



Spare part SIMATIC S7, Analog input SM 336, 6 AI; 14 bit; 40-pole, fail-safe analog inputs for SIMATIC S7F systems with diagnostic alarm

Supply voltage	
Rated value (DC)	24 V
Reverse polarity protection	Yes
Load voltage L+	
<ul style="list-style-type: none"> Rated value (DC) Reverse polarity protection 	24 V Yes
Input current	
From power supply L+, typ.	160 mA
from backplane bus 5 V DC, max.	90 mA
Power loss	
Power loss, typ.	4.25 W
Analog inputs	
Number of analog inputs	6
<ul style="list-style-type: none"> For voltage measurement 	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	
<ul style="list-style-type: none"> Voltage Current 	Yes Yes
Input ranges (rated values), voltages	
<ul style="list-style-type: none"> 0 to +10 V — Input resistance (0 to 10 V) 	Yes 59 kΩ
Input ranges (rated values), currents	
<ul style="list-style-type: none"> 0 to 20 mA — Input resistance (0 to 20 mA) 4 mA to 20 mA — Input resistance (4 mA to 20 mA) 	Yes 107 Ω Yes 107 Ω
Cable length	
<ul style="list-style-type: none"> shielded, max. 	200 m
Analog value generation for the inputs	
Integration and conversion time/resolution per channel	
<ul style="list-style-type: none"> Resolution with overrange (bit including sign), max. Integration time (ms) Interference voltage suppression for interference frequency f1 in Hz 	14 bit 20 ms (at 50 Hz); 16.66 ms (at 60 Hz) 38 dB
Encoder	
Connection of signal encoders	
<ul style="list-style-type: none"> for current measurement as 2-wire transducer 	Yes

<ul style="list-style-type: none"> • for current measurement as 4-wire transducer 	Yes
Errors/accuracies	
Operational error limit in overall temperature range	
<ul style="list-style-type: none"> • Voltage, relative to input range, (+/-) 	0.48 %
<ul style="list-style-type: none"> • Current, relative to input range, (+/-) 	0.48 %
Basic error limit (operational limit at 25 °C)	
<ul style="list-style-type: none"> • Voltage, relative to input range, (+/-) 	0.4 %
<ul style="list-style-type: none"> • Current, relative to input range, (+/-) 	0.4 %
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
<ul style="list-style-type: none"> • Diagnostic alarm 	Yes; Parameterizable
Diagnoses	
<ul style="list-style-type: none"> • Diagnostic information readable 	Yes
Diagnostics indication LED	
<ul style="list-style-type: none"> • Fail-safe operation 	Yes
<ul style="list-style-type: none"> • Group error SF (red) 	Yes
<ul style="list-style-type: none"> • Encoder supply Vs (green) 	Yes
Potential separation	
Potential separation analog inputs	
<ul style="list-style-type: none"> • between the channels 	No
<ul style="list-style-type: none"> • between the channels and backplane bus 	Yes
<ul style="list-style-type: none"> • between the channels and the power supply of the electronics 	Yes; only if sensors are externally supplied
Isolation	
Isolation tested with	500 V DC/350 V AC
Standards, approvals, certificates	
Highest safety class achievable in safety mode	
<ul style="list-style-type: none"> • Requirement class according to DIN V 19250 	AK 6
<ul style="list-style-type: none"> • acc. to EN 954 	Cat. 4
<ul style="list-style-type: none"> • Performance level according to ISO 13849-1 	e
<ul style="list-style-type: none"> • SIL acc. to IEC 61508 	SIL 3
connection method / header	
required front connector	40-pin
Dimensions	
Width	80 mm
Height	125 mm
Depth	120 mm
Weights	
Weight, approx.	480 g
last modified:	5/27/2021 