

D30 Compact Digital Positioner



Model Code

A =	Model No.			
	D 30			
B =	Approvals / Certificate			
	D	General purpose version		
C =	Air rela			
	H High Flow Spool Valve			
D =		nections Threads		
	G	¼" G air, M20 x 1,5 electrical		
	М	1/4" NPT air, M20 x 1,5 electrical		
	N	1/4" NPT air, 1/2" NPT electrical		
E =	Connec	ctions Qty and Aux		
	2	2 Electrical conduits		
	Т	2 Electrical conduits, threaded aux. ventilation		
F=	Housin	g material / Surface treatment		
	U Aluminum / Powder epoxy, black			
G =	Spindle	e / Mounting Options		
	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		
H =		r / Indicator		
	PVA	PMV, Black cover, Arrow indicator		
	PVD	PMV, Black cover, Dome indicator		
	FWA	Flowserve, White cover, Arrow indicator		
	F W D	Flowserve, White cover, Dome indicator		
I=	Tempe	rature Range		
	U -40°C to 80°C (-40°F to 176°F)			
J =	-	ignal / Protocol		
	4	4-20 mA / none		
	5	4-20 mA / HART		
K =		Feedback option / Switches		
	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		
L=	-	s / Add-in electronics		
	0	Standard diagnostics		
M =	Access			
	Х	No accessories		
	M	Gauge block ¼" G (3 gauges included / SST, Brass)		
	N	Gauge block 1/4" NPT (3 gauges included / SST, Brass)		
N =		l Options		
	N	No special options		
	S	Exhaust silencers		
	-	/ for additional variana		

^{*} Contact PMV for additional versions

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

Technical data

D30 Compact Digital Positioner

Rotation angle	min 2.5° max 100°
Stroke	From 5 mm (0.2")
Input signal	4-20 mA DC
Air supply	1.4-8 bar (20-115 psi) DIN/ISO 8573-1 3.2.3 Free from oil, water and moisture.
Air delivery	Up to 760 nl/min @ 6 bar (29.3 scfm @ 87 psi)
Air consumption	8 nl/min @ 6 bar (0.31 scfm @ 87 psi)
Air connections	1/4" G or NPT
Cable entry	2x M20x1.5 or ½" NPT
Electrical connections	Screw terminals 2.5 mm² /AWG14
Linearity	<0.4%
Repeatability	<0.5%
Hysteresis	<0.3%
Dead band	0.1-10% adjustable
Display	Graphic, view area 15 x 41 mm (0.6 x 1.6")
UI	5 push buttons
CE directives	93/68EEC, 89/336/EEC, 92 /31/EEC
Voltage drop, w/o HART	8 V
Voltage drop, with HART	9.4 V
Vibrations	< 0.25% FS 10-500 Hz 2g max
Enclosure	IP66
Material	Die-cast Aluminum
Surface treatment	Powder epoxy
Temperature range	-40°C to +80°C (-40°F to 176°F)
Weight	1.8 kg (4 lbs)
Mounting position	Any
Communication protocols	Hart Profibus PA Foundation Fieldbus

Optional plug-in modules

Mechanical switches		
Туре	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				
(NJ2-V3-N)				
Туре	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)			

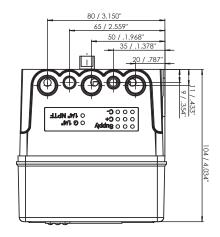
Proximity switches				
Туре	SPDT			
Rating	0.4 A @ 24 VDC, Max 10 W			
Operating time	Max 1.0 ms			
Max voltage	200 VDC			
Contact resistance	0.2 Ω			
Temperature range	-30°C to 80°C (-22°F to 180°F)			

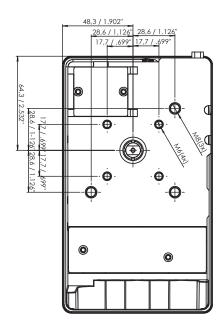
Slot NAMUR switches					
(SJ2-S1N, SJ2-SN, SJ2-N)					
Туре	Proximity DIN EN 60947-5-6:2000				
Load current	1 mA ≤ I ≤ 3 mA				
Voltage	8 VDC				
Hysteresis	0.2%				
Temperature range	-25°C to 85°C (-13°F to 185°F)				

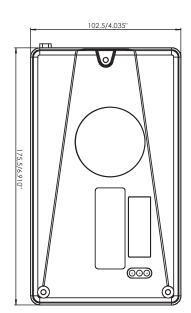
4-20 mA transmitter				
Supply	11-28 VDC			
Output	4-20 mA			
Resolution	0.1%			
Linearity full span	+/-0.5%			
Output current limit	30 mA DC			
Load impedance	800 Ω @ 24 VDC			

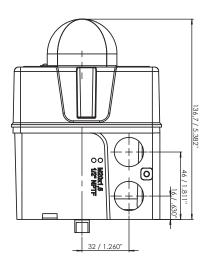


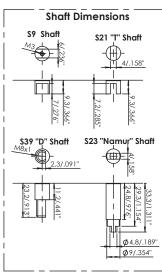
Spindle and Dimension Drawings (mm/inch)

















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

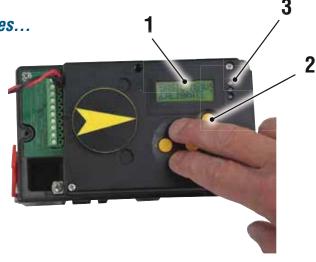
- Plug-in limit switches and 4-20 mA transmitter
- Hart, Profibus PA or Foundation Fieldbus
- Add-on gaugeblock
- Dome indicator
- Plug-in pressure sensors for diagnostics with ValveSight®
- · Remote or integrated mounting





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.

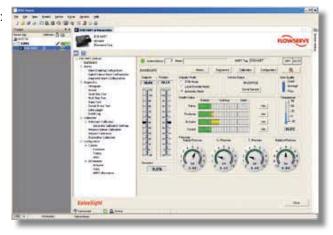
ValveSight provides:

- 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

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