



## *D30 Compact Digital Positioner*



*Experience In Motion*



## ***D30 Compact Digital Positioner***

### ***Description***

The PMV D30 Digital Positioner series offers intelligent and reliable valve control. Its compact modular design with a variety of mounting options makes it the perfect fit for controlling all major types of valve. It is available with 4-20 mA, Hart, Profibus and Fieldbus communication plus a range of optional integrated limit switches and continuous position feedback. Communication via DTM provides even more information from the process and enables convenient remote configuration of the device. A user friendly menu system with a graphics LCD plus LED indicators are available for local operation. Its housing is weatherproof in accordance with IP66 and remote mounting is possible for extreme conditions.

### ***Benefits***

- Reliable valve operation by robust and proven design
- Suits almost any control valve
- Very easy to install, configure and operate
- Suits small or large, rotary or linear valves
- Quick calibration and commissioning

### ***Features***

- Instant, accurate calibration by pushing two dedicated buttons simultaneously from any menu position
- Sturdy housing, robust large spool valve and proven digital technology ensure trouble free operation for many years, even when plant environments are very demanding
- The D30 suits rotary and linear valves as well as single and double acting actuators
- Combines high precision for small valves with very high air capacity to handle large valves
- ValveSight™ DTM based predictive valve diagnostics provides overview of valve health to help avoid unplanned stoppages and to reduce maintenance costs
- Scheduled or manual Partial Stroke Testing to ensure/validate On/Off applications can open or close valves when required
- A wide range of spindle shafts and mounting kits available
- The spindle shaft is preloaded to eliminate play in the feedback mechanism
- Graphics LCD, three status LEDs and intuitive multi-language menu system

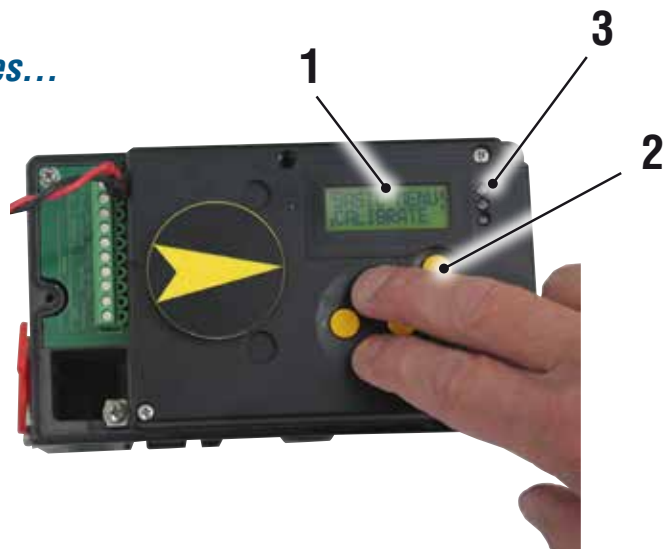
### ***Options***

- Plug-in limit switches and 4-20 mA transmitter
- Hart, Profibus PA or Foundation Fieldbus
- Add-on gaugeblock
- Dome indicator
- Plug-in pressure sensors for diagnostics with ValveSight®
- Remote or integrated mounting



*The D30 is up and running in minutes...*

1. LCD with 5 buttons for simple menu navigation.
2. Push 2 buttons simultaneously to perform instant, accurate calibration.
3. Green, yellow, red LEDs providing instant indication of normal operation, fully open/closed valve cut off or alarm at a glance.



*...on any valve*



**Mounting options include brackets and direct mounting for rotary and linear applications**



## The D30 Helps Maximize Plant Uptime

The ValveSight™ predictive diagnostics system provides a dashboard for two way communication between the valve and the operator. It taps into the valve and lets plant staff know not only detailed current status of the valve equipment but also provides indications on what is about to happen to help avoid unplanned stoppages of the plant.

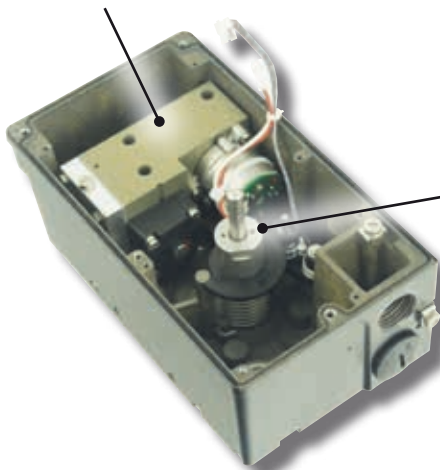
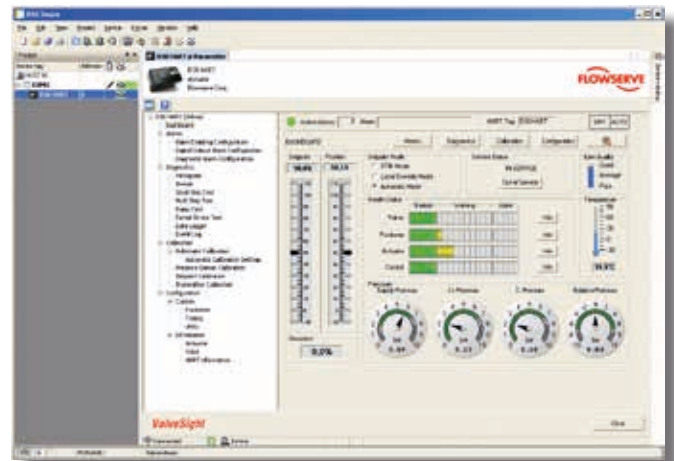
### ValveSight provides:

- Online and offline diagnostics of valve, actuator and positioner
- Alarms explained in plain English
- Health bars which assist in predicting repairs as well as plan maintenance to minimize costly process downtime
- Graphs presenting trends of key valve health parameters
- PST (partial stroke) – scheduled automatic tests or manual
- Alarm limits are easily customized

The D30 can be set up and communicate in several ways including:

- Locally at the valve via an intuitive menu system in the D30 graphics display
- Locally by using a Hart handheld device
- Remotely or locally via the ValveSight™ DTM using a PC (shown)

Large robust spool valve for single acting and double acting applications. Very high air capacity combined with unique intelligent control algorithm ensure accurate and responsive control of all valves regardless of size and actuator type.



- To simplify installation, the spindle shaft has a friction clutch which means easier commissioning and no possibility of breaking the feedback mechanism
- Torsional play in the valve position feedback mechanism is eliminated by a preloaded spring

## Technical data

### D30 Compact Digital Positioner

<b>Rotation angle</b>	min 2.5° max 100°
<b>Stroke</b>	From 5 mm (0.2")
<b>Input signal</b>	4-20 mA DC
<b>Air supply</b>	1.4-8 bar (20-115 psi) DIN/ISO 8573-1 3.2.3 Free from oil, water and moisture.
<b>Air delivery</b>	Up to 760 nl/min @ 6 bar (29.3 scfm @ 87 psi)
<b>Air consumption</b>	8 nl/min @ 6 bar (0.31 scfm @ 87 psi)
<b>Air connections</b>	¼" G or NPT
<b>Cable entry</b>	2x M20x1.5 or ½" NPT
<b>Electrical connections</b>	Screw terminals 2.5 mm <sup>2</sup> /AWG14
<b>Linearity</b>	<0.4%
<b>Repeatability</b>	<0.5%
<b>Hysteresis</b>	<0.3%
<b>Dead band</b>	0.1-10% adjustable
<b>Display</b>	Graphic, view area 15 x 41 mm (0.6 x 1.6")
<b>UI</b>	5 push buttons
<b>CE directives</b>	93/68EEC, 89/336/EEC, 92 /31/EEC
<b>Voltage drop, w/o HART</b>	8 V
<b>Voltage drop, with HART</b>	9.4 V
<b>Vibrations</b>	< 0.25% FS 10-500 Hz 2g max
<b>Enclosure</b>	IP66
<b>Material</b>	Die-cast Aluminum
<b>Surface treatment</b>	Powder epoxy
<b>Temperature range</b>	-40°C to +80°C (-40°F to 176°F)
<b>Weight</b>	1.8 kg (4 lbs)
<b>Mounting position</b>	Any
<b>Communication protocols</b>	Hart Profibus PA Foundation Fieldbus

### Optional plug-in modules

Mechanical switches	
Type	SPDT
Size	Sub miniature
Rating	3 A/125 VAC / 2 A/30 VDC
Temperature range	-30°C to 80°C (-22°F to 180°F)

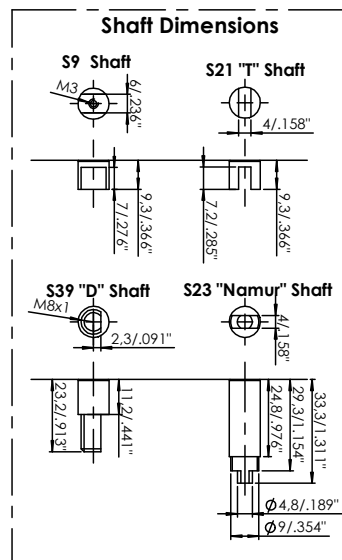
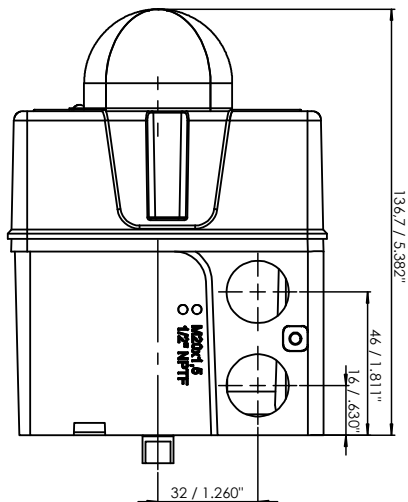
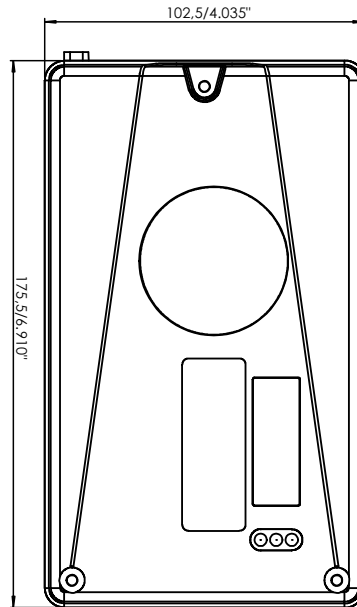
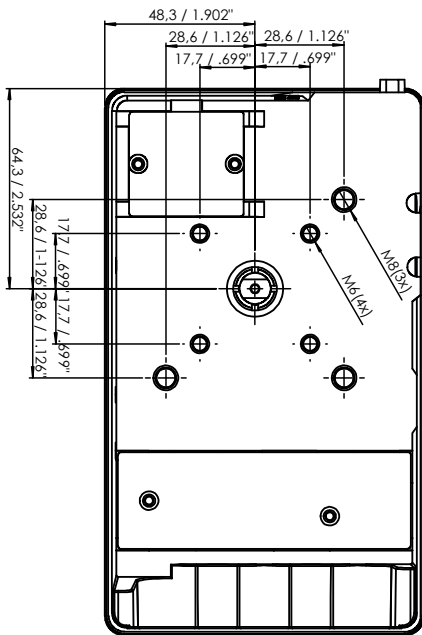
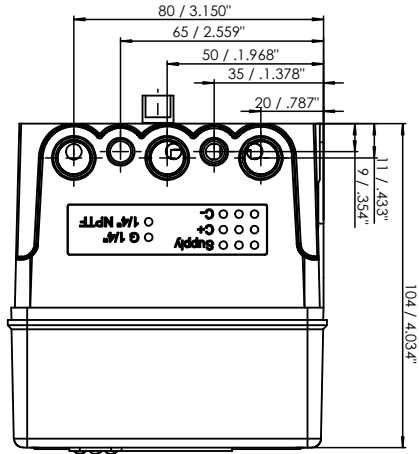
NAMUR sensors	
<b>(NJ2-V3-N)</b>	
Type	Proximity DIN EN 60947-5-6:2000
Load current	1 mA ≤ I ≤ 3 mA
Voltage range	8 VDC
Hysteresis	0.2%
Temperature range	-25°C to 85°C (-13°F to 185°F)

Proximity switches	
Type	SPDT
Rating	0.4 A @ 24 VDC, Max 10 W
Operating time	Max 1.0 ms
Max voltage	200 VDC
Contact resistance	0.2 Ω
Temperature range	-30°C to 80°C (-22°F to 180°F)

Slot NAMUR switches	
<b>(SJ2-S1N, SJ2-SN, SJ2-N)</b>	
Type	Proximity DIN EN 60947-5-6:2000
Load current	1 mA ≤ I ≤ 3 mA
Voltage	8 VDC
Hysteresis	0.2%
Temperature range	-25°C to 85°C (-13°F to 185°F)

4-20 mA transmitter	
Supply	11-28 VDC
Output	4-20 mA
Resolution	0.1%
Linearity full span	+/-0.5%
Output current limit	30 mA DC
Load impedance	800 Ω @ 24 VDC

## Spindle and Dimension Drawings (mm/inch)



## Model Code

<b>A =</b>	<b>Model No.</b>	
	D 30	Full LCD menu, LED status
<b>B =</b>	<b>Approvals / Certificate</b>	
	D	General purpose version
<b>C =</b>	<b>Air relay</b>	
	H	High Flow Spool Valve
<b>D =</b>	<b>Connections Threads</b>	
	G	1/4" G air, M20 x 1,5 electrical
	M	1/4" NPT air, M20 x 1,5 electrical
	N	1/4" NPT air, 1/2" NPT electrical
<b>E =</b>	<b>Connections Qty and Aux</b>	
	2	2 Electrical conduits
	T	2 Electrical conduits, threaded aux. ventilation
<b>F =</b>	<b>Housing material / Surface treatment</b>	
	U	Aluminum / Powder epoxy, black
<b>G =</b>	<b>Spindle / Mounting Options</b>	
	09	Double D type, adaptor spindle
	21	NAF Turnex including Mounting bracket
	23	VDI/VDE 3845 rotary, Mounting kit not included
	30	Adaptor spindle, select between 01/06/26/30/36
	39	IEC 534-6, Flat D type, nut incl. Mounting kit not included
<b>H =</b>	<b>Cover / Indicator</b>	
	P V A	PMV, Black cover, Arrow indicator
	P V D	PMV, Black cover, Dome indicator
	F W A	Flowserve, White cover, Arrow indicator
	F W D	Flowserve, White cover, Dome indicator
<b>I =</b>	<b>Temperature Range</b>	
	U	-40°C to 80°C (-40°F to 176°F)
<b>J =</b>	<b>Input signal / Protocol</b>	
	4	4-20 mA / none
	5	4-20 mA / HART
<b>K =</b>	<b>Feedback option / Switches</b>	
	X	No feedback option
	T	4-20 mA transmitter only
	S	Limit switches Mechanical SPDT
	N	Namur V3 type sensor, P+F NJ2-V3-N
	P	Limit switches Proximity SPDT
	4	Slot type Namur sensor, P+F SJ2-S1N
	5	Slot type Namur sensor, P+F SJ2-SN
	6	Slot type Namur sensor, P+F SJ2-N
<b>L =</b>	<b>Options / Add-in electronics</b>	
	0	Standard diagnostics
<b>M =</b>	<b>Accessories</b>	
	X	No accessories
	M	Gauge block 1/4" G (3 gauges included / SST, Brass)
	N	Gauge block 1/4" NPT (3 gauges included / SST, Brass)
<b>N =</b>	<b>Special Options</b>	
	N	No special options
	S	Exhaust silencers

\* Contact PMV for additional versions

**A A A B C D E - F G G H H H - I J K L M N**



FCD PMENBR0030-00-A4 10/15

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.

©2015 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  
Phone: +46 (0)8-555 106 00  
E-mail: [infopmv@flowserve.com](mailto:infopmv@flowserve.com)

**PMV USA**

14219 Westfair West Drive  
Houston, TX 77041, USA  
Phone: +1 281 671 9209  
Fax: +1 281 671 9268  
E-mail: [pmvsales@flowserve.com](mailto:pmvsales@flowserve.com)

**Flowserve Flow Control**

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

**Flowserve Flow Control Benelux**

Rechtzaad 17  
4703 RC Roosendaal  
THE NETHERLANDS  
Phone: +31 (0) 30 6771946  
Fax: +27 (0) 30 6772471  
E-mail: [fcbinfo@flowserve.com](mailto:fcbinfo@flowserve.com)

**Flowserve Flow Control GmbH**

Rudolf-Plank Strasse 2  
D-76275 Ettlingen  
GERMANY  
Phone: +49 (0) 7243 103 0  
Fax: +49 (0) 7243 103 222  
E-mail: [argus@flowserve.com](mailto:argus@flowserve.com)

**Flowserve S.p.a.**

Via Prealpi, 30  
20032 Cormano (Milano)  
ITALY  
Phone: +39 (0) 2 663 251  
Fax: +39 (0) 2 615 18 63  
E-mail: [infoitaly@flowserve.com](mailto:infoitaly@flowserve.com)

**Flowserve Corporation**

No. 35, Baiyu Road  
Suzhou Industrial Park  
Suzhou 215021, Jiangsu Province,  
PRC  
Phone: +86-512-6288-1688  
Fax: +86-512-6288-8737

**Flowserve (China)**

585, Hanwei Plaza  
7 Guanghau Road  
Beijing, China 100004  
Phone: +86 10 6561 1900

**Flowserve Pte Ltd**

No. 12 Tuas Avenue 20  
Singapore 638824  
Phone: +65 6879 8900  
Fax: +65 6862 4940

**Flowserve do Brasil Ltda**

Rua Tocantins, 128 - Bairro Nova Gerti  
São Caetano do Sul,  
São Paulo 09580-130 Brazil  
Phone: +5511 4231 6300  
Fax: +5511 4231 6329 - 423