



Figure similar

ET 200PA SMART HART analog input 8 AI, 0/4 - 20 mA HART 1 x 20-pole HART auxiliary variables, redundancy IM 650-8PH required; conformal coating ISA-S71.04 severity level G1; G2; G3

General information	
Product function	
• Isochronous mode	No
Supply voltage	
Rated value (DC)	24 V
Load voltage L+	
• Rated value (DC)	24 V
• Reverse polarity protection	Yes
Input current	
from load voltage L+ (without load), max.	20 mA
from backplane bus 5 V DC, max.	120 mA
Output voltage	
Power supply to the transmitters	
• present	Yes
• Rated value (DC)	24 V
• short-circuit proof	Yes
• Supply current, max.	60 mA; per channel
Power loss	
Power loss, typ.	1.5 W
Analog inputs	
Number of analog inputs	8
permissible input voltage for voltage input (destruction limit), max.	30 V; 12 V continuous, 30 V for max. 1 s
permissible input current for current input (destruction limit), max.	40 mA
Input ranges (rated values), currents	
• 0 to 20 mA	Yes
— Input resistance (0 to 20 mA)	140 Ω
• -20 mA to +20 mA	Yes
— Input resistance (-20 mA to +20 mA)	140 Ω
• 4 mA to 20 mA	Yes
— Input resistance (4 mA to 20 mA)	140 Ω
Cable length	
• shielded, max.	800 m
Analog value generation for the inputs	
Measurement principle	Sigma Delta
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	16 bit

<ul style="list-style-type: none"> Integration time, parameterizable 	Yes		
<ul style="list-style-type: none"> Integration time (ms) 	20 ms at 50 Hz; 16.6 ms at 60 Hz; 100 ms at 100 Hz		
<ul style="list-style-type: none"> Basic conversion time, including integration time (ms) 	55 ms @ 60 Hz, 65 ms @ 50 Hz, 305 ms @ 100 Hz		
<ul style="list-style-type: none"> Interference voltage suppression for interference frequency f_1 in Hz 	10 / 50 / 60 Hz		
Smoothing of measured values			
<ul style="list-style-type: none"> parameterizable 	Yes		
<ul style="list-style-type: none"> Step: None 	Yes		
<ul style="list-style-type: none"> Step: low 	Yes		
<ul style="list-style-type: none"> Step: Medium 	Yes		
<ul style="list-style-type: none"> Step: High 	Yes		
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			
Linearity error (relative to input range), (+/-)	0.01 %		
Temperature error (relative to input range), (+/-)	0.001 %/K		
Crosstalk between the inputs, min.	70 dB		
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.1 %		
Operational error limit in overall temperature range			
<ul style="list-style-type: none"> Current, relative to input range, (+/-) 	0.15 %		
Basic error limit (operational limit at 25 °C)			
<ul style="list-style-type: none"> Current, relative to input range, (+/-) 	0.1 %		
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		
<ul style="list-style-type: none"> Common mode interference, min. 	100 dB		
Interrupts/diagnostics/status information			
Diagnostics function	Yes		
Alarms			
<ul style="list-style-type: none"> Diagnostic alarm 	Yes		
<ul style="list-style-type: none"> Hardware interrupt 	No		
Diagnoses			
<ul style="list-style-type: none"> Diagnostic information readable 	Yes		
<ul style="list-style-type: none"> Overrange 	Yes		
<ul style="list-style-type: none"> Wire-break in signal transmitter cable 	Yes		
<ul style="list-style-type: none"> Group error 	Yes		
Diagnostics indication LED			
<ul style="list-style-type: none"> Group error SF (red) 	Yes		
<ul style="list-style-type: none"> Channel fault indicator F (red) 	No		
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		
Isolation			
Isolation tested with	500 V DC		
Connection method			
required front connector	20-pin		
Dimensions			
Width	40 mm		
Height	125 mm		
Depth	117 mm		
Weights			
Weight, approx.	220 g		
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	10	EC001596
ETIM	9	EC001596
ETIM	8	EC001596
ETIM	7	EC001596
IDEA	4	3562
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval	For use in hazardous locations
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