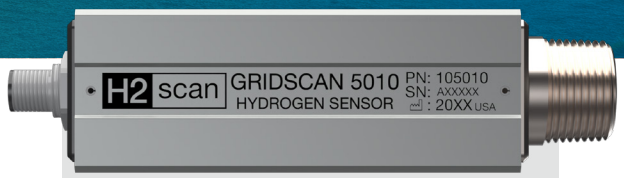
GRIDSCAN® 5010

COMPREHENSIVE TRANSFORMER MONITORING

H2scan®
Advanced Hydrogen Sensing



Extend the Life of Your Assets with the GRIDSCAN 5010

H2scan's GRIDSCAN® 5010 is a proven transformer monitor that provides meaningful and actionable insight into the condition of transformer fleets regardless of size. H2scan's GRIDSCAN 5010 monitor alert transformer owners when their assets enter an abnormal state, prompting action to avoid premature or catastrophic failure. The low cost, ease of deployment and operating life makes it ideal for real-time fleet-wide health monitoring.

The GRIDSCAN 5010's unique solid-state technology eliminates the need for sensor maintenance, calibration and problematic consumables. The patented H2scan sensor is recognized as the industry gold standard. It provides true set-and-forget monitoring, allowing maintenance teams to focus on distressed assets.

Using industry standard communication protocols, the GRIDSCAN 5010 integrates seamlessly with a wide range of systems, making it ideal for standalone deployment, or for integration into OEM transformer monitoring and multi-gas DGA's.

The GRIDSCAN 5010 introduces an innovative sensor design that eliminates measurement gaps by providing truly continuous hydrogen monitoring. Unlike traditional sensors, they perpetually auto-calibrate for uninterrupted monitoring of high-value transformer assets. This new addition to the GRIDSCAN series is available in both in-gas and in-oil versions.

H2scan's family of reliable and accurate hydrogen sensors have been monitoring transformer fleets for decades. They are:

- Designed to support fleet-wide monitoring cost-effectively
- Different models with varying performance capabilities satisfy a wide-range of deployment needs
- Able to operate in all known insulating liquids or the head-space of power transformers and ancillary equipment
- A compact form factor for tight installation spaces
- Ruggedly fabricated to work in all known environmental operating conditions (hot/cold/salt water/submersible)
- Offered as a complete IoT platform, but also supports conventional SCADA connectivity and standalone local display

Transform Your Transformer Monitoring Program

Fast Time to Value:
Hours, not weeks or months

Long Life Hydrogen Sensor: Standard 3-year warranty on the product and 10-year warranty on the hydrogen sensing element

Patented Auto Calibration:
Eliminates drift and need for periodic calibration thus maximizing uptime

Easy to Install and Operate:
No moving parts and small form factor

Rugged & Reliable: Rated for harsh environmental conditions

Broad Connectivity: IoT/SCADA ready with Modbus or DNP3. Analog (4-20 mA optional)

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H2scan® Advanced Hydrogen Sensing

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COMPREHENSIVE TRANSFORMER MONITORING

Protect critical transformer assets without worrying about maintaining sensors or calibration. GRIDSCAN 5010 sensor provides an accurate, reliable and affordable hydrogen process gas measurement solution for the insulating liquid or head-space of power transformers.

Certifications: The GRIDSCAN 5010 meets all relevant global monitoring standards for transformer installations and is CE-approved for safe general-use operation.

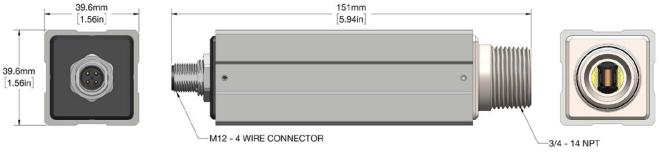
Specifications

Hydrogen Sensor Specifications	
H2 Measurement Range[1]	25 - 5,000 ppm[2]
Accuracy[3]	± 20% of reading or ± 25 ppm[4]
Repeatability[5]	± 10% of reading or ± 15 ppm[4]
Response Time	< 60 minutes
Operating Temperature (Ambient)	-40°C to 70° C (-40°F to 158°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Temperature Range[6]	Oil Phase: -40°C to 105°C (-40°C to 221°F)
Data Log Storage	1 year
Cross-sensitivity to H_2O, CO_2, C_2H_2, C_2H_4, CO, etc.	<2%
Serial Communications	2-Wire RS485, Modbus, DNP3
Power Supply	12-48 VDC, 10 W
Environment	IP68 (7.62 m [25 ft.] water for 14 days) – Marine rated assembly (C5M equiv)
Insulating Liquid Supported	Mineral oil, silicone, natural ester, synthetic ester
Operating Life Expectancy	10+ years

Physical Specifications	
Wetted Materials and Internal Sealing	316SS, 40% mineral filled nylon, polyimide, viton (fluoropolymer elastomer), hermetic glass-to-metal feed-through
External Housing and Sealing	Hard anodized 6061 aluminum, 40% mineral filled nylon, viton (fluoropolymer elastomer), nickel-plated zinc (4-wire connector)
Humidity and Corrosion Resistance	Class C5M marine equivalent; salt-water condensing (IEC60068-2-11 & DIN EN ISO 12944)
Ingress Protection	IP68; 7.62 m [25 ft.] water for 14 days (IEC 60529)
Certifications	CE Mark, ROHS 2011/65/EU compliant, EMC/RFI and Other. Electrical Certification, IEC 55022 IFCC Part 15, IEC 55011, IEC 61000-4-2 through 61000-4-4, 61000-4-6, and 61000-4-8, IEC 61010-1, IEC 61326, IEC 60068-2-30
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)
Shock	30 g, shock duration 18 ms (IEC 60068-2-27)

1. *Accuracy and Repeatability specs do not apply above 5,000 ppm*
2. *If in gas sensor the value is the in oil equivalent ppm value*
3. *True accuracy of the sensor when in service*
4. *Whichever is greater*
5. *For consecutive measurements to an identical hydrogen concentration*
6. *Main tank bulk oil temperature*

GRIDSCAN 5010 Dimensions



Specifications subject to change without notice
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