

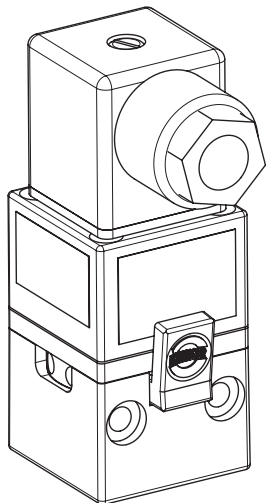
P20

Piezo-controlled pneumatic valve
for intrinsically safe applications

Technical Data

EN MET


HOERBIGER



GENERAL PROPERTIES

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GENERAL PROPERTIES

Type	P20
Function	Switching 3/2-way NC overlapping
Actuation type	Piezoelectric pilot
Constructive structure	Poppet Valve
Manual override	Tactile; snapping
Connection type	Flange according to CNOMO ¹⁾
Weight	0.100 kg ²⁾
Installation position	Any
Protection type	IP 54 (DIN EN 60529 A1: 2000) ³⁾
Storage temperature	-40 °C to +80 °C
Ambient temperature ⁴⁾	-10 °C to +60 °C
Medium temperature ⁴⁾	-10 °C to +60 °C
Rel. humidity	10 to 95 % (without condensation)
Material	Anodized aluminum, brass, spring steel, plastic, elastomer, NBR, ARCAP
Behavior in case of energy failure	Port 2 venting
RoHS-Conformity	RoHS 2011/65/EU

¹⁾ Base plates for threaded connection see accessories

²⁾ Optional with adapter plate (+0.06 kg)

³⁾ With mounted connector plug and tight pneumatic connections

⁴⁾ For use below the freezing point, dried air is required (pressure dew point 10 K below ambient or medium temperature).

GENERAL PNEUMATIC PROPERTIES

Media ⁵⁾	Compressed air and neutral gases
Media quality	According to ISO 8573-1:2010 (3;3;4)
Flow direction on	From 1 to 2
Flow direction off	From 2 to 3
Approval acc. to EU Type test certificate	
Category, ignition type protection	Gas: II 2G Ex ia IIC T4/T5/T6 Gb Dust: II 2D Ex ia IIIB T125°C Db

⁵⁾ Other media only after approval by the manufacturer

PNEUMATIC PROPERTIES

Nominal pressure (p_N)	6 bar
Input pressure min ($p_{1_{min}}$)	1.5 bar
Input pressure max ($p_{1_{max}}$)	8 bar
Nominal flow rate 1 to 2 (Q_N) ⁶⁾	> 110 l/min

⁶⁾ Measured at p_1 = nominal pressure and pressure drop 1 bar

ELECTRICAL PROPERTIES

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ELECTRICAL PROPERTIES

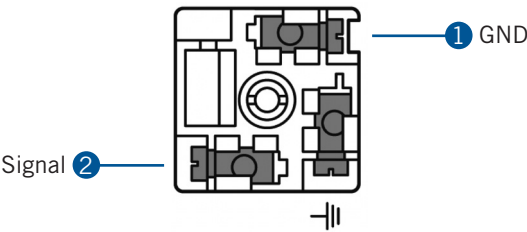
	PT63	PM64	PN61
Nominal voltage (U _N)	9 V DC	16 V DC	30 V DC
Switching voltage ON (U _{on})	5.5 to 9 V DC	6 to 16 V DC	7 to 30 V DC
Switching voltage OFF (U _{off})	1 V DC		
Holding current ON (I _{on})	1 to 19 mA	1.7 to 23 mA	2 to 19 mA
Holding current OFF (I _{off})	0.05 mA	0.1 mA	0.22 mA
Power consumption min (P _{min})	5.5 mW	10 mW	14 mW
Power consumption max (P _{max})	171 mW	368 mW	571 mW
Safety data according to EU type test certificate			
Voltage (U _i)	9 V DC	16 V DC	30 V DC
Current (I _i)	Not relevant		
External capacitance (C _i)	12 nF		
External inductance (L _i)	Negligible		

FORMULA TO CALCULATE THE ELECTRIC CURRENT

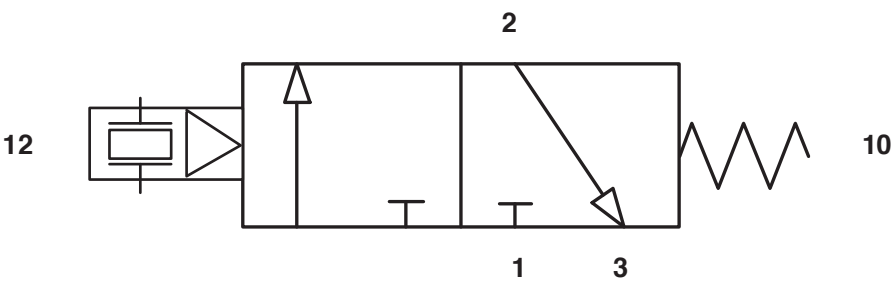
PT63	PM64	PN61
$I = (U \times 5.14) - 27.27$	$I = (U \times 2.13) - 11.08$	$I = (U \times 0.74) - 3.17$

CLAMPS/CONNECTION BLOCK

Connector	Plug connector acc. to DIN EN175301-803A; electrical connections 1=GND; 2=Signal
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CIRCUIT SYMBOL



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Technical drawings of the 3000 series ball valve, showing front, side, and top views for single and multi-valve configurations.

Top View (Left): Shows the front and side profiles. Dimensions include a top width of ca. 50, a side width of ca. 37, and a height of ca. 82. Callouts 1, 2, and 3 point to specific features. A label 'HB' points to the handle. A note '34 x Anzahl der Ventile' indicates the total width for multiple valves.

Front View (Left): Shows the front profile with a width of 32 and a height of 15.25. Callouts 1 and 2 point to features. A label 'HB' points to the handle.

Side View (Left): Shows the side profile with a width of 32 and a height of 15.25. Callouts 1 and 2 point to features. A label 'HB' points to the handle.

Top View (Right): Shows the front and side profiles. Dimensions include a top width of ca. 82, a side width of ca. 75, and a height of ca. 62. Callouts 1, 2, and 3 point to specific features. A label 'HB' points to the handle. A note '34 x Anzahl der Ventile' indicates the total width for multiple valves.

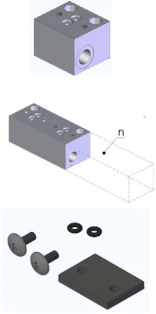
Front View (Right): Shows the front profile with a width of 32 and a height of 15.5. Callouts 1 and 2 point to features. A label 'HB' points to the handle.

Side View (Right): Shows the side profile with a width of 32 and a height of 15.5. Callouts 1 and 2 point to features. A label 'HB' points to the handle.

ACCESSORIES

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ACCESSORIES

ORDER NO.		
	Base plate, G1/8", 1-fold, aluminum	P20-ANG-A001
	Base plate, G1/8", 2-fold, aluminum	P20-ANG-A002
	Blind plate complete, aluminum	P20-000-B001
	Replacement connector	P20-ANG-S001

ORDER KEY

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TYPE NUMBER KEY

		1	2		3		4
TYPE NUMBER	P 2 0	0	x x	-	x x	0 A	- x x x
Example	P 2 0	0	2 1	-	6 4	1 A	- 0 B 2

1 Device type	
0	Pilot

2 Valve type	
21	NC

3 Type of electronic	
61	PN61 = 7 – 30 V DC
63	PT63 = 5,5 – 9 V DC
64	PM64 = 6 – 16 V DC

4 Number of valves*	
000	Without base plate
0B1	With base plate
0B2	Manifold version G1/8" 2-fold

*See accessories

CONVERSION FACTORS

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CONVERSION FACTORS

VALUE	UNIT	CONVERSION UNIT	FACTOR
Length	mm	in	0.03934
	in	mm	25.4
	m	ft	3.28084
	ft	m	0.3048
Weight	kg	lb	2.204622
	lb	kg	0.453592
Pressure	bar	psi	14.5035
	psi	bar	0.06895
	MPa	psi	145.035
	psi	MPa	0.006895
	bar	MPa	0.1
	MPa	bar	10
Temperature	°C	°F	1.8 °C + 32
	°F	°C	0.5556 °F – 32
Torque	Nm	ft/lbs	0.7375
	ft/lbs	Nm	1.3558

ADDITIONAL DOCUMENTATION

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WWW.HOERBIGER.COM

This data sheet and additional documentation is available in the download area of the company's website.



www.hoerbiger.com

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