, fault (determined by internal tests)

- extensive self-tests during normal operation
- integrated sensor for card temperature
- monitoring of all operating voltages, processor and field
- electrical isolation between input-side and backplane interface
- hot-replaceable

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

DATASHEET