



hmi

high-accuracy
measurement
instruments

FICHA TÉCNICA DE PRODUTO

PRODUCT DATASHEET

HMI – Automação e Instrumentação, Lda.

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TX

Thermal dispersion switch

Measurement made easy

K-TEK Level 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 500°F / -195 to 260°C
- 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 350°F / -46 to 177°C Standard Option: -320 to 500°F / -196 to 260°C
Operating Pressure	Full Vacuum to 2000 psig / 137 bar Standard Options: 4,000 psig / 275 bar maximum 10,000 psig / 689 bar maximum (HP Option)
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 to 8 ft. (96 in, 2438mm)

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; T3C Ta = 60°C CL II, III, Div 1, GP E,F,G; T3A Ta = 60°C; Type 4X
Shipping Weight	5 lbs standard



ORDERING INFORMATION:

TX.a.b.c.d.e.f.g.h.i.j.k.l.m:

.a Housing

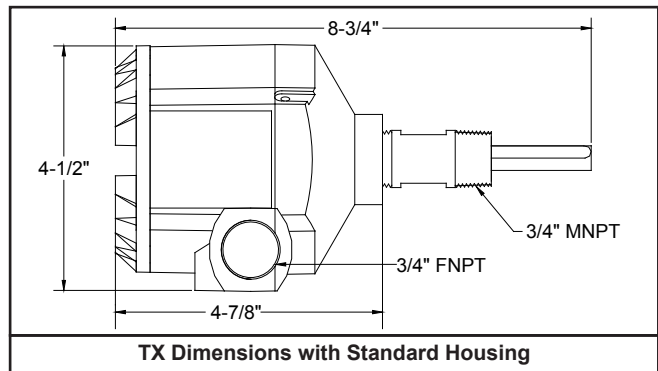
- A1 Single Compartment Aluminum Housing **Standard**
- A1W Single Compartment Aluminum Housing with glass window cover
- A2 Dual Compartment Aluminum Housing
- A2W Dual Compartment Aluminum Housing with Glass Viewing Window
- S2 Dual Compartment 316L Stainless Steel Housing
- S2W Dual Compartment 316L Stainless Steel Housing with Glass Viewing Window

.b Material Type

- S6 316L Stainless Steel **Standard**
- HB Hastelloy B-3
- HC Hastelloy C-276
- A20 Alloy 20
- AM Monel

.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

- 18 1.8" / 45.7 mm Insertion Length **Standard**
- 12 1.2" / 30.5 mm Insertion Length
- CS Customer Specified Length in Inches or Millimeters (1.2" / 30.5 mm minimum), maximum 8 ft. (96 in, 2438 mm) Lengths > 1.2" restricted to maximum pressure of 2000 psig

.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)

.g Approvals

- X None
- N2 FM & CSA Approvals

.h Dual switch point

- X None
- DS Dual Switch Point Electronics with Millivolt Output

.i Remote Electronics

- X None
- 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® (a registered trademark of DuPont) Cable (900°F / 482°C process temperature) Specify cable length "xxxx" ft. (Max. Length 2000 ft. / 609 m)

.j Flow Options

- X None
- HF High Flow Option (Requires 1" MNPT or 1-1/2" Flange or larger; for clean liquids only)

.k High Pressure Options

- X None

.l Packing Gland

- X None
- G1 Packing Gland for Retractable Probe, 50 psig / 3.4 bar Maximum
- G2 Packing Gland for Retractable Probe, 500 psig / 34.5 bar Maximum

.m Hermetic Seal

- X None
- HS 5 Pin Hermetic Feed-through (not offered with Titanium)

Service Codes

Engineering Documents

GD1	Drawings for Approval - NOTE: Lead time will start after receipt of customer approved drawings
GD2	Drawings for Record
GD3	Certified as Built Drawings - NOTE: Lead time will start after receipt of Purchase Order

Liquid Dye Penetrant

CNA	Liquid Dye Penetrant Examination on all Pressure containing Welds (Final Pass Only) (Per Tag)
CNC	Liquid Dye Penetrant Examination on 10% of all Pressure containing Welds (Final Pass Only) (Per Tag)

Positive Material Identification

CHC	Positive Material Identification with Carbon Content
CHD	Positive Material Identification without Carbon Content

Hydrostatic Examination

CP1	Hydrostatic Examination - (10 Minutes)
CP2	Hydrostatic Examination with Chart Recording - (30 Minutes)

Additional Services

CAL	Calibration Certificate (Flow)
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Material Monitoring

C2	Material Monitoring with Inspection Certificate 3.1 acc. EN 10204
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Origin Documents

GS1	Certificate of Origin
GS2	Certificate of Origin Notarized by Local Chamber of Commerce
GS3	Certificate of Origin Legalized by Specific Country Chamber of Commerce - Lead Time may be Extended depending on Country
GS4	Korean Foreign Trade certificate
GS5	NAFTA Certificate
GS6	EX-IM BANK Certificate (One per Tag)

Certifications

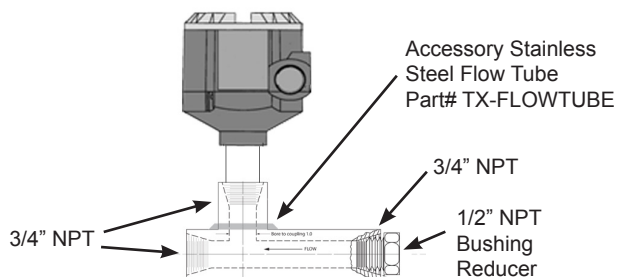
CL	Certificate of Compliance
CU3	Certificate of Functionality
CPE	Calibration Certificate of Hydrotest Equipment (Requires CP1 or CP2 in Hydrostatic Examination)
CRN	Canadian Registration Number (Requires C2 in Material Monitoring and CP1 or CP2 in Hydrostatic Examination)

NACE

CN1	NACE (MR 0103) Hardness Certificate (Requires C2 in Material Monitoring)
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Accessory: 316 Stainless Flow Tube part# TX-FLOWTUBE (to adapt standard TX to small diameter pipe sizes)

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



Contact us

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Sales



Service



Our offering:

	Actuators and Positioners		Analytical Instruments
	Device Management, Fieldbus and Wireless		Flow Measurement
	Force Measurement		Level Measurement
	Natural Gas Measurement		Pressure Measurement
	Recorders and Controllers		Temperature Measurement

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