

# GRIDSCAN® 5015

## COMPREHENSIVE TRANSFORMER MONITORING

**H2scan®**  
Advanced Hydrogen Sensing

### Extend the Life of Your Transformer Assets with the GRIDSCAN 5015

H2scan's GRIDSCAN® 5015 is a proven transformer monitor that provides meaningful and actionable insight into the condition of transformer fleets regardless of size. H2scan's GRIDSCAN 5015 monitors alert transformer owners when their assets enter an abnormal state, prompting action to avoid premature or catastrophic failure. The GRIDSCAN 5015's low cost, ease of deployment and operating life makes it ideal for real-time fleet-wide health monitoring.

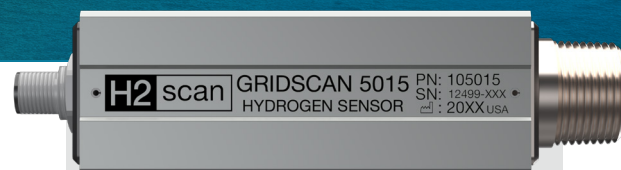
The GRIDSCAN 5015's unique solid-state technology eliminates the need for sensor maintenance, calibration and problematic consumables. The patented H2scan sensor is recognized as the industry gold standard. It provides true set-and-forget monitoring, allowing maintenance teams to focus on distressed assets, thus reducing OPEX and extending the life of all transformer assets.

The GRIDSCAN 5015 extends high-performance monitoring capabilities to environments with significantly higher hydrogen concentrations in the nitrogen blanket. With an impressive measurement range of 250 PPM to 40,000 PPM, the GRIDSCAN 5015 is specifically designed for transformers that experience more substantial gassing, such as those in renewable energy facilities with high harmonics and underground vaults.

Using industry standard communication protocols, the GRIDSCAN 5015 integrates seamlessly with H2scan's system components as well as the existing substation communication infrastructure.

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

- Designed to support fleet-wide deployment
- Able to operate in all the head-space of power transformers at nominal or very high hydrogen concentrations
- A compact form factor for tight installation spaces
- Ruggedly fabricated to work in all known environmental operating conditions (hot/cold/salt water/submersible)
- Wider temperature operating range for vault transformer monitoring
- 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 and Reliable: Rated for  
harsh environmental conditions

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



Protect critical transformer assets without worrying about maintaining sensors or calibration. GRIDSCAN 5015 sensor provide an accurate, reliable, and affordable hydrogen gas measurement solution for power transformers and ancillary liquid filled equipment.

**Certifications:** The GRIDSCAN 5015 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 <sup>1</sup>	250- 50,000 ppm <sup>2</sup>
Accuracy <sup>3</sup>	± 20% of reading or ± 250 ppm <sup>4</sup>
Repeatability <sup>5</sup>	± 10% of reading or ± 150 ppm <sup>4</sup>
Operating Temperature (Ambient)	-20°C to 70°C (-4°F to 158°F)
Storage Temperature	-40°C to 85°C (-40° F to 185°F)
Gas Temperature Range	-40°C to 80°C (-40°F to 176°F)
Data Log Storage	1 year
Humidity	0-95% (non-condensing)
Cross-sensitivity to H <sub>2</sub> O, CO <sub>2</sub> , C <sub>2</sub> H <sub>2</sub> , C <sub>2</sub> H <sub>4</sub> , CO, etc.	<2%
Serial Communications	2-Wire RS485, Modbus, DNP3.0
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, natural and synthetic ester
Operating Life Expectancy	10+ years

1. Accuracy and Repeatability specs do not apply above 50,000 ppm

2. The value is the in oil equivalent ppm

3. True accuracy of the sensor when in service

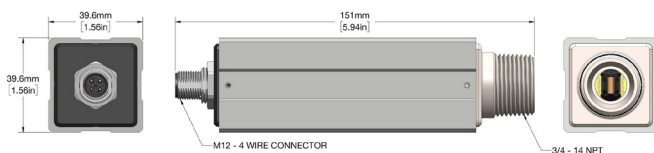
4. The value is the in oil equivalent ppm

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 <sup>6</sup> (Ambient)	Class C5M marine equivalent; salt-water condensing (IEC60068-2-11 & DIN EN ISO 12944)
Ingress Protection <sup>7</sup>	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) 4M6, 4M4 (IBS), IEC 60721-3-4 ed.2 table 6

5. For consecutive measurements to an identical hydrogen concentration

6. Applies to housing after installation: sensing elements may be damaged if exposed to salt or water condensation

### GRIDSCAN 5015 Dimensions



Specifications subject to change without notice  
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