



Figure similar

SIMATIC, electronic module for ET200iSP, 4 AO HART, 4 - 20 mA, for connecting HART field devices, supported HART protocol version 6.0, Ex ib (ia Ga) IIC T4 Gb, Ex ib [ia IIIC Da] IIC T4 Gb, Ex ib [ia] I Mb

General information	
Product brand name	SIMATIC
Product family	ET 200iSP
Product category	Analog module output
Product type designation	4AQ I HART
Installation type/mounting	
Rack mounting	No
Front mounting	Yes
Rail mounting	Yes
Wall mounting/direct mounting	No
Supply voltage	
Type of supply voltage	DC
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Input current	
Current consumption, typ.	295 mA
from load voltage (power bus), max.	330 mA
Power loss	
Power loss, typ.	2.7 W
Hardware configuration	
Fieldbus connection via separate transceiver	Yes
Analog outputs	
Number of analog outputs	4
Cycle time (all channels) max.	3.6 ms
Voltage signal at analog output	No
Current signal at analog output	Yes
Output ranges, current	
• 0 to 20 mA	Yes
• 4 mA to 20 mA	Yes
Connection of actuators	
• for current output two-wire connection	Yes
Load impedance (in rated range of output)	
• with current outputs, max.	750 Ω
Cable length	
• shielded, max.	500 m
Analog value generation for the outputs	
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	14 bit
Settling time	

<ul style="list-style-type: none"> <li>• for resistive load</li> <li>• for capacitive load</li> <li>• for inductive load</li> </ul>	4 ms 40 ms 40 ms
<b>Errors/accuracies</b>	
Linearity error (relative to output range), (+/-)	0.015 %
Temperature error (relative to output range), (+/-)	0.005 %/K
Crosstalk between the outputs, min.	-50 dB
Repeat accuracy in steady state at 25 °C (relative to output range), (+/-)	0.01 %
Operational error limit in overall temperature range	
<ul style="list-style-type: none"> <li>• Current, relative to output range, (+/-)</li> </ul>	0.15 %
Basic error limit (operational limit at 25 °C)	
<ul style="list-style-type: none"> <li>• Current, relative to output range, (+/-)</li> </ul>	0.1 %
<b>Interfaces</b>	
Number of PROFINET interfaces	0
<b>Protocols</b>	
Supports protocol for PROFINET IO	No
PROFIsafe	No
PROFIBUS	No
Further protocols	
<ul style="list-style-type: none"> <li>• other bus systems</li> </ul>	No
<b>Interrupts/diagnostics/status information</b>	
Substitute values connectable	Yes
<b>Alarms</b>	
<ul style="list-style-type: none"> <li>• Diagnostic alarm</li> </ul>	Yes
<b>Diagnoses</b>	
<ul style="list-style-type: none"> <li>• Diagnostic information readable</li> <li>• Wire-break</li> <li>• Short-circuit</li> </ul>	Yes Yes; I load > 1 mA Yes; I load > 1 mA
Diagnostics indication LED	
<ul style="list-style-type: none"> <li>• Group error SF (red)</li> </ul>	Yes
<b>Ex(i) characteristics</b>	
Module for Ex(i) protection	Yes; for more Co/Lo combinations, see certificate IECEx KEM 05.0012
maximum values for connecting terminals for gas group IIC	
<ul style="list-style-type: none"> <li>• U<sub>o</sub> (no-load voltage), max.</li> <li>• I<sub>o</sub> (short-circuit current), max.</li> <li>• P<sub>o</sub> (power output), max.</li> <li>• C<sub>o</sub> (permissible external capacity), max.</li> <li>• L<sub>o</sub> (permissible external inductivity), max.</li> </ul>	27.6 V 88.2 mA 0.61 mW 83 nF 3 mH
<b>Potential separation</b>	
between channels and powerbus	Yes
Potential separation analog outputs	
<ul style="list-style-type: none"> <li>• between the channels</li> <li>• between the channels and backplane bus</li> </ul>	No Yes
<b>Degree and class of protection</b>	
IP degree of protection	IP30
<b>Standards, approvals, certificates</b>	
CE mark	CE 0344
UKCA mark	DEKRA 21UKEX0091 Importer UK: Siemens plc Manchester M20 2UR
cULus	LISTED E334384
FM approval	CLASSIFIED 3025852
Suitable for safety functions	No
INMETRO certificate	UL-BR 12.0070
reference designation according to IEC 81346-2 (2009)	K
Use in hazardous areas	
<ul style="list-style-type: none"> <li>• ATEX marking</li> <li>• ATEX certificate</li> <li>• IECEx</li> <li>• CCC Ex</li> <li>• EAC Ex</li> </ul>	II 2 G (1) G Ex ib [ia Ga] IIC T4 Gb II 2 G (1) D Ex ib [ia IIIC Da] IIC T4 Gb I M2 Ex ib [ia] I Mb KEMA 04 ATEX 1250 IECEx KEM 05.0012 2020322316002946 PB Ex ib [ia] I Mb 1Ex ib [ia Ga] IIC T4 Gb [Ex ia Da] IIIC

<ul style="list-style-type: none"><li>• FM marking</li><li>• Explosion protection category for gas</li><li>• Explosion protection category for dust</li><li>• associated equipment (Ex ia)</li><li>• associated equipment (Ex ib)</li></ul>		Class I, Zone 1 AEx ib [ia] IIC T4 Ex ib IIC T4 NI, Class I, DIV.2, GP. A,B,C,D T4 AIS, Class I, DIV.1, GP. A,B,C,D T4 DIP Class II, III, GP. E,F,G ATEX gas explosion protection, Zone 1 ATEX dust explosion protection, Zone 21 always install in corresponding enclosure Yes Yes
connection method		
Design of electrical connection		Screw/spring-type terminal
Dimensions		
Width		30 mm
Height		129 mm
Depth		136.5 mm
Weights		
Weight, approx.		265 g
last modified:		1/31/2025 