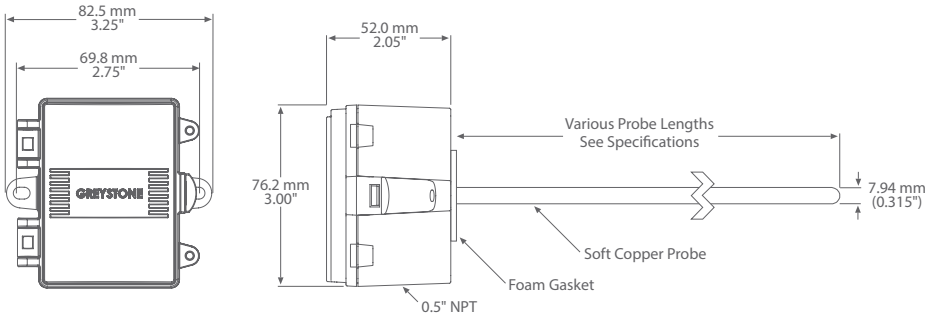
GREYSTONE
ENERGY SYSTEMS INC

FLEXIBLE COPPER DUCT AVERAGE TEMPERATURE TRANSMITTER



TXDC SERIES

PRODUCT DESCRIPTION

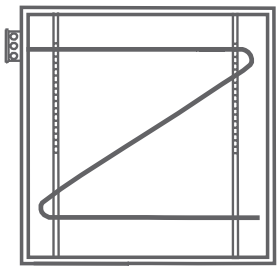
The flexible multi-point duct average temperature transmitter incorporates numerous precision platinum RTD's at equal distances and encapsulated in a 7.94mm (0.3125") OD, soft copper probe and is available in various lengths. All probes provide excellent heat transfer, fast response and resist moisture penetration. A transmitter that provides a high accuracy signal with excellent long term stability, low hysteresis and fast response is available with various ranges.

TYPICAL INSTALLATION

For complete installation and wiring details, please refer to the product installation instructions.

The duct average probes are installed through a hole in the side of the duct to monitor an average temperature within the duct. Select a probe length that allows for criss-crossing the duct multiple times. Install the probes in a straight section of duct at a suitable distance downstream from any heating, cooling, or humidification devices.

The enclosure provides mounting tabs for ease of installation.



SPECIFICATIONS

SENSOR TYPE	1000 Ω platinum RTD
SENSOR ACCURACY	±0.3°C (±0.54°F) @ 0°C (32°F)
PROBE SENSING RANGE	-20 to 60°C (-4 to 140°F)
WIRE MATERIAL	FT-6 rated plenum cable, 22 AWG
PROBE MATERIAL	Soft copper
PROBE DIAMETER	7.94 mm (0.315")
STANDARD LENGTHS	1.8m, 3.6m, 6.1m, 7.3m, 15.2m (6', 12', 20' 24' 50')
OUTPUT SIGNAL	4-20 mA current loop, 0-5 Vdc, or 0-10 Vdc (factory configured)
TRANSMITTER ACCURACY	±0.1% of span, including linearity
OUTPUT DRIVE @ 24 VDC	**Current:** 600 mA maximum **Voltage:** 10 KΩ minimum
MAXIMUM OUTPUT (VOLTAGE)	Limited to <5.5 Vdc or 0-5 Vdc, <10.5 for 0-10 Vdc
INPUT VOLTAGE EFFECT	Negligible over specified operating range
PROTECTION CIRCUITRY	Reverse voltage protected and output limited
AMBIENT OPERATING RANGE	-40 to 60°C (-40 to 140°F), 5 to 95 %RH non-condensing
ENCLOSURE	**A:** ABS, UL94-V0, IP65 (NEMA 4X) **E:** Same as A, with thread adapter (1/2" NPT to M16), and cable gland fitting
TERMINATION	Screw terminal block (14 to 22 AWG)
PROTECTION CLASS	III
POWER SOURCE UL	0-5 Vdc: 10-35 Vdc or 10-28 Vac SELV (Class 2) 0-10 Vdc: 15-35 Vdc or 15-28 Vac SELV (Class 2) 4-20 mA: 15-35 Vdc (loop-powered) or 22-28 Vac Limited Energy, <15W
CONSUMPTION	Current @ 20 mA Voltage @ 5 mA
EU CONFORMITY	CE
CERTIFICATION	UL 60730 & CSA E60730
UL 2043 / CSA / ULC S142 COMPLIANT	Suitable for Use in Air Handling Spaces in Accordance with Section 300.22, (C) of the National Electrical Code
PURPOSE OF CONTROL	Operating Control
TYPE OF ACTION	Type 1
IMPULSE VOLTAGE	330V
POLLUTION DEGREE	2
COUNTRY OF ORIGIN	Canada

NOTE: This product is factory calibrated and any field adjustment will void the warranty.

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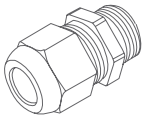
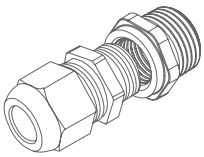
ACCESSORIES - INCLUDED WITH E ENCLOSURE OPTION

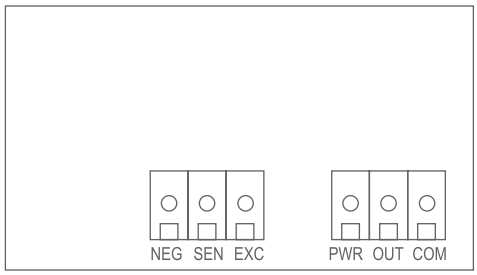


CABLE GLAND FITTING



THREAD ADAPTER 1/2" NPT TO M16

WIRING INFORMATION



TERMINAL	FUNCTION
PWR	Power Supply
OUT	Analog Output
COM	Common
NEG	
SEN	Temperature Sensor Input
EXC	

ORDERING

PRODUCT	**TXDC**	Flexible Copper Duct Average Temperature Transmitter
ENCLOSURE	**A** **E**	ABS, with hinged and gasketed cover Same as C, with thread adapter and cable gland fitting
SENSOR	**12**	1000 Ω Platinum, IEC 751, 385 Alpha, thin film
PROBE LENGTH	**I** **J** **K** **L** **Q**	1.8 m (6′) 4-sensors 3.6 m (12′) 4-sensors 6.1 m (20′) 4-sensors 7.3 m (24′) 9-sensors 15.2 m (50′) 16-sensors
OUTPUT	**A** **D** **E**	4-20 mA 0-5 Vdc 0-10 Vdc
SCALED RANGE	**001** **002** **003** **006** *	0 to 35°C (32 to 95°F) 0 to 50°C (32 to 122°F) 0 to 100°C (32 to 212°F) -50 to 50°C (-58 to 122°F) Additional ranges available

PART NUMBER

TXDC

NOTE: Greystone Energy Systems, Inc. reserves the right to make design modifications without prior notice.

RoHS COMPLIANT

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