

# EP5 Fail Freeze



## Description

EP5 Fail Freeze offers enhanced system safety gained from its fail freeze characteristic.

In the event that the 4-20 mA input signal is lost, EP5 Fail Freeze will fail in place.

The unit is loop powered and needs no additional power supply.

It features a rugged design, high gain, high capacity gold plated spool valve, external zero adjustment, gauge ports, replaceable filter, tapped exhaust port, all in an IP65/NEMA 4 enclosure.



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Additional capabilities include the direct mounting of a sealed feedback unit, F5, with the ability to include switches, position transmitter or a potentiometer. The F5 mounts on top of the EP5 Fail Freeze requiring no additional brackets or linkage.

PMV also offers a wide range of mounting kits, cams and accessories, to easily customize the EP5 Fail Freeze to fit your application.

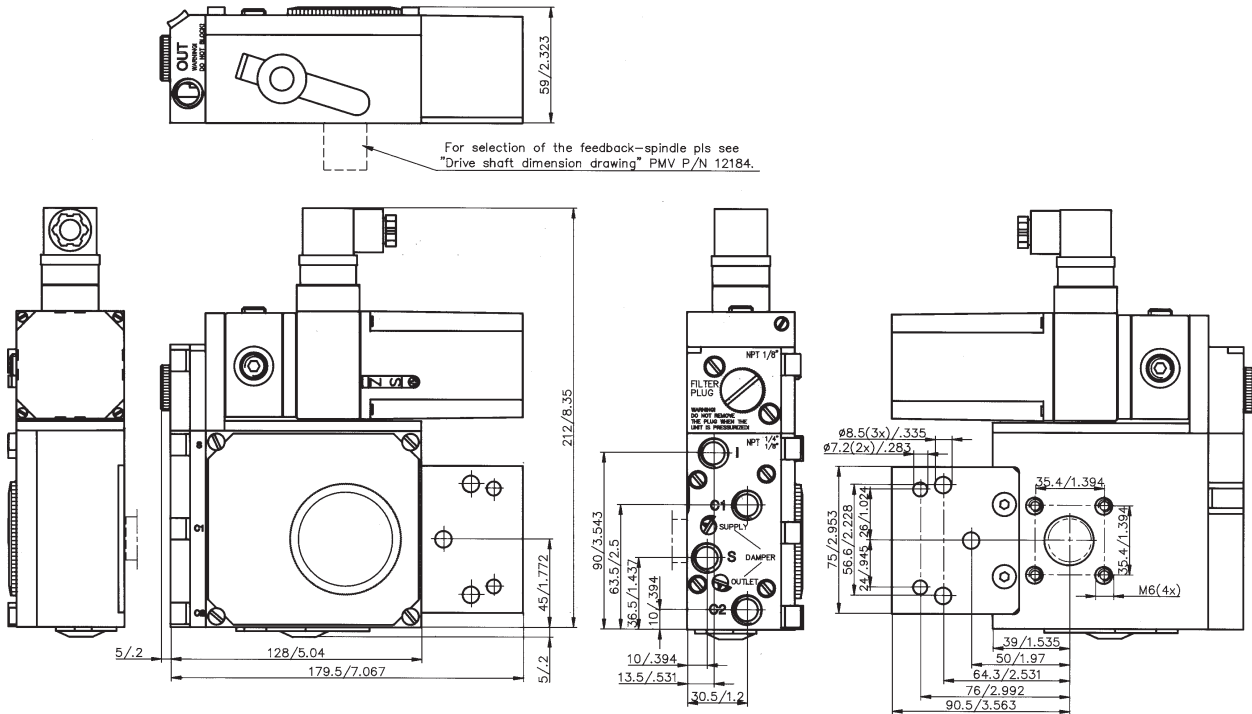
## Options

- 1/2" NPT conduit connection
- H5, Dome style indicator
- F5 Feedback Unit

## Technical Specifications:

|                        |   |  |
|------------------------|---|--|
| Input signal           | 4-20 mA two wire  |  |
| Air supply             | 1,5 - 7 bar (20-100 Psi) Oil free, dry air filtered to 5 microns  |  |
| Air connections        | 1/4" NPT or G   |  |
| Gauge connections      | 1/8" NPT or G   |  |
| Electrical connections | DIN 43650, 30 mm square connector (standard) or 1/2" NPT  |  |
| Linearity              | ≤ 1,5%  |  |
| Repeatability          | ≤ 0,5%  |  |
| Hysteresis + deadband  | ≤ 1%  |  |
| Gain factor            | Min. 66%/ % ISA S75.13-1989<br>Min. 1000 kPa/kPa at 20% load  |  |
| Air delivery capacity  | 200nl/ min (6,9 SCFM) at 0,2 MPa/29 Psi<br>370 nl/ min (12,8 SCFM) at 0,4 MPa/58 Psi<br>540 nl/ min (18,8 SCFM) at 0,6 MPa/87 Psi   | Low Bleed<br>156 nl/ min (0,62 SCFM)<br>288 nl/ min (0,62 SCFM)<br>421 nl/ min (0,62 SCFM) |
| Air consumption        | 6,1 nl/ min (0,22 SCFM) at 0,2 MPa/29 Psi<br>13,6 nl/ min (0,48 SCFM) at 0,4 Mpa/58 Psi<br>22 nl/ min (0,78 SCFM) at 0,6 MPa/87 Psi | 2,7 nl/ min (0,1 SCFM)<br>6,1 nl/ min (0,21 SCFM)<br>9.9 nl/ min (0,35 SCFM)               |
| Supply pressure effect | 0,1% /0,1 MPa (15 Psi)  |  |
| Voltage drop           | 5,5 - 6 Volts   |  |
| Position sensitivity   | None  |  |
| Fail freeze level      | Input signal < 2 mA (+0,5 mA)   |  |
| Fail freeze drift rate | +2% setpoint/hour at constant temp  |  |
| EMC                    | BSEN 50081-2:1994 & BSEN 50082-2:1995   |  |
| Temp range             | -20° to 70C° (-4° to 158°F)   |  |
| Materials              | Die cast aluminium, Zinc, Nylon, Stainless steel  |  |
| Surface treatment      | Epoxy coating, black  |  |
| Ingress protection     | IP65/NEMA 4   |  |
| Weight                 | 2,4 kg (5,3 lbs)  |  |

# Dimensional Drawing, EP5 Fail Freeze



## Ordering Information

|                      |          |   |
|----------------------|----------|---|
| 1. Model             | EP5FS    | EP5 fail freeze                           |
| 2. Spool valve       | HP or LB | High Performance or Low bleed             |
| 3. Air connection    | N or G   | NPT 1/4" or G 1/4"                        |
| 4. Surface treatment | U        | Epoxy coating                             |
| 5. Spindle           | 01       | 01 to 35 See dwg SPNDLSP5                 |
| 6. Cam               | K01      | K01 to K17, K01 = linear 90 deg, standard |
| 7. Front over        | PV9DA    | 90 deg*, direct, arrow indicator          |
| 8. Input signal      | 4        | 4-20 mA input                             |
| 9. Temperature       | Z        | Nitrile seals -20 °C                      |

\* For 30, 45 and 60 deg rotation, change PV9 to PV3, PV4 or PV6.

Example: EP5F5HPNU-23K01-PV9DA-4Z  
 1 2 3 4 5 6 7 8 9



Palmstiernas Instrument AB  
 Tulegatan 15  
 SE-113 53 Stockholm  
 SWEDEN  
 Tel: +46 (0) 8 555 106 00  
 Fax: +46 (0) 8 555 106 01  
 E-mail: info@pmvpositioners.com  
 Internet: www.pmvpositioners.com

### SUBSIDIARIES:

PMV Controls Ltd  
 Headlands Business Park  
 Ringwood  
 Hampshire BH24 3PB  
 ENGLAND  
 Tel: +44 (0) 1425 48 08 88  
 Fax: +44 (0) 1425 48 08 89  
 E-mail: sales@pmv-controls.ltd.uk

PMV-USA, Inc  
 1440 Lake Front Circle  
 Unit 160  
 The Woodlands, Texas 77380  
 USA  
 Tel: +1 281 292 7500  
 Fax: +1 281 292 7760  
 E-mail: pmvusa@pmvusa.com  
 Internet: www.pmvusa.com

PMV GmbH  
 Postfach 2310  
 D-41554 Kaarst  
 GERMANY  
 Tel: +49 2131 667 081/82  
 Fax: +49 2131 667 083  
 E-mail: hs.pmv@ambos.co.at

Palmstiernas Svenska AB  
 Box 21  
 S-663 21 Skoghall  
 SWEDEN  
 Tel: +46 (0) 54 52 14 70  
 Fax: +46 (0) 54 52 14 42  
 E-mail: info@palmstiernas.se  
 Internet: www.palmstiernas.se



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