

# *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.

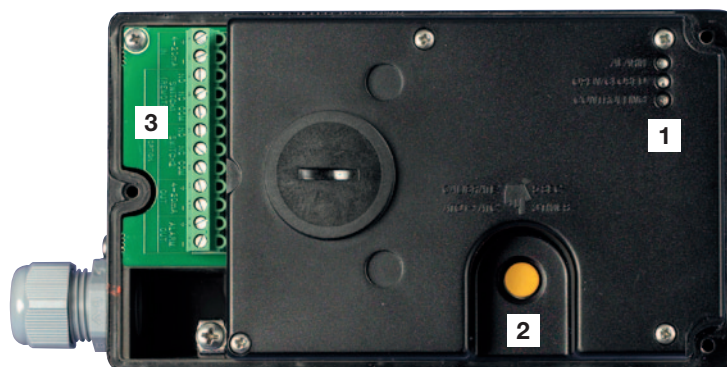
For visual indication you can select between flat arrow indicator or a dome indicator.

### ***Features and Benefit***

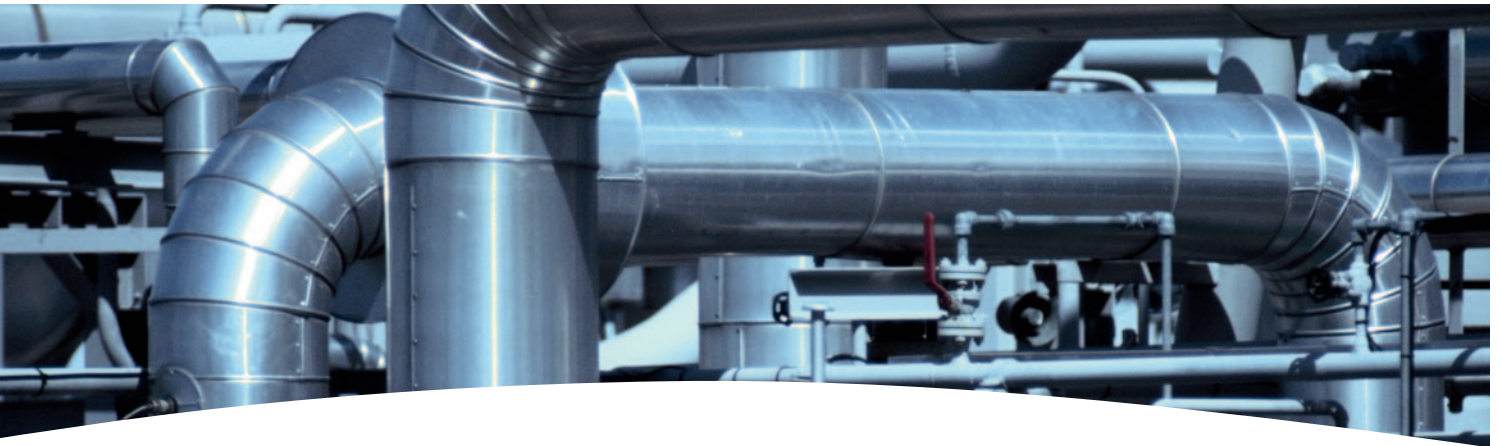
- Modular
- Flexible
- Rotary and Linear
- Add in switch and position feedback
- VDI/VDE 3845
- VDI/VDE 3847
- HART option
- 4-20mA feedback option

#### **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.



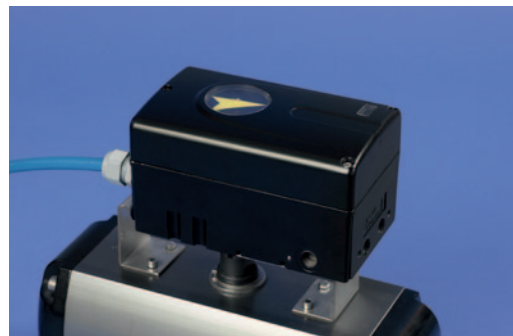
D20 modular design gives you many options.



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

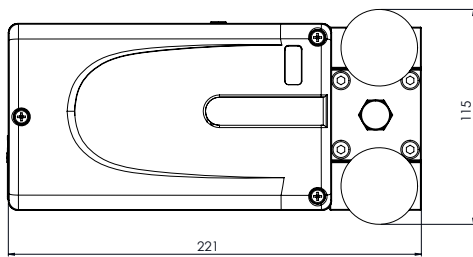
Input signal	4-20 mA
Current supply min.	3,6 mA
Current supply Max.	150 mA
Load Standard	400 ohm at 20mA
Load HART	470 ohm at 20mA
Voltage drop Standard	8 VDC at 20mA
Voltage drop HART	9.4 VDC at 20mA
Angle of rotation min	0-40°
Angle of rotation Max	0-90°
Air supply range	1.5 – 6 bar
Out put	0-100% 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

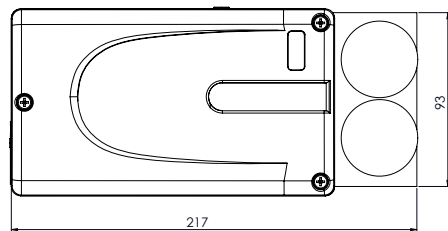
<b>Mechanical switches</b>	
Type	SPDT
Size	Sub Sub miniature
Rating	3A, 125 VAC / 2A, 30VDC
Mechanical life	>1 x 106 operations
<b>Namur sensors</b>	
Type	P+F NJ2 V3 N Inductive DIN 19234
Load current	<1mA>3mA
Voltage range	5-25 VDC
Hysteresis	3-15% (5% typical)
Temp range	-25° to +100° C (-248° to 373°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



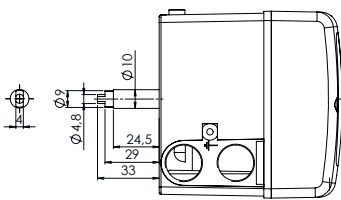
### Spindles and Dimensions drawings (mm)



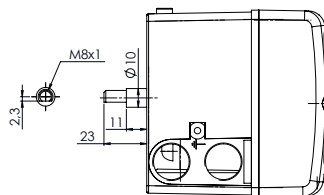
Double acting block



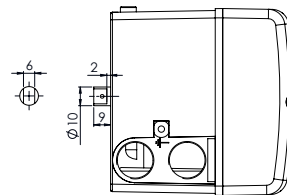
Gauge block



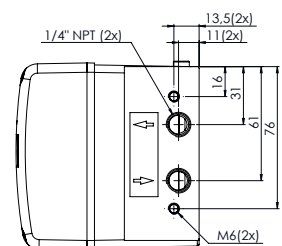
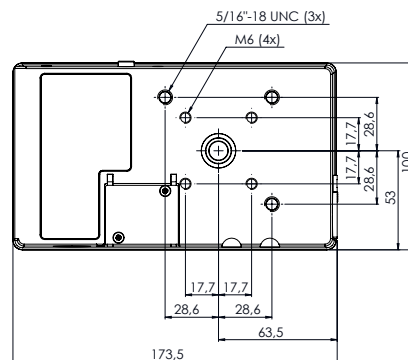
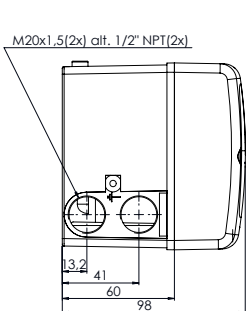
S23 "Namur Spindle"



S39 "D Spindle"



S09 "Double D Spindle"





## **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



Hazardous Locations 08ATEX 1362X

II 1 G Ex ia IIC T4 Ta: 85°C

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