

SIMATIC DP, electronics module for ET200iSP, 4 AI HART, 4DMU, for connecting HART 4-wire transmitters Supported HART protocol Version 6.0



Figure similar

Input current	
Current consumption, typ.	27 mA
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 x4 channels with 60 Hz, 50 Hz interference frequency suppression
Technical unit for temperature measurement adjustable	Yes
Input ranges (rated values), currents	
<ul style="list-style-type: none"> <li>4 mA to 20 mA</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Input resistance (4 mA to 20 mA)</li> </ul>	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	
<ul style="list-style-type: none"> <li>• Resolution with overrange (bit including sign), max.</li> </ul>	12 bit; + sign
<ul style="list-style-type: none"> <li>• Integration time, parameterizable</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Basic conversion time, including integration time (ms)</li> </ul>	30 ms
<ul style="list-style-type: none"> <li>• Interference voltage suppression for interference frequency f1 in Hz</li> </ul>	50 / 60 Hz
Smoothing of measured values	
<ul style="list-style-type: none"> <li>• parameterizable</li> </ul>	Yes; in 4 stages
<ul style="list-style-type: none"> <li>• Step: None</li> </ul>	Yes; 1x cycle time
<ul style="list-style-type: none"> <li>• Step: low</li> </ul>	Yes; 4x cycle time
<ul style="list-style-type: none"> <li>• Step: Medium</li> </ul>	Yes; 32x cycle time
<ul style="list-style-type: none"> <li>• Step: High</li> </ul>	Yes; 64x cycle time

## Encoder

Connection of signal encoders	
<ul style="list-style-type: none"> <li>• for current measurement as 4-wire transducer</li> </ul>	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	
<ul style="list-style-type: none"> <li>• Current, relative to input range, (+/-)</li> </ul>	0.15 %
Basic error limit (operational limit at 25 °C)	
<ul style="list-style-type: none"> <li>• Current, relative to input range, (+/-)</li> </ul>	0.1 %
Interference voltage suppression for $f = n \times (f1 \pm 1 \%)$ , $f1 =$ interference frequency	
<ul style="list-style-type: none"> <li>• Series mode interference (peak value of interference &lt; rated value of input range), min.</li> </ul>	70 dB

## Interrupts/diagnostics/status information

Alarms	
<ul style="list-style-type: none"> <li>• Diagnostic alarm</li> </ul>	Yes; Parameterizable
<ul style="list-style-type: none"> <li>• Limit value alarm</li> </ul>	Yes; Parameterizable
Diagnostic messages	
<ul style="list-style-type: none"> <li>• Diagnostic information readable</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Wire-break</li> </ul>	Yes
Diagnostics indication LED	

- Group error SF (red)

Yes

### Potential separation

#### Potential separation analog inputs

- between the channels
- between the channels and backplane bus

No

Yes

### Standards, approvals, certificates

CE mark

Yes

#### Highest safety class achievable in safety mode

- Performance level according to ISO 13849-1
- SIL acc. to IEC 61508

none

No

#### Use in hazardous areas

- Type of protection acc. to EN 50020 (CENELEC)
- Type of protection acc. to KEMA

II2 G (1) GD Ex ib[ja] IIC T4 and I M2 Ex ib[ja] I

04 ATEX 1245

### Dimensions

Width

30 mm

Height

129 mm

Depth

136.5 mm

### Weights

Weight, approx.

230 g

**last modified:**

05/15/2019