

*** SPARE PART*** SIMATIC SC,ELECTRONIC SUBMODULE 2 AI,
4..20mA, +/-20MA

| Supply voltage | |
|---|--|
| Rated value (DC) | 24 V |
| Reverse polarity protection | Yes |
| Input current | |
| from supply voltage L+, max. | 30 mA |
| Power loss | |
| Power loss, typ. | 0.6 W |
| Hardware configuration | |
| Rack | |
| • required terminal block | TB 16SC |
| Slots | |
| • required slots | 1; from 8 |
| Analog inputs | |
| Number of analog inputs | 2 |
| permissible input current for current input (destruction limit), max. | 40 mA; Permanent |
| Input ranges | |
| • Current | Yes |
| Input ranges (rated values), currents | |
| • -20 mA to +20 mA | Yes |
| • Input resistance (-20 mA to +20 mA) | 50 Ω |
| • 4 mA to 20 mA | Yes |
| • Input resistance (4 mA to 20 mA) | 50 Ω |
| Thermocouple (TC) | |
| Temperature compensation | |
| — parameterizable | No |
| Characteristic linearization | |
| • parameterizable | No |
| Cable length | |
| • shielded, max. | 200 m |
| Analog value generation for the inputs | |
| Measurement principle | integrating |
| Integration and conversion time/resolution per channel | |
| • Resolution (incl. overrange) | +/-20 mA: 13 bits, 4 to 20 mA: 12 bits |

| | |
|--|------------|
| • Resolution with overrange (bit including sign), max. | 13 bit |
| • Integration time, parameterizable | Yes |
| • Basic conversion time (ms) | 55 / 65 ms |
| • Integration time (ms) | 50 / 60 ms |
| • Interference voltage suppression for interference frequency f1 in Hz | 50 / 60 Hz |

| | |
|-------------------------------------|--|
| Smoothing of measured values | |
| • parameterizable | Yes; parameterizable in 4 stages by means of digital filtering |
| • Step: None | Yes; 1 x cycle time |
| • Step: low | Yes; 8 x cycle time |
| • Step: Medium | Yes; 64 x cycle time |
| • Step: High | Yes; 128 x cycle time |

Encoder

| | |
|--|--|
| Connection of signal encoders | |
| • for voltage measurement as 2-wire transducer | Yes; 4-wire transformer with external transmitter feed |
| • for current measurement as 2-wire transducer | Yes; with external transmitter supply |
| • for current measurement as 4-wire transducer | Yes |

Errors/accuracies

| | |
|---|--------------------|
| Linearity error (relative to input range), (+/-) | 0.05 % |
| Temperature error (relative to input range), (+/-) | 0.01 %/K |
| Crosstalk between the inputs, min. | 50 dB; At 50/60 Hz |
| Repeat accuracy in steady state at 25 °C (relative to input range), (+/-) | 0.1 % |

| | |
|---|-----|
| Operational error limit in overall temperature range | |
| • Current, relative to input range, (+/-) | 1 % |

| | |
|---|-------|
| Basic error limit (operational limit at 25 °C) | |
| • Current, relative to input range, (+/-) | 0.8 % |

| | |
|--|-------|
| Interference voltage suppression for $f = n \times (f1 \pm 1 \%)$, f1 = interference frequency | |
| • Series mode interference (peak value of interference < rated value of input range), min. | 70 dB |
| • Common mode interference (USS < 2.5 V), min. | 90 dB |

Interrupts/diagnostics/status information

| | |
|----------------------|----|
| Alarms | No |
| Diagnostic functions | No |

Potential separation

| | |
|---|-----------------|
| Potential separation analog inputs | |
| • between the channels | No |
| • between the channels and backplane bus | No; Optocoupler |

- between the channels and the power supply of the electronics

No

Permissible potential difference

Between the inputs and MANA (UCM)

2 V DC / 2 Vpp AC

Isolation

Isolation tested with

1500 V AC

Dimensions

Width

10 mm

Height

64 mm

Depth

51 mm

Weights

Weight, approx.

20 g

last modified:

03/01/2017