



# varixx

**ZYGGOT THERMOGRAPHY**  
TEMPERATURE+OZONE+HUMIDITY MONITOR

## DESCRIPTION

This ZYGGOT system is developed to address current safety standards that prohibit opening energized electrical panels for temperature measurements with thermography guns or cameras, without the use of appropriate PPE.

The ZYGGOT Temperature + Ozone + Humidity (TOH) is an economical real-time thermography solution for monitoring parameters related to arc flash incidents occurring in Low Voltage, Medium Voltage, and High Voltage electrical power distribution systems, including transformers and motors.

## BENEFITS

- ◆ Real-Time Thermography monitoring prevents opening panels of doors
- ◆ 125 Temperature + Ozone + Humidity sensors totaling 375 sensors integrated in one system
- ◆ Non-Contact measurement
- ◆ Modular Integration with touch-screen panel
- ◆ Simple Integration with Gateway
- ◆ Arc Flash Prevention rather than detection

## TEMPERATURE



THM Temperature sensors are infrared sensors that provide two separate temperature measurements for determining an arc flash incident.

**Point-Temperature** measurement is a 7° propagated angle surface temperature measurement of an object the sensor is pointed to.

**Area-Temperature** measurement is the area surrounding the sensor that provides an area temperature measurement. This temperature measurement is important to detect partial discharge of temperature increase in a area due to failing wire insulation.

## OZONE



The ZYGGOT Ozone ultra-sensitive sensor detects levels in the order of parts per billion, and is used to provide feedback for predictive maintenance.

Ozone is produced mainly by the Corona effect (Corona Discharge) or by UV radiation that are present in electrical sparks in an environment with the presence of Oxygen/Air. Ozone production is due to the occurrence of partial discharges in compromised insulating media which occurs due to poor quality or aging of wire insulation.

## HUMIDITY



The ZYGGOT Humidity sensor measures the relative humidity of the air inside the panel which contributes to reduction of wire insulation. Its variation in relation to time may indicate, for example, that the system is operating without the internal heaters of the panel in operating conditions, or changes in the condition of the air present in the rooms.

[Process Instrumentation and Measurement Services, Inc. \(PIMS\)](#)

For more information contact us:

Phone: +1 (832) 661-5446

Email: [robert.arias@promasurementservices.com](mailto:robert.arias@promasurementservices.com)

Website: [www.promasurementservices.com](http://www.promasurementservices.com)





THM TUBULAR TEMPERATURE SENSOR	
MODEL: ZST/M/7/300/24	
MEASUREMENT ANGLE	7°
ACCURACY	+/- 2.5% F.S.
RESOLUTION	1°C
READING ERROR	+/- .5°C (0 - 125°C)
TARGET READING	0 TO 300°C (0 - 572°F)
AREA READING	0 TO 75°C (0 - 167°F)
MATERIAL OF CONST.	STAINLESS STEEL/ POLYCARBONATE
DIAMETER	19 mm (0.75")
LENGTH	53 mm (2.086")



OZONE SENSOR	
MODEL: ZSO/2000	
MEASUREMENT RANGE	0—2000 PPB
ACCURACY	+/- 1%
RESOLUTION	0.1 PPB
READING ERROR	+/- 1%
SENSITIVITY	≤ 5 PPB
MATERIAL OF CONST.	POLYCARBONATE
DIAMETER	54 mm (2.13")
LENGTH	31.2 mm (1.23")



HUMIDITY SENSOR	
MODEL: ZSB/M/60/120	
MEASUREMENT RANGE	0—100%
ACCURACY	+/- 1%
RESOLUTION	0.1 %
READING ERROR	+/- 1%
SENSITIVITY	≤ 2%
MATERIAL OF CONST.	POLYCARBONATE
DIAMETER	54 mm (2.13")
LENGTH	31.2 mm (1.23")



ZYGGOT V5F TOH CONTROLLER HMI	
MODEL: V5F/TOH	
POWER SUPPLY	+24 VDC
HUMIDITY	5 TO 98%
RESOLUTION	1°C
NO OF SENSORS	UP TO 125 SENSORS
INPUTS	4 ANALOG 4 DIGITAL (12 TO 12 VDC)
OUTPUTS	2 ALARM TRIP (NO) 2 PROGRAMMABLE (NO) 1 OUTPUT TO SENSORS
COMMUNICATIONS	SERIAL MODBUS RTU ETHERNET MODBUS DEVICENET
SCREEN	COLOR, TOUCH SCREEN WVGA



GATEWAY	
MODEL: V5CON	
POWER SUPPLY	+24 VDC
HUMIDITY	5 TO 98%
RESOLUTION	1°C
NO OF SENSORS	UP TO 375 SENSORS
INPUTS	4 ANALOG 4 DIGITAL (12 TO 12 VDC)
OUTPUTS	2 PROGRAMMABLE (NC)
COMMUNICATIONS	(2) RS-485 MODBUS RTU ETHERNET MODBUS