



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
HW functional status	17
Firmware version	V3.0.4
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	
<ul style="list-style-type: none"> <li>0 to 20 mA</li> </ul>	Yes
<ul style="list-style-type: none"> <li>4 mA to 20 mA</li> </ul>	Yes
Connection of actuators	
<ul style="list-style-type: none"> <li>for current output two-wire connection</li> </ul>	Yes
Load impedance (in rated range of output)	
<ul style="list-style-type: none"> <li>with current outputs, max.</li> </ul>	750 Ω
Cable length	
<ul style="list-style-type: none"> <li>shielded, max.</li> </ul>	500 m
Analog value generation for the outputs	

<b>Integration and conversion time/resolution per channel</b>	
• Resolution with overrange (bit including sign), max.	14 bit
<b>Settling time</b>	
• for resistive load	4 ms
• for capacitive load	40 ms
• for inductive load	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 %
<b>Operational error limit in overall temperature range</b>	
• Current, relative to output range, (+/-)	0.15 %
<b>Basic error limit (operational limit at 25 °C)</b>	
• Current, relative to output range, (+/-)	0.1 %
<b>Interfaces</b>	
Number of PROFINET interfaces	0
<b>Protocols</b>	
Supports protocol for PROFINET IO	No
PROFIsafe	No
PROFIBUS	No
<b>Further protocols</b>	
• other bus systems	No
<b>Interrupts/diagnostics/status information</b>	
Substitute values connectable	Yes
<b>Alarms</b>	
• Diagnostic alarm	Yes
<b>Diagnoses</b>	
• Diagnostic information readable	Yes
• Wire-break	Yes; I load > 1 mA
• Short-circuit	Yes; I load > 1 mA
<b>Diagnostics indication LED</b>	
• Group error SF (red)	Yes
<b>Ex(i) characteristics</b>	
Module for Ex(i) protection	Yes; for more Co/Lo combinations, see certificate IECEx KEM 05.0012
<b>maximum values for connecting terminals for gas group IIC</b>	
• U <sub>o</sub> (no-load voltage), max.	27.6 V
• I <sub>o</sub> (short-circuit current), max.	88.2 mA
• P <sub>o</sub> (power output), max.	0.61 mW
• C <sub>o</sub> (permissible external capacity), max.	83 nF
• L <sub>o</sub> (permissible external inductivity), max.	3 mH
<b>Potential separation</b>	
between channels and powerbus	Yes
<b>Potential separation analog outputs</b>	
• between the channels	No
• between the channels and backplane bus	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
<b>Use in hazardous areas</b>	
• ATEX marking	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

- ATEX certificate
- IECEx
- CCC Ex
- EAC Ex
- FM marking
- Explosion protection category for gas
- Explosion protection category for dust
- associated equipment (Ex ia)
- associated equipment (Ex ib)

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  
 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

**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**



[Miscellaneous](#)

[China RoHS](#)



**For use in hazardous locations**



[FM](#)



[Miscellaneous](#)



**For use in hazardous locations**

[CCC-Ex](#)



[Miscellaneous](#)





[NK / Nippon Kaiji Ky-  
okai](#)



---

last modified:

7/17/2025