

DELPHI MINI



DISSOLVED GAS ANALYSIS INSTRUMENTS

The Doble Delphi Mini is a dissolved gas analysis (DGA) monitor that helps you track transformer health by providing early warning signs of problems such as overheating, insulation degradation or mechanical movement within the unit. The Delphi Mini provides this valuable information in real time, second by second.

The Delphi Mini is immune to oil surges and vacuums that may affect other sensors; in addition, the Delphi Mini contains self-testing diagnostics to monitor its own performance. Use the Delphi Mini as part of your comprehensive fleet management program or to monitor smaller transformers in a cost-effective manner.

Benefits

- Cost-effective updates on transformer health between regular DGA samples
- Alerts you when there is a sudden change in dissolved gas levels due to a developing fault within the transformer
- Notifications give you time to plan instead of reacting to a failure
- Actionable intelligence helps you determine what steps to take: maintenance, testing, load management or replacement

Key Features

- Patented vacuum resistant membrane prevents failure during oil surges, maintenance or other activities
- Available as a composite gas monitor or hydrogen monitor
- Self-testing provides assurance of reliable results

Technical Specifications

Measured Values (Relative Sensitivity)

Gas	Percentage	Range
Hydrogen	100%	0-5000 ppm
If composite, Hydrogen and these additional gases:		
Carbon Monoxide	10-20%	
Acetylene	10-20%	
Ethylene	2-8%	

Accuracy, Limit of Detection, Response

Accuracy	2 ± 10% reading or ± 20 uL/L (ppm), whichever is greater	
Limit of Detection	H2 = 10 uL/L (ppm) at 99% confidence level	
Response time to 80% step change	≤ 10 minutes	
Response time to 100% step change	≤ 60 minutes	

Operating Environment

Oil Pressure at sensor	Can with stand absolute vacuum to 0.7 Mpa (100 psi)
Outdoor protection	Meets IEC 60529, IP 55
Vibration	Meets IEC 68-2-5
Mechanical	Brushed aluminium enclosure
EMC	Meets IEC 61000-4-2/4/5/8, Grade 4
High & low temperatures	Meets IEC 68-2-1 & 68-2-2
Electronics temperature range	-40 to 60°C (-40 to 140°F)

Sensor Temperature Range

Gas Sensor	-20 to 70°C (-4 to 158°F) at sensor face, -20 to 105°C (-4 to 221°F) with finned attachment
Standards	CE marked RoHS compliant

Inputs and Outputs

Standard Outputs	RS485, 2 channels 4-20 mA, relay contacts
4-20 mA Channel 1	Gas Level (Scaled 0 - 5000 ppm)
4-20 mA Channel 2	Hourly Trend (Scaled 0 - 5000 ppm)
Dry Contacts	2 Rating: 5A/240VAC
Alarm Types	Normal Gas Hi Gas Hi-Hi (also indicated on front panel)
External Alarm Indicators	Green = Normal Orange = High Red = High-High
Optional Host PC Software	Support Networking Windows 2000/XP/7

Additional Details

Weight	6.4 lbs/ 2.9 kgs
Hardware & Firmware	Microprocessor, watchdog and real-time clock with embedded firmware
Popular Valve Mounting Options	DN50 (Metric) 1.5 inch NPT (English)
Data Storage	Built in short term, long term and status
Power Supply	50/60 Hz 110/220 V

Ordering Information

Part Number	Product
DV-CG	Delphi Mini, Composite Gas Sensor
DV-H	Delphi Mini, Hydrogen Sensor
	<i>Adapters available in common valve sizes</i>



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Specifications are subject to change without notice.
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