QUALITROL® 118 ITM

Intelligent dry transformer monitor

Accurate, flexible and reliable monitoring for dry type transformers

- Monitor up to three dry-type transformer windings
- Built-in fan control, fan exerciser, alarming and trip functions
- 0-1 or 4-20mA output for integration with SCADA systems
- CE, UL and CSA certified

Product Summary

Application The 118 series Intelligent Transformer Monitor is the right choice for all your Dry Type Transformer monitoring and control needs.

Description The 118 monitors temperature in up to three (3) Dry-Type transformer windings. The 118 operates Fan, Alarm, Trip and two (2) additional relays by comparing the winding with the highest temperature to pre-selected relay set point temperatures. Front panel LED indication available.

Up to two (2) cooling fan banks can be controlled using the heavy duty fused fan control relays.

Both analog and digital communications can be provided for use with SCADA systems.
### Thermocouple Monitor
- The 118 ITM monitors up to three (3) Type “K” thermocouples
- Reliable operation through advanced design
- The 118 ITM displays three (3) thermocouple inputs, the stored maximum temperature and its associated winding

### Fan Exerciser
- Fan exerciser is configurable to customer requirements
- The 118 ITM has a built-in configurable fan exerciser function that can activate fans at periodic intervals providing maximum asset protection (configuration software required)

### 118 ITM Outputs
- Output Fans: One or two SPST contacts Rated 30 Amps @ 120/240 VAC, 1 HP @ 120 VAC, 2 HP @ 240 VAC for each contact
- Output Alarm: One SPDT contact Rated 10 Amps @ 120 VAC or 8 Amps @ 240 VAC (resistive)
- Output Trip: One (1) SPDT contact Rated 10 Amps @ 120 VAC or 8 Amps @ 240 VAC (resistive)
- Remote Output: 0-1 mA into a load of up to 10,000 ohms max
- 4-20 mA into a load of up to 500 ohms max
- Optional MODBUS communication via RS-485

### Certification
- As part of Qualitrol’s drive for quality and reliability on all Intelligent Transformer Monitors, the 118 ITM is rigorously tested to UL standard 873, Canadian Standard C22.2 No. 24-93 and EU Declaration of Conformance CE
### TECHNICAL DETAILS

#### Input Power:
- 80 to 300 VAC 50/60 Hz; <10Watts
- 48 to 280 VDC Universal Power Supply <10Watts

#### Measurement Range:
0°C–250°C

#### Display Resolution:
1°C increments

#### Input Measurement Accuracy:
±3°C

#### Memory Retention:
40 years (with power OFF)

### Contact Ratings
- **Fans:**
  - 120 VAC: 30 A, 1 Hp
  - 240 VAC: 30 A, 2 Hp
- **Alarm & Trip:**
  - 120 VAC: 10 A
  - 240 VAC: 8 A

#### Fan Circuit Rating:
UL rated for 20 Amp

#### Remote Output Current Loop:
- 0 to 1 mA = into 10,000 Ohms max. load
- 0 to 10 mA = into a 1000 Ohms max. load
- 4 to 20 mA = into 500 Ohms max. load
- 0 to 5 V

#### Accuracy:
±3°C

#### Fan Exerciser:
- Fan Run Time – 1 to 120 minutes
- Fan Cycle Time – 0.01 to 30.0 days
- Time starts at power up

#### Optional Modbus Communications:
Via electrically isolated 2- or 4-wire RS-485 link

#### Environment
- **Operating Temperature:** -30°C to +72°C
- **Storage Temperature:** -50°C to +72°C
- **Relative Humidity:** 10 to 90% non-condensing
- **Hi-pot:** 1500 VAC 50/60 Hz for 1 minute; relay contacts and power input to all other terminals and earth ground
- **Vibration:** 50/180 Hz @ .004”displacement
- **Shock:** 10 Gs in 3 orthogonal planes
- **Transient Suppression:** Per ANSI 37.90a-1989 oscillatory waveform test

#### Mechanical
- **Front Panel:** 6.5”[165.1mm] Wide x 9.10”[231.1mm] High
- **Mount:** Panel mount through 5.37” [136.4 mm] wide x 7.97” [202.4 mm] high cutout.
  - Mounting Holes 5.74” [145.8mm] Wide x 8.34”[211.8mm] High
  - Ø.261[6.63mm]
- **Depth:** 2.22”[56.4mm]
- **Weight:** 3lbs[1.4kg]
- **Terminals:** Screw terminal; maximum 12-gauge wire
- **Front Panel:** 8.82”[224.03mm] Wide x 15.1”[381.1mm] High (Hinge Mount)

#### Mechanical
- **Mount:** Hinge mount through 8.82” [224.03mm] Wide x 15.12” [384.05 mm] High cutout
  - Mounting Holes 7.94” [201.63mm] Wide x 14.25”[361.95mm] High
  - Ø.261 [6.63mm] x (4)
- **Depth:** 4.28” [108.71mm]
- **Weight:** 5lbs [2.3kg]
- **Terminals:** Screw terminal; maximum 12-gauge wire

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**Note:** The image contains additional technical details and specifications that are not shown here. For more information, please visit the website or contact info@qualitrolcorp.com.
About QUALITROL®
QUALITROL® manufactures substation and transformer monitoring and protection devices used by electric utilities and manufacturing companies. It is the global leader in sales and installations of transformer asset protection equipment, fault recorders and fault locators. Established in 1945, QUALITROL® produces thousands of different types of products on demand, each customized to customers’ unique requirements.

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