



Figure similar

SIMATIC S7-300, CONTROL MODULE FM 355 C, 4 CHANNELS, CONTIN. 4 AI + 8 DI + 4 AO INCL. MULTI-LANG CONFIG. PACK., MANUAL AND GETTING STARTED (GER/EN/FR/IT) ON CD-ROM

Supply voltage

Load voltage L+

| | |
|---------------------------------------|--------|
| • Rated value (DC) | 24 V |
| • permissible range, lower limit (DC) | 20.4 V |
| • permissible range, upper limit (DC) | 28.8 V |

Input current

| | |
|---|---------------------|
| from load voltage L+ (without load), max. | 310 mA; Typ. 260 mA |
| from backplane bus 5 V DC, max. | 75 mA; typ. 50 mA |

Power losses

| | |
|------------------|-------|
| Power loss, typ. | 6.5 W |
| Power loss, max. | 7.8 W |

Digital inputs

| | |
|---|-----|
| Number of digital inputs | 8 |
| Input characteristic curve in accordance with IEC 61131, type 2 | Yes |

Input voltage

| | |
|--------------------|-----------|
| • Rated value (DC) | 24 V |
| • for signal "0" | -3 to +5V |
| • for signal "1" | 13 to 30V |

Input current

| | |
|------------------------|------|
| • for signal "1", typ. | 7 mA |
|------------------------|------|

Cable length

| | |
|--------------------|---------|
| • shielded, max. | 1 000 m |
| • Unshielded, max. | 600 m |

Analog inputs

| | |
|---|----------------|
| Number of analog inputs | 4 |
| permissible input voltage for voltage input (destruction limit), max. | 30 V |
| permissible input current for current input (destruction limit), max. | 40 mA |
| Input ranges | |
| • Voltage | Yes |
| • Current | Yes |
| • Thermocouple | Yes |
| • Resistance thermometer | Yes |
| Input ranges (rated values), voltages | |
| • 0 to +10 V | Yes |
| • Input resistance (0 to 10 V) | 100 k Ω |
| • -1.75 V to +11.75 V | Yes |
| • Input resistance (-1.75 V to +11.75 V) | 100 k Ω |
| • -80 mV to +80 mV | Yes |
| • Input resistance (-80 mV to +80 mV) | 10 M Ω |
| Input ranges (rated values), currents | |
| • 0 to 20 mA | Yes |
| • Input resistance (0 to 20 mA) | 50 Ω |
| • 0 to 23.5 mA | Yes |
| • Input resistance (0 to 23.5 mA) | 50 k Ω |
| • -3.5 mA to +23.5 mA | Yes |
| • Input resistance (-3.5 mA to +23.5 mA) | 50 Ω |
| • 4 mA to 20 mA | Yes |
| • Input resistance (4 mA to 20 mA) | 50 k Ω |
| Input ranges (rated values), thermoelements | |
| • Type B | Yes |
| • Input resistance (Type B) | 10 M Ω |
| • Type J | Yes |
| • Input resistance (type J) | 10 M Ω |
| • Type K | Yes |
| • Input resistance (Type K) | 10 M Ω |
| • Type R | Yes |
| • Input resistance (Type R) | 10 M Ω |
| • Type S | Yes |
| • Input resistance (Type S) | 10 M Ω |
| Input ranges (rated values), resistance thermometer | |
| • Pt 100 | Yes |
| • Input resistance (Pt 100) | 10 M Ω |
| Thermocouple (TC) | |

| | |
|---|---|
| Temperature compensation | |
| — internal temperature compensation | Yes |
| — external temperature compensation with Pt100 | Yes |
| Characteristic linearization | |
| • Parameterizable | Yes |
| — for thermocouples | Type B, J, K, R, S |
| — for resistance thermometer | Pt100 (standard) |
| Cable length | |
| • shielded, max. | 200 m; 50 m at 80 mV and thermocouples |
| Analog outputs | |
| Number of analog outputs | 4 |
| Voltage output, short-circuit protection | Yes |
| Voltage output, short-circuit current, max. | 25 mA |
| Current output, no-load voltage, max. | 18 V |
| Output ranges, voltage | |
| • 0 to 10 V | Yes |
| • -10 V to +10 V | Yes |
| Output ranges, current | |
| • 0 to 20 mA | Yes |
| • 4 mA to 20 mA | Yes |
| Connection of actuators | |
| • for voltage output two-wire connection | Yes |
| • for current output two-wire connection | Yes |
| Load impedance (in rated range of output) | |
| • with voltage outputs, min. | 1 k Ω |
| • with voltage outputs, capacitive load, max. | 1 μ F |
| • with current outputs, max. | 500 Ω |
| • with current outputs, inductive load, max. | 1 mH |
| Cable length | |
| • shielded, max. | 200 m; 50 m at 80 mV and thermocouples |
| Analog value creation | |
| Measurement principle | integrating |
| Integration and conversion time/resolution per channel | |
| • Resolution with overrange (bit including sign), max. | 14 bit; 12 or 14 bit, parameterizable |
| • Conversion time (per channel) | 16.67 ms; for 12 bit: 16 2/3 ms for 60 Hz, 20 ms for 50 Hz; for 14 bit: 100 ms for 50 and 60 Hz |
| Settling time | |
| • for resistive load | 0.2 ms |
| • for capacitive load | 3.3 ms |
| • for inductive load | 0.5 ms |

| Encoder | |
|---|---|
| Connection of signal encoders | |
| • for voltage measurement | Yes |
| • for current measurement as 4-wire transducer | Yes |
| Connectable encoders | |
| • 2-wire sensor | Yes |
| — Permissible quiescent current (2-wire sensor), max. | 1.5 mA |
| Errors/accuracies | |
| Linearity error (relative to input range), (+/-) | 0.05 % |
| Temperature error (relative to input range), (+/-) | 0.005 %/K |
| Linearity error (relative to output range), (+/-) | 0.05 % |
| Temperature error (relative to output range), (+/-) | 0.02 %/K |
| Operational limit in overall temperature range | |
| • Voltage, relative to input area, (+/-) | 0.6 %; +/-0.6 to +/-1% |
| • Current, relative to input area, (+/-) | 0.6 %; +/-0.6 to +/-1% |
| • Resistance thermometer, relative to input area, (+/-) | 0.6 %; +/-0.6 to +/-1% |
| • Voltage, relative to output area, (+/-) | 0.5 % |
| • Current, relative to output area, (+/-) | 0.6 % |
| Basic error limit (operational limit at 25 °C) | |
| • Voltage, relative to input area, (+/-) | 0.4 %; 80 mV: +/-0.6%; 250 to 1000 mV: +/-0.4%; 2.5 to 10 V: +/-0.6%; 3.2 to 20 mA: +/-0.5% |
| • Current, relative to input area, (+/-) | 0.4 %; +/-0.4 to +/-0.6 % |
| • Resistance thermometer, relative to input area, (+/-) | 0.4 %; +/-0.4 to +/-0.6 % |
| • Voltage, relative to output area, (+/-) | 0.3 % |
| • Current, relative to output area, (+/-) | 0.5 % |
| Interference voltage suppression for $f = n \times (f_1 \pm 1 \%)$, f_1 = interference frequency | |
| • Series mode interference (peak value of interference < rated value of input range), min. | 40 dB |
| • common mode voltage (USS < 2.5 V) , min. | 70 dB |
| Interrupts/diagnostics/status information | |
| Substitute values connectable | Yes; Parameterizable |
| Control technology | |
| Number of closed-loop controllers | 4 |
| Galvanic isolation | |
| Galvanic isolation controller | |
| • between the channels | No |
| • between the channels and the backplane bus | Yes; Optocoupler |
| Permissible potential difference | |

| | |
|-------------------------------------|---------------|
| between inputs and MANA (UCM) | 2.5 V DC |
| between M internally and the inputs | 75V DC/60V AC |
| Isolation | |
| Isolation checked with | 500 V DC |
| Connection method | |
| required front connector | 2x 20-pin |
| Dimensions | |
| Width | 80 mm |
| Height | 125 mm |
| Depth | 120 mm |
| Weights | |
| Weight, approx. | 470 g |
| last modified: | 12.03.2015 |