

## DUCT EURO

Duct temperature sensor in NEMA 4X / IP66 Euro plastic enclosure



### FEATURES

- Durable injection-molded NEMA 4X / IP66 watertight enclosure
- Hinged removable snap cover
- Available in 4" / 6" / 8" / 12" / 18" probe lengths
- AISI 316 stainless steel temperature probe
- 1/2" NPT adapter and cable gland strain relief included
- Quick Connect wire terminals
- NTC thermistors and RTD elements available
- Compatible with most control systems
- CE & RoHS compliant
- 5 year limited warranty

### GENERAL INFORMATION

The Tasseron Euro Series Duct / Immersion Temperature Sensor provides a high quality solution for both commercial and industrial applications. The Euro housing offers weatherproof NEMA 4X/IP 66 ratings and is produced with injection-molded PC/ABS material and stainless steel AISI 316 probe.

The available measuring elements interface with most major control manufacturers. Accurate thermistors and RTDs ensure low drift and are double encapsulated to guarantee the highest reliability in the field. The installed, high quality, closed cell foam ensures sealing of the probe insert and absorption of vibration. The Hinged Snap Cover and Quick Connect wire terminals make installation easy and reduces installation costs.

The Euro Series is also available with multiple temperature transmitter ranges with 4-20mA analog output.

### SPECIFICATIONS

|                 |  |
|-----------------|--|
| Enclosure:      | NEMA 4X/IP66, injection-molded PC/ABS UL 94 V-0  |
| Cover:          | Tool-free quick snap with locking hinge, removable                                     |
| Mounting:       | Direct or available adjustable mounting system   |
| Probe Length:   | 4" / 6" / 8" / 12" / 18"   |
| Probe Material: | AISI 316 stainless steel; 6mm ( $\pm 1/4$ ")   |
| Connection:     | 2 pole AWG 22-16 / 0.35—1.5mm <sup>2</sup> spring-loaded, Quick Connect wire terminals |

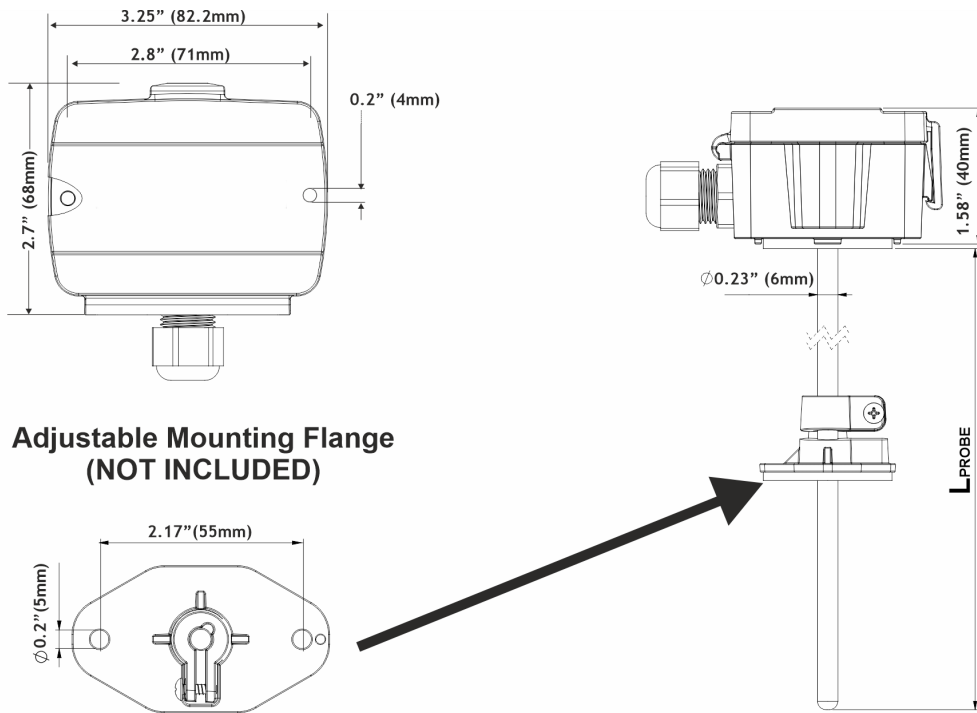
## SPECIFICATIONS CONT.

|                 |   |
|-----------------|---|
| Sensor Element: | Interchangeable NTC thermistor, 2-wire<br>RTD Pt1000, 2 wire<br>RTD Ni1000-891, 2 wire<br>RTD Ni1000-TC5, 2 wire  |
| Sensor Value:   | NTC 10K Ohm type 2 @ 25°C / 77°F<br>NTC 10K Ohm type 3 @ 25°C / 77°F<br>NTC 20K Ohm @ 25°C / 77°F<br>NTC 10K Ohm type 4 @ 25°C / 77°F<br>NTC 3K Ohm @ 25°C / 77°F<br>RTD Pt1000 1000 Ohm @ 0°C / 32°F<br>RTD Pt100 100 Ohm @ 0°C / 32°F<br>RTD Ni1000-891 891 Ohm @ 0°C / 32°F<br>RTD Ni1000-TC5 1000 Ohm @ 0°C / 32°F<br>(Other elements on request) |
| Accuracy:       | NTC thermistor 0...70°C ± 0.2°C / 32...158°F ± 0.36°F<br>Pt100 / Pt1000 Class B IEC751, ± 0.3°C / ± 0.5°F @ 0°C / 32°F<br>Ni1000 DIN 43760, ± 0.5°C / ± 0.9°F @ 0°C / 32°F  |
| Range:          | -40...105°C / -40...221°F   |

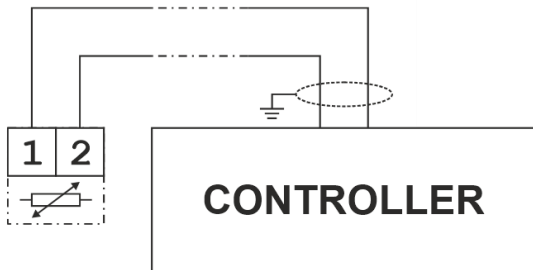
## TEMPERATURE TRANSMITTERS ONLY:

|                      |   |
|----------------------|---|
| Transmitter Element: | Pt1000 Class-A  |
| Loop Supply Voltage: | 10- 35 VDC, 500 Ohm load 10 - 36 VDC  |
| Output Current:      | 4 - 20 mA   |
| Accuracy:            | 0.2% FSR  |
| Connection:          | 2-pole AWG 30-16 / 0.2 - 1.5mm <sup>2</sup> spring-loaded,<br>3.81mm Quick Connect wire terminals   |
| Connector:           | 1—V+<br>2—T   |
| Temp. TR Ranges:     | Range 1 "X" : -40...+70°C / -40...158°F<br>Range 2 "W" : 0...+50°C / +32...122°F<br>Range 3 "T" : 0...100°C / +32...+212°F (Default)<br>Range 4 "U" : +20.7...+48.9°C / +20...+120°F<br>Range 5 "V" : -17.8...37.8°C / 0...+100°F |
| Approval:            | CE & RoHS compliant   |
| Warranty:            | 5 year limited warranty   |
| Accessories:         | M16 to 1/2" NPT Conduit Adapter<br><br>M16 Cable Gland<br><br><i>Adjustable Depth Mounting Flange (not included)</i>  |

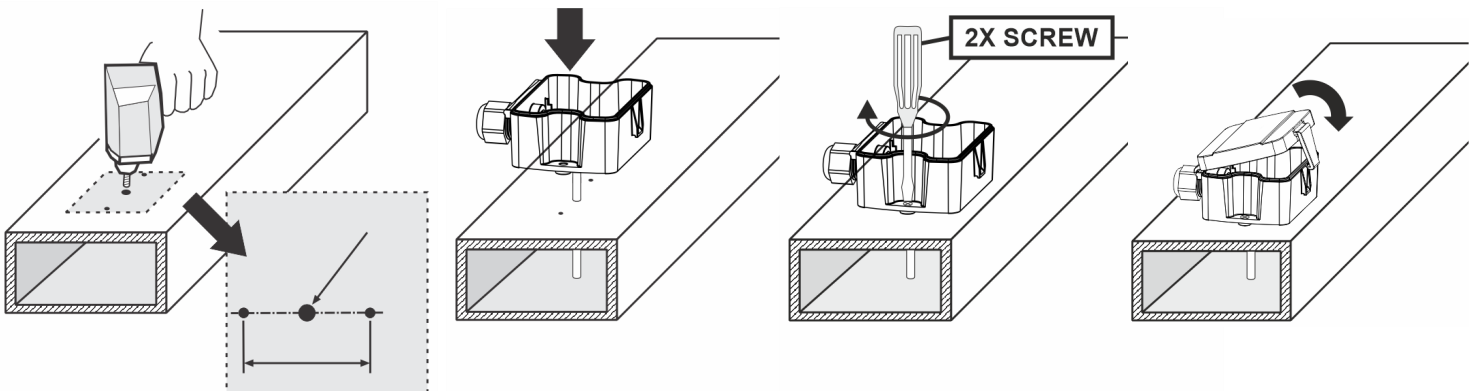
## DIMENSIONS



## WIRING



## INSTALLATION



## ORDERING INFORMATION

# HOW TO BUILD A TASSERON DUCT EURO PART NUMBER

Sample Part Number (THTDEA06) — Duct Euro temperature sensor with 10k-2 element with 6" probe.

| T        | H    | T    | D    | E                                    | A                    | 06           |
|----------|------|------|------|--------------------------------------|----------------------|--------------|
| Tasseron | HVAC | Temp | Duct | Enclosure                            | Element              | Details      |
|          |      |      |      | E—Euro                               | A—10K -2             | 04—4 Inches  |
|          |      |      |      |                                      | B—10K -3             | 06—6 Inches  |
|          |      |      |      |                                      | C—20K                | 08—8 Inches  |
|          |      |      |      |                                      | D—3K                 | 12—12 Inches |
|          |      |      |      |                                      | E—Pt1000             | 18—18 Inches |
|          |      |      |      |                                      | F—Ni1000-891         |              |
|          |      |      |      |                                      | G—10K-4              |              |
|          |      |      |      |                                      | H— Pt100             |              |
|          |      |      |      |                                      | I—4.7K               |              |
|          |      |      |      |                                      | J—10K-3 (11K)        |              |
|          |      |      |      | *Other elements available on request | K— Ni1000-TC5        |              |
|          |      |      |      |                                      | <b>Transmitters:</b> |              |
|          |      |      |      |                                      | W—Range 1            |              |
|          |      |      |      |                                      | -40...+70°C          |              |
|          |      |      |      |                                      | X—Range 2            |              |
|          |      |      |      |                                      | 0...+50°C            |              |
|          |      |      |      |                                      | T—Range 3            |              |
|          |      |      |      |                                      | 0...+100°C           |              |
|          |      |      |      |                                      | (32°F...212°F)       |              |
|          |      |      |      |                                      | U—Range 4            |              |
|          |      |      |      |                                      | 20°F...120°F         |              |
|          |      |      |      |                                      | V—Range 5            |              |
|          |      |      |      |                                      | 0°F...100°F          |              |

\*Additional mounting flange

# HVAC temperature measuring elements

## R/T TABLES

| Temp |     | NTC thermistors |                |                |            |           | RTD elements |            |         |            |
|------|-----|-----------------|----------------|----------------|------------|-----------|--------------|------------|---------|------------|
|      |     | curve A         | curve B        | curve G        | curve C    | curve D   | curve E      | curve F    | curve H | curve K    |
|      |     | NTC 10K type 2  | NTC 10K type 3 | NTC 10K type 4 | NTC 20KOhm | NTC 3KOhm | Pt1000/B     | Ni1000-891 | Pt100/B | Ni1000-TC5 |
| °C   | °F  | R (kOhm)        | R (kOhm)       | R (kOhm)       | R (kOhm)   | R (kOhm)  | R (Ohm)      | R (Ohm)    | R (Ohm) | R (Ohm)    |
| -40  | -40 | 341.4           | 242.1          | 191.9          | 784.6      | 97.40     | 843          | 697        | 84.3    | 831        |
| -35  | -31 | 246.2           | 181.0          | 146.6          | 558.8      | 71.53     | 862          | 719        | 86.2    | 851        |
| -30  | -22 | 179.5           | 136.6          | 112.9          | 402.7      | 52.80     | 882          | 743        | 88.2    | 872        |
| -25  | -13 | 132.2           | 103.9          | 87.59          | 293.6      | 39.16     | 902          | 766        | 90.2    | 893        |
| -20  | -4  | 98.34           | 79.64          | 68.47          | 216.3      | 29.24     | 922          | 790        | 92.2    | 914        |
| -15  | 5   | 73.73           | 61.54          | 53.91          | 160.7      | 22.04     | 941          | 815        | 94.1    | 935        |
| -10  | 14  | 55.78           | 47.91          | 42.74          | 120.5      | 16.74     | 961          | 839        | 96.1    | 956        |
| -5   | 23  | 42.59           | 37.57          | 34.11          | 91.07      | 12.79     | 980          | 864        | 98.0    | 978        |
| 0    | 32  | 32.82           | 29.66          | 27.40          | 69.40      | 9.856     | 1000         | 891        | 100.0   | 1000       |
| 5    | 41  | 25.52           | 23.57          | 22.14          | 53.33      | 7.663     | 1020         | 916        | 102.0   | 1022       |
| 10   | 50  | 19.97           | 18.85          | 17.99          | 41.28      | 5.999     | 1039         | 942        | 103.9   | 1045       |
| 15   | 59  | 15.75           | 15.17          | 14.72          | 32.18      | 4.729     | 1058         | 968        | 105.8   | 1068       |
| 20   | 68  | 12.51           | 12.28          | 12.09          | 25.28      | 3.754     | 1078         | 994        | 107.8   | 1091       |
| 25   | 77  | 10.00           | 10.00          | 10.00          | 20.00      | 3.000     | 1097         | 1021       | 109.7   | 1114       |
| 30   | 86  | 8.048           | 8.184          | 8.308          | 15.92      | 2.416     | 1117         | 1048       | 111.7   | 1138       |
| 35   | 95  | 6.516           | 6.735          | 6.936          | 12.75      | 1.957     | 1136         | 1075       | 113.6   | 1162       |
| 40   | 104 | 5.306           | 5.577          | 5.819          | 10.27      | 1.595     | 1155         | 1102       | 115.5   | 1186       |
| 45   | 113 | 4.345           | 4.641          | 4.904          | 8.320      | 1.307     | 1175         | 1130       | 117.5   | 1210       |
| 50   | 122 | 3.578           | 3.877          | 4.151          | 6.779      | 1.076     | 1194         | 1158       | 119.4   | 1235       |
| 55   | 131 | 2.962           | 3.261          | 3.529          | 5.556      | 0.888     | 1213         | 1187       | 121.3   | 1260       |
| 60   | 140 | 2.464           | 2.756          | 3.012          | 4.577      | 0.737     | 1232         | 1216       | 123.2   | 1285       |
| 65   | 149 | 2.060           | 2.340          | 2.582          | 3.788      | 0.616     | 1252         | 1245       | 125.2   | 1311       |
| 70   | 158 | 1.730           | 1.996          | 2.221          | 3.150      | 0.518     | 1271         | 1274       | 127.1   | 1337       |
| 75   | 167 | 1.460           | 1.707          | 1.918          | 2.630      | 0.441     | 1290         | 1304       | 129.0   | 1364       |
| 80   | 176 | 1.236           | 1.466          | 1.663          | 2.206      | 0.377     | 1309         | 1334       | 130.9   | 1390       |
| 85   | 185 | 1.051           | 1.264          | 1.446          | 1.857      | 0.324     | 1328         | 1365       | 132.8   | 1417       |
| 90   | 194 | 0.896           | 1.095          | 1.262          | 1.570      | 0.278     | 1347         | 1396       | 134.7   | 1444       |
| 95   | 203 | 0.767           | 0.952          | 1.105          | 1.333      | 0.239     | 1366         | 1427       | 136.6   | 1472       |
| 100  | 212 | 0.659           | 0.831          | 0.970          | 1.136      | 0.206     | 1385         | 1459       | 138.5   | 1500       |
| 105  | 221 | 0.569           | 0.728          | 0.855          | 0.972      | 0.179     | 1404         | 1491       | 140.4   | 1528       |
| 110  | 230 | 0.493           | 0.640          | 0.755          | 0.834      | 0.156     | 1423         | 1524       | 142.3   | 1557       |
| 115  | 239 | 0.428           | 0.564          | 0.669          | 0.719      | 0.136     | 1442         | 1556       | 144.2   | 1586       |
| 120  | 248 | 0.374           | 0.499          | 0.594          | 0.621      | 0.119     | 1461         | 1590       | 146.1   | 1615       |
| 125  | 257 | 0.327           | 0.443          | 0.529          | 0.539      | 0.105     | 1479         | 1623       | 147.9   | 1645       |

\* Other elements on request

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