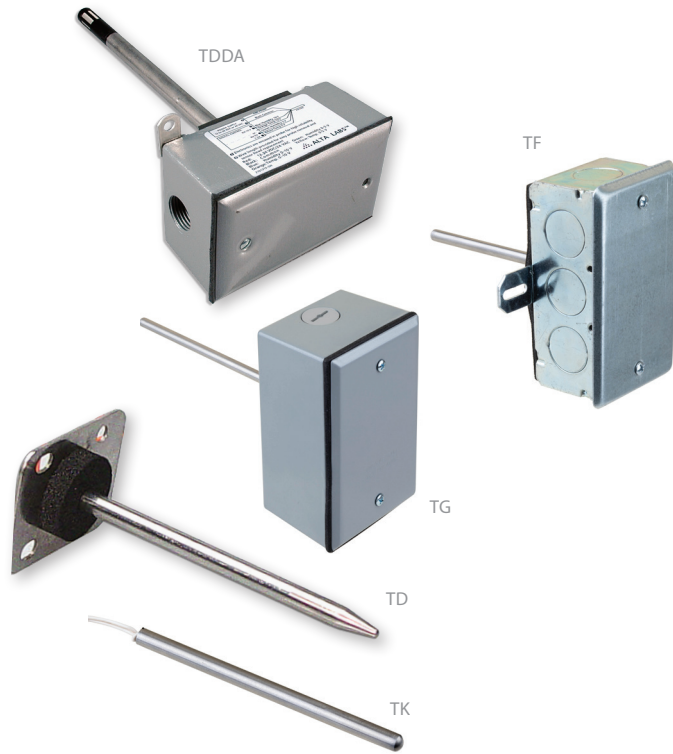


T SERIES

Sensor Housed in Probe, Protects Against Corrosion



Duct mount temperature sensors from Veris are pre-calibrated and housed in sturdy stainless steel probes. The devices are easy to install, durable, and highly accurate.

SPECIFICATIONS

| | |
|-------------------|--|
| Wiring | 22 AWG; 2-wire: RTD/Thermistor, 4 to 20 mA |
| Mounting Location | Not suitable for wet locations. For indoor use only. |

TEMPERATURE TRANSMITTER OPTION

| | |
|----------------------|--|
| Input Power | 4 to 20 mA models: Loop powered Class 2, 12 to 30 Vdc only, 30 mA max; 0-5/0-10 V models: Class 2, 12 to 30 Vdc/24 Vac, 50/60 Hz, 15 mA max |
| Temp. Output | 2-wire, loop powered 4 to 20 mA 3-wire, 0-5V/0-10Vdc |
| Sensor Type | Solid-state, integrated circuit |
| Transmitter Accuracy | ±0.5 °C (±0.9 °F) typical* |
| Ranges | Selectable 0 to 50 °C (32 to 122 °F) or -40 to 50 °C (-40 to 122 °F) |

RESISTIVE OPTION

| | |
|----------------|-------------------------------|
| Operating Temp | -25 to 105 °C (-13 to 221 °F) |
|----------------|-------------------------------|

WARRANTY

| | |
|------------------|---------|
| Limited Warranty | 5 years |
|------------------|---------|

AGENCY APPROVALS



*Room temperature offset documented on each unit.

Cost effective

Cost-effective, high accuracy thermistors or RTDs available with or without a junction box

Durable

Corrosion resistant stainless steel probe design

No calibration

No calibration required

APPLICATIONS

- Duct systems
- Industrial

ORDERING INFORMATION

RTD/Thermistor Models

| Enclosure | Immersion Probe Length "L" | Sensor Type | Output | Calibration Certificate |
|---------------------------------------|----------------------------|--------------------------------------|--------------------|------------------------------|
| T | | | R0 | |
| D = Duct | B = 4" (102mm)* | B = 100R platinum, RTD | = Resistive Output | 0 = None |
| K = Probe only (no mounting hardware) | C = 6" (152mm) | C = 1k platinum, RTD | | 2 = 3-point NIST calibration |
| F = Duct with mounting box | D = 8" (203mm) | D = 10k T2, Thermistor | | |
| G = Duct with water resistant housing | E = 12" (305mm)** | E = 2.2k, Thermistor | | |
| | F = 18" (457mm)** | F = 3k, Thermistor | | |
| | G = 24" (610mm)** | H = 10k T3, Thermistor | | |
| | K = 36" (914mm)** | I = 1k Balco (Nickel-iron) RTD | | |
| | | J = 10k Dale, Thermistor | | |
| | | K = 10k w/11k shunt, Thermistor | | |
| | | M = 20k NTC, Thermistor | | |
| | | N = 1800 ohm, Thermistor | | |
| | | T = 100k, Thermistor | | |
| | | W = 10k T2 high accuracy, Thermistor | | |
| | | Y = 10k T3 high accuracy, Thermistor | | |

* TK model is 4 1/2" (115 mm)
** Not available with TK model

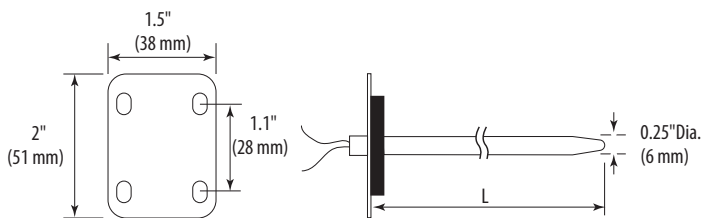
Example: T D B D R0 2

Transmitter Models

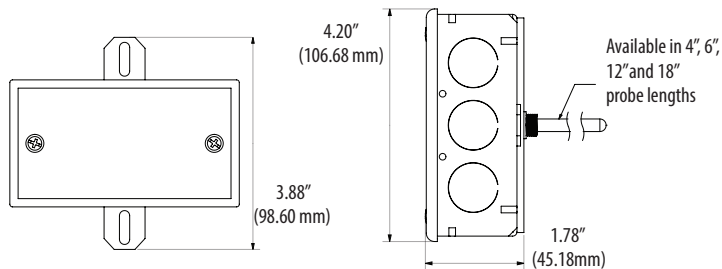
| Output | Range | Cal Certificate | Example: |
|-----------------------------|---|--|------------|
| TDDA | | | TDDA V 2 0 |
| M = 4 to 20mA V = 5/10 V | 1 = -40 to 50 °C (-40 to 122 °F) 2 = 0 to 50 °C (32 to 122 °F) | 0 = None 2 = 3-point NIST certification | |



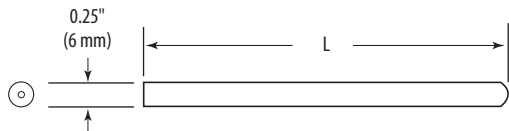
TD
Dimensional Drawing



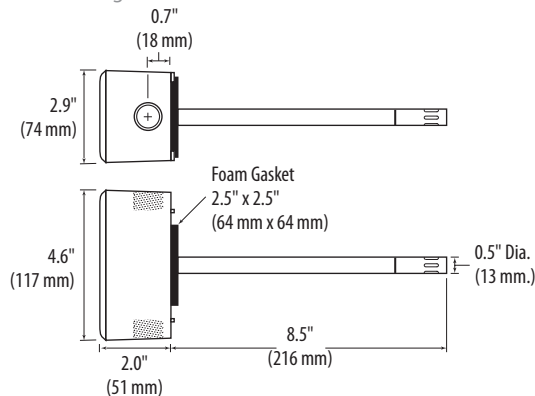
TF
Dimensional Drawing



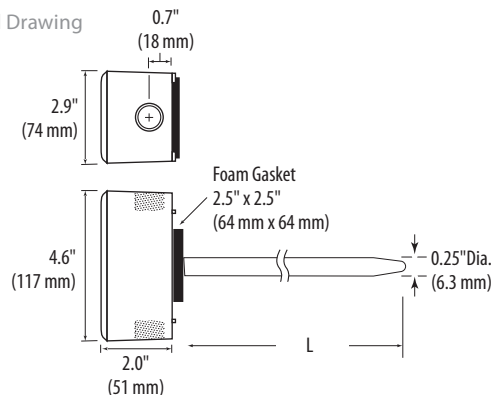
TK
Dimensional Drawing



TDDA
Dimensional Drawing



TG
Dimensional Drawing



STANDARD RTD AND THERMISTOR VALUES

| Class | Pt RTD | | Balco RTD | THERMISTOR | | | | | | | | High Accuracy | |
|-----------------|-------------------------|-------------------------|-----------|------------------|------------------|---------------------|------------------|--------------------|--------------------|--------------------|---------------------------------|------------------|--|
| | 100 Ohm | 1000 Ohm | 1000 Ohm | 2.2k | 3k | 10k Type 2 | 10k Type 3 | 10k Dale | 20k | 100k | 10k Type 2 | 10k Type 3 | |
| Accuracy | ±0.3°C 0.00385 curve | ±0.3°C 0.00385 curve | ±1% @70°C | ±0.2°C 0/70°C | ±0.2°C 0/70°C | ±1.0°C -50/150°C | ±0.2°C 0/70°C | ±0.2°C -20/70°C | Consult Factory | Consult Factory | ±0.1°C 20/70°C ±0.2°C 0/20°C | ±0.1°C 0/70°C | |
| Temp. Response* | PTC | PTC | PTC | NTC | NTC | NTC | NTC | NTC | NTC | NTC | NTC | NTC | |

*PTC: Positive Temperature Coefficient
*NTC: Negative Temperature Coefficient

STANDARD RTD AND THERMISTOR VALUES (Ohms Ω)

| °C | °F | 100 Ohm | 1000 Ohm | 1000 Ohm | 2.2k | 3k | 10k Type 2 | 10k Type 3 | 10k Dale | 20k NTC | 100k | 10k Type 2 | 10k Type 3 |
|--------------|-----|---------|----------|----------|---------|---------|------------|------------|----------|-----------|-----------|------------|------------|
| -50 | -58 | 80.306 | 803.06 | 740.46 | 154,464 | 205,800 | 692,700 | 454,910 | 672,300 | 1,267,600 | - | 692,700 | 454,910 |
| -40 | -40 | 84.271 | 842.71 | 773.99 | 77,081 | 102,690 | 344,700 | 245,089 | 337,200 | 643,800 | 3,366,000 | 344,700 | 245,089 |
| -30 | -22 | 88.222 | 882.22 | 806.02 | 40,330 | 53,730 | 180,100 | 137,307 | 177,200 | 342,000 | 1,770,000 | 180,100 | 137,307 |
| -20 | -4 | 92.160 | 921.60 | 841.00 | 22,032 | 29,346 | 98,320 | 79,729 | 97,130 | 189,080 | 971,200 | 98,320 | 79,729 |
| -10 | 14 | 96.086 | 960.86 | 877.46 | 12,519 | 16,674 | 55,790 | 47,843 | 55,340 | 108,380 | 553,400 | 55,790 | 47,843 |
| 0 | 32 | 100.000 | 1,000.00 | 913.66 | 7,373 | 9,822 | 32,770 | 29,588 | 32,660 | 64,160 | 326,600 | 32,770 | 29,588 |
| 10 | 50 | 103.903 | 1,039.03 | 952.25 | 4,487 | 5,976 | 19,930 | 18,813 | 19,900 | 39,440 | 199,000 | 19,930 | 18,813 |
| 20 | 68 | 107.794 | 1,077.94 | 991.82 | 2,814 | 3,750 | 12,500 | 12,272 | 12,490 | 24,920 | 124,900 | 12,500 | 12,272 |
| 25 | 77 | 109.735 | 1,097.35 | 1,013.50 | 2,252 | 3,000 | 10,000 | 10,000 | 10,000 | 20,000 | 100,000 | 10,000 | 10,000 |
| 30 | 86 | 111.673 | 1,116.73 | 1,035.18 | 1,814 | 2,417 | 8,055 | 8,195 | 8,056 | 16,144 | 80,580 | 8,055 | 8,195 |
| 40 | 104 | 115.541 | 1,155.41 | 1,077.68 | 1,199 | 1,598 | 5,323 | 5,593 | 5,326 | 10,696 | 53,260 | 5,323 | 5,593 |
| 50 | 122 | 119.397 | 1,193.97 | 1,120.52 | 811.5 | 1,081 | 3,599 | 3,894 | 3,602 | 7,234 | 36,020 | 3,599 | 3,894 |
| 60 | 140 | 123.242 | 1,232.42 | 1,166.13 | 561.0 | 747 | 2,486 | 2,763 | 2,489 | 4,992 | 24,880 | 2,486 | 2,763 |
| 70 | 158 | 127.075 | 1,270.75 | 1,210.75 | 395.5 | 527 | 1,753 | 1,994 | 1,753 | 3,512 | 17,510 | 1,753 | 1,994 |
| 80 | 176 | 130.897 | 1,308.97 | 1,254.55 | 284.0 | 378 | 1,258 | 1,462 | 1,258 | 2,516 | 12,560 | 1,258 | 1,462 |
| 90 | 194 | 134.707 | 1,347.07 | 1,301.17 | 207.4 | - | 919 | 1,088 | 917 | 1,833 | 9,164 | 919 | 1,088 |
| 100 | 212 | 138.506 | 1,385.06 | 1,348.38 | 153.8 | - | 682 | 821 | 679 | 1,356 | 6,792 | 682 | 821 |
| 110 | 230 | 142.293 | 1,422.93 | 1,397.13 | 115.8 | - | 513 | 628 | 511 | 1,016 | 5,108 | 513 | 628 |
| 120 | 248 | 146.068 | 1,460.68 | 1,447.44 | 88.3 | - | 392 | 486 | 389 | 770 | 3,894 | 392 | 486 |
| 130 | 266 | 149.832 | 1,498.32 | 1,496.28 | 68.3 | - | 303 | 380 | 301 | 591 | 3,006 | 303 | 380 |
| Sensor Codes | | B | C | I | E | F | D | H | J | M | T | W | Y |

