

SIMATIC S7-300, CONROL 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 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)
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	
Measurement principle	integrating

Integration and conversion time/resolution per channel	
Resolution with overrange (bit including sign), max.	14 bit; 12 bit 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 Hz 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 error limit in overall temperature range	
Voltage, relative to input range, (+/-)	0.6 %; +/-0.6 to +/-1%
Current, relative to input range, (+/-)	0.6 %; +/-0.6 to +/-1%
Resistance thermometer, relative to input range, (+/-)	0.6 %; +/-0.6 to +/-1%
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, (+/-)	0.4 %; 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 range, (+/-)	0.4 %; +/-0.4 to +/-0.6 %
Resistance thermometer, relative to input range, (+/-)	0.4 %; +/-0.4 to +/-0.6 %
Voltage, relative to output range, (+/-)	0.3 %
Current, relative to output range, (+/-)	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 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
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