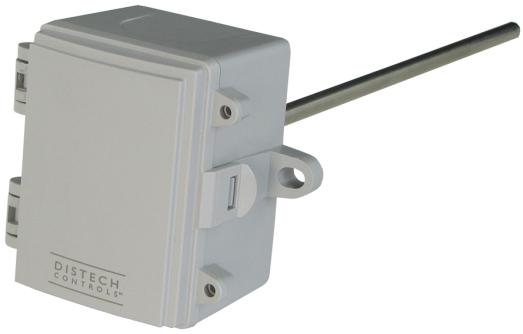
Datasheet

TS-Dyyy2X Transmitter Series

Duct/Immersion Temperature Transmitters, Nema 4X



Overview

The TS-Dyyy2X Series all-purpose temperature transmitters provide the precision temperature of a duct. When combined with a TS-TW series Stainless Steel thermowell, they can be used to measure liquid temperatures in a pipe. The TS-Dyyy2X single-point temperature sensor utilizes a precision sensor encapsulated in a 6.00 mm (0.236”) OD and a 304-series stainless-steel probe. It is available in various lengths. All probes provide excellent heat transfer, fast response, and resistance to moisture penetration. The transmitter offers a high-accuracy signal with excellent long-term stability, low hysteresis, and fast response.

Applications

- Used for measuring temperature on supply and return ducts, supply and return hot water pipes of heating systems, supply and return lines in chillers, or domestic hot water tanks and piping
- Incorporated in chillers to monitor temperature gradients

Features & Benefits

- Slim, compact style and clean lines are well received by architects and building owners
- Economical
- Ease of installation
- Probes made of corrosion-resistant 304 stainless steel
- Accurate temperature monitoring for increased comfort

Model Selection

		TS-	D	C04	2X	002	R1
Mounting Style	D = Duct or Immersion						
Control Signal Output	C04 = Current, 4-20mA						
	V05 = Voltage, 0-5VDC						
	V10 = Voltage, 0-10VDC						
Enclosure	2X = Plastic enclosure, Nema 4X						
Probe Length	002 = 2" (50mm)						
	004 = 4" (100mm)						
	006 = 6" (150mm)						
	008 = 8" (200mm)						
	012 = 12" (300mm)						
	018 = 18" (450mm)						
Temperature Range	R1 = 0° - 35°C (32° - 95°F)						
	R2 = 0° - 50°C (32° - 122°F)						
	R3 = 0° - 100°C (32° - 212°F)						
	R4 = -50° - 50°C (-58° - 122°F)						

Accessories

Thermal Joint Compound

TS-JC2	Thermal Joint Compound, 2 oz (60ml) Jar
TS-JC5	Thermal Joint Compound, 5 oz (150ml) Tube
TS-JC8	Thermal Joint Compound, 8 oz Jar (240ml)

Thermowells

TS-TWN30402	50mm (2”) 304 SS well
TS-TWN30404	100mm (4”) 304 SS well
TS-TWN30406	150mm (6”) 304 SS well
TS-TWN30408	200mm (8”) 304 SS well
TS-TWN31602	50mm (2”) 316 SS well
TS-TWN31604	100mm (4”) 316 SS well
TS-TWN31606	150mm (6”) 316 SS well
TS-TWN31608	200mm (8”) 316 SS well

Calibration Certificate

TS-NIST Calibration Certificate

Note: Calibration certificates must be purchased at the time of purchasing the relative sensors.

Product Specifications

Environmental

Operating temperature	-40°C to 85°C; -40°F to 185°F
Storage temperature	-40°C to 85°C; -40°F to 185°F
Ambient humidity	0 to 95% Non-condensing

Transmitter/Sensor/Probe

Transmitter Accuracy	±0.1% of span, including linearity
Temperature Sensor Type[1]	1000Ω Platinum RTD
Sensor Accuracy	±0.3°C (±0.54˚F) @ 0˚C (32˚F)
Output Signal	4-20mA current loop, 0-5 Vdc, or 0-10 Vdc
Probe Sensing Range	-20 to 105°C (-4 to 221°F)
Probe Dimension	6.00 mm (0.236”) Diameter
Probe Material	304 Series Stainless Steel

Enclosure

Material	Grey ABS; Type: UL94-V0; IP65 (Nema 4X)
Shipping Weight	0.60 lbs (0.2727 kg)

Electrical

Input Voltage Effect	Negligible over specified operating range
Protection Circuitry	Reverse voltage protected and output limited
RFI Rejection	Good RFI rejection of normal frequencies
Wire Material	PVC Insulated, parallel bonded (Type 2, 100 Plat. Uses FT4)
4-20 mA Loop Power Supply	15-35 Vdc or 22-32 Vac
Minimum Loop Current	2 mA nominal (occurs with shorted sensor)
Maximum Loop Current	22.5 mA nominal (occurs with open sensor)
Maximum Loop Load	>600Ω
0-5 Vdc Power Supply	10-35 Vdc or 10-32 Vac
0-10 Vdc Power Supply	15-35 Vdc or 15-32 Vac
Maximum Current (Voltage)	5 mA nominal
Maximum Output (Voltage)	Limited to <5.5 Vdc for 0-5 Vdc, <10.5 for 0-10 Vdc

Agency Approvals

Material[2]	UL94-V0

ISO 9001

1. Temperature sensor type stated is standard. Other temperature sensor types are available.
2. All materials and manufacturing processes comply with the RoHS directive

Dimensions