

**TC-HAO081, TK-HAO081****Table 6-30** HART- Analog Output, 8-Point, Current/Voltage Module

Parameter	Specification															
Number of Points/Channels	8 output channels															
Available output ranges for channels configured for non-HART. Voltage and Current Ranges:	<table border="0"> <tr> <td>Actual</td> <td colspan="2">Configuration</td> </tr> <tr> <td><u>Range:</u></td> <td><u>Selection:</u></td> <td><u>Resolution:</u></td> </tr> <tr> <td>±10.4 volts</td> <td>±10 volts</td> <td>16 bits (323 μV/bit)</td> </tr> <tr> <td>0 to 10.25 volts</td> <td>0-10 volts</td> <td>15 bits (323 μV/bit)</td> </tr> <tr> <td>0 to 21 mA</td> <td>4-20 mA</td> <td>15 bits (656 nA/bit)</td> </tr> </table>	Actual	Configuration		<u>Range:</u>	<u>Selection:</u>	<u>Resolution:</u>	±10.4 volts	±10 volts	16 bits (323 μV/bit)	0 to 10.25 volts	0-10 volts	15 bits (323 μV/bit)	0 to 21 mA	4-20 mA	15 bits (656 nA/bit)
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Available output ranges for channels configured for HART. Output is automatically set to Current Range only.	<table border="0"> <tr> <td>Actual</td> <td colspan="2">Configuration</td> </tr> <tr> <td><u>Range:</u></td> <td><u>Selection:</u></td> <td><u>Resolution:</u></td> </tr> <tr> <td>0 to 21 mA</td> <td>4-20 mA</td> <td>15 bits (656 nA/bit)</td> </tr> </table>	Actual	Configuration		<u>Range:</u>	<u>Selection:</u>	<u>Resolution:</u>	0 to 21 mA	4-20 mA	15 bits (656 nA/bit)						
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HART Protocol Revision	Module is compliant with the specification for HART protocol Revision 5.7															
Module scan time (for the analog 0-100% output value)	10 ms for all (8) channels															
Over voltage Protection	24 VAC/VDC continuous at room temperature															
Short Circuit Protection    Current Voltage	Electronically current limited to 21 mA or less. Electronically current limited to 35 mA or less.															
Drive Capability	>2000 . (Voltage) 50-750 . (Current) With short circuit protection for all (8) channels.															
Calibrated Accuracy @ 25°C	Better than 0.1% of range (Voltage) Better than 0.15% of range (Current)															
Calibration interval –	12 months typical															
RFI Immunity	Error of less than 2.0% of range at 10 V/m, 27 to 1000 MHz															
Output Settling Time Current Output, No HART Current Output, with HART Voltage Output	<23 ms to 95% of final value with resistive loads <35 ms to 95% of final value with resistive loads <8.5 ms to 95% of final value with resistive loads															
Offset Drift with Temperature	50 μV/°C (voltage) typical. 200 nA/°C (current) typical.															
Gain Drift with Temperature	20 ppm/°C (Voltage) maximum. 30 ppm/°C (Current) maximum.															
Module Error Over Full Temp. Range	0.3% of range (Voltage) 0.3% of range (Current)															
Isolation Voltage; User to system	100% tested at 2550VDC for 1second															
Module Power Dissipation	6.3 W max															
Backplane Current	See Module Power Consumption Data, page 46.															
Open loop current detection	Current outputs only. For proper detection, the channel output value must be greater than 0.1 mA.															
Typical OC Detection Time	Less than 5 seconds															
Connection Terminal Blocks	TC-TBNH, 20-position terminal block															
HART wiring mode supported	Point-to-Point only. Multi-drop is not supported.															