BELIMO®

Duct/Immersion sensor Temperature

For measuring temperature in duct applications. In connection with a stainless steel or brass thermowell also applicable for pipe applications. NEMA 4X / IP65 rated enclosure.

5

5-year warranty

Type Overview

Type	Output signal	Probe length	Probe diameter
01DT-5AH	Pt100	2" [50 mm]	0.24" [6 mm]
01DT-5AL	Pt100	4" [100 mm]	0.24" [6 mm]
01DT-5AN	Pt100	6" [150 mm]	0.24" [6 mm]
01DT-5AP	Pt100	8" [200 mm]	0.24" [6 mm]
01DT-5AR	Pt100	12" [300 mm]	0.24" [6 mm]
01DT-5AT	Pt100	18" [450 mm]	0.24" [6 mm]

Technical Data

Electrical Data	Electrical connection	Pluggable spring loaded terminal block max. 2.5 mm²
	Cable entry	Cable gland with strain relief Ø6...8 mm (1/2" NPT conduit adapter included)
Functional Data	Application	air water
	Output signal passive temperature	Pt100
Measuring Data	Measured values	Temperature
	Measuring range temperature	-60...320°F [-50...160°C]
	Accuracy temperature passive	±0.5°F @ 32°F [±0.3°C @ 0°C]
	Measuring current	<1 mA @ 32°F [0°C]
	Time constant τ (63%) in air duct	Typical 210 s @ 0 m/s Typical 46 s @ 3 m/s
	Time constant τ (63%) in water pipe	With thermowell A-22P-A.. and thermal contact fluid Typical 7 s with thermowell brass Typical 9 s with thermowell stainless steel
Materials	Cable gland	Plug Adapter: PA66, black Nut: PA6, black
	Housing	cover: PC, orange base: PC, orange seal: NBR70, black UV resistant
	Probe material	AISI 316L
Safety Data	Ambient humidity	max. 95% RH, non-condensing
	Ambient temperature	-30...120°F [-35...50°C]
	Fluid temperature	-60...320°F [-50...160°C]
	Housing surface temperature	max. 195°F [90°C]

Safety Data	Protection class IEC/EN	III, Protective Extra-Low Voltage (PELV)
	Power source UL	Class 2 Supply
	EU Conformity	CE Marking
	Certification IEC/EN	IEC/EN 60730-1
	Certification UL	cULus acc. to UL60730-1A/-2-9, CAN/CSA E60730-1/-2-9
	Degree of protection IEC/EN	IP65
	Degree of protection NEMA/UL	NEMA 4X
	Quality Standard	ISO 9001
	Mode of operation	Type 1
	Control pollution degree	3
	Rated impulse voltage supply	0.8 kV
	Construction	Independently mounted control

Safety Notes

⚠️ This device has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application. Unauthorized modifications are prohibited. The product must not be used in relation with any equipment that in case of a failure may threaten humans, animals or assets.

Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Only authorized specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.

The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Remarks

General Remarks Concerning Sensors

Due to self-heating with 2 wire passive sensors, the supply wire current affects the measurement accuracy. So the supply current should not be higher than the measuring current values specified in this data sheet.

When using lengthy connecting cables (depending on the cross section used), the cable resistance must be taken into account. The lower the impedance of the sensor used, the greater the effect of the line resistance on the measurement, because it generates an offset.

Scope of delivery

Scope of delivery	Description	Type
	Mounting clip, with screws and adhesive foil	A-22D-A11
	1/2" NPT conduit adapter	

Accessories

Optional accessories	Description	Type
	Mounting plate S housing	A-22D-A09
	Connection adapter, M20x1.5, for cable 1x6 mm, Multipack 10 pcs.	A-22G-A01.1

Optional accessories air	Description	Type
	Mounting flange for sensor probe 6 mm, up to max. 120°C [248°F], Plastic	A-22D-A03
	Mounting flange for sensor probe 6 mm, up to max. 260°C, Brass	A-22D-A05

Recommended accessories water	Description	Type
	Thermowell pocket (fabricated) Stainless steel, 2" [50 mm], 1/2" NPT, wrench size 3/4"	A-22P-A05
	Thermowell pocket (fabricated) Stainless steel, 4" [100 mm], 1/2" NPT, wrench size 3/4"	A-22P-A07
	Thermowell pocket (fabricated) Stainless steel, 6" [150 mm], 1/2" NPT, wrench size 3/4"	A-22P-A09
	Thermowell pocket (fabricated) Stainless steel, 8" [200 mm], 1/2" NPT, wrench size 3/4"	A-22P-A11
	Thermowell pocket (fabricated) Stainless steel, 12" [300 mm], 1/2" NPT, wrench size 3/4"	A-22P-A13
	Thermowell pocket (fabricated) Stainless steel, 18" [450 mm], 1/2" NPT, wrench size 3/4"	A-22P-A15
	Thermowell pocket (fabricated) Brass, 2" [50 mm], 1/2" NPT, wrench size 3/4"	A-22P-A17
	Thermowell pocket (fabricated) Brass, 4" [100 mm], 1/2" NPT, wrench size 3/4"	A-22P-A19
	Thermowell pocket (fabricated) Brass, 6" [150 mm], 1/2" NPT, wrench size 3/4"	A-22P-A21
	Thermowell pocket (fabricated) Brass, 8" [200 mm], 1/2" NPT, wrench size 3/4"	A-22P-A23
	Thermowell pocket (fabricated) Brass, 12" [300 mm], 1/2" NPT, wrench size 3/4"	A-22P-A25
	Thermowell pocket (fabricated) Brass, 18" [450 mm], 1/2" NPT, wrench size 3/4"	A-22P-A27
	Thermowell pocket (machined) Stainless steel, 2" [50 mm], 1/2" NPT, wrench size 3/4"	A-22P-A36
	Thermowell pocket (machined) Stainless steel, 4" [100 mm], 1/2" NPT, wrench size 3/4"	A-22P-A37
	Thermowell pocket (machined) Stainless steel, 6" [150 mm], 1/2" NPT, wrench size 3/4"	A-22P-A38
	Thermowell pocket (machined) Stainless steel, 8" [200 mm], 1/2" NPT, wrench size 3/4"	A-22P-A39
	Syringe with thermal paste	A-22P-A44
	Cold barrier, Plastic, L 50 mm, for thermowell A-22P-A..	A-22P-A51

Wiring Diagram
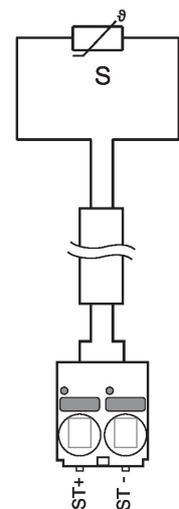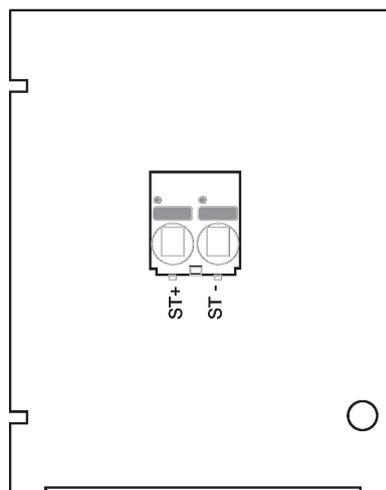
Dimensions
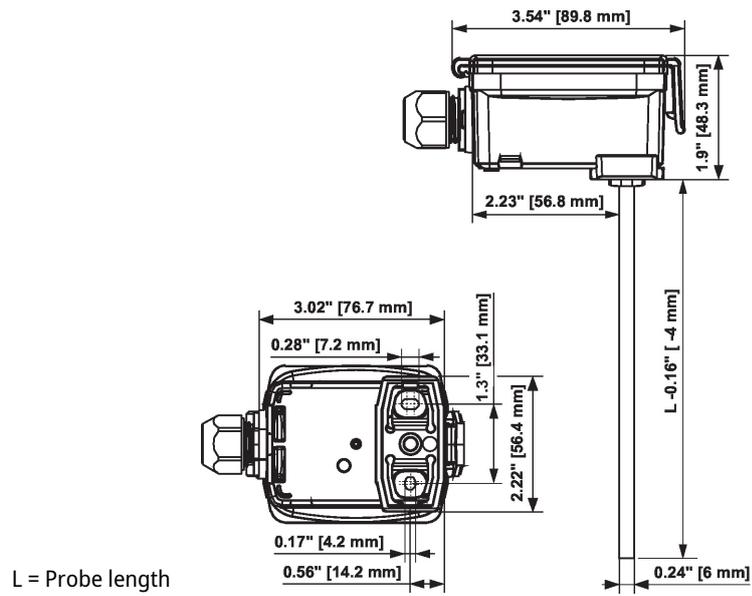
L = Probe length

Type	Probe length	Weight
01DT-5AH	2" [50 mm]	0.26 lb [0.12 kg]
01DT-5AL	4" [100 mm]	0.26 lb [0.12 kg]
01DT-5AN	6" [150 mm]	0.29 lb [0.13 kg]
01DT-5AP	8" [200 mm]	0.29 lb [0.13 kg]
01DT-5AR	12" [300 mm]	0.31 lb [0.14 kg]
01DT-5AT	18" [450 mm]	0.33 lb [0.15 kg]