FLOWSERVE

PMV DS/DM Series UltraSwitch™

Switch box

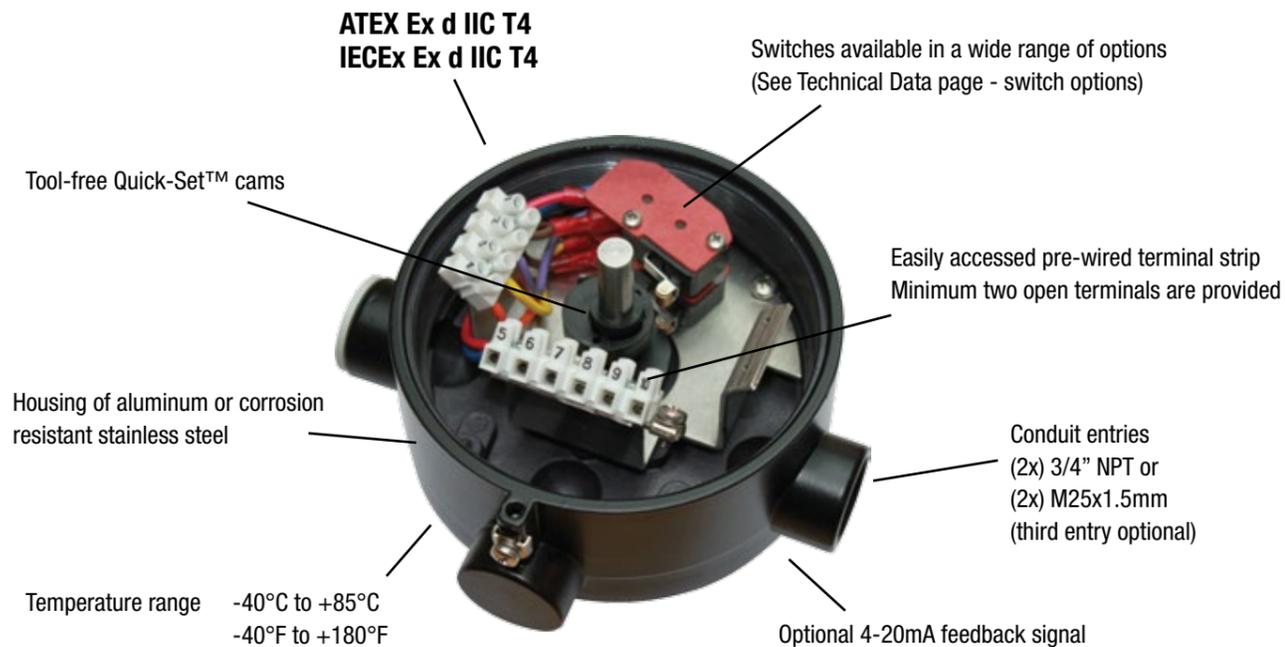*Experience In Motion*

Features

DS/DM Series Ultraswitch™

Description

The DS/DM Series UltraSwich™ provides cost efficient, accurate and reliable position signaling for hazardous locations. The sturdy enclosure is offered in aluminum or corrosion resistant stainless steel and is provided with multiple switch options. An external indicator is available.

The DS/DM 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. Minimum two open terminals are always provided.

Its compact housing has multiple mounting possibilities, up to three conduit entries and pre-wired switches to enable easy installation. It is designed to meet IP66 and NEMA Type 4X standards and is offered for general purpose/weather proof and for explosion proof hazardous locations.

Features and Benefits

ATEX Ex d IIC T4
IECEx Ex d IIC T4

Switches available in a wide range of options
(See Technical Data page - switch options)

Tool-free Quick-Set™ cams

Easily accessed pre-wired terminal strip
Minimum two open terminals are provided

Housing of aluminum or corrosion resistant stainless steel

Conduit entries
(2x) 3/4" NPT or
(2x) M25x1.5mm
(third entry optional)

Temperature range   -40°C to +85°C
-40°F to +180°F

Optional 4-20mA feedback signal

Hazardous Locations Approvals

Typical applications / industries suitable for the DS/DM-Series UltraSwitch™ are:

- Chemical
- Oil & Gas
- Pharmaceutical
- Offshore

Hazardous locations approvals and communication

Explosion proof:

Approvals for   ATEX Ex d IIC T4.

IECEx Ex d IIC T4

AS-Interface (AS-i)

The DS/DM-series can be equipped with optional AS-i communication capabilities. This technology offers a very simple, flexible and cost efficient network system.
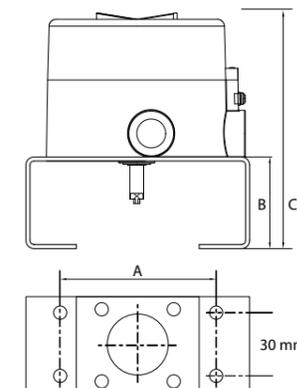
Mounting options and visual indication

NAMUR mounting kit
with Indicator

NAMUR mounting

Standard NAMUR EN15714 mounting kits are available for standard NAMUR shafts. Available for 80x30 and 130x30 actuator top patterns with an actuator shaft height of 20, 30 or 50 mm. For linear applications the optional "L" shaft can be ordered. Visual indicator also shown.

Mounting kit NAMUR p/n	23648	23649	23650
A = Bolt pattern length (mm)	80	80	130
B = Bracket height (mm)	45	55	55
C = Height (mm)	145	155	155

30 mm

Housing

Technical Data

Aluminum or Stainless Steel housing

Powder Epoxy painted Aluminum housing

Base always black. Covers in black (standard), white or optional cover color on request

Corrosion free Stainless Steel housing

Unpainted stainless steel DIN 1.4408

Switch Options

Code	Switch Option	Manufacturer	Load Capacity
M1	SPDT Mechanical	Honeywell MicroSwitch	15A @ 125/250 VAC; 0,5A @ 125 VDC; 0,25A @ 250VDC; 5A @ 120VAC
MG	SPDT Gold Mechanical	Honeywell MicroSwitch	1A @ 125 VAC; 50 mA @ 24 VDC
MC	SPDT Mechanical	Honeywell MicroSwitch	Mechanical switch 250°F
F3	IF5250	IFM	10-36VDC NC PNP, 150mA, 3-wire NC
F5	IF6001	IFM	18-32VDC, NO PNP, 150mA@50 C
F6	IF6034	IFM	10-36VDC, NO PNP, 150mA, Stainless Steel
F7	IN0074	IFM	20-250 AC/DC NO, 350mA/100mA
F8	IN0081	IFM	20-250 AC/DC NO, 350mA/100mA w/LED
P4	SPST Proximity	Aleph	0.35A @ 140 VAC; 0.25A @ 200VDC (50 W Max.)
P5	SPDT Proximity	Hamlin	0.25A @ 120 VAC; 0.25A @ 28 VDC (3 W Max.)
PE	SPDT Sabre Proximity	Flowserve	1A @ 120 VAC; 1A @ 24 VDC
PP	SPDT Phazer Proximity	Flowserve	3A @ 120 VAC; 2A @ 24 VDC
PT	SPST BRS Proximity	Flowserve	3A @ 120 VAC; 0.5 @ 24 VDC
N3	Slotted NAMUR	PF SJ3.5-S1N	NAMUR NO 2-wire Safety function
N8	Solid State Proximity	PF NJ2 V3 N	NAMUR NC Sensor; 8 VDC
N9	Solid State Proximity	PF NBB3-V3-Z4	NPN Sourcing; 100 mA max. Current; 5-60 VDC
NP	Solid State Proximity	PF SJ3.5-N	NAMUR Sensor Output; 5-25 VDC Supply
NQ	Solid State Proximity	PF NJ4-12GK-N	NAMUR NC Sensor; 8 VDC
NR	Solid State Proximity	PF NJ4-12GM40-E1	PNP Sinking; 200 mA max. Current; 10-60 VDC
NS	Solid State Proximity	PF NJ4-12GM40-E2	NPN Sourcing; 200 mA max. Current; 10-60 VDC
NT	Solid State Proximity	PF NJ4-12GK40-E2	NPN Sourcing; 200 mA max. Current; 10-60 VDC
NW	Solid State Proximity	PF SJ3.5-SN	NAMUR NC Sensor; 8 VDC

More switch options available

Data/Materials

Data	
Ingress protection	IEC 529 IP 66
Weight Aluminum housing	1.8kg / 4 lbs
Weight Stainless Steel housing	3.5kg / 7.75 lbs

Part	Material
Housings & Covers	Powder epoxy painted Aluminum or Stainless Steel
Shaft	Stainless Steel
Cams/Splines	Nylon
Terminal Block	Nylon
Internal Brackets	Nylon, Aluminum or Stainless Steel
All External Fasteners	Stainless Steel
All Internal Fasteners	Stainless Steel
Indicator	Polyurethane
Label	Polyester or Stainless Steel

Certificate	
ATEX	II 2GD Ex d IIC T4 Gb Ex tb IIIC T113°C Db
IECEx	Ex d IIC T4 Gb Ex tb IIIC T113°C Db

DS/DM-Series Ultraswitch™ Switch box Nomenclature

A = **Product & Connections (cable entry)**
DS   Explosion proof / Flame proof switch box with 3/4" NPT cable entries
DM   Explosion proof / Flame proof switch box with M25x1,5 cable entries

B = **Number of open cable entries**
2   2 x open cable entries (standard)
3   3 x open cable entries (option)

C = **Housing material /Surface treatment**
B   Aluminum housing, polyester powdercoating, Black base & cover
W   Aluminum housing, polyester powdercoating, Black base & White cover
C   Aluminum housing, polyester powdercoating, Black base & Optional cover color
S   Stainless Steel housing

D = **Shaft**
D   Double 'D' Shaft 1/4"
N   Namur VDI/VDE 3845 Shaft (rotary actuators)
T   For NAF Turnex actuators
L   D style including nut for linear applications

E = **Indicator option**
0   No indicator
1   Indicator below switch box

F = **Qty of switches**
0   0 Switches
2   2 Switches
4   4 Switches

G = **Switch options - see page with switch options**

H = **Certificate**
14   General Purpose
19   ATEX II 2 GD Ex d IIC T4 Gb, Ex tb IIIC T113°C Db IP66, -40°C to +85°C
25   IEC Ex d IIC T4 Gb, Ex tb IIIC T113°C Db IP66, -40°C to +85°C

I = **Product approval marking**
0   Self-adhesive marking label, Polyester
M   Stainless steel marking plate

J = **Analog Output**
0   None
4   4-20mA transmitter **(G= none, M1 or MG only)**

K = **Terminal Options**
2   2 Extra open terminals (Standard)
4   4 Extra open terminals (Optional, not possible for all switch options)
6   6 Extra open terminals (Optional, not possible for all switch options)
8   8 Extra open terminals (Optional, not possible for all switch options)
H   Heavy Duty Terminal Block, 8 contact points.
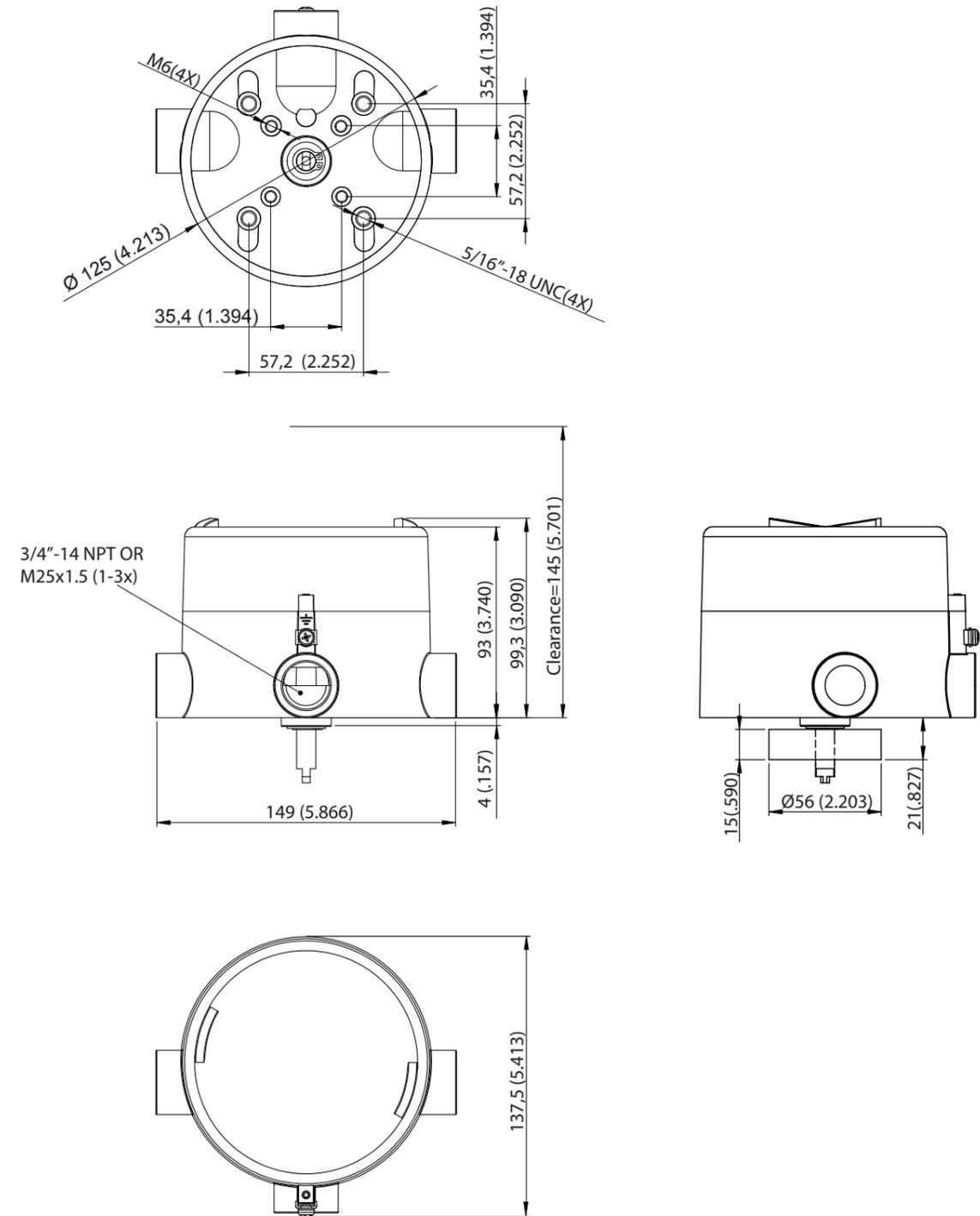
L = **Options/ Elastomers**
0   Nitrile O-rings
V   Viton O-rings
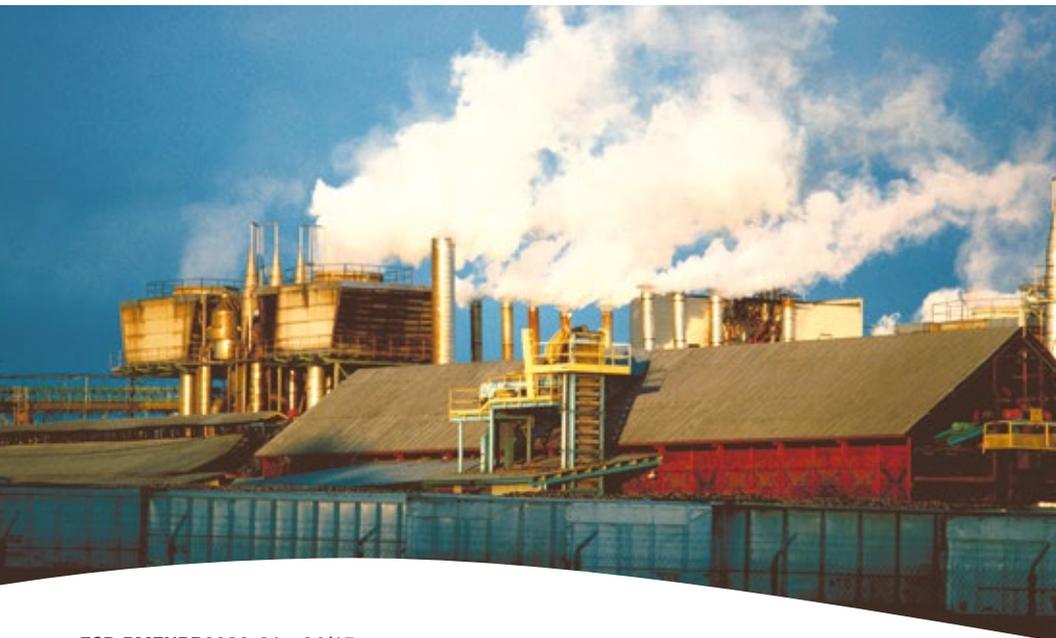
M = **Brand**
P   PMV

Ordering code example												
A	B	C	D	E	F	G		H		I	J	K	L	M
DS	2	B	N	1	2	MG	-	14	-	0	0	2	0	P

Explosion proof / Flame proof switch box with 3/4" NPT cable entries, 2 Cable entries, Aluminum housing, NAMUR
shaft, Indicator, 2 switches "MG", General purpose, label, No output, 2 Extra terminals, Nitrile O-rings, PMV Brand

Dimensions DS/DM (mm/Inch)

FCD PMENBR0020-01 - 04/15

To find your local Flowserve representative:

For more information about Flowserve Corporation,

visit flowserve.com

Hazardous Locations

ATEX	II 2GD ⟨Ex⟩ Ex d IIC T4 Gb
	⟨Ex⟩ Ex tb IIIC T113°C Db
IECEx	Ex d IIC T4 Gb
	Ex tb IIIC T113°C Db

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