Data sheet DS/TX-EN Rev. M

TX
Thermal Dispersion Switch

Measurement made easy

Flow/Level/Temperature Switch
K-TEK Products



Features
- For Liquids, Gases & Small Granular Solids
- One Switch for Gas or Liquid Flow, Liquid Level, Interface Level or Temperature
- 316L Stainless Steel All Welded Construction Standard
- Explosion Proof, No Moving Parts
- Temperature Range –50 to 350°F / -46 to 177°C Standard
- Pressure to 4000 psig / 275 bar Standard

Options
- Exotic Alloys for Corrosive Applications
- Temperatures from –320 to 900ºF / -195 to 482ºC
- Pressure to 10,000 psig / 689 bar
- Extended Sensor
- Remote Mounting
- Flange Mounting
- Ceramic Glass To Metal Feedthrough Provides Secondary Pressure Boundry

Accessory
- Stainless steel flow tube adapter for small diameter pipe

SPECIFICATIONS

Sensor

Materials of Construction	316L Stainless Steel Standard, Exotic Alloys Optional
Response Time	No Flow to Flow: From 3 Seconds; Flow to No Flow: From 8 Seconds Level: +/- 1/8"; Temperature: From 1 second
Operating Temperature	-50 to 350ºF / -46 to 177ºC **Standard** Options: -320 to 500ºF / -196 to 260ºC -100 to 900ºF / -73 to 482ºC
Operating Pressure	Full Vacuum to 4000 psig / 275 bar **Standard** Option: 10,000 psig / 689 bar maximum
Repeatability	Flow: 0.5% of maximum flow rating at Constant Conditions **Standard**; Level: +/- 1/8"; Temperature: +/- 1ºC
Process Connection	3/4" MNPT **Standard** Options: 1", 1-1/4", 1-1/2", 2" MNPT, Flanges, Retractable Probes
Insertion Length	1.8" / 45.7mm **Standard** Option: 1.2" / 30.5mm; Custom Lengths Available

Electronics

Housing	Powder Coated Aluminum **Standard** Optional: Dual Compartment Aluminum; Dual Compartment 316L SS
Operating Temperature	-50 to 140ºF/-46 to 60ºC Ambient Option: Remote Mounting of Electronics Up to 2000 ft. / 609 meters
Power Input	90-132 VAC, 50/60 Hz, 5.5 watts max Options: 24 VDC, 24 VAC, 208-240 VAC
Relay Output	DPDT 8 amps @ 250 VAC
Conduit Entry	3/4" FNPT **Standard**
Approvals	CL I, Div I, GP A,B,C,D; CL I, Div II, GP E,F,G; Div III, DIP, NEMA or Type 4X FM: T3A @ Ta = 60C CSA: T3C @ Ta = 60C (For A, A1 and S housing options) GOST Russia, GOST Kazakhstan: 1ExdIICT3
Shipping Weight	5 lbs standard

ORDERING INFORMATION:

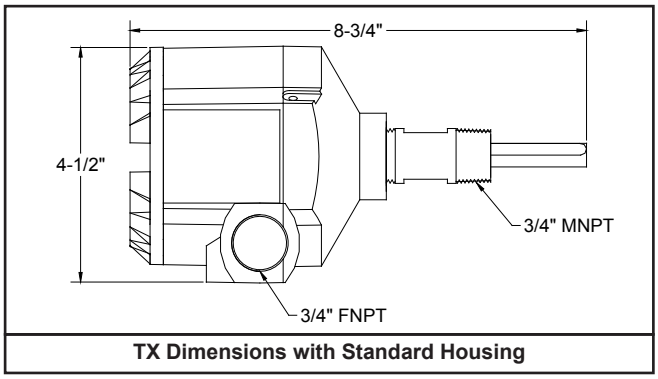
TX/a/b/c/d/e/f/g/h:

/a Housing

A1	Single Compartment Aluminum Housing **Standard**
A1W	Single Compartment Aluminum Housing with glass window cover
A	Dual Compartment Aluminum Housing
AW	Dual Compartment Aluminum Housing with Glass Viewing Window
S	Dual Compartment 316L Stainless Steel Housing
SW	Dual Compartment 316L Stainless Steel Housing with Glass Viewing Window

/b Material Type

S6	316L Stainless Steel **Standard**
HB	Hastelloy B-3
HC	Hastelloy C-276
AM	Monel
T2	Titanium GR. 2
T7	Titanium GR. 7
A20	Carpenter 20



TX Dimensions with Standard Housing

/c A) Process Connection – Threaded

0750	3/4” MNPT **Standard**
1000	1” MNPT
1250	1-1/4” MNPT
1500	1-1/2” MNPT
2000	2” MNPT

B) Process Connection – Flanged

/AABC	AA	B	C
	10 1” Flange	1 150#	1 Raised Face, 316L SS
	15 1-1/2” Flange	2 300#	2 Raised Face, Carbon Steel
	20 2” Flange	3 600#	3 Flat Face, 316L SS
	30 3” Flange	4 900#	4 Flat Face, Carbon Steel
	40 4” Flange	5 1500#	6 Special
	60 6” Flange		

/d Insertion Length

1.8	1.8” / 45.7 mm Insertion Length **Standard**
1.2	1.2” / 30.5 mm Insertion Length
Length	Customer Specified Length in Inches or Millimeters (1.2” / 30.5 mm minimum)

/e Power Input

1	90-132 VAC **Standard**
2	24 VDC or VAC (22.8 - 28.8 VDC; 20 VAC - 25 VAC)
3	200-240 VAC

/f Process Temperature

H0	-50 to 350ºF / -46 to 177ºC **Standard**
H1	-320 to 500ºF / -196 to 260ºC (Requires remote mounting of electronics)
H2	-100 to 900ºF / -73 to 482ºC (Requires remote mounting of electronics)

/g Approvals

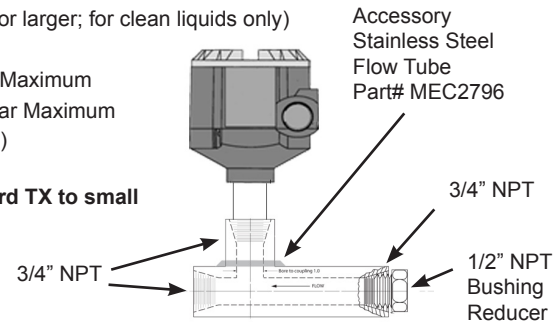
X	Not FM or CSA Approved
FMX	Factory Mutual Research Corp (FMRC) **Standard**
CSX	CSA Canadian Standard Association
GR	**GOST Russia**
GK	**GOST Kazakhstan**

/h Options (leave blank if no options required)

DS	Dual Switch Point Electronics with Millivolt Output
RJxxxx	Remote Electronics with PVC Cable (200ºF / 93.3ºC) Specify cable length “xxxx” ft. (Max. Length 2000 ft. / 609 m)
RFxxxx	Remote Electronics with Teflon Cable (500ºF / 260ºC) Specify cable length “xxxx” ft. (Max. Length 2000 ft. / 609 m)
HF	High Flow Option (Requires 1” MNPT or 1-1/2” Flange or larger; for clean liquids only)
HP	High Pressure Option (10,000 psig / 689 bar)
G1	Packing Gland for Retractable Probe, 50 psig / 3.4 bar Maximum
G2	Packing Gland for Retractable Probe, 500 psig / 34.5 bar Maximum
HS	5 Pin Hermetic Feed-through (not offered with Titanium)

Accessory: 316 Stainless Flow Tube part# MEC 2796 (to adapt standard TX to small diameter pipe sizes)

***Note: For available set points / flow calibration & conversion charts see MKT-0189-1**



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DS/TX-EN Rev. M 06.2012

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