

D20 Compact Digital Positioner

Product
Information





D20 Compact Digital Positioner

Description

D20 is a compact digital positioner that is very simple and quick to install and operate. To calibrate it, simply press the button for 5 seconds, D20 will auto-calibrate and tune itself in a few seconds.

D20 can be fitted with optional 4-20 mA feedback transmitter and limit switches. HART communication is also possible as an option.

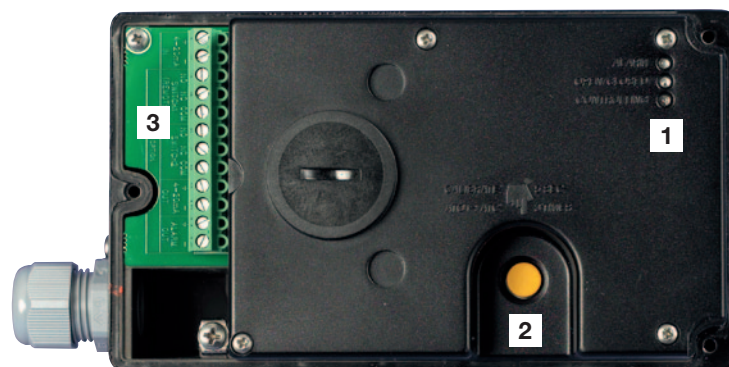
For visual indication you can select between flat arrow indicator or a dome indicator.

Features and Benefit

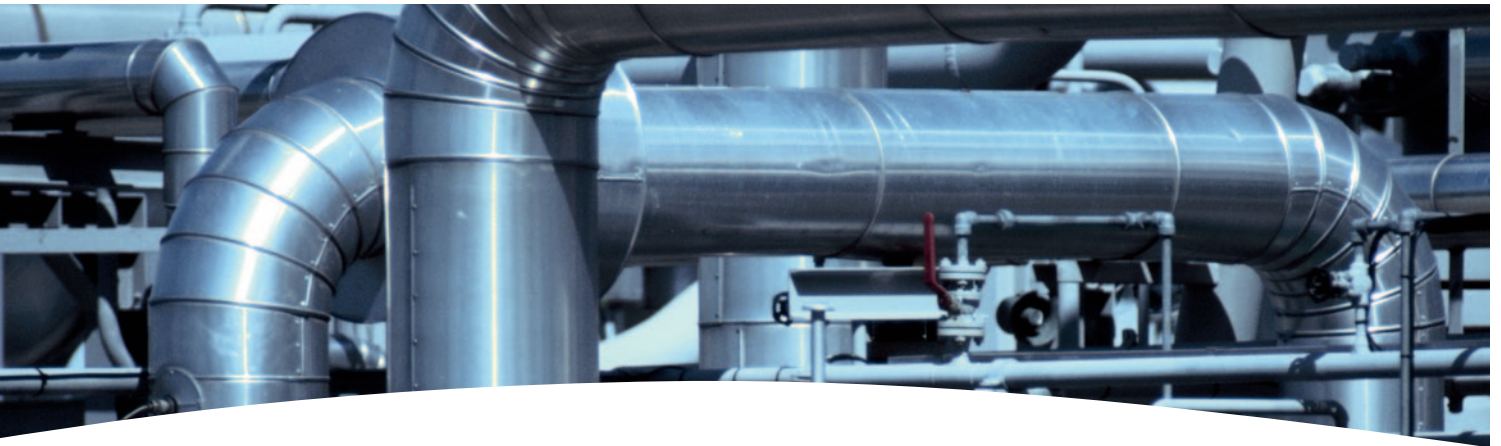
- Modular
- Flexible
- Rotary and Linear
- Add in switch and position feedback
- VDI/VDE 3845
- VDI/VDE 3847
- HART option
- 4-20mA feedback option

Intrinsically safe:

ATEX II 1 G  Ex ia IIC T6



1. LED's indication
2. Calibration/configuration button
3. Add in feedback option



Press button and D20 will auto calibrate itself.



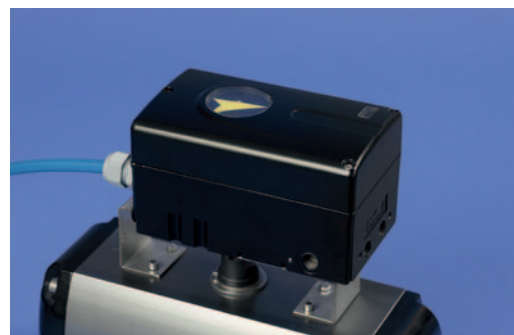
D20 modular design gives you many options.



D20 mounted according to VDI/VDE 3847.



D20 suits both rotary and linear actuators.



D20 mounted according to VDI/VDE 3845.

D20 Technical data

D20 Compact Digital Positioner

Input signal	4-20 mA
Current supply min.	3,6 mA
Current supply Max.	150 mA
Load Standard	400 ohm at 20mA
Load HART	470 ohm at 20mA
Voltage drop Standard	8 VDC at 20mA
Voltage drop HART	9.4 VDC at 20mA
Angle of rotation min	0-40°
Angle of rotation Max	0-90°
Air supply range	1.5 – 6 bar
Out put	0-100% of air supply pressure
Air supply quality	Free from oil, dust and moisture IEC 770, ISA 7.0.01
Air supply effect	<0.1%FS for 10% pressure change at 6Bar
Ingress protection	IP66 / Nema 4X
Operating humidity	0-100% rh non-condensing
Air connections	¼" NPT
Cable entry	2 x ½" or 2 x M20x 1,5
Terminals	Screw terminals 2,5 mm2 (AWG 14)
Operating Temperature	-20 to +85°C 40 to +85°C (optional)
Storage temperature	-40 to +85°C
Air delivery capacity	7 Nm3/h @ 6 bar (3 bar diff pressure)
Air delivery capacity Double acting	7 Nm3/h @ 6 bar (3 bar diff pressure)
Air consumption Single acting	0,120 Nm3/h @ 6 bar
Air consumption Double acting	0,120 Nm3/h @ 6 bar
Cv air delivery Single acting	0,12
Cv air delivery Double acting	0,12
Cut off function	Close 0.5% Open 99.5%
Linearity	<1%
Sensitivity	<0.05%
Resolution	<0,1%
Repeatability	<0.2%
Hysteresis + dead band	<0.5%
Temp effect	<0.1%/10K
Mounting position effect	<0,2%
CE	93/68/EEC, 2004/108/EEC, 2006/95/EEC
Approvals	II 1G Ex ia IIC T4 Ta:85°C
Certificate nr	Nemko 08ATEX1362X
Housing material	Die cast Aluminium
Surface treatment	Powder coating
Soft goods	Nitrile
Weight	1,5 kg

Optional plug in module

Mechanical switches	
Type	SPDT
Size	Sub Sub miniature
Rating	3A, 125 VAC / 2A, 30VDC
Mechanical life	>1 x 106 operations
Namur sensors	
Type	P+F NJ2 V3 N Inductive DIN 19234
Load current	<1mA>3mA
Voltage range	5-25 VDC
Hysteresis	3-15% (5% typical)
Temp range	-25° to +100° C (-248° to 373° F)
Namur sensors	
Type	P+F SJ2-N
Normal Voltage	8 VDC
Load current	1mA<l<3mA
Voltage range	(5-25 VDC)
Hysteresis (max)	0.2%
Temp range	-25° to +100° C (-248° to 373° F)
Namur sensors	
Type	P+F SJ2-SN
Normal Voltage	8 VDC
Load current	1mA<l<3mA
Voltage range	5-25 VDC
Hysteresis (max)	(0.2%)
Temp range	-40° to +100° C (-233° to 373° F)
Namur sensors	
Type	P+F SJ2-S1N
Normal Voltage	8 VDC
Load current	1mA<l<3mA
Voltage range	5-25 VDC
Hysteresis (max)	0.2%
Temp range	-25° to +100° C (-248° to 373° F)
Proximity switches	
Type	SPDT
Rating	10W
Voltage max	200VDC
Current max	500mA
Contact resistance max	0.2 ohm
Operating time	1.0 ms
Transmitter	
Power supply	12-28 VDC
Output	1-22 mA
Resolution	0.1%
Linearity	±0.5%
Load impedance	600 ohm at (12 VDC and 20mA)
Alarm Output	
Supply	3-28 VDC
Output	20mA @ 24 VDC

217

93

Technical drawing of the rear view of the device. It shows a circular cable entry point with a diameter of $\varnothing 9$ mm. The distance from the center of the cable entry to the center of the mounting hole is 24.5 mm. The distance from the center of the cable entry to the center of the mounting hole is 29 mm. The distance from the center of the cable entry to the center of the mounting hole is 33 mm. The diameter of the mounting hole is $\varnothing 4.8$ mm. The diameter of the mounting hole is $\varnothing 10$ mm. The drawing also shows a side view of the device with a diameter of $\varnothing 4.8$ mm.

Technical drawing of the rear view of the device. It shows a circular mounting hole with a diameter of $\varnothing 10$ and a depth of 2.3. A screw with a thread of M8x1 is shown being inserted into the hole. The distance from the center of the hole to the center of the mounting hole is 23. The distance from the center of the hole to the center of the mounting hole is 11.

M20x1,5(2x) alt. 1/2" NPT(2x)

12

32

41

60

98

1/4" NPT (2x)



D20 Compact Digital Positioner Model Code

- A = Model no**
D20 Digital compact positioner, General purpose, LED status
- B = Approval, Certificate**
D General purpose version
I Intrinsically safe version ATEX
- C = Connections Air, Electrical**
M 1/4" NPT air, M20 x 1,5 electrical x 2
N 1/4" NPT air, 1/2" NPT electrical x 2
- D = Housing/Surface treatment**
U Aluminium/Powder epoxy, black
- E = Function**
S Single acting
D Double acting, incl gauges (2) Stainless/Brass
- F = Mounting options / Spindle**
09 Double D type, adaptor spindle
12 Flowtop, D-style+ nut, direct mounting, Kit 30144 include
23 VDI/VDE 3845 rotary, Mounting kit not included
39 IEC 534-6, Flat D type, nut incl. Mounting kit not included
40 VDI/VDE 3847 Linear, Flat D, Mounting kit 30145 included
- G = Cover and Indicator**
PVA PMV, Black cover, Arrow indicator
PVB PMV, Black cover, No indicator
PVD PMV, Black cover, Dome indicator
- H = Temperature/seals**
Z Standard -20°C to 85°C (-4°F to 185°F)
Q Low temp -40°C to 85°C (-38°F to 185°F)
- I = Input signal/Protocol**
4 4-20 mA / none
5 4-20 mA / HART
- J = Feedback option, 4-20 mA transmitter, switches**
X No feedback option
T 4-20 mA transmitter only
S Limit switches Mechanical SPDT + 4-20mA
N Namur V3 type sensor, P+F NJ2-V3-N + 4-20mA
P Limit switches Proximity SPDT + 4-20mA
4 Slot type Namur sensor, P+F SJ2-S1N + 4-20mA
5 Slot type Namur sensor, P+F SJ2-SN + 4-20mA
6 Slot type Namur sensor, P+F SJ2-N + 4-20mA
- K = Options, Add in electronics**
0 Standard diagnostics
- L = Accessories**
X No accessories
M Gauge block 1/8" G (2 x gauges included)
N Gauge block 1/8" NPT (2 x gauges included)

Example: AAABCD-EFFGGG-HIJKL



p/n: FCD PMENBR0015-01

Dystrybutor:



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Hazardous Locations 08ATEX 1362X

II 1 G Ex ia IIC T4 Ta: 85°C

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