

SIMATIC S7-300, temperature Control Unit FM 355-2 C, 4 channels, continuous, 4 AI+8 DI+4 AO incl. multi-language configuration package, Manual and Getting Started (de, de, fr, en it) on CD-ROM



Figure similar

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 loss	
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) • for signal "0" • for signal "1"	24 V -3 to +5V 13 to 30V
Input current	
• for signal "1", typ.	7 mA
Cable length	
• shielded, max. • unshielded, max.	1 000 m 600 m
Analog inputs	
Number of analog inputs	4
permissible input voltage for voltage input (destruction limit), max.	20 V
permissible input current for current input (destruction limit), max.	40 mA
Input ranges	
• Voltage • Current • Thermocouple • Resistance thermometer	Yes Yes Yes Yes
Input ranges (rated values), voltages	
• 0 to +10 V • Input resistance (0 to 10 V) • -1.75 V to +11.75 V • Input resistance (-1.75 V to +11.75 V)	Yes 100 k Ω Yes 100 k Ω
Input ranges (rated values), currents	
• 0 to 20 mA • Input resistance (0 to 20 mA) • 0 to 23.5 mA • Input resistance (0 to 23.5 mA) • -3.5 mA to +23.5 mA • Input resistance (-3.5 mA to +23.5 mA) • 4 mA to 20 mA • Input resistance (4 mA to 20 mA)	Yes 50 Ω Yes 50 Ω Yes 50 Ω Yes 50 Ω
Input ranges (rated values), thermocouples	
• Type B • Input resistance (Type B) • Type E • Input resistance (Type E) • Type J • Input resistance (type J) • Type K • Input resistance (Type K)	Yes 10 M Ω Yes 10 M Ω Yes 10 M Ω Yes 10 M Ω

• 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
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 kΩ
• with voltage outputs, capacitive load, max.	1 μF
• 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 generation for the inputs	
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	14 bit

Analog value generation for the outputs

Settling time

• for resistive load	0.1 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

Operational error limit in overall temperature range

• Voltage, relative to input range, (+/-)	0.6 %; ± 0.6 to ± 0.7 %
• Current, relative to input range, (+/-)	0.6 %; ± 0.6 to ± 0.7 %
• Resistance thermometer, relative to input range, (+/-)	0.6 %; ± 0.6 to ± 0.7 %
• Voltage, relative to output range, (+/-)	0.5 %
• Current, relative to output range, (+/-)	0.6 %

Basic error limit (operational limit at 25 °C)

• Voltage, relative to input range, (+/-)	0.04 %; ± 0.04 to ± 0.5 %
• Current, relative to input range, (+/-)	0.04 %; ± 0.04 to ± 0.5 %
• Resistance thermometer, relative to input range, (+/-)	0.04 %; ± 0.04 to ± 0.5 %
• Voltage, relative to output range, (+/-)	0.4 %
• Current, relative to output range, (+/-)	0.5 %

Interrupts/diagnostics/status information

Substitute values connectable	Yes; Parameterizable
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Integrated Functions

Control technology

• Number of closed-loop controllers	4
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Potential separation

Potential separation controller

• between the channels	No
• between the channels and backplane bus	Yes; Optocoupler

Isolation

Isolation tested with	500 V DC
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Connection method	
required front connector	2x 20-pin
Dimensions	
Width	80 mm
Height	125 mm
Depth	120 mm
Weights	
Weight, approx.	470 g
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