



New Fan Controller and Temperature Monitor

Federal Pacific is announcing the availability of our new monitoring device, manufactured by Qualitrol, for controlling fans and measuring the winding temperature of our Medium Voltage Transformers. We are very pleased to present some of the new features of the new controller, shown in Figure 1.

Among many improved features, one of the most important is that the new **118 ITM** Controller has "universal" input voltage capability. The **118 ITM** will accept a range of Input AC voltages from **80** volts to **300** volts at both 60 and 50 Hz. This capability eliminates the need for a CPT on a 480Y/277 source, whenever the controller is being used only for monitoring winding temperature.

Both controllers have 3 sets of contacts: (1) Turning on the fans; (2) Turning on alarms; and (3) Closing a trip circuit to de-energize the transformer. The new **118 ITM** has two additional form C contacts for unique customer applications.

Modbus® communications protocol is available on both controllers. The new **118 ITM** offers a USB plug for downloading software and installing relay settings. All of the temperature monitors and controllers furnished by Federal Pacific will be mounted on hinges for easy access to the rear of the panel to make desired connections.



Figure 1. New Controller **118 ITM**



Figure 2. Present Controller **ETM 118 Series**

Shown in Figure 3 is a typical installation of the **ETM 118** Series fan controller on the Federal Pacific transformer. More information on the **ETM 118** Series Monitor can be found on catalog page 88. The **118 ITM** will provide all of the same historical data either locally or remotely as the **ETM 118** Series Monitor.

When mounted on the transformer, the monitor can be energized either from an external source or from the transformer secondary. Prior to the availability of the **118 ITM** if the controller were energized from the low voltage secondary of the transformer, usually a CPT would be furnished by Federal Pacific to step the 480Y/277 voltage down to 120 volts.

In Figure 4 is a summary of the technical features offered by the new Qualitrol **118 ITM** Monitor and Fan Controller.

More details and a complete set of instructions for the enhanced **118 ITM** controller are available from your Federal Pacific representative.

Winding Temperature Monitor and Fan Controller



Figure 3

TECHNICAL DETAILS				
Performance	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	Volts	Resistive	Horsepower
	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	0 to 1 mA = into 10,000 Ohms max. load		
	Current Loop: (configuration software required)	0 to 10 mA = into a 1000 Ohms max. load 0 to 20 mA = into 500 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 (Panel Mount Unit)	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"[231.1mm] High (Hinge Mount)		
Mechanical (Hinge Mount)	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		

Figure 4

