



PMV F5 Feedback unit

Product Information



For position feedback, the F5 unit offers the ability to very simply add switches (mechanical or proximity), a potentiometer or a 4–20 mA transmitter to the P5/EP5 base pneumatic positioner. The modular housing needs no special mounting pieces and is O-ring sealed. LED lights assist in the setting of the transmitter. The cam and spindle are not splined, so true 100% resolution is achieved – an important feature when used on control valves.

F5/F5-EX

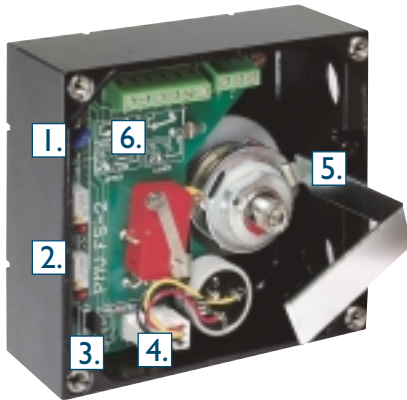


- Mounts on P5/EP5 without additional mounting bracket.
- Bright visible, flat or dome position indicator.
- Easy to set stepless cams – 100% resolution.
- Switches, mechanical or proximity, Namur sensors.

- Potentiometer or 4–20 mA position transmitter.
- Sturdy, reliable and simple design.
- Explosion proof or intrinsically safe enclosure.

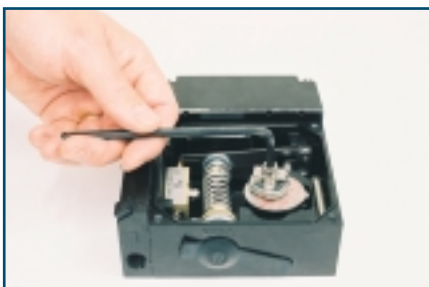


Simple Handling



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

Easy to install



Install coupling



Place F5 unit on top, tighten screws



Install indicator and cover

General

Conduit entries	2x1/2 NPT or 2xPG 13.5 (M20)
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 250VAC

NAMUR sensors

Type	Proximity DIN 19234 NAMUR
Load Current	≤ 1mA ≥ 3 mA
Voltage range	5-25VDC
Hysteresis	0,2%
Temp	-20°C to 85°C (-4°F to 185°F)

Proximity switches

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

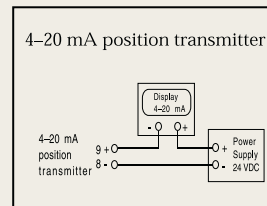
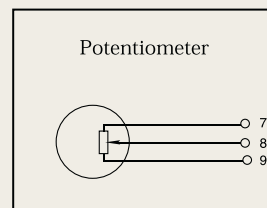
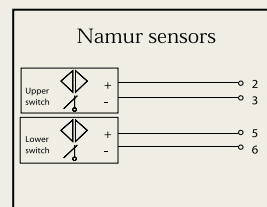
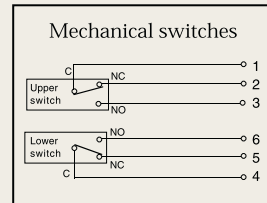
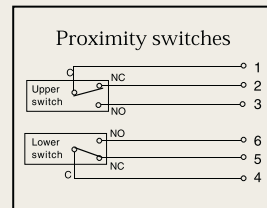
Potentiometer

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

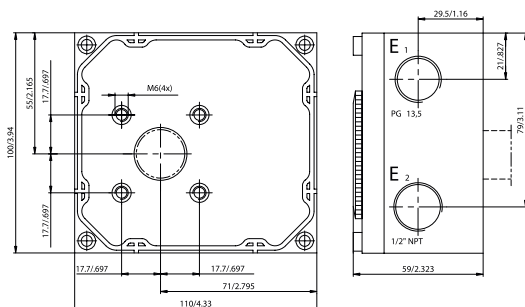
4-20 mA position transmitter

Power supply	Max. 28 VDC
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 24VDC

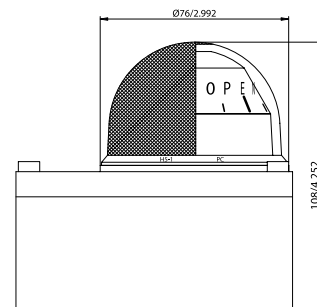
* Not NAMUR sensors



Dimension drawings

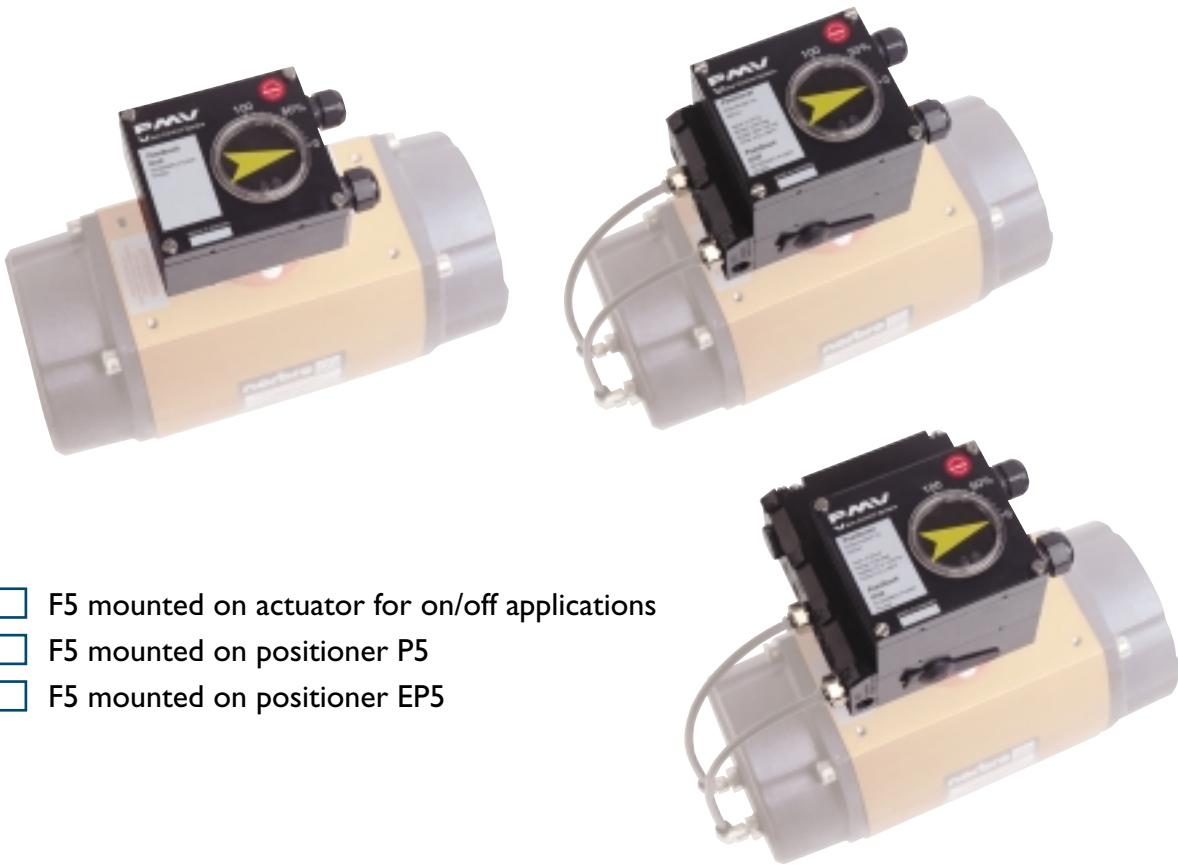


F5



F5 with Dome H5

Modular



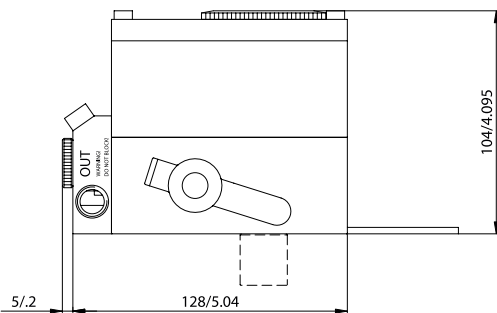
- F5 mounted on actuator for on/off applications
- F5 mounted on positioner P5
- F5 mounted on positioner EP5

Hazardous Locations

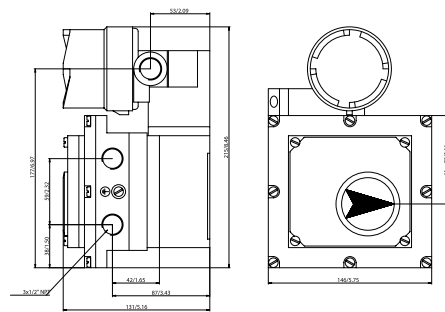
Intrinsically safe: Cenelec EEx ia IIC T4 LCIE 95.D6 III X
CSA, FM Class I, Div I, Group C, D T3C

Explosion proof: Cenelec EEx d IIB+H₂, T4-T6 LCIE 97.D6 I 40 III X
CSA, FM Div I, Class I, 2 & 3 Group BCDEFG T4-T6

ATEX pending



F5 on EP5



F5EX on EP5EX

How to order

Mark your choice

1. Model	F5G	P5 with PG13.5 connections	<input type="checkbox"/>
	F5N	P5 with NPT 1/4" connections	<input type="checkbox"/>
2. Surface treatment	U	Epoxy, ED	<input type="checkbox"/>
	M	Tufram	<input type="checkbox"/>
3. Switches	MEC	2 x SPDT switches	<input type="checkbox"/>
	NAM	2 x Namur sensors	<input type="checkbox"/>
	PXY	2 x Proximity switches	<input type="checkbox"/>
4. Feedback	XXX	None	<input type="checkbox"/>
	POT	Potentiometer 5 kOhm	<input type="checkbox"/>
	PIK	Potentiometer 1 kOhm	<input type="checkbox"/>
	P18	Potentiometer 180 deg	<input type="checkbox"/>
	420	4-20 mA transmitter	<input type="checkbox"/>
	T18	4-20 mA transmitter, 180 deg	<input type="checkbox"/>
	T27	4-20 mA transmitter, 270 deg	<input type="checkbox"/>
5. Spindle	00	Drive coupling for P5/EP5	<input type="checkbox"/>
6. Seals	N	Nitrile, NBR	<input type="checkbox"/>
	Q	Silicon, Q	<input type="checkbox"/>

1. Model	F5IS	F5 Intrinsically safe	<input type="checkbox"/>
	F5EX	F5 Explosion proof	<input type="checkbox"/>
2. Electrical connections	G	PG13.5, Not F5EX	<input type="checkbox"/>
	N	1/4" NPT	<input type="checkbox"/>
3. Surface treatment	U	Epoxy, ED	<input type="checkbox"/>
	M	Tufram	<input type="checkbox"/>
4. Switches	MEC	2 x SPDT switches	<input type="checkbox"/>
	NAM	2 x Namur sensors	<input type="checkbox"/>
	PXY	2 x Proximity switches	<input type="checkbox"/>
5. Feedback	XXX	None	<input type="checkbox"/>
	POT	Potentiometer 5 kOhm	<input type="checkbox"/>
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	P18	Potentiometer 180 deg	<input type="checkbox"/>
	420	4-20 mA transmitter	<input type="checkbox"/>
	T18	4-20 mA transmitter, 180 deg	<input type="checkbox"/>
	T27	4-20 mA transmitter, 270 deg	<input type="checkbox"/>
6. Spindle	00	Drive coupling for P5/EP5	<input type="checkbox"/>
	23	01 to 35, See dwg SPNDLS_P5	<input type="checkbox"/>
7. Frontcover, indicator	PV9DA*	90 deg, direct arrow indicator	<input type="checkbox"/>
	PV3RH*	30 deg, reverse, Dome indicator	<input type="checkbox"/>
8. Seals	N	Nitrile, NBR	<input type="checkbox"/>
	Q	Silicon, Q	<input type="checkbox"/>

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

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