



Figure similar

SIMATIC DP, HART analog input SM 331, 8 AI, 0/4 - 20 mA HART, for ET200M with IM153-2, 1 x 20-pole, Functions: FW update, HART auxiliary variables, redundancy, local diagnostic buffer with time stamping,

General information	
Product function	
<ul style="list-style-type: none"> • Isochronous mode 	No
Supply voltage	
Load voltage L+	
<ul style="list-style-type: none"> • Rated value (DC) • Reverse polarity protection 	24 V Yes
Input current	
from load voltage L+ (without load), max.	20 mA
from backplane bus 5 V DC, max.	120 mA
output voltage / header	
supply voltage of the transmitters / header	
<ul style="list-style-type: none"> • present • Rated value (DC) • short-circuit proof • Supply current, max. 	Yes 24 V Yes 60 mA
Power loss	
Power loss, typ.	1.5 W
Analog inputs	
Number of analog inputs	8
permissible input current for current input (destruction limit), max.	40 mA
Input ranges (rated values), currents	
<ul style="list-style-type: none"> • 0 to 20 mA <ul style="list-style-type: none"> — Input resistance (0 to 20 mA) • 4 mA to 20 mA <ul style="list-style-type: none"> — Input resistance (4 mA to 20 mA) 	Yes 140 Ω 140 Ω
Cable length	
<ul style="list-style-type: none"> • shielded, max. 	800 m
Analog value generation for the inputs	
Measurement principle	Sigma Delta
Integration and conversion time/resolution per channel	
<ul style="list-style-type: none"> • Resolution with overrange (bit including sign), max. • Integration time, parameterizable • Integration time (ms) • Basic conversion time, including integration time (ms) • Interference voltage suppression for interference frequency f_1 in Hz 	16 bit Yes 20 ms at 50 Hz; 16.6 ms at 60 Hz; 100 ms at 100 Hz 55 ms @ 60 Hz, 65 ms @ 50 Hz, 305 ms @ 100 Hz 10 / 50 / 60 Hz
Smoothing of measured values	

• parameterizable	Yes
• Step: None	Yes
• Step: low	Yes
• Step: Medium	Yes
• Step: High	Yes

Encoder

Connection of signal encoders	
• for current measurement as 2-wire transducer	Yes
• for current measurement as 4-wire transducer	Yes

Errors/accuracies

Operational error limit in overall temperature range	
• Current, relative to input range, (+/-)	0.15 %
Basic error limit (operational limit at 25 °C)	
• Current, relative to input range, (+/-)	0.1 %

Interrupts/diagnostics/status information

Diagnostics function	Yes
Alarms	
• Diagnostic alarm	Yes
• Limit value alarm	Yes
Diagnostics indication LED	
• Group error SF (red)	Yes
• Channel fault indicator F (red)	Yes

Potential separation

Potential separation analog inputs	
• between the channels	No
• between the channels and backplane bus	Yes

Isolation

Isolation tested with	500 V DC
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Degree and class of protection

IP degree of protection	IP20
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connection method

required front connector	20-pin
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Dimensions

Width	40 mm
Height	125 mm
Depth	117 mm

Weights

Weight, approx.	205 g
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Classifications

	Version	Classification
eClass	14	27-24-26-01
eClass	12	27-24-26-01
eClass	9.1	27-24-26-01
eClass	9	27-24-26-01
eClass	8	27-24-26-01
eClass	7.1	27-24-26-01
eClass	6	27-24-26-01
ETIM	9	EC001596
ETIM	8	EC001596
ETIM	7	EC001596
IDEA	4	3562
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval	
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[Miscellaneous](#)



[Manufacturer Declaration](#)



[KC](#)

General Product Approval

For use in hazardous locations



[EM](#)



For use in hazardous locations

Maritime application



[Miscellaneous](#)



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