

Dissolved Gas Analyzer | Dehydrating Breather | Gas Analysis Systems

# DHRUVA OLMFB - 500 Maintenance Free Breather

One size fits all - 50 MVA to 500 MVA



# SYSTEM HIGHLIGHTS



Condition Based Monitoring or more often referred as CMB is no longer a luxury but rather a necessity. In the quest to improve reliability, reduce unplanned outages and avoid catastrophic failures, customers have been turning to CMB and the On line Dehydrating System is one such equipment that is required to protect the asset.

Transformer Manufacturers still prefer to use conventional dehydrating breathers which are filled with irregular silica gel for typical applications as they are an inexpensive hassle free solution. The silica gel saturates and is exhausted after 3 to 12 months depending on the transformer rating. The drying agent which then must be replaced often goes unchanged and un-noticed. The periodic visual inspections and the regular replacement of the drying agent represent a significant cost factor.

DHRUVA OLMFB - 500 Maintenance Free Breather is maintenance-free dehydrating breather is the perfect solution to this problem. The special chromatography grade indicating silica gel with added chromium offers a very high surface area and increased Hygroscopicity. The silica gel chamber is dehydrated by a sensor-controlled heater element that is installed. This minimizes the visual inspections, and the expensive, regular replacement of the drying agent is no longer necessary. With more than 49 years of manufacturing experience of analytical instruments and the number one supplier of Dissolved Gas Analysis system, the DHRUVA OLMFB - 500 Maintenance Free Dehydrating Breather is class apart MADE IN INDIA Product. The DHRUVA OLMFB - 500 Maintenance Free Breather will contribute to the significant reduction of the life cycle costs for all customers using this product in India today and globally at a later date. In addition, a transformer's total operating reliability is increased since there is no risk of moisture penetration if the conventional dehydrating breather is replaced too late.



# TECHNICAL HIGHLIGHTS



- The DHRUVA OLMFB - 500 is a microprocessor based system with auto diagnostics as well as test mode operable from the resistive touch pad
- Safety of the operator and system is ensured – Over Pressure, Over Temperature & Time are a few parameters constantly monitored
- The resistive touch screen provides ease in operation, display of values and system control. It is perhaps the only system available in the market with all features
- Parameters and Modes settable by the user are not limited to - Conditioning Temperature, Conditioning Time, Type of Mode, Wait Interval for Auto Switching, RH value for initiation, Pressure / Flow Monitoring data, RTC etc.
- Pass Word Protection for System Parameters & Mode setting. The Display of parameters does not need any password making the system quite accessible and user friendly yet quite secure
- Degree of protection - IP65 with outer cabinet being UV protected & Non metallic making it ideal for outdoor operation in Direct Sunlight or Salty Environment. The Frame and Surface in Contact with the gas utilizes SS316
- Operating Temperature
  - a. 0 to 55°C environment
  - b. 0 to 80°C Gas Environment
- Power supply - 200 to 300 V AC within line voltage conditioner and filter that opens when transients cross 400 VAC, 400 Watts, 3 Amps
- Specialized Features include Blind Working Mode, Filter Clog Bypass, User settable RH, Pressure and Temperature options for special applications, Rapid heating and cooling with Heat Pipe technology (IP of CIC)
- Data logging using RS485 or 4-20 mA with 2 PFC Relay contacts for alarms

## OPERATION

As the mounting flange side of the ONLINE BREATHER is connected to the oil side reservoir of the transformer, during normal operation, the air flowing to the oil reservoir is guided over the silica gel (Drying agent). Normally moisture from the air is continuously absorbed by the silica gel, the content of the moisture in the guiding chambers is continuously measured by moisture sensor and results are forwarded to the electronic controller. The moisture sensor also measures the temperature of the air at the inlet.

If the moisture content (% Rh) of the air in the guiding chamber is increase beyond the critical specified limit, the self regulating heater element in the silica gel chamber is activated. The temperature sensor with the electronic control regulates the set temperature of the heater element. The water vapour arising from the silica gel is condenses at the bottom and drips out.

The measured temperature of the heater element is displays over the small touch screen. The heater temperature, cycle duration for activating heater is user settable.

If the moisture content (% Rh) of the air in the guiding chamber is increase beyond the normal specified limit, the electronic controller is measuring the pressure inside the chamber. If pressure is also increases beyond the specified limit, than also the electronic controller the heater element in the silica gel chamber is activated.

# OUR PRODUCT RANGE



**DGA 2010 With Manual HSS**



**GE Kelman DGA 900**



**DGA Dhruva With Automatic HSS**



**GE Kelman Transport X2**



**Hydran M2 X**



**Micro DGA 2030**

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