



SIMATIC ET 200SP HA, analog output module, AQ 8xI HART HA suitable for terminal block H1, M1, color code CC00, channel diagnostics, 16-bit, +/-0.1%

General information	
Product type designation	AQ 8 x I HART HA
Firmware version	V1.0
<ul style="list-style-type: none"> FW update possible 	Yes
Usable terminal block	TB type H1, M1, P0 and N0
Color code for module-specific color identification plate	CC00
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	V16
<ul style="list-style-type: none"> STEP 7 configurable/integrated from version 	V5.6
<ul style="list-style-type: none"> PCS 7 configurable/integrated from version 	V9.0
<ul style="list-style-type: none"> PCS neo can be configured/integrated from version 	V3.0
<ul style="list-style-type: none"> PROFINET from GSD version/GSD revision 	GSDML V2.3
Redundancy	
<ul style="list-style-type: none"> Redundancy capability 	Yes; With TB type M1
CIR - Configuration in RUN	
Reparameterization possible in RUN	Yes
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
Input current	
Current consumption (rated value)	230 mA; 8x 20 mA with 750 ohm load resistance
Current consumption, max.	350 mA; 8x 24 mA with 750 ohm load resistance
Power loss	
Power loss, typ.	3.2 W
Address area	
Address space per module	
<ul style="list-style-type: none"> Address space per module, max. 	17 byte; 16-byte outputs and 1 byte for QI information
<ul style="list-style-type: none"> Address space per module with HART, max. 	57 byte; 40-byte inputs for HART and 1 byte for QI information, 16-byte outputs
<ul style="list-style-type: none"> Address space per module with MultiHART, max. 	24 byte; 6-byte inputs for HART and 1 byte for QI information, 16-byte outputs, and 1-byte output for MultiHART command
Analog outputs	
Number of analog outputs	8; short-circuit proof with respect to ground
Current output, no-load voltage, max.	28 V
Output ranges, current	
<ul style="list-style-type: none"> 0 to 10 mA 	Yes; 14 bit
<ul style="list-style-type: none"> 0 to 20 mA 	Yes; 15 bit

<ul style="list-style-type: none"> • -20 mA to +20 mA • 4 mA to 20 mA 	No Yes; 16 bit incl. sign
Connection of actuators	
<ul style="list-style-type: none"> • for current output two-wire connection 	Yes
Load impedance (in rated range of output)	
<ul style="list-style-type: none"> • for current outputs, min. • with current outputs, max. • with current outputs, inductive load, max. 	150 Ω 750 Ω 10 mH
Destruction limits against externally applied voltages and currents	
<ul style="list-style-type: none"> • Voltages at the outputs 	36 V; Minus 0.3 V lower limit
Cable length	
<ul style="list-style-type: none"> • shielded, max. 	1 000 m; with unshielded cables up to 800 m, remember that (external) EMC loads can cause incorrect measured values
Analog value generation for the outputs	
Settling time	
<ul style="list-style-type: none"> • for resistive load • for inductive load 	1.2 ms; 750 ohm 1.2 ms
Errors/accuracies	
Linearity error (relative to output range), (+/-)	0.01 %
Temperature error (relative to output range), (+/-)	0.002 %/K
Crosstalk between the outputs, min.	70 dB
Repeat accuracy in steady state at 25 °C (relative to output range), (+/-)	0.02 %
Operational error limit in overall temperature range	
<ul style="list-style-type: none"> • Current, relative to output range, (+/-) 	0.5 %; 0 ... 60 °C: 0.2 %
Basic error limit (operational limit at 25 °C)	
<ul style="list-style-type: none"> • Current, relative to output range, (+/-) 	0.1 %
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
<ul style="list-style-type: none"> • Diagnostic alarm 	Yes
Diagnoses	
<ul style="list-style-type: none"> • Monitoring the supply voltage • Wire-break • Short-circuit • Overflow/underflow 	Yes Yes; channel by channel Yes; channel by channel Yes; channel by channel
Diagnostics indication LED	
<ul style="list-style-type: none"> • MAINT LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics 	Yes; Yellow LED Yes; green PWR LED Yes; green LED Yes; red LED Yes; green/red DIAG LED
Potential separation	
Potential separation channels	
<ul style="list-style-type: none"> • between the channels • between the channels and backplane bus • Between the channels and load voltage L+ 	No Yes Yes
Isolation	
Isolation tested with	1 500 V DC/1 min, type test
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. 	-40 °C 70 °C -40 °C 60 °C
Dimensions	
Width	22.5 mm
Height	115 mm
Depth	138 mm
Weights	

Weight, approx.

160 g

last modified:

8/16/2023 