



PST (Partial Stroke Test)

Product Overview

The Digital Epic Control Transmitters provide discrete valve position control and precision, non-contact position feedback with digital communication via FOUNDATION Fieldbus™ protocol in a simple, integrated package. Additional bonus features are remote and local PST (partial stroke test) and ESD (emergency shut down) initiation for safety system applications.

F430 – Large engineered resin enclosure, dual coil valve options available

F431 – Small engineered resin enclosure, single coil valve options only

F450 – Large 316 stainless steel enclosure, dual coil valve options available

F451 – Small 316 stainless steel enclosure, single coil valve options only

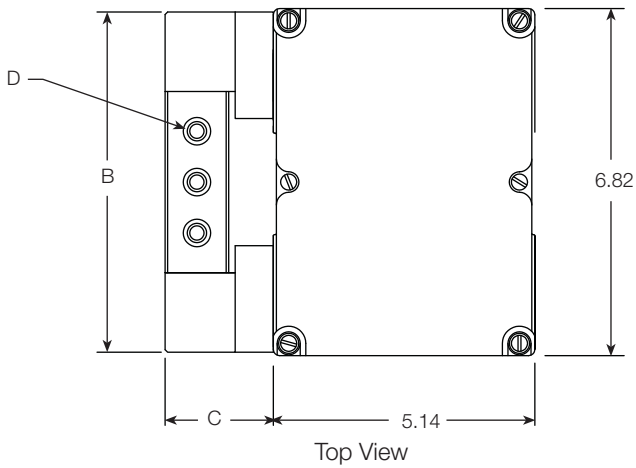
Features and Benefits

- Microprocessor based technology allows digital communication via FOUNDATION Fieldbus™ protocol.
- Measuring of valve position is accomplished with a non-contact magnetic pick-up. This eliminates any mechanical devices, such as drive arms or linkages, greatly increasing reliability in high cycle applications or where vibration is present.
- Available with PST capability and an ESD feature which may be initiated remotely via FOUNDATION Fieldbus™ signal.
- Optional external button to initiate partial stroke test.
- Available with low power Falcon solenoid valve.
- Models F430 and F431 feature corrosion resistant, resin enclosure.
- Models F450 and F451 feature heavy duty, 316 stainless steel enclosure.

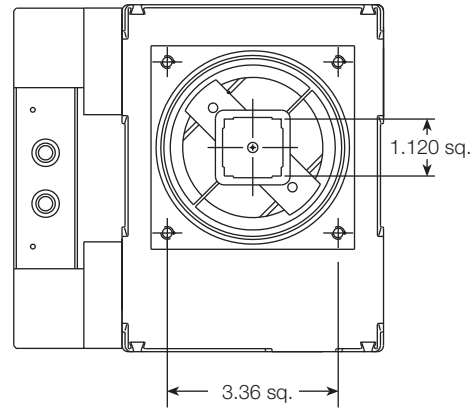


Digital EPIC F450

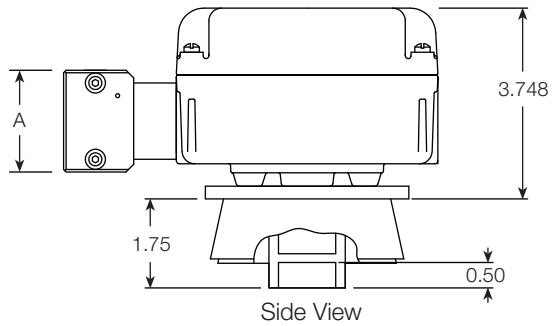
Dimensions Model F430



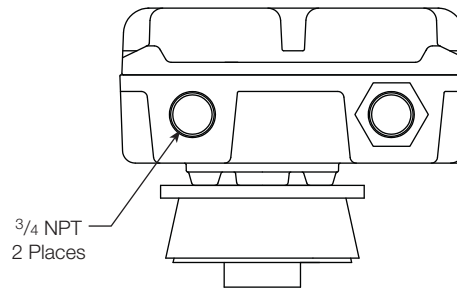
Top View



Bottom View



Side View



Technical Specifications

Conduit Entries	3/4" NPT
Output	4 to 20 mA proportional to valve position
Terminal Voltage Required	10 to 30 volts
Linearity*	± 1.0% F.S.
Span Adjustment	60 to 120 degrees
Zero Adjustment	30% of calibration span
Resolution	≤ 0.05% F.S.
Hysteresis	Negligible
Standard Operating Temperature Range**	-40°F to +185°F
Temperature Effect	≤ 0.01% F.S./°C
Humidity	10% to 90% non-condensing
Voltage Effect	≤ 0.2% F.S. from 10 VDC to 30 VDC
Reverse Polarity	Protected
Mounting Attitude	Any position
Startup Stabilization	0.5 seconds
Output Update Rate	25 ms

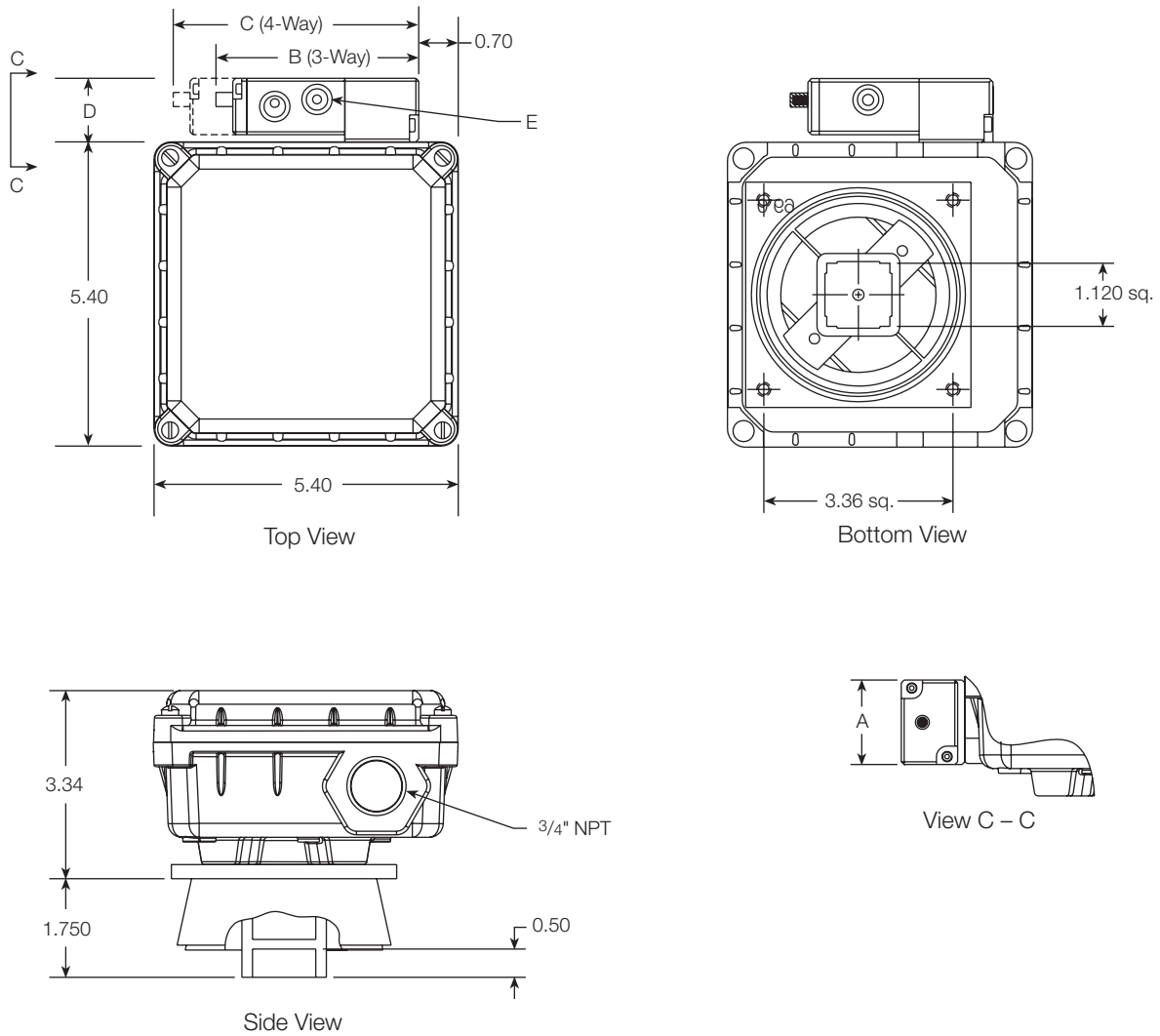
* Linearity is applicable for stroke 2" and under for linear application.

** Engineered resin enclosures -10°F to +185°F for hazardous area use.
Standard Falcon valve operating temperature range -4°F to +185°F, with optional -40°F to +185°F.

Dimensions

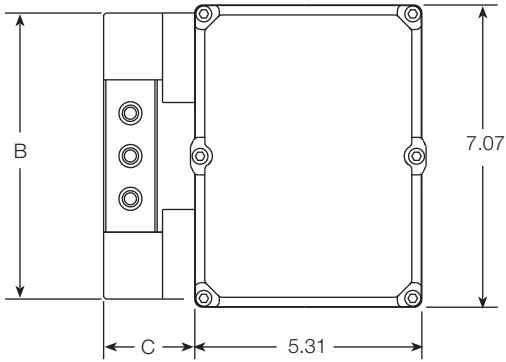
	A	B	C	D
0.5 C _v	1.50	5.13	1.13	1/4 NPT (F)
1.2 C _v	2.00	6.69	2.13	1/4 NPT (F)
3.5 C _v	2.75	7.74	2.62	1/2 NPT (F)

Dimensions Model F431

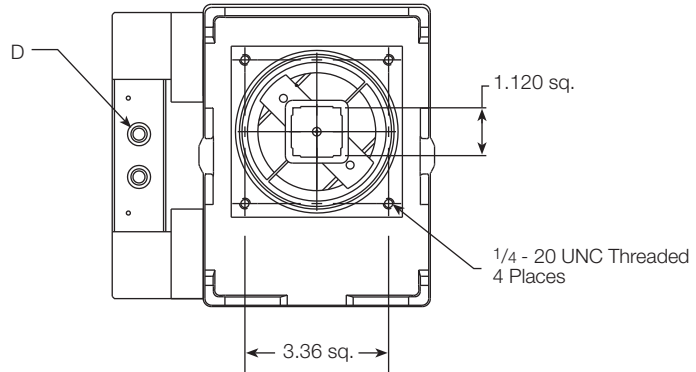


Dimensions					
	A	B (3-way)	C (4-way)	D	E
0.5 C _v	1.50	3.62	4.38	1.13	1/4 NPT (F)
1.2 C _v	2.00	4.96	5.95	1.39	1/4 NPT (F)
3.5 C _v	2.75	5.31	6.62	1.87	1/2 NPT (F)

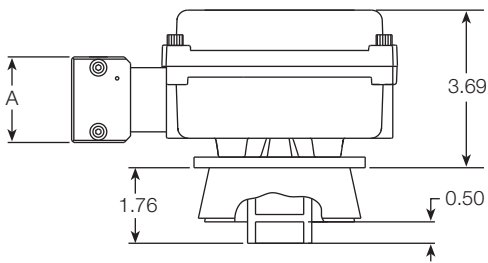
Dimensions Model F450



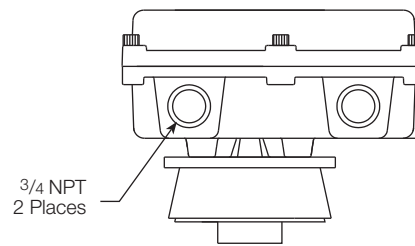
Top View



Bottom View



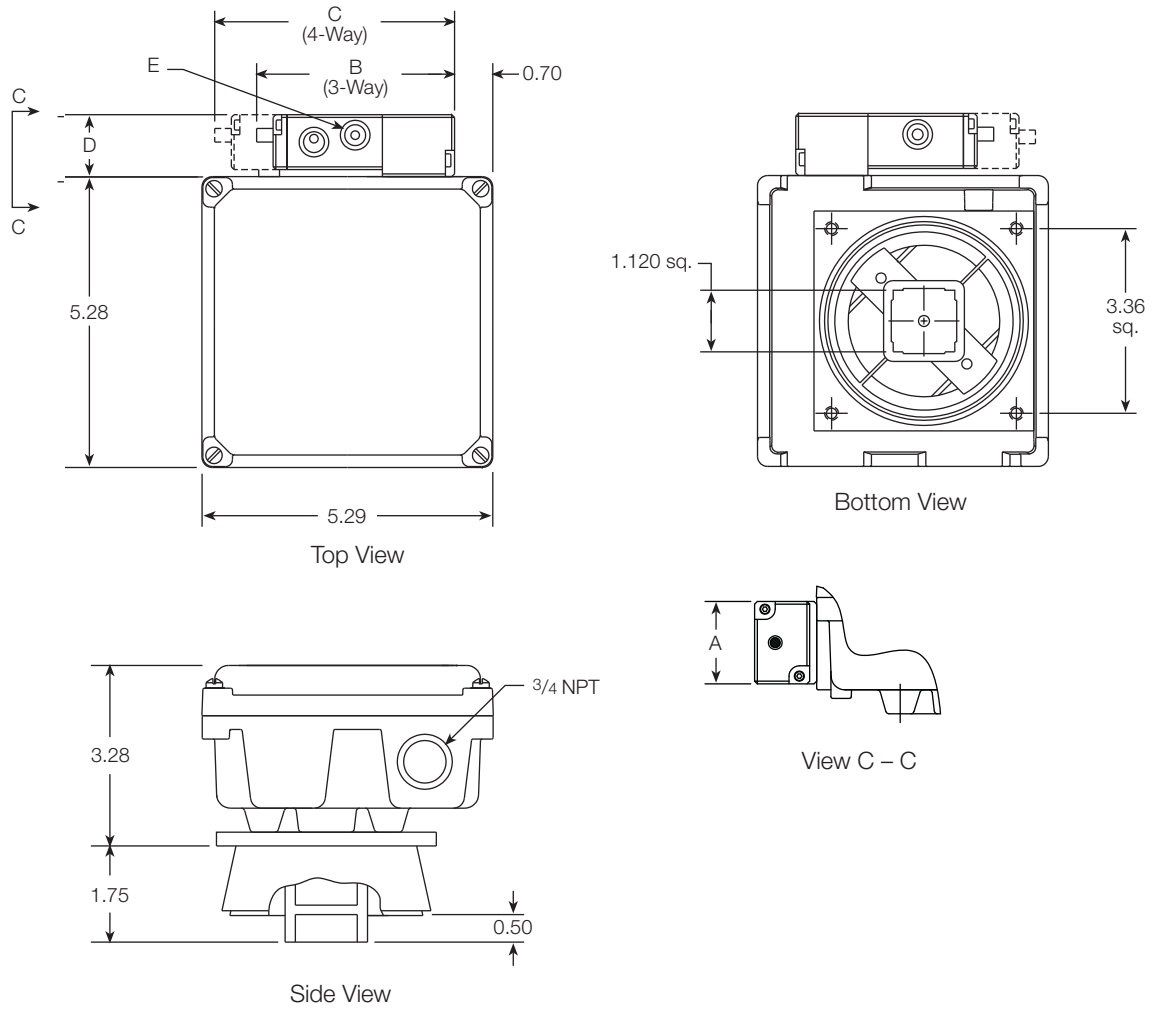
Side View



Dimensions

	A	B	C	D
0.5 C _v	1.50	5.13	1.13	1/4 NPT (F)
1.2 C _v	2.00	6.69	2.13	1/4 NPT (F)
3.5 C _v	2.75	7.74	2.62	1/2 NPT (F)

Dimensions Model F451



Dimensions

	A	B (3-way)	C (4-way)	D	E
0.5 C _v	1.50	3.62	4.38	1.13	1/4 NPT (F)
1.2 C _v	2.00	4.96	5.95	1.39	1/4 NPT (F)
3.5 C _v	2.75	5.31	6.62	1.87	1/2 NPT (F)

Ordering Guide

Base Model

F430	Digital FF EPIC Digital Transmitter (Large Resin Enclosure)
F431	Digital FF EPIC Digital Transmitter (Small Resin Enclosure)
F450	Digital FF EPIC Digital Transmitter (Large 316 SS Enclosure)
F451	Digital FF EPIC Digital Transmitter (Small 316 SS Enclosure)

Application Type

LV	Linear Transmitter****	RO	Rotary Transmitter
LR	Linear Transmitter with Remote Mount Option****	RR	Rotary Transmitter with Remote Mount Option

ESD/PST/PIN Connector

0	None w/3/4 NPT	3	Micro (EURO) w/1/2 NPT	6	Mini w/1/2 NPT
1	ESD Function w/3/4 NPT	4	ESD Function Micro (EURO) w/1/2 NPT	7	ESD Function w/Mini 1/2 NPT
2	PST Function w/3/4 NPT	5	PST Function Micro (EURO) w/1/2 NPT	8	PST Function w/Mini 1/2 NPT

Coil Voltage

0	None
D	7.2 VDC

Falcon Valve Body

22	0.5 C _v , 3-Way, Brass	26	0.5 C _v , 4-Way, Brass
32	0.5 C _v , 3-Way, Aluminum	36	0.5 C _v , 4-Way, Aluminum
42	0.5 C _v , 3-Way, 303 SS	46	0.5 C _v , 4-Way, 303 SS
52	0.5 C _v , 3-Way, 316 SS	56	0.5 C _v , 4-Way, 316 SS
23	1.2 C _v , 3-Way, Brass	27	1.2 C _v , 4-Way, Brass
33	1.2 C _v , 3-Way, Aluminum	37	1.2 C _v , 4-Way, Aluminum
43	1.2 C _v , 3-Way, 303 SS	47	1.2 C _v , 4-Way, 303 SS
53	1.2 C _v , 3-Way, 316 SS	57	1.2 C _v , 4-Way, 316 SS
34	3.5 C _v , 3-Way, Aluminum	38	3.5 C _v , 4-Way, Aluminum
54	3.5 C _v , 3-Way, 316 SS***	58	3.5 C _v , 4-Way, 316 SS***
20	0.5 C _v , Dual Coil, Brass*	30	0.5 C _v , Dual Coil, Aluminum*
40	0.5 C _v , Dual Coil, 303 SS*	50	0.5 C _v , Dual Coil, 316 SS*
2Y	1.2 C _v , Dual Coil, Brass*	3Y	1.2 C _v , Dual Coil, Aluminum*
4Y	1.2 C _v , Dual Coil, 303 SS*	5Y	1.2 C _v , Dual Coil, 316 SS*
3Z	3.5 C _v , Dual Coil, Aluminum*	00	None

Special Valve Features

0	None
V	Non-venting (available in 1.2 C _v only)
I	Non-venting, No Indicator (available in 1.2 C _v only)

Override Option

0	None
M	Momentary**
L	Locking**
R	No-voltage Release, Non-latching (available in 1.2 C _v only)
N	No-voltage Release, Latching (available in 1.2 C _v only)
E	External Pilot**

F431 RO 1 D 53 0 0 = Model Number **F431RO1D5300**

* Dual Coil valve body options only available with base Models F430 and F450.

** Override Options M, L, E are not available with option "54" and "58" Falcon valve bodies. These options are available in 303 SS.

*** 5400 valves are 5800 with ports 2 and 3 plugged for 3-way functionality. Valve body options 54 and 58 are not available in Models F430 and F431.

**** Valve stroke and fail position must be specified at time of quotation for LV and LR options.

USA/Canada: Saddle Brook, NJ
Ph: 201-794-7650
Dedicated Order Fax: 201-794-4790
General Fax: 201-794-0913

www.westlockcontrols.com

Europe/Asia: Kent, England
Ph: + 44 189 251 6277
Fax: + 44 189 251 6279
www.westlockuk.com

Latin America: Barueri, Sao Paulo
Ph: + 55 11 2588 1400
Fax: + 55 11 2588 1410
www.westlock.com.br

Tyco Flow Control (TFC) provides the information herein in good faith but makes no representation as to its comprehensiveness or accuracy. This data sheet is intended only as a guide to TFC products and services. Individuals using this data sheet must exercise their independent judgment in evaluating product selection and determining product appropriateness for their particular purpose and system requirements. TFC MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT(S) TO WHICH THE INFORMATION REFERS. ACCORDINGLY, TFC WILL NOT BE RESPONSIBLE FOR DAMAGES (OF ANY KIND OR NATURE, INCLUDING INCIDENTAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES) RESULTING FROM THE USE OF OR RELIANCE UPON THIS INFORMATION. Patents and Patents Pending in the U.S. and foreign countries. Tyco reserves the right to change product designs and specifications without notice. All registered trademarks are the property of their respective owners. Printed in the USA.