

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



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)	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), thermocouples	
• 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 generation for the inputs	
Measurement principle	integrating

Integration and conversion time/resolution per channel	
<ul style="list-style-type: none"> Resolution with overrange (bit including sign), max. 	14 bit; 12 bit or 14 bit, parameterizable
<ul style="list-style-type: none"> 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 Hz and 60 Hz
Analog value generation for the outputs	
Settling time	
<ul style="list-style-type: none"> for resistive load 	0.1 ms
<ul style="list-style-type: none"> for capacitive load 	3.3 ms
<ul style="list-style-type: none"> for inductive load 	0.5 ms
Encoder	
Connection of signal encoders	
<ul style="list-style-type: none"> for voltage measurement 	Yes
<ul style="list-style-type: none"> for current measurement as 4-wire transducer 	Yes
Connectable encoders	
<ul style="list-style-type: none"> 2-wire sensor 	Yes
<ul style="list-style-type: none"> — 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 error limit in overall temperature range	
<ul style="list-style-type: none"> Voltage, relative to input range, (+/-) 	0.6 %; +/-0.6 to +/-1%
<ul style="list-style-type: none"> Current, relative to input range, (+/-) 	0.6 %; +/-0.6 to +/-1%
<ul style="list-style-type: none"> Resistance thermometer, relative to input range, (+/-) 	0.6 %; +/-0.6 to +/-1%
<ul style="list-style-type: none"> Voltage, relative to output range, (+/-) 	0.5 %
<ul style="list-style-type: none"> Current, relative to output range, (+/-) 	0.6 %
Basic error limit (operational limit at 25 °C)	
<ul style="list-style-type: none"> Voltage, relative to input range, (+/-) 	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%
<ul style="list-style-type: none"> Current, relative to input range, (+/-) 	0.4 %; +/-0.4 to +/-0.6 %
<ul style="list-style-type: none"> Resistance thermometer, relative to input range, (+/-) 	0.4 %; +/-0.4 to +/-0.6 %
<ul style="list-style-type: none"> Voltage, relative to output range, (+/-) 	0.3 %
<ul style="list-style-type: none"> Current, relative to output range, (+/-) 	0.5 %
Interference voltage suppression for $f = n \times (f_1 \pm 1 \%)$, $f_1 =$ interference frequency	
<ul style="list-style-type: none"> Series mode interference (peak value of interference < rated value of input range), min. 	40 dB

• Common mode interference (USS < 2.5 V) ,
min. 70 dB

Interrupts/diagnostics/status information

Substitute values connectable Yes; Parameterizable

Integrated Functions

Control technology

• Number of closed-loop controllers 4

Potential separation

Potential separation controller

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

Permissible potential difference

Between the inputs and MANA (UCM) 2.5 V DC

Isolation

Isolation tested 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: 03/24/2017