

Thermal Dispersion Flow / Level / Temperature Switch Standard Response

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 900°F / -195 to 482°C
- Pressure to 10,000 psig / 689 bar
- Extended Sensor
- Remote Mounting
- Flange Mounting
- Ceramic Glass To Metal Feedthrough Provides Secondary Pressure Boundary



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 350°F / -46 to 177°C Standard Options: -320 to 500°F / -196 to 260°C -100 to 900°F / -73 to 482°C |
| 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: +/- 1°C |
| 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 140°F/-46 to 60°C 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

- /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 Raised Face, Carbon Steel |
| | 40 4" Flange | 5 1500# | 6 Special |
| | 60 6" Flange | | |

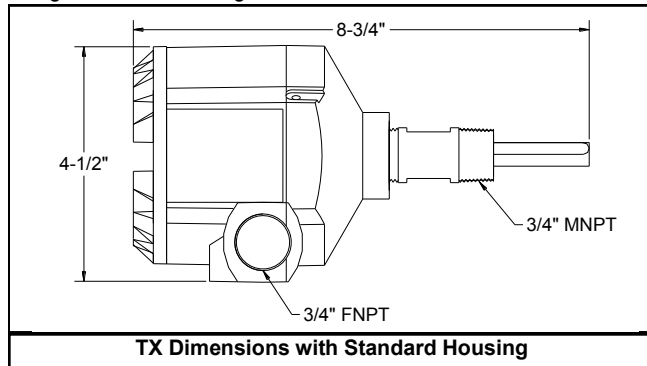
- /d Insertion Length**
 - 1.8 1.8" / 45.7 mm Insertion Length **Standard**
 - 1.2 1.2" / 30.5 mm Insertion Length
 - Length Customer Specified Length in Inches or Millimeters (1.2" / 30.5 mm minimum)

- /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 350°F / -46 to 177°C **Standard**
 - H1 -320 to 500°F / -196 to 260°C (Requires remote mounting of electronics)
 - H2 -100 to 900°F / -73 to 482°C (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 (200°F / 93.3°C) Specify cable length "xxxx" ft. (Max. Length 2000 ft. / 609 m)
 - RFxxxx Remote Electronics with Teflon Cable (500°F / 260°C) 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)



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