

Duct Sensors

Features

- IP65 Housing
- Wide range of element types



Specification

<u> </u>	A		
Output types:			
	Thermistor	Resistive	
	Active	4-20mA or 0-10Vdc (selectable)	
Accuracy:			
	Thermistor	±0.2°C (0°C to 70°C)	
	PT100a	±0.35°C (0°C to 100°C)	
	PT1000a	±0.35°C (0°C to 100°C)	
	NI1000	±0.35°C (0°C to 100°C)	
Probe:			
	Material	Brass	
	Dimensions	150mm x 6mm dia.	
Housing:			
	Material	ABS (flame retardant type VO)	
	Dimensions	55mm x 90mm dia.	
	Mounting holes	4mm spaced 85mm apart	
Protection		IP65	
Ambient range		-10°C to +80°C	
Country of origin		UK	

Product Codes

TT-522-A	(10K3A1) Trend, Seachange, Honeywell	
TT EOO D	Aquatroi	
П-922-В	(TUR4AT) ANDOVEL, DEITA CONTIONS, YOR	
TT 522 C	<40 C, Siebe	
TT 522-C	(ZUNDAT) HUTTEYWEII (DT100a) Sarak	
TT 522-D	(PT100a) Seick	
TT 522-E	(NI1000a) Soutor	
TT 522-F	(NITOUOA) Sauter	
11-522-6	(NTTOODA/TCR(LANT)) Stemens, Landis &	
TT-522-H	(SAT1) Satchwoll	
TT-522-K	(STA1) Landis & Staefa	
TT-522-L	(TAC1) TAC	
TT-522-M	(2.2K3A1) Johnson Controls	
TT-522-N	(3K3A1) Alerton	
TT-522-P	(30K6A1) Drayton	
TT-522-Q	(50K6A1) Ambiflex	
TT-522-R	(100K6A1) York >40°C	
TT-522-S	(SAT2) Satchwell	
TT-522-T	(SAT3) Satchwell	
TT-522-W	(SIE1) Siebe	
TT-522-Y	(STA2) Landis & Staefa	
TT-522-Z	(10K NTC) Carel	
Active output:		
TT-522-CVO		
4-20m/	A/0-10Vdc selectable output	
TT-522-CVO-	C	
4-20m/	A/0-10Vdc selectable output custom temp.	
scaling		
Suffix (at extra	cost):	
-250		
250mm	n Probe length	
Δετρογο		
ACCESSOI Y		
TT-522-DFP		

Duct flange plate



Technical Overview

The TT-522 range of duct temperature sensors are used for air temperature in ducts. Units contain either a high quality thermistor, Nickel or Platinum sensing element.

The temperature element is fitted into a 150mm long brass probe with holes to allow direct air flow. A neoprene gasket is supplied to ensure a good seal between the sensor and the duct. A flange plate is available for adjustment of penetration depth (order as TT-522-DFP).

The TT-522-CVO (active output), combines 4 preset ranges and selectable output mode, customised output range scaling enabling a choice of outputs and ranges on one unit.

Installation

- 1. It is recommended that the unit be mounted with the cable entry at the bottom.
- 2. If the cable is fed from above then into the cable gland at the bottom, it is recommended that a rain loop be placed in the cable before entry into the sensor.
- 3. Remove the front cover by twisting the lid and separating from the main body.
- 4. Make sure to align the holes in the probe so that they point into the air flow, not at right angles to it.
- 5. Using the base of the housing as a template mark the hole centres. Drill two pilot holes at 85mm centres in the surface to which the sensor is to be mounted.
- 6. Fix the sensor to the duct using appropriate screws.
- 7. The housing is designed to make it easy for an electrical screwdriver to be used if desired.
- Feed the cable through the waterproof gland and terminate at the terminal block. Leaving some slack inside the housing, tighten the cable gland onto the cable to ensure water tightness.
- 9. Replace the lid after the electrical connections have been made.

Connections

Resistive output:



Connections are made via the 2-way terminal block. Connections for the thermistor/platinum and nickel elements are polarity independent.

4-20mA/0-10Vdc:

For full connection and specification please refer to the TT-CVO datasheet.

Trend Scaling

IQ1xx and early IQ2x series (without type 5, characterise) Thermistor A (10K3A1 TYPE 2 linearise thermistor volts)

(-10 to +40°)		(-10 to +110°)	
Brange	-10	Brange	-10
Trange	40	Trange	110
F	8.47	F	8.47
G	7.42	G	5.55
Н	6.11	Н	2.65
I	4.73	I	1.12
J	3.48	J	0.49

IQ1xx and early IQ2x series (with type 5, characterise)

(-10 to +40°C)

	Resistance input	Temp. Output
1	5.32	40.0
2	5.89	37.5
3	6.53	35.0
4	7.24	32.5
5	8.05	30.0
6	8.96	27.5
7	10.00	25.0
8	11.16	22.5
9	12.49	20.0
10	14.00	17.5
11	15.71	15.0
12	17.67	12.5
13	19.90	10.0
14	22.47	7.5



Trend Scaling (continued)

15	25.40	5.0
16	28.79	2.5
17	32.66	0.0
18	37.18	-2.5
19	42.35	-5.0
20	55.30	-10.0

Upper	40.0
Lower	-10.0
Ехр	3
Points used	20
Input type	3(kohms)

(-10 to +110°C)

	Resistar	nce input	Temp. Output
1	0.51		110.0
2	0.60		104.0
3	0.72		98.0
4	0.86		92.0
5	1.03		86.0
6	1.25		80.0
7	1.53		74.0
8	1.87		68.0
9	2.31		62.0
10	2.87		56.0
11	3.60		50.0
12	4.54		44.0
13	5.77		38.0
14	7.40		32.0
15	9.57		26.0
16	12.49		20.0
17	16.47		14.0
18	21.93		8.0
19	29.53		2.0
20	55.30		-10.0
Upper		110.0	
Lower		-10.0	
Ехр		3	
Points ι	used	20	
Input type		3(kohms)	

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