

# GRIDSCAN® AO-1

## ANALOG OUTPUT MODULE



### GRIDSCAN Analog Output Module

The GSAO-1 Analog Output Module is an accessory for the GRIDSCAN® 5000 Series of H2scan hydrogen sensors. When paired with the GRIDSCAN hydrogen sensor, it provides a 4-20 mA analog signal equivalent of the dissolved hydrogen gas in the transformer oil or gas space. Rated for a wide hydrogen and temperature range, the GRIDSCAN 5000 Series with the GSAO-1 accessory leads the industry in ease of retrofitting a hydrogen sensor package to a variety of process monitoring and safety solutions.

- The accuracy of the GRIDSCAN hydrogen measurement is not degraded
- Seamless and rapid integration with SCADA and legacy systems (no protocol mapping required)
- It can drive local displays and annunciators
- Uses available signal cabling between transformer cabinet and control room
- Provides air-gapped and constant information for the most demanding cybersecurity requirements
- Automatically programs the GRIDSCAN sensor when first connected (no computers required)
- Local LED display with diagnostic alert
- Rugged IP68 enclosure with wide operating temperature makes the GSAO-1 suitable for all outdoor applications
- Small and unobtrusive form factor simplifies installation

### Complement Your Monitoring Program with the GSAO-1

**Fast Time to Value:** Hours, not weeks or months

**Seamless Integration:** Connects to SCADA and legacy systems with industry standard 4-20 mA

**Cost-Effective:** Minimizes complexity and uses the existing infrastructure

**Rugged and Reliable:** Weatherproof, rugged enclosure and robust design for harsh substation environments

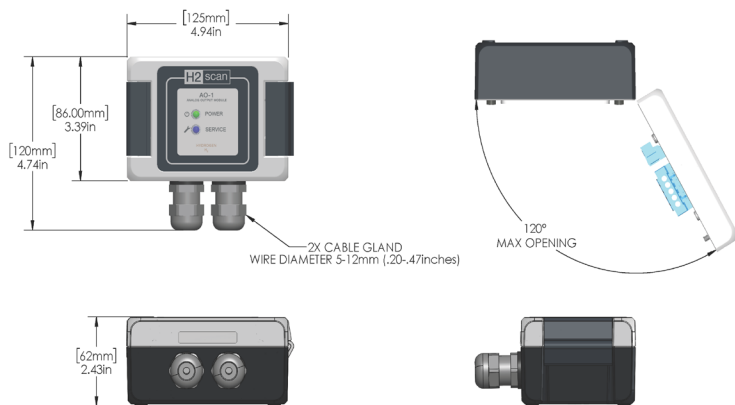
**Easy Installation:** "Plug-and-play" connectivity with H2scan sensors. Configures without a computer for immediate operation



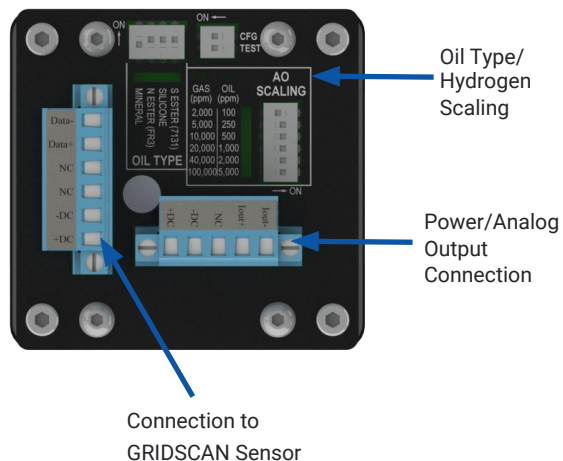
## Operating Conditions

Environmental	
Ingress Protection	IP68
Operating Temperature (Ambient)	-40°C to 70°C (-40°F to 158°F)
Shock	30g, shock duration, 18 ms (IEC 60068-2-27)
Vibration	3-axis sinusoidal, wide-band and random [simulated long-life] (IEC 60068-2-6 table C.2, IEC 60068-2-64 paragraph A.2, category no.2, IEC 61373:2010 Cat 1B section9)
Mechanical	
Dimensions H x W x D	120 x 125 x 62 mm (4.72 x 4.92 x 2.44 in)
Weight	387 g (0.85 lbs)
Electrical	
External Power Supply Required	9, 12, 15, 24, 30, 36 or 48 VDC nominal (8.55 to 50.4 VDC)
Analog Output Range	Nominal 4-20 mA with over-range capability up to 24 mA
Power Consumption	13 W minimum (includes power for GRIDSCAN)
Analog Output Scaling (ppm)	0-100, 0-250, 0-500, 0-1000, 0-2000, 0-5000
Select Oil Types	Mineral oil, Natural ester oil (FR3), Silicone oil, Synthetic ester oil (7131)
Physical	
Housing	Die Cast Aluminum
Sealing	<b>Housing:</b> Gasket sealed precision die-cast housing with adhesive sealed chemically strengthened glass. <b>Cable Glands:</b> IP68 sized for 5-12mm (0.20-0.47 in) wire diameter.

**GSAO-1 Dimensions**



**Internal Wiring/Settings**



Specifications subject to change without notice  
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