

SIMATIC DP, ELECT. SUBMODULE FOR ET200ISP, 4 AI HART, 4DMU, FOR CONNECTION OF HART 4-WIRE TRANSDUCER



Figure similar

Input current	
from supply voltage L+, max.	30 mA
Power loss	
Power loss, typ.	0.4 W
Analog inputs	
Number of analog inputs	4
permissible input current for current input (destruction limit), max.	50 mA
Cycle time (all channels) max.	120 ms; 30 ms basic conversion time x 4 channels with 60 Hz, 50 Hz interference frequency suppression
Technical unit for temperature measurement adjustable	Yes
Input ranges	
• Voltage	No
• Current	Yes
• Thermocouple	No
• Resistance thermometer	No

• Resistance	No
Input ranges (rated values), currents	
• 4 mA to 20 mA	Yes
• Input resistance (4 mA to 20 mA)	295 Ω
Cable length	
• shielded, max.	500 m

Analog value generation for the inputs

Measurement principle	integrating (Sigma-Delta)
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	12 bit; + sign
• Integration time, parameterizable	Yes
• Basic conversion time, including integration time (ms)	30 ms
• Interference voltage suppression for interference frequency f1 in Hz	50 / 60 Hz
Smoothing of measured values	
• parameterizable	Yes; in 4 stages
• Step: None	Yes; 1 x cycle time
• Step: low	Yes; 4 x cycle time
• Step: Medium	Yes; 32 x cycle time
• Step: High	Yes; 64 x cycle time

Encoder

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

Errors/accuracies

Linearity error (relative to input range), (+/-)	0.015 %
Temperature error (relative to input range), (+/-)	0.005 %/K
Crosstalk between the inputs, min.	-50 dB
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.01 %
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 %
Interference voltage suppression for $f = n \times (f1 \pm 1 \%)$, f1 = interference frequency	
• Series mode interference (peak value of interference < rated value of input range), min.	70 dB

Interrupts/diagnostics/status information

Alarms	
• Diagnostic alarm	Yes; Parameterizable

• Limit value alarm	Yes; Parameterizable
Diagnostic messages	
• Diagnostic information readable	Yes
• Wire-break	Yes
Diagnostics indication LED	
• Group error SF (red)	Yes
Potential separation	
Potential separation analog inputs	
• between the channels	No
• between the channels and backplane bus	Yes
Standards, approvals, certificates	
CE mark	Yes
Highest safety class achievable in safety mode	
• Performance level according to ISO 13849-1	none
• SIL acc. to IEC 61508	No
Use in hazardous areas	
• Type of protection acc. to EN 50020 (CENELEC)	II2 G (1) GD Ex ib[ia] IIC T4 and I M2 Ex ib[ia] I
• Type of protection acc. to KEMA	04 ATEX 1245
Dimensions	
Width	30 mm
Height	129 mm
Depth	136.5 mm
Weights	
Weight, approx.	230 g
last modified:	03/07/2017