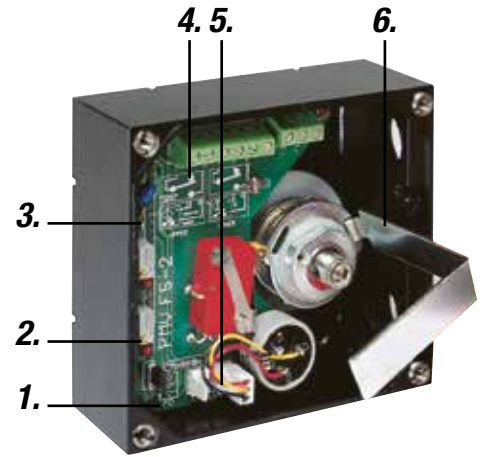


F5 Feedback unit

Product
Information



1. Jumper for field selection of 90, 60, 45 and 30 deg, operation for 4–20 mA position transmitter.
2. LEDs indicate 4–20 mA output.
3. Test outlet for 4–20 mA position transmitter.
4. Info printed on the PC board.
5. Field selectable direction of 4–20 mA of output signal, direct or reverse.
6. Easy to set cams with no fixed increments for true 100% resolution.



F5 Feedback Unit

F5/F5-EX

- Mounts on P5/EP5 without additional mounting bracket.
- Bright visible, flat or dome position indicator.
- Easy to set stepless cams – 100% resolution.
- Switches, mechanical or proximity, P+F Namur sensors.
- Potentiometer or 4–20 mA position transmitter.
- Sturdy, reliable and simple design.
- Explosion proof or intrinsically safe enclosure.
- ATEX, CSA and FM approvals.



Explosion proof

Easy to install



Install coupling on P5/EP5



Place F5 unit on top, tighten screws



Install indicator and cover



Technical data

General

Conduit entries	2 x 1/2" NPT or M20x1,5
Housing material	Die cast aluminum
Surface treatment	ED painting
Weight	0,7 kg (lbs 1,5) Ex proof = 2,1 kg (lbs 4,6)
Mounting	Direct on P5/EP5 and VDI/VDE 3845
Fasteners	Stainless A2/A4
Terminals	2,5 mm ² (AWG 14) Screw terminals
Enclosure	IP66, NEMA 4
Temp*	-40°C to +85°C (-40°F to +185°F)

Switches, mechanical

Type	Mechanical SPDT V3
Rating	6/2,5A 250 V AC

NAMUR sensors

Type	P+F NJ2 V3N
Load Current	≤ 1 mA ≥ 3 mA
Voltage range	8 V DC
Hysteresis	0,2%
Temp	-25°C to +85°C (-4°F to +185°F)

Proximity switches

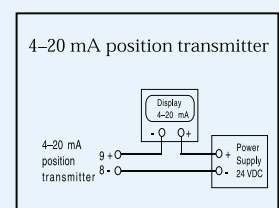
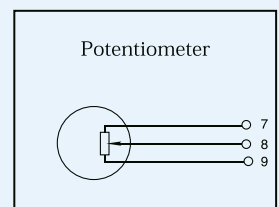
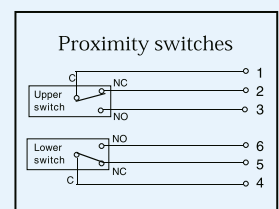
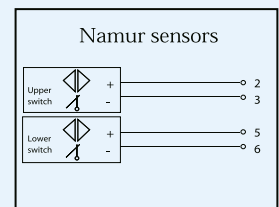
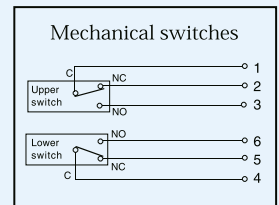
Contact rating	2 W or 2 VA @ 30 V DC/V AC, 0.1 A
Maximum operating time	0.5 milliseconds
Breakdown voltage	200 V DC
Contact resistance	0.2 Ohms
Switch type	SPDT hermetically sealed in one unit
Mechanical and electrical life	> 10 million operations

Potentiometer

Output	5kΩ (4kΩ at 90°)
Elements	Conductive plastic
Power rating at 70°	1 W
Linearity	1%
Resolution	Essentially infinite

4-20 mA position transmitter

Power supply	Max. 28 V DC
Output signal	4-20 mA
LED indication at 4 mA	±1%
LED indication at 20 mA	±1%
Resolution	Infinite
Minimum rotation travel	30°
Maximum rotation travel	90° (270° option)
Linearity	<1% of full scale
Hysteresis	<0,5% of full scale
Output current limit	24 mA DC
Load impedance	800Ω at 24 V DC



* Not NAMUR sensors



Modular



F5 mounted on actuator for on/off applications



F5 mounted on positioner P5



F5 mounted on positioner EP5

F5 Series Coding

Model (for installation on P5/EP5 only)
 F5G F5 with M20x1,5 connections
 F5N F5 with NPT 1/2" connections

Surface treatment
 U Epoxy, ED
 M Tufram

Switches
 MEC 2 x SPDT switches
 NAM 2 x P+F Namur Sensors
 PXY 2 x Proximity switches
 SAP 2 x NBB2

Feedback
 XXX None
 POT Potentiometer 5 kOhm
 P1K Potentiometer 1 kOhm
 P18 Potentiometer 180 deg
 420 4-20 mA transmitter
 T18 4-20 mA transmitter, 180 deg
 T27 4-20 mA transmitter, 270 deg

Spindle
 00 Drive coupling for P5/EP5

Seals
 Z Nitrile, NBR

Model
 F5IS F5 Intrinsically safe
 F5EX F5 Explosion proof

Electrical connections
 G PG13.5, Not F5EX
 Z 1/2" NPT

Surface treatment
 U Epoxy, ED
 M Tufram

Switches
 MEC 2 x SPDT switches
 NAM 2 x P+F Namur Sensors
 PXY 2 x Proximity switches

Feedback
 XXX None
 POT Potentiometer 5 kOhm
 P1K Potentiometer 1 kOhm
 P18 Potentiometer 180 deg
 420 4-20 mA transmitter
 T18 4-20 mA transmitter, 180 deg
 T27 4-20 mA transmitter, 270 deg

Spindle
 00 Drive coupling for P5/EP5
 23 01 to 39, see dwg SPNDLS_P5

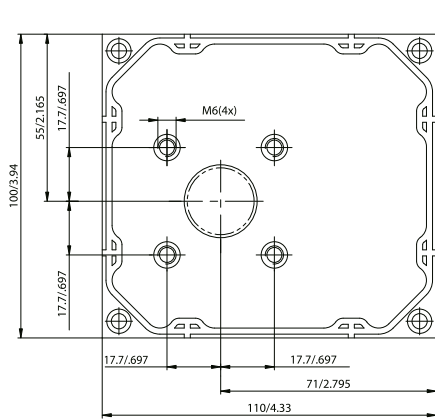
Frontcover, indicator
 PV9DA 90 deg, direct arrow indicator
 PV3RH 30 deg, Dome indicator

Seals
 Z Nitrile, NBR

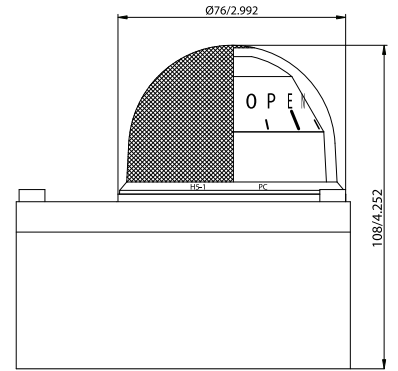
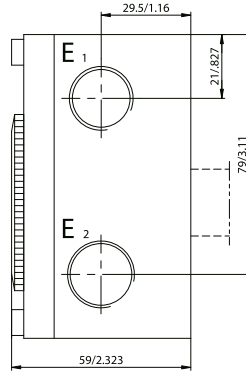
Example
 F5ISNU-MEC420-00-PV9DA-Z

(*For 30, 45, 60 deg rotation, change PV9 to PV3, PV4 or PV6 D=direct, R=reverse, A=arrow indicator, B=blind, H=dome)

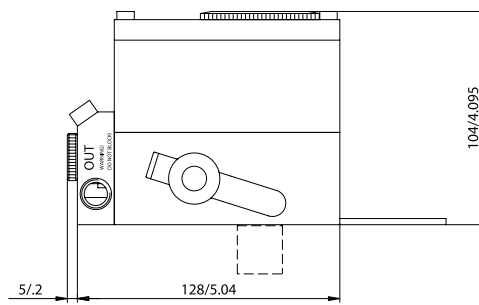
Dimensions drawings (mm)



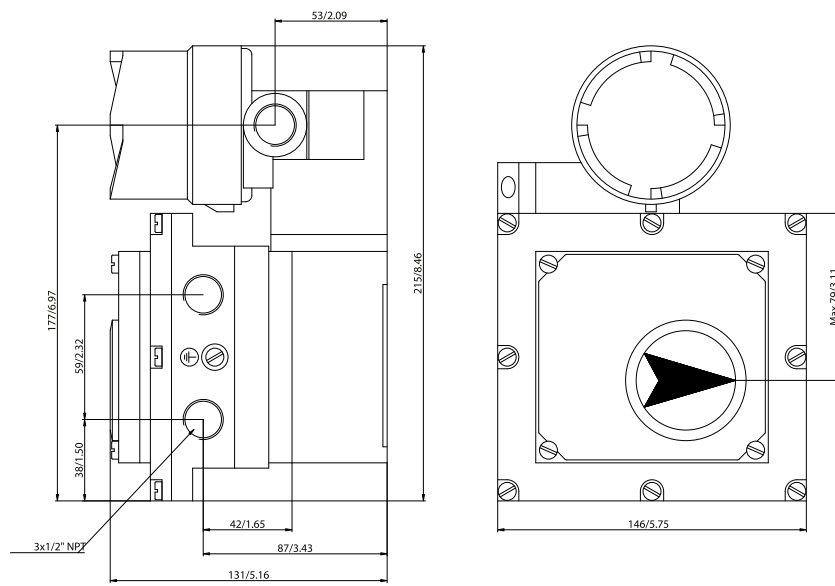
F5



F5 with Dome H5



F5 on EP5



F5EX on EP5EX




p/n: FCD PMENBR0005-03




Hazardous Locations



Intrinsically safe:

ATEX  II 1 G, EEx ia IIC T4 LCIE 95.D6 IIIX CSA, FM Class 1, Div 1, Group C, D T3C ATEX

Explosion proof:

ATEX  II 1 G, EEx d IIB+H2, T4-T6 LCIE 97.D6140 IIIX CSA, FM Div 1, Class 1, 2 & 3 Group BCDEFG T4-T6, ATEX

Flowserve Corporation has established industry leadership in the design and manufacture of its products. When properly selected, this Flowserve product is designed to perform its intended function safely during its useful life. However, the purchaser or user of Flowserve products should be aware that Flowserve products might be used in numerous applications under a wide variety of industrial service conditions. Although Flowserve can (and often does) provide general guidelines, it cannot provide specific data and warnings for all possible applications. The purchaser/user must therefore assume the ultimate responsibility for the proper sizing and selection, installation, operation, and maintenance of Flowserve products. The purchaser/user should read and understand the Installation and Maintenance (I & M) instructions included with the product, and train its employees and contractors in the safe use of Flowserve products in connection with the specific application.

While the information and specifications contained in this literature are believed to be accurate, they are supplied for informative purposes only and should not be considered certified or as a guarantee of satisfactory results by reliance thereon. Nothing contained herein is to be construed as a warranty or guarantee, express or implied, regarding any matter with respect to this product. Because Flowserve is continually improving and upgrading its product design, the specifications, dimensions and information contained herein are subject to change without notice. Should any question arise concerning these provisions, the purchaser/user should contact Flowserve Corporation at any one of its worldwide operations or offices.

©2008 Flowserve Corporation, Irving, Texas, USA. Flowserve and PMV are registered trademarks of Flowserve Corporation.

Palmstierna International AB
Korta Gatan 9
SE-171 54 Solna
SWEDEN
Tel: +46 (0) 8 555 106 00
Fax: +46 (0) 8 555 106 01
E-mail: infopmv@flowserve.com

Italy
Flowserve Spa
Via Prealpi, 30
20032 Cormano (Milano)
ITALY
Tel: +39 (0) 2 663 251
Fax: +39 (0) 2 615 18 63
E-mail: infoitaly@flowserve.com

USA, Mexico
PMV-USA
14219 Westfair West Drive
Houston, TX 77041
USA
Tel: +1 281 671 9209
Fax: +1 281 671 9268
E-mail: pmvusa@flowserve.com

Asia Pacific Headquarters
Flowserve Pte Ltd.
No. 12 Tuas Avenue 20
REPUBLIC OF SINGAPORE 638824
Tel: +65 (0) 687 98900
Fax: +65 (0) 686 24940
E-mail: fcdasiaprocess@flowserve.com

South Africa
Flowserve
Unit 1, 12 Director Road
Spartan Ext. 2
1613 Kempton Park, Gauteng
SOUTH AFRICA
Tel: +27 (0) 11 397 3150
Fax: +27 (0) 11 397 5300

The Netherlands
Fabromatic BV
Rechtzaad 17
4703 RC Roosendaal
THE NETHERLANDS
Tel: +31 (0) 30 6771946
Fax: +27 (0) 30 6772471
E-mail: fcbinfo@flowserve.com

China
Flowserve
Hanwei Building
No. 7 Guanghua Road
Chao Yang District
100004 Beijing
CHINA
Tel: +86 (10) 6561 1900
Fax: +86 (10) 6561 1899

www.pmv.nu