

# TEMPERATURE

## OSA THERMISTOR AND RTD SENSORS KTO\* SERIES



### DESCRIPTION

The Kele KTO\* OSA Thermistor and RTD Sensors are designed to be cost-effective with accuracies of  $\pm 0.5^\circ\text{F}$  ( $\pm 0.28^\circ\text{C}$ ). Each uses metal enclosures and is constructed for easy installation with any building automation system (BAS). The thermistor is made of a very stable, pre-aged material that offers long-life reliability for HVAC control. The platinum RTD comes in 100 $\Omega$  and 1000 $\Omega$  versions. All sensors come with a three-year warranty.

### FEATURES

- Metal enclosures with plastic weather shield
- Three-year warranty
- $\pm 0.5^\circ\text{F}$  ( $\pm 0.28^\circ\text{C}$ ) accuracy

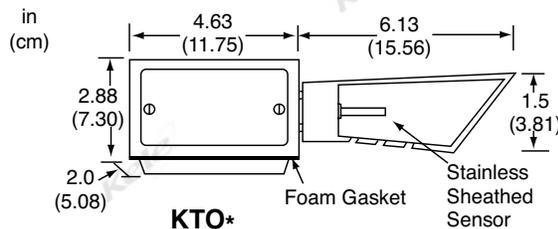


KTO3

### SPECIFICATIONS

<b>Accuracy</b>		<b>RTD</b>	Positive temperature coefficient
<b>Thermistor</b>	$\pm 0.50^\circ\text{F}$ ( $0.28^\circ\text{C}$ )	<b>Temperature Stability</b>	
<b>RTD</b>	$\pm 0.60^\circ\text{F}$ ( $0.33^\circ\text{C}$ )	<b>Thermistor</b>	0.24 $^\circ\text{F}$ (0.13 $^\circ\text{C}$ ) over five years
<b>Sensor Type</b>		<b>RTD</b>	Max 0.04% after 1k hours @ 500 $^\circ\text{C}$
<b>Thermistor</b>	2.252 k $\Omega$ , 3 k $\Omega$ , 10 k $\Omega$ Type II, III & III w/11K shunt, 20 k $\Omega$ , 100 k $\Omega$	<b>Heat Dissipation</b>	2.7 mW/ $^\circ\text{C}$ (power needed to raise the temperature 1 $^\circ\text{C}$ )
<b>RTD</b>		<b>Enclosure Rating</b>	NEMA 1, Metal, weather resistant
<b>Type 71, 81</b>	100 $\Omega$ Pt 385 Curve	<b>Mounting</b>	3/4" conduit fittings
<b>Type 85</b>	1000 $\Omega$ Pt 385 Curve	<b>Wiring Terminations</b>	8', 24 AWG gray wire leads, type 71 & 81 sensors have 18" leads
<b>Type 91</b>	1000 $\Omega$ Pt 375 Curve	<b>Weight</b>	0.75 lb (0.3 Kg) with no options
<b>Temperature Range</b>		<b>Approvals</b>	CE
<b>Thermistor/RTD</b>	-40 $^\circ$ to 221 $^\circ\text{F}$ (-40 $^\circ$ to 105 $^\circ\text{C}$ )	<b>Warranty</b>	3 years
<b>Temperature Coefficient</b>			
<b>Thermistor</b>	Negative temperature coefficient		

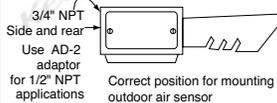
### DIMENSIONS



### MOUNTING

#### Mounting KTO\*

Toggle bolts or other direct wall-mount screws can be used for outside mounting. For conduit connections, 3/4" NPT threads are available in the back and side.



For best results, do not mount above doors, windows, air intakes, or exhausts.

### ORDERING INFORMATION

MODEL	DESCRIPTION
KTO3	OSA temperature sensor, 10,000 $\Omega$ thermistor Type III, (gray leads)
KTO11K	OSA temperature sensor, 10,000 $\Omega$ thermistor Type III with 11K shunt, (gray leads)
KTO21	OSA temperature sensor, 2252 $\Omega$ thermistor Type II, (gray leads)
KTO22	OSA temperature sensor, 3,000 $\Omega$ thermistor Type II, (gray leads)
KTO24	OSA temperature sensor, 10,000 $\Omega$ thermistor Type II, (gray leads)
KTO27	OSA temperature sensor, 100,000 $\Omega$ thermistor Type II, (gray leads)
KTO42	OSA temperature sensor, 20,000 $\Omega$ thermistor Type IV, (gray leads)
KTO71	100 ultra high accurat RTD @ 32 $^\circ\text{F}$ (0 $^\circ\text{C}$ ), 385 platinum curve (gray leads)
KTO81	OSA temperature sensor, 100 $\Omega$ RTD 385 platinum curve (gray leads)
KTO85	OSA temperature sensor, 1,000 $\Omega$ RTD 385 platinum curve (gray leads)
KTO91	OSA temperature sensor, 1,000 $\Omega$ RTD 385 platinum curve (gray leads)
OPTIONS	
X25	25' (7.6m) lead length 24 AWG
XC25	25' (7.6m) lead length jacketed cable
XCP25	25' Non-shielded plenum cable
XD	Dual sensors in one probe
XG	Greenfield fitting (not installed)
XLT	Liquid-tight fitting (factory installed)
XMT	Mounting tabs
XN	Certificate of conformance
XN1	NIST certificate, one reference point 32 $^\circ\text{F}$ (0 $^\circ\text{C}$ )
XN2	NIST certificate, two reference points 32 $^\circ\text{F}$ /158 $^\circ\text{F}$ (0 $^\circ\text{C}$ /70 $^\circ\text{C}$ )
XN3	NIST certificate, three reference points 32 $^\circ\text{F}$ /77 $^\circ\text{F}$ /158 $^\circ\text{F}$ (0 $^\circ\text{C}$ /25 $^\circ\text{C}$ /70 $^\circ\text{C}$ )
XP	Matched sensor pair, matched to $\pm 0.1^\circ\text{F}$ , 0.05 $^\circ\text{C}$ (must order two sensors)
XPA	Ultra high accuracy, thermistors only, $\pm 0.135^\circ\text{F}$ (0.075 $^\circ\text{C}$ )
XTB	Terminal block
XZ	Three wire RTD connections (optional only on Type 81, standard on Type 71, not available with XC25 & XCP25 options)

### RELATED PRODUCTS

<b>T81U-XR</b>	100 ohm, Type 81 4-20 mA temperature transmitter, custom rangeable
<b>T85U-XR</b>	1000 ohm, Type 85 4-20 mA temperature transmitter, custom rangeable
<b>T91U-XR</b>	1000 ohm, Type 91 4-20 mA temperature transmitter, custom rangeable
<b>AD-2</b>	Knock-out adapter -3/4in TO 1/2in