

ET 200 distributed I/Os

ET 200M

SM 334 analog input/output modules

Overview



- Analog inputs and outputs
- For the connection of analog sensors and actuators

Technical specifications

SM 334	6ES7 334-0CE01-0AA0	6ES7 334-0KE00-0AB0
Inputs	4	4
• For voltage measurement	4	2
• For resistance measurement	-	4
Interrupts		
• Limit value interrupt	-	-
• Diagnostics interrupt	-	-
Diagnostics	-	-
Rated load voltage L+	24 V DC	24 V DC
Input resistance/input ranges	0 to 10 V / 100 k Ω ; 0 to 20 mA / 50 Ω	0 to 10 V / 100 k Ω ; resistance 10 k Ω ; Pt 100 (only air conditioning sector)
Permissible input range for voltage input, max.	20 V	-
Permissible input range for current input, max.	20 mA	-
Connection of signal sensors		
• For current measurement		
- as two-wire transmitter	-	-
- as four-wire transmitter	Yes	-
• For resistance measurement		
- with two-wire connection	-	Yes
- with three-wire connection	-	Yes
- with four-wire connection	-	Yes
Isolation to backplane bus	No	Yes
Conversion time/resolution per channel		
• Integration time (all channels)		85 ms
• Resolution	8-bit	12-bit
Operational limit (in the entire temperature range, referred to input range)		
• Voltage	$\pm 0.9\%$	$\pm 0.7\%$
• Current	$\pm 0.8\%$	-
• 10 k Ω	-	$\pm 3.5\%$
• Pt 100	-	$\pm 1.0\%$

Technical specifications (continued)

SM 334	6ES7 334-0CE01-0AA0	6ES7 334-0KE00-0AB0
Basic error (operational error at 25 °C, referred to output range)		
• Voltage	± 0.7%	+/- 0.5 %
• Current	± 0.6%	-
• 10 kΩ	-	± 2.8%
• Pt 100	-	+/-0.8%
Outputs	2	2
Interrupts		
• Diagnostics interrupt	-	-
Diagnostics	-	-
Output ranges		
• Voltage outputs	0 to 10 V	0 to 10 V
• Current outputs	0 to 20 mA	-
Load resistor		
• With voltage outputs, min.	5 kΩ	2.5 kΩ
• With current outputs, max.	300 Ω	-
• For capacitive load, max.	1 μF	1 μF
• Inductive loads, max.	1 mH	-
Voltage output		
• Short-circuit protection	Yes	Yes
• Short-circuit current, max.	11 mA	10 mA
Current output		
• Open-circuit voltage, max.	15 V	-
Isolation to backplane bus	No	Yes
Resolution	8-bit	12-bit
Cycle time (all channels/AI + AO)	5 ms	85 ms
Transient recovery time		
• For resistive load, max.	0.3 ms	0.8 ms
• For capacitive load, max.	3 ms	0.8 ms
• For inductive load, max.	0.3 ms	-
Substitute values injectable	-	-
Operating error limit (referred to output range)		
• Voltage	± 0.6%	± 1.0%
• Current	± 1.0%	-
Basic error limit (operating error limit at 25 °C, referred to the output range)		
• Voltage	± 0.4%	± 0.85%
• Current	+/- 0.8%	-
General		
Cable length (shielded), max.	200 m	100 m
Current consumption		
• From backplane bus, max.	55 mA	60 mA
• From L+	110 mA	80 mA
Isolation		500 V DC
Power losses, typically	2.6 W	2 W
Dimensions (W x H x D) in mm	40 x 125 x 120	40 x 125 x 120
Required front connector	20-pin	20-pin
Weight	285 g	200 g

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Ordering data	Order No.		Order No.
SM 334 analog input/output modules incl. labeling strips, bus connector • 4 inputs, 2 outputs • 4 inputs, 2 outputs; resistance measurement, Pt 100	6ES7 334-0CE01-0AA0 6ES7 334-0KE00-0AB0	S7-SmartLabel Software for machine labeling of modules directly from the STEP 7 project	2XV9 450-1SL01-0YX0
SIPLUS SM 334 analog input/output modules for amplified temperature range incl. labeling strips, bus connector • 4 inputs, 2 outputs; resistance measurement, Pt 100	6AG1 334-0KE00-2AB0	Labeling sheets for machine labeling for 16-channel signal module, DIN A4, for printing using laser printer; 10 units • Petrol • Light beige • Yellow • Red	6ES7 392-2AX00-0AA0 6ES7 392-2BX00-0AA0 6ES7 392-2CX00-0AA0 6ES7 392-2DX00-0AA0
Front connector 1 item 20-pin, with screw-type terminals • 1 item • 100 units 20-pin, with spring-loaded terminals	6ES7 392-1AJ00-0AA0 6ES7 392-1AJ00-1AB0 6ES7 392-1BJ00-0AA0	for 32-channel signal module, DIN A4, for printing by laser printer; 10 units • Petrol • Light beige • Yellow • Red	6ES7 392-2AX10-0AA0 6ES7 392-2BX10-0AA0 6ES7 392-2CX10-0AA0 6ES7 392-2DX10-0AA0
Front door, elevated design e.g. for 32-channel modules; permits connection of 1.3 mm ² /16 AWG conductors	6ES7 328-0AA00-7AA0	SIMATIC Manual Collection Electronic manuals on CD-ROM, multi-language: S7-200, TD 200, S7-300, C7, S7-400, STEP 7, engineering tools, runtime software, SIMATIC DP (distributed I/O), SIMATIC HMI (human machine interface), SIMATIC NET (industrial communication)	6ES7 998-8XC01-8YE0
SIMATIC TOP connect	See Catalog ST 70	SIMATIC Manual Collection Maintenance service for 1 year Current S7 Manual Collection CD as well as the three following updates	6ES7 998-8XC01-8YE2
Bus connector 1 unit (spare part)	6ES7 390-0AA00-0AA0	S7-300 manual Design, CPU data, module data, operation list • German • English • French • Spanish • Italian	6ES7 398-8FA10-8AA0 6ES7 398-8FA10-8BA0 6ES7 398-8FA10-8CA0 6ES7 398-8FA10-8DA0 6ES7 398-8FA10-8EA0
Shield connecting element 80 mm wide, with 2 rows for 4 terminal elements each	6ES7 390-5AA00-0AA0		
Terminal elements 2 units • For 2 cables with 2 to 6 mm diameter • For 1 cable with 3 to 8 mm diameter • For 1 cable with 4 to 13 mm diameter	6ES7 390-5AB00-0AA0 6ES7 390-5BA00-0AA0 6ES7 390-5CA00-0AA0		
Label covers 10 units for signal modules (not 32-channel modules), function modules	6ES7 392-2XY00-0AA0		
Labeling strips 10 units for signal modules (not 32-channel modules), function modules	6ES7 392-2XX00-0AA0		