



Figure similar

SIMATIC S7-300, Control Unit FM 355 S, 4 channels, Step and pulse, 4 AI+8 DI+8 DO incl. multi-language configuration package, Manual and Getting Started (de, de, fr, 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.                       | 270 mA; typ. 220 mA |
| from backplane bus 5 V DC, max.                                 | 75 mA; typ. 50 mA   |
| Power loss                                                      |                     |
| Power loss, typ.                                                | 5.5 W               |
| Power loss, max.                                                | 6.9 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               |
| Digital outputs                                                 |                     |
| Number of digital outputs                                       | 8                   |
| Short-circuit protection                                        | Yes; Electronic     |
| Limitation of inductive shutdown voltage to                     | L+ (-1.5 V)         |
| Controlling a digital input                                     | Yes                 |
| Switching capacity of the outputs                               |                     |
| • on lamp load, max.                                            | 5 W                 |
| Load resistance range                                           |                     |
| • lower limit                                                   | 240 Ω               |
| • upper limit                                                   | 4 kΩ                |
| Output voltage                                                  |                     |
| • for signal "1", min.                                          | L+ (-2.5 V)         |
| Output current                                                  |                     |
| • for signal "1" rated value                                    | 100 mA              |
| • for signal "1" permissible range for 0 to 60 °C, min.         | 5 mA                |
| • for signal "1" permissible range for 0 to 60 °C, max.         | 150 mA              |

|                                                                       |                    |
|-----------------------------------------------------------------------|--------------------|
| • for signal "0" residual current, max.                               | 0.5 mA             |
| Parallel switching of two outputs                                     |                    |
| • for logic links                                                     | Yes                |
| Switching frequency                                                   |                    |
| • with resistive load, max.                                           | 100 Hz             |
| • with inductive load, max.                                           | 0.5 Hz             |
| • on lamp load, max.                                                  | 100 Hz             |
| Total current of the outputs (per group)                              |                    |
| all mounting positions                                                |                    |
| — up to 60 °C, max.                                                   | 400 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 kΩ             |
| • -1.75 V to +11.75 V                                                 | Yes                |
| — Input resistance (-1.75 V to +11.75 V)                              | 100 kΩ             |
| • -80 mV to +80 mV                                                    | Yes                |
| — Input resistance (-80 mV to +80 mV)                                 | 10 MΩ              |
| 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 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 Ω               |
| Input ranges (rated values), thermocouples                            |                    |
| • Type B                                                              | Yes                |
| — Input resistance (Type B)                                           | 10 MΩ              |
| • Type J                                                              | Yes                |
| — Input resistance (type J)                                           | 10 MΩ              |
| • Type K                                                              | Yes                |
| — Input resistance (Type K)                                           | 10 MΩ              |
| • Type R                                                              | Yes                |
| — Input resistance (Type R)                                           | 10 MΩ              |
| • Type S                                                              | Yes                |
| — Input resistance (Type S)                                           | 10 MΩ              |
| Input ranges (rated values), resistance thermometer                   |                    |
| • Pt 100                                                              | Yes                |
| — Input resistance (Pt 100)                                           | 10 MΩ              |
| 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)                                                                                                |
| <b>Cable length</b>                                      |                                                                                                                 |
| • shielded, max.                                         | 200 m; 50 m at 80 mV and thermocouples                                                                          |
| <b>Analog value generation for the inputs</b>            |                                                                                                                 |
| Integration and conversion time/resolution per channel   |                                                                                                                 |
| • Resolution with overrange (bit including sign), max.   | 14 bit; 12 bit or 14 bit, parameterizable                                                                       |
| <b>Encoder</b>                                           |                                                                                                                 |
| 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                                                                                                          |
| <b>Errors/accuracies</b>                                 |                                                                                                                 |
| Operational error limit in overall temperature range     |                                                                                                                 |
| • Voltage, relative to input range, (+/-)                | 0.6 %; $\pm 0.6$ to $\pm 1\%$                                                                                   |
| • Current, relative to input range, (+/-)                | 0.6 %; $\pm 0.6$ to $\pm 1\%$                                                                                   |
| • Resistance thermometer, relative to input range, (+/-) | 0.6 %; $\pm 0.6$ to $\pm 1\%$                                                                                   |
| Basic error limit (operational limit at 25 °C)           |                                                                                                                 |
| • Voltage, relative to input range, (+/-)                | 0.4 %; 80 mV: $\pm 0.6\%$ ; 250 to 1 000 mV: $\pm 0.4\%$ ; 2.5 to 10 V: $\pm 0.6\%$ ; 3.2 to 20 mA: $\pm 0.5\%$ |
| • Current, relative to input range, (+/-)                | 0.4 %; $\pm 0.4$ to $\pm 0.6\%$                                                                                 |
| • Resistance thermometer, relative to input range, (+/-) | 0.4 %; $\pm 0.4$ to $\pm 0.6\%$                                                                                 |
| <b>Interrupts/diagnostics/status information</b>         |                                                                                                                 |
| Substitute values connectable                            | Yes; Parameterizable                                                                                            |
| <b>Integrated Functions</b>                              |                                                                                                                 |
| Counter                                                  | No                                                                                                              |
| Control technology                                       |                                                                                                                 |
| • Number of closed-loop controllers                      | 4                                                                                                               |
| <b>Potential separation</b>                              |                                                                                                                 |
| Potential separation controller                          |                                                                                                                 |
| • between the channels                                   | No                                                                                                              |
| • between the channels and backplane bus                 | Yes; Optocoupler                                                                                                |
| <b>Isolation</b>                                         |                                                                                                                 |
| Isolation tested with                                    | 500 V DC                                                                                                        |
| <b>connection method</b>                                 |                                                                                                                 |
| required front connector                                 | 2x 20-pin                                                                                                       |
| <b>Dimensions</b>                                        |                                                                                                                 |
| Width                                                    | 80 mm                                                                                                           |
| Height                                                   | 125 mm                                                                                                          |
| Depth                                                    | 120 mm                                                                                                          |
| <b>Weights</b>                                           |                                                                                                                 |
| Weight, approx.                                          | 470 g                                                                                                           |

|                        |        |                |                       |
|------------------------|--------|----------------|-----------------------|
| <b>Classifications</b> |        |                |                       |
|                        |        | <b>Version</b> | <b>Classification</b> |
|                        | eClass | 14             | 27-24-22-05           |
|                        | eClass | 12             | 27-24-22-05           |
|                        | eClass | 9.1            | 27-24-22-05           |
|                        | eClass | 9              | 27-24-22-05           |
|                        | eClass | 8              | 27-24-22-05           |
|                        | eClass | 7.1            | 27-24-22-05           |
|                        | eClass | 6              | 27-24-22-05           |
|                        | ETIM   | 9              | EC001422              |
|                        | ETIM   | 8              | EC001422              |
|                        | ETIM   | 7              | EC001422              |
|                        | IDEA   | 4              | 3567                  |
|                        | UNSPSC | 15             | 32-15-17-05           |

|                                 |  |  |  |
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| <b>Approvals / Certificates</b> |  |  |  |
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## General Product Approval

[Manufacturer Declaration](#)

[Miscellaneous](#)



[Metrological Approval](#)

## General Product Approval

EMV

For use in hazardous locations



For use in hazardous locations

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last modified:

4/7/2025 