

Product Specifications

Analog Output Modules

Each TMR Analog Output Module has three isolated sets of electronics, called channels, which independently accept data from the MP associated with each channel. The channels provide input to voter circuitry to select a single channel to drive the output. Special circuitry is used to ensure that the channels that are not driving the output are shunted so they cannot affect the output.

AO Modules include complete, ongoing diagnostics for each channel. If the diagnostics detect a failure on any channel, the Fault indicator turns on and activates the system alarm. The Fault indicator identifies a channel fault, not a complete module failure. AO Modules are guaranteed to operate properly in the presence of a single fault and may continue to operate properly with multiple faults.

AO Modules support a hot-spare module. Each AO Module is mechanically keyed to prevent improper installation in a configured baseplate.

The Model 3481S2 AO Module can be used with these baseplates:

- Model 2481S2, which is used in typical applications.
- Model 2483S2, which enables communication between HART field devices and Configuration and Asset Management Software running on a PC.
- Model 2483AS2, which is used in hazardous locations and enables communication between HART field devices and Configuration and Asset Management Software running on a PC.
- AO External Termination Baseplate, which is used with the Model 9863-610F External

Termination Panel in hazardous locations.

The Model 3482S2 High-Current AO Module is compatible with only the Model 2481S2 Analog Output Baseplate.

Analog Output Module Specifications

Model Number	3481S2	3482S2
Points	4, commoned-return, DC-coupled	4, commoned-return, DC-coupled
Isolated points	None	None
Output current range	4–20 mA output, controlled 0.66–21.34 mA over-range 0.66 mA output capability (step function < 2 mA)	4–40 mA output, controlled 1.32–42.68 mA over-range 1.32 mA output capability (step function < 4 mA) ^a
Output accuracy	<0.25% (in range of 4–20 mA) of FSR (0–22 mA), from 32° F to 158° F (0° C to 70° C)	< 0.25% (in range of 4–40 mA) of FSR (0–44 mA), from 32° F to 122° F (0° C to 50° C) ^a
Type	TMR	TMR
Resolution	12 bits	12 bits
Diagnostic	Forced-switch diagnostic (FSD)	Forced-switch diagnostic (FSD)
External loop power (reverse voltage-protected)	32 VDC, maximum 24 VDC, nominal	32 VDC, maximum 24 VDC, nominal
Output loop power requirements for specified load	300 Ω @ >16 VDC (1 A minimum) 500 Ω @ >20 VDC (1 A minimum) 700 Ω @ >24 VDC (1 A minimum) 800 Ω @ >28 VDC (1 A minimum)	125 Ω @ >16 VDC (1 A minimum) 210 Ω @ >20 VDC (1 A minimum) 295 Ω @ >24 VDC (1 A minimum) 340 Ω @ >28 VDC (1 A minimum) ^a
Over-range protection	36 VDC, continuous 0 VDC, continuous	36 VDC, continuous 0 VDC, continuous
Switch time on leg failure	1 ms, typical 3 ms, maximum	1 ms, typical 3 ms, maximum

a. This specification applies to points 3 and 4. The specification for points 1 and 2 is the same as for Model 3481S2