

# PMV PS/PM Series UltraSwitch™

Switchbox

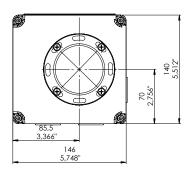


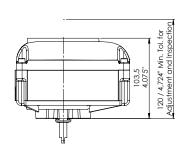


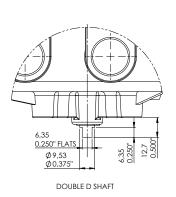
# Cover Options

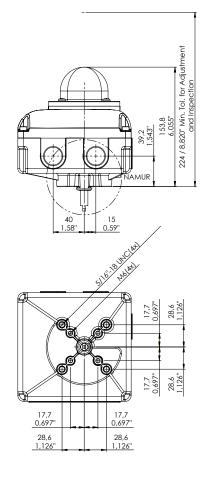


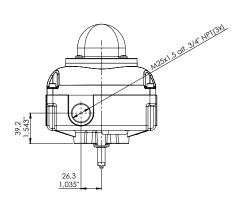
## **Dimensions PS/PM (mm/inch)**

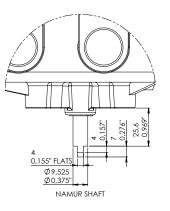














# Simple Reliable Rugged



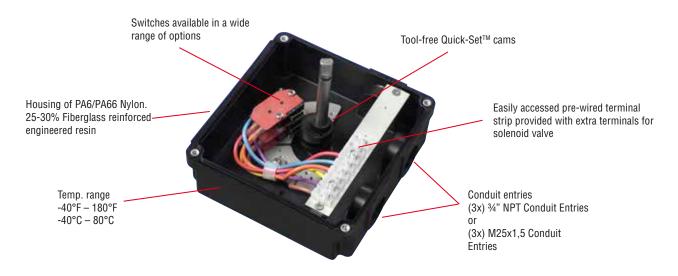
The PS/PM Series UltraSwitch™ provides accurate & reliable position signaling in harsh corrosive environments. The engineered resin enclosure is provided with multiple switch options. An UltraDome™ indicator for visual position indication is standard with optional flat top for lower profile. It is designed to be directly and easily mounted onto actuators for both rotary and linear indication. It may also be used as a junction box for direct connection of solenoid valves.

With a housing of high strength and corrosion resistant fiberglass reinforced engineered resin, Nylon PA6/PA66, and pre-wired switches, it is both easy to install and withstands the toughest corrosive environments. Nylon PA6/PA66 is used in a number of different high strength, abrasion and impact resistant thermoplastic polyamide formulations. It offers excellent chemical resistance to common chemicals such as solvents, bases and salts. Designed to meet IP66/NEMA 4/4X standards, the PS/PM UltraSwitch™ is certified for both Intrinsically Safe and Non-Incendive hazardous locations.

#### Typical applications / Industries suitable for the PS/PM-Series UltraSwitch™ are:

- · Chemical & Petrochemical
- Food & Beverage
- Municipal & Wastewater
- Pharmaceutical
- Power

#### **Features**







Mounted on rotary actuator



Mounted on linear actuator

## PS/PM-Series UltraSwitch™ Nomenclature

A. Manufacturer B. Shaft	PM N	PMV NAMUR VDI/VDE 3845
C. Connections (cable entry)	D PS PM	Double D 1/4" Engineered Resing Housing 3 x 3/4 NPT Engineered Resing Housing 3 x M25x1,5
D. Indicator option  E. Switch quantity	1 U 3 C D E F H K R W X	Flat cover without indicator Standard UltraDome™ red/green 4 Window UltraDome™ 90 deg 3-way UltraDome™ 180 deg 3-way UltraDome™ 180 deg 3-way Centre-blocked UltraDome™ 120 deg Thru/Divert UltraDome™ Black/yellow UltraDome™ Ektar UltraDome™ (red/green) Reverse UltraDome™ (red=open / green=closed) White/blue UltraDome™ 180 deg 3-way UltraDome™ (white/blue) 2 Switches
E. Switch quantity	4	4 Switches
F. Switch options	options	See page 4 for switch options
G. Certificate*	14 15 21 27 28	General Purpose ATEX II 1G Ex ia IIC T4/T5/T6 IEC Ex ia IIC T4/T5/T6 FM IS CI. 1 Div. 1 Grp. A,B,C,D; T4
H. Analog output	0 T D A	None 4-20 mA transmitter 180 deg 4-20 mA transmitter 0-1 kOhm Potentiometer
I. Wiring options	0 1 2 3 4 H	None Brad Harrison Connectors - 3 pins Brad Harrison Connectors - 5 pins Brad Harrison Connectors - 7 pins Weidmüller Plintrad special AKZ 2,5 Heavy Duty Terminal Block
J. Minimum extra terminals	2 4 6 8	2 Open Terminal Locations (Standard) 4 Open Terminal Locations (2 SPST switches) 6 Open Terminal Locations (2 SPDT switches) 8 Open Terminal Locations (2 or 4 SPST switches)
K. Special options	0 V	None Viton O-rings

#### Example

PM	N PS	U	2	M 1	-	15	-	0	0	2	0	
----	------	---	---	-----	---	----	---	---	---	---	---	--

<sup>\*</sup> See switch option data

# Switches Data Materials of construction



# **Switch Options**

Code	Cert.	Switch Option	Manufacturer	Load Capacity
M1	-	M1 – SPDT Mechanical	Honeywell MicroSwitch	15A @ 125/250 VAC; 0,5A @ 125 VDC; 0,25A @ 250VDC; 5A @ 120VAC
MG	3	MG – SPDT Gold Mechanical	Honeywell MicroSwitch	1A @ 125 VAC; 50 mA @ 24 VDC
MA	-	MA – 3-Position Control	Honeywell MicroSwitch	15A @ 125 VAC; 0,5A @ 125 VDC; 0,25A @ 250VDC; 5A @ 120VAC
M3	-	M3 – DPDT Mechanical	Cherry	15A @ 125/250 VAC
MB	-	MB – DPDT Mechanical	Licon	10A @ 125 VAC
MD	-	MD – 3-Pos. Control w/Indication (DA)	Licon	10A @ 125 VAC
MS	-	MS – 3-Pos. Control w/Indication (SR)	Licon	10A @ 125 VAC
P4	3	P4 – SPST Proximity	Aleph	0.35A @ 140 VAC; 0.25A @ 200VDC (50 W Max.)
P5	3	P5 – SPDT Proximity	Hamlin	0.25A @ 120 VAC; 0.25A @ 28 VDC (3 W Max.)
PE	3	PE – SPDT Sabre Proximity	Flowserve	1A @ 120 VAC; 2A @ 24 VDC
PP	3	PP – SPDT Phazer Proximity	Flowserve	3A @ 120 VAC; 2A @ 24 VDC
PL	3	PL – SPDT Phazer w/LED	Flowserve	0.5A @ 120 VAC; 0.3A @ 24 VDC
PT	3	PT – SPST BRS Proximity	Flowserve	3A @ 120 VAC; 0.5 @ 24 VDC
PX	3	PX – SPST BRS w/LED	Flowserve	0.5A @ 120 VAC; 0.3A @ 24 VDC
N8	3	N8 – Solid State Proximity	PF NJ2 V3 N	NAMUR NC Sensor; 8 VDC
NP	3	NP – Solid State Proximity	PF SJ3.5-N	NAMUR Sensor Output; 5-25 VDC Supply
NQ	3	NQ - Solid State Proximity	PF NJ4-12GK-N	NAMUR NC Sensor; 8 VDC
NR	3	NR – Solid State Proximity	PF NJ4-12GM40-E1	PNP Sinking; 200 mA max. Current; 10-60 VDC
NS	3	NS – Solid State Proximity	PF NJ4-12GM40-E2	NPN Sourcing; 200 mA max. Current; 10-60 VDC
NT	-	NT – Solid State Proximity	PF NJ4-12GK40-E2	NPN Sourcing; 200 mA max. Current; 10-60 VDC
N9	3	N9 – Solid State Proximity	PF NBB3-V3-Z4	NPN Sourcing; 100 mA max. Current; 5-60 VDC

#### Certificates

- = General Purpose  $\mathbf{1}$  = ATEX II 1G Ex ia IIC T4/T5/T6  $\mathbf{2}$  = IEC Ex ia IIC T4/T5/T6  $\mathbf{3}$  = 1+2

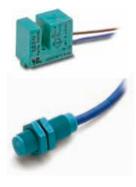






# **Data/Materials**

Data	
Ingress protection	IP 66, according to EN 60529
Weight	1 kg / 2,2 lbs
Part	Material
Housing/Cover	PA6/PA66 Nylon. 25-30% Fiberglass filled engineered resin
Shaft	Stainless Steel
Cams/Splines	Nylon
Terminal Block	Nylon – Buchanan TBS Series
Internal Brackets	Stainless Steel or Plated Steel
All Internal Fasteners	Stainless Steel or Plated Steel
All External Fasteners	Stainless Steel
All Molded in Fasteners	Anodized Aluminum
UltraDome	Polycarbonate
Rotor	Polycarbonate









#### To find your local Flowserve representative:

For more information about Flowserve Corporation, visit flowsreve.com

Hazardous Locations  $\langle \xi_{\mathsf{X}} \rangle$ 



IECEx NEM 11.0012X Ex ia IIC T4/T5/T6 Nemko II ATEX1065X ⟨Ex⟩ II 1G Ex ia IIC T4/T5/T6 FM IS CI. 1 Div. 1 Grp. A,B,C,D; T4 IP66/Nema 4/4x

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 onlyand should not be considered certified or as a guarantee of satisfactory results by reliance thereon. Nothing contained herein is to be construedas a warranty or guarantee, express or implied, regarding any matter with respect to this product. Because Flowserve is continually improving andupgrading 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.

©2012 Flowserve Corporation, Irving, Texas, USA, Flowserve and PMV are registered trademarks of Flowserve Corporation

#### **PMV Automation 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

#### Germany

Flowserve Flow Control GmbH Rudolf-Plank Strasse 2 D-76275 Ettlingen GERMANY Tel: +49 (0) 7243 103 0 Fax: +49 (0) 7243 103 222 E-mail: argus@flowserve.com

Flowserve Flow Control Burrell Road, Haywards Heath West Sussex RH16 1TL Phone: +44(0)1444 314400 E-mail: pmvuksales@flowserve.com

#### Italy

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

#### USA. Mexico

14219 Westfair West Drive Houston, TX 77041, USA Tel: +1 281 671 9209 Fax: +1 281 671 9268 E-mail: pmvsales@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

#### The Netherlands

Flowserve Flow Control Benelux Rechtzaad 17 4703 RC Roosendaal THE NETHERLANDS Tel: +31 (0) 30 6771946 Fax: +27 (0) 30 6772471 E-mail: fcbinfo@flowserve.com

flowserve com