

InsuLogix® RFM Overpressure Indicator

RETROFITTABLE FAULT DETECTOR FOR POLE TOP TRANSFORMERS AND VOLTAGE REGULATORS

It is estimated that in the USA alone, tens of millions pole top transformers are not equipped with internal fault visual indicators, thus putting in danger the lives of personnel maintaining the distribution network. The InsuLogix® RFM is the only retrofittable pole top transformer fault detector designed to help the linemen determine if the transformer has an internal fault.

DEVICE CHARACTERISTICS

The primary function of the InsuLogix® RFM is to provide a visible external indication when arcing occurs inside the transformer tank. The device's red indicator serves as confirmation that a fault has occurred within the transformer, and the unit should not be re-energized for safety reasons. The InsuLogix® RFM is sensitive enough to detect a pressure increase due to internal low energy arcing which can result from partial discharge, or high energy arcing resulting from short circuits between phases or between phase and ground.

The InsuLogix® RFM will never activate during transformer testing, transport, or installation; and comes equipped with a pressure relief valve for release of internal tank pressure manually or automatically.

ROUTINE TESTS

The InsuLogix® RFM operates with a bellows mechanism resistant to vibration and temperatures. Each device is individually tested with five consecutive tests at three different pressure rates: 1.5, 5, and 14 psi/sec. Test certificates are available with each release upon request.

SENSITIVITY

The RFMs calibration is immune to pressure increases due to temperature variation. The flag will not trigger as a result of low energy arcs.

APPLICATION

The InsuLogix® RFM can be used on pole and pad mounted transformers as well as voltage regulators.



Patented InsuLogix® RFM Overpressure Indicator

Standard calibration for voltage regulator applications includes the pressure relief valve (PRV) set to 5 psi, with flag activation at 7.5 psi. For all other applications, the standard calibration has the PRV set to 10 psi, with flag activation at 12.5 psi.

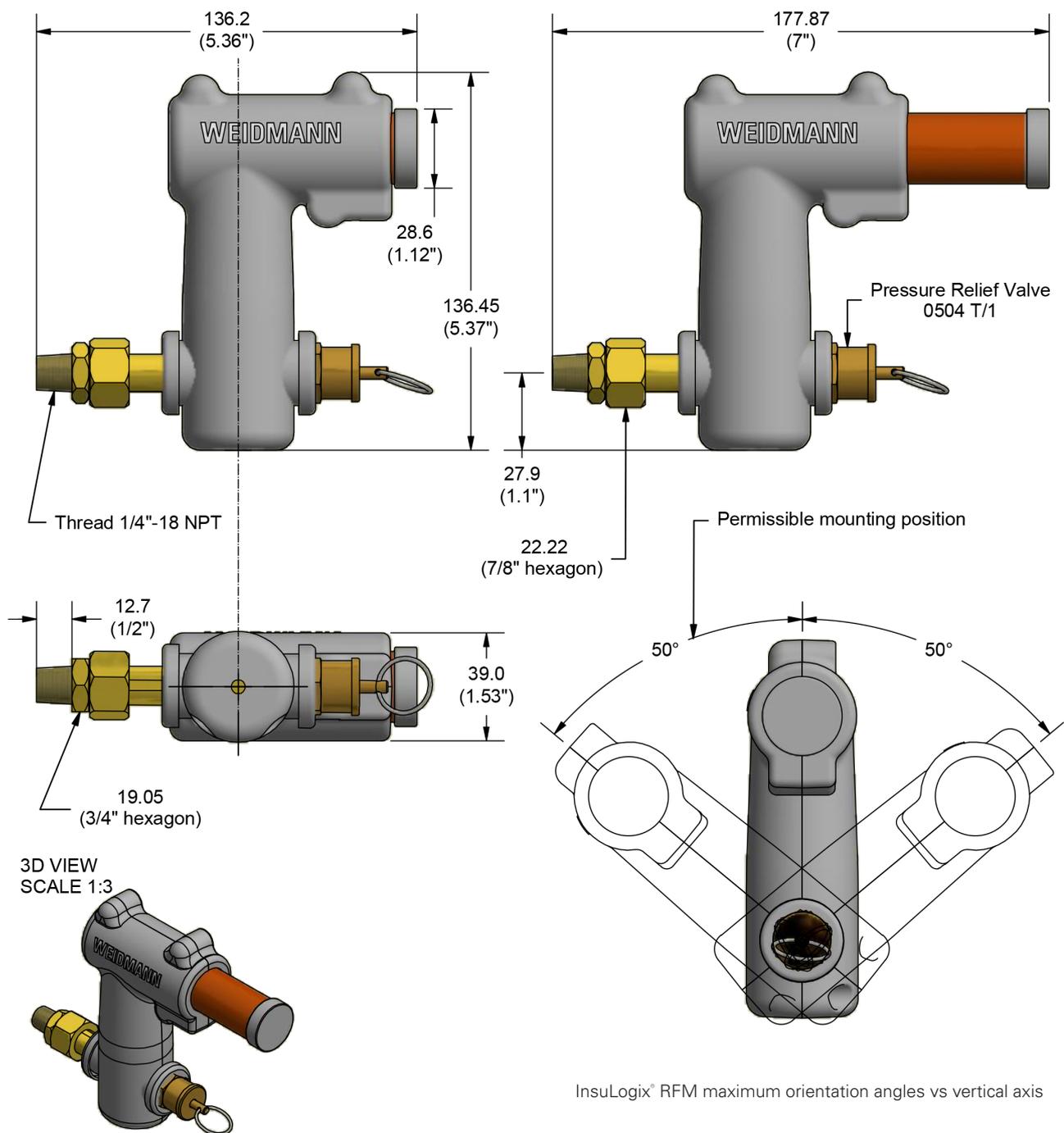
Custom calibrations are available upon request.

INTEGRATION WITH SCADA

For operations that need information on pole top transformer health transmitted in real time into the SCADA, Weidmann has developed a solution consisting of a wireless transmitter connected to the RFM. The RFM status can be transmitted to SCADA via modem or a radio transmitter. Moreover, where necessary, the transmitter can also transfer information such as transformer temperature and load. In the latter case, temperature and current additional sensors are required. Such solutions are recommended for pole top transformers located in highly populated areas and/or feeding critical buildings such as hospitals, schools, and government institutions. Contact Weidmann for more information on the integrated solution.

* Patent # US 10,345,367 B1

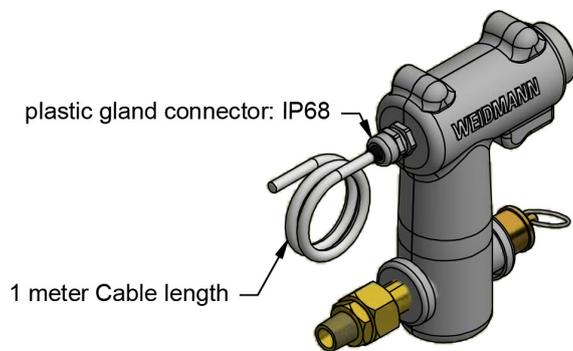
WEIDMANN



InsuLogix® RFM maximum orientation angles vs vertical axis

SPECIFICATIONS

	Voltage Regulator	Pole & Pad Mount
Flag Activation	7.5 ± 1 PSI	12.5 ± 1 PSI
Operating Pressures	Pressure Relief Valve	5.0 +1.0 / 10.0 +1.0
		-0.0 / -0.0
Operating Pressures	Operating Temperature	-40 °C to 60 °C / -40 °C to 60 °C
	Storage Temperature	-40 °C to 60 °C / -40 °C to 60 °C
	Permissible Mounting Position	50 ° / 50 °
Weight	0.395 kg/0.87 lb	
Use	Outdoor – thermoplastic, flame retardant with UV protection	
Control	2 Cond/22 AWG Shielded	
Switch	0.25A @ 175 VDC	
(optional)	0.18A @ 120 VAC	



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