akribis

BROCHURE

Serial-Gateway

Dynamic Ratings

Distributed by AKRIBIS

Load & Temperature Wireless Sensor

ConnectGrid™ Smart Infrastructure Solution

Accurate and Reliable Monitoring

Applications

Temperature and load are two cornerstone parameters for transformers and other large assets. In order to understand the loading on the network, and the impact that the loading is having, it is critical to bring this data back to the office for analysis.

Historical devices such as oil and winding temperature indicators (OTI / WTI) require interface units and SCADA connections to be able to enable access to this basic data and in many instances this is just not cost effective. By utilising our B100 Electronic Temperature Monitor (ETM) on our Distributed Monitoring platform, we are able to bring accurate and reliable temperature and load information back to your systems without any communication wiring or field SCADA interfaces.

With the benefits of local relay outputs for cooling control and protection functions, built in winding temperature calculation and optional temperature input for LTC or ambient temperature monitoring, the B100 not only provides a convenient way to get key measurement data back to your team, but it also is an excellent replacement for traditional mechanical gauge devices.

SERIAL GATEWAY
+ B100 TRANSFORMER MONITOR

Communications

Using the latest IoT focused Low-Power Wide-Area Network (LPWAN) communication technologies enables the sensor to be rapidly installed and minimise communication infrastructure cost. All sensors are available with a selection of cellular or LoRaWAN communications, providing flexible, secure and low cost options to get data back.

Connections and Installation

- The package is provided with the B100 ETM with an integrated wireless interface.
- Dynamic Ratings can provide a variety of temperature probes and CT accessories customised to your transformer or application.
- The B100 ETM requires power connection, and offers a wide-range AC or DC inputs.

The Dynamic Ratings Tool-kit for Condition Monitoring

The Load & Temperature wireless sensor is part of our suite of IoT based sensors for distributed monitoring applications that embodies key design elements to ensure success:

- Driven by data security, privacy and reliability for a long operational life
- Support device management and remote firmware updates for a large fleet
- Enterprise architecture that can be hosted on or off premises
- Seamless integration with back-end systems such as analytics and SCADA (e.g. DNP3)

Real-Time Measurements

- Top Oil Temperature
- Optional LTC or Ambient Temperature
- Load Current (up to 3 CT inputs)

Calculated Parameters

- Winding Temperatures (up to three)
- LTC Differential (with LTC temperature input)
- Insulation ageing rate based on winding temperature

RESPONSIVE
ASSET HEALTH SOLUTIONS

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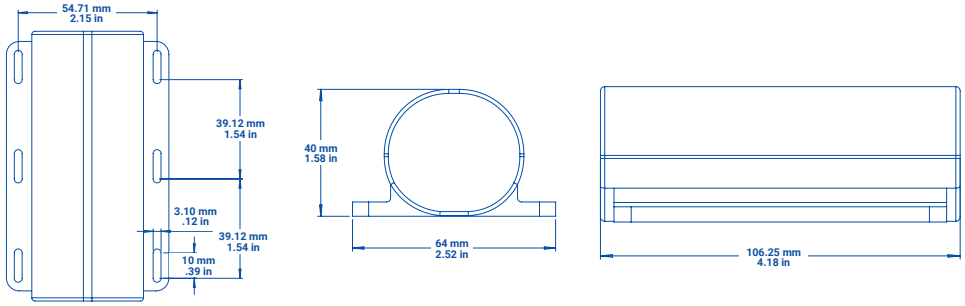
How to Order

Part Number	Description
DMS-011	Wireless Load and Temperature Sensor

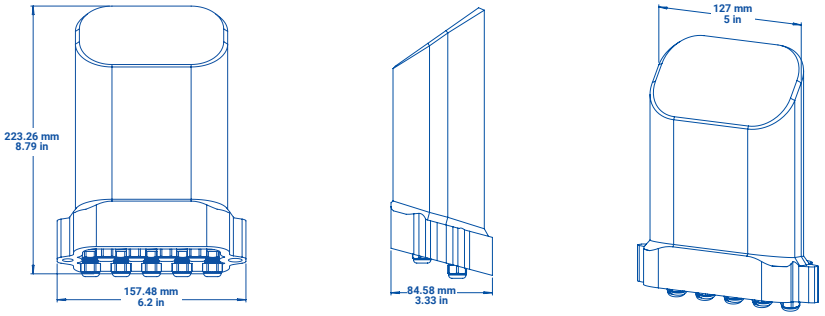
Product Specifications

Operating Temperature Range:	-40°C to 70°C (-40°F to 158°F)
Oil Temperature Range:	-50°C to 200°C (-58°F to 392°F)
CT Input Range:	0-10 mA (normally paired with interposing CT for load current measurement)
Analog Outputs:	2 Outputs (4-20 mA / 0-10 VDC)
Relay Outputs:	7 Outputs (1 x NC System Alarm, 6 x CO for alarms/control)
Dimensions:	Sensor: 287mm x 296mm x 129mm (11.3in x 11.7in x 5.11in) Outdoor-Rated Gateway: 180mm x 120mm x 80mm (7.09in x 4.72in x 3.15in) Indoor-Rated Gateway: 63.5mm x 110mm x 39.5mm (2.5in x 4.33in x 1.56in)
Communications:	Cellular: LTE Cat M1 / Cat NB1 (NB-IoT) LoRaWAN: 1.0.2
Voltage Input (nominal):	48-240 VDC / 110-240 VAC (24 VDC option available on request)
Power Consumption:	30W
Ingress Protection:	B100 ETM comes in multiple options ranging from IP44 (panel mount) to IP66 (outdoor enclosure)

Serial Gateway (Internal)



Serial Gateway (External)



DYNAMIC RATINGS

An ISO 9001, ISO 14001, ISO 27001, ISO 45001 Certified Company.

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