

S9 1/8"

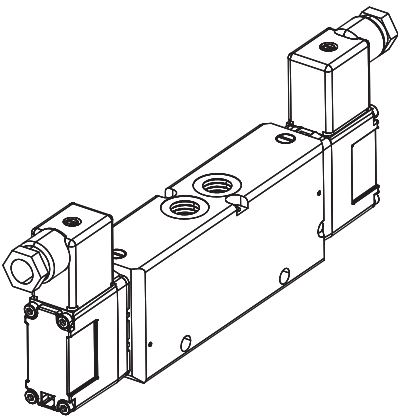
Piezo-controlled pneumatic valve
for intrinsically safe applications

Technical Data

EN MET



HOERBIGER



GENERAL PROPERTIES

S9 1/8"

GENERAL PROPERTIES

Type	S9 1/8"
Function	Switching 5/2; 5/3-way NC monostable; bistable overlapping
Actuation type	Piezoelectric pilot
Constructive structure	Gate valve
Manual override	Tactile; snapping
Connection type	Thread G 1/8"
Weight	See dimensions
Installation position	Any
Protection type	IP 43 (DIN EN 60529 A1: 2000) ¹⁾
Storage temperature	-40 °C to +80 °C
Ambient temperature ²⁾	-10 °C to +60 °C (-25 °C to +60 °C with pilot air pressure > 5,5 bar)
Medium temperature ²⁾	-10 °C to +60 °C (-25 °C to +60 °C with pilot air pressure > 5,5 bar)
Material	Anodized aluminium, aluminium teflon coated, brass, spring steel, plastic, elastomer, NBR, ARCAP
Behavior in case of energy failure	Monostable – port 4 exhaust; bistable – keep present position

¹⁾ With mounted connector plug and tight pneumatic connections

²⁾ For use below the freezing point, dried air is required (pressure dew point 10 K below ambient or medium temperature).

GENERAL PNEUMATIC PROPERTIES

Media ³⁾	Compressed air and neutral gases
Media quality	According to ISO 8573-1:2010 (7:3:4)
Flow direction on	See order number overview
Flow direction off	See order number overview
Approval acc. to EU Type test certificate	
Category, ignition type protection	Gas: II 2G Ex ia IIC T4/T5/T6 Ga Dust: II 2D Ex ia IIIB T125°C Db Mechanical S9 (basic valve): II 2 G Ex h IIC T6/T5 Gb -10 °C ≤ T _a ≤ +40 °C/+60 °C

³⁾ Other media only after approval by the manufacturer

PNEUMATIC PROPERTIES

	S9 1/8" INTERNAL PILOT AIR	S9 1/8" EXTERNAL PILOT AIR
Nominal pressure (p _N)	6 bar	6 bar
Input pressure min (p1 _{min})	2.5 bar	0 bar ⁴⁾
Input pressure max (p1 _{max})	8 bar	8 bar
Nominal flow rate 1 to 2 (Q _N) ⁵⁾	> 500 l/min	> 500 l/min

⁴⁾ At p1 < 2.5 bar: pst > 2.5 bar, at p1 2.5 ... 8.0 bar: pst ≥ p1

⁵⁾ Measured at p1 = nominal pressure and pressure drop 1 bar

ELECTRICAL PROPERTIES

S9 1/8"

ELECTRICAL PROPERTIES

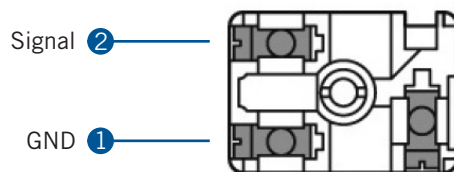
	PT63	PM64	PN61
Electrical connection	DIN EN 175301-803 Construction type B		
Nominal voltage (U_N)	9 V DC	16 V DC	30 V DC
Switching voltage ON (U_{on})	5.5 to 9 V DC	6 to 16 V DC	7 to 30 V DC
Switching voltage OFF (U_{off})	1 V DC		
Holding current ON (I_{on})	1 to 19 mA	1.7 to 23 mA	2 to 19 mA
Holding 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 mA	16 mA	30 mA
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
$I \text{ [mA]} = (U \times 5.14) - 27.27$	$I \text{ [mA]} = (U \times 2.13) - 11.08$	$I \text{ [mA]} = (U \times 0.74) - 3.17$

CLAMPS/CONNECTION BLOCK

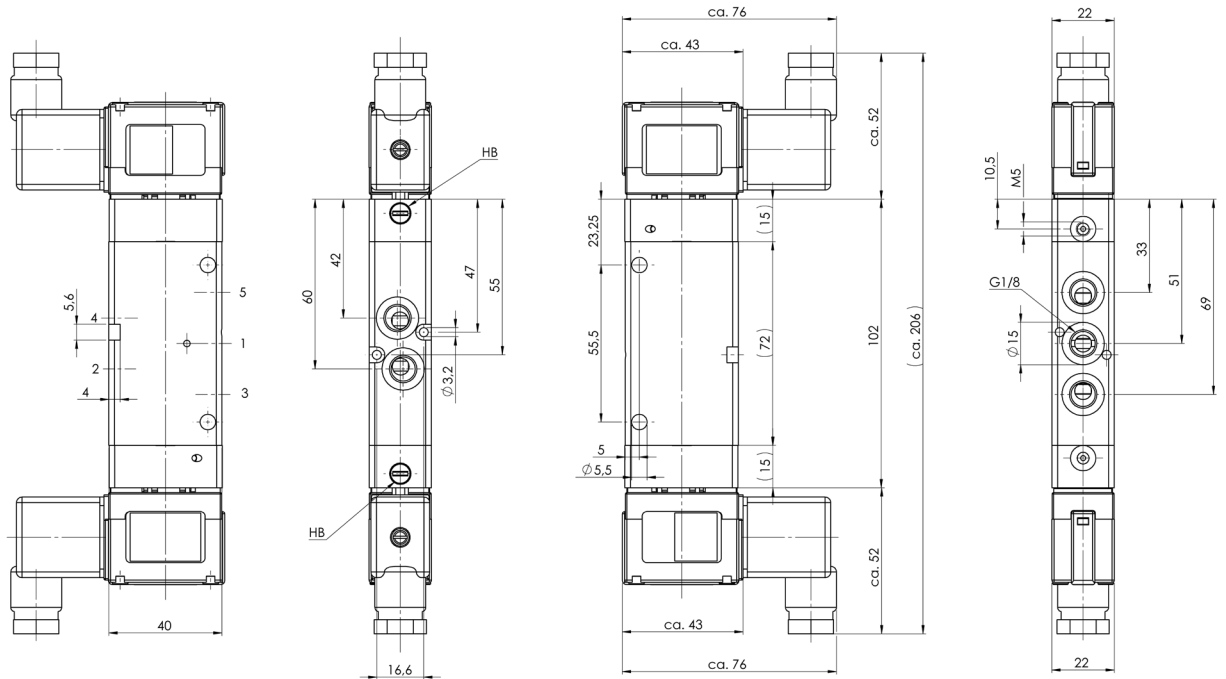
Connector	Plug connector to industrial form B; electrical connections 1=GND; 2=Signal
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DIMENSIONS

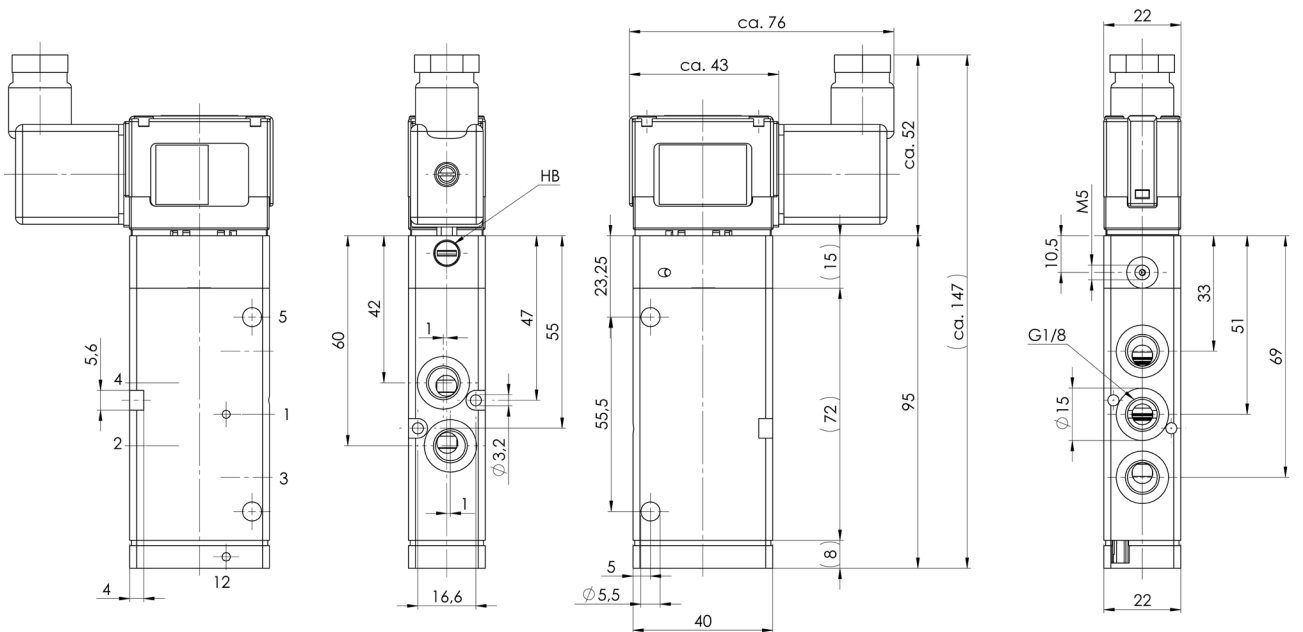
S9 1/8"

5/2-WAY BISTABLE



Weight: 0,340 g

5/2-WAY MONOSTABLE

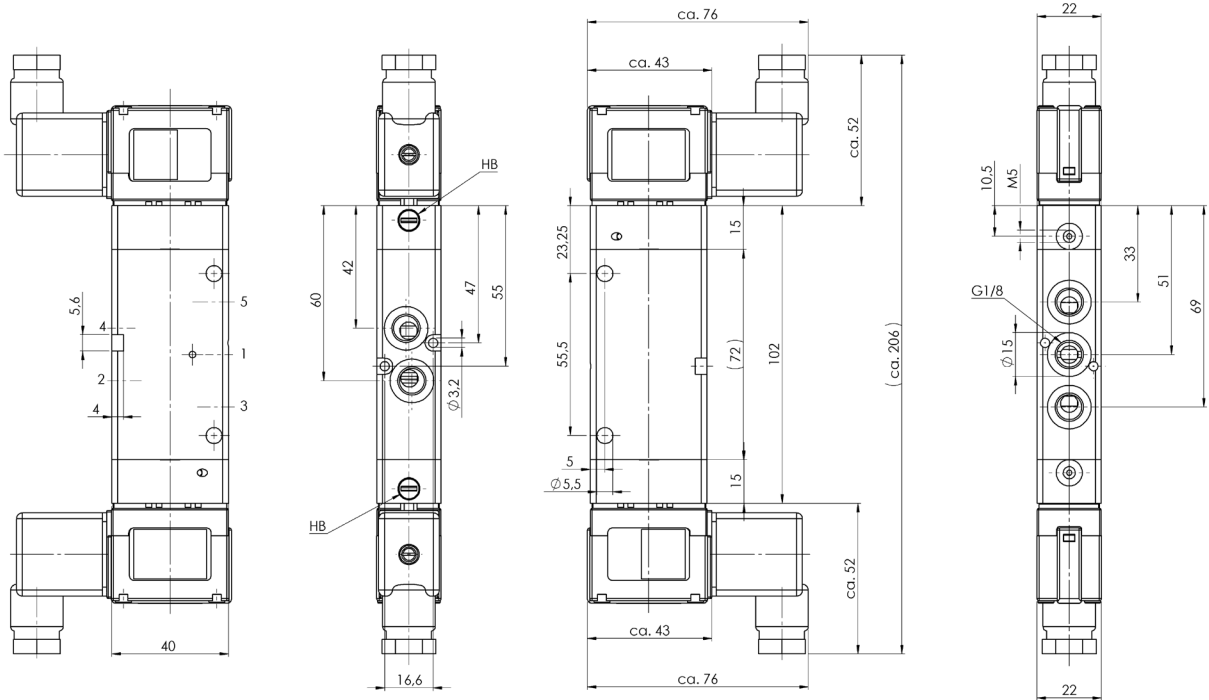


Weight: 0,245 g

DIMENSIONS

S9 1/8"

5/3-WAY BISTABLE



Weight: 0,340 g

ACCESSORIES

S9 1/8"

ACCESSORIES



Replacement connector, 3-pole, DIN EN 175301-803 Construction type B

ORDER NO.

P08-ANG-S001

ORDER KEY

S9 1/8"

TYPE NUMBER KEY

		1	2	3
TYPE NUMBER	S 0 9	x x x	6 x 6 x	x 0 x
Example	S 0 9	1 0 4	6 1 6 A	0 0 0

1 Device type + Valve type

104	5/2 bistable	
105	5/2 bistable with ext. pilot pressure	
108	5/3 middle position closed	
109	5/3 middle position exhausted	
110	5/3 middle position venting	
111	5/3 middle position closed with ext. pilot pressure	
112	5/3 middle position exhausted with ext. pilot pressure	
113	5/3 middle position venting with ext. pilot pressure	
117	5/2 monostable with ext. pilot pressure	
118	5/2 monostable	

2 Type of electronic

616A	PN61 = 7 – 30 V DC
636A	PT63 = 5,5 – 9 V DC
646A	PM64 = 6 – 16 V DC

3 Labeling

000	Standard
S01	Special versions, sequentially numbered
S02	
...	

CONVERSION FACTORS

S9 1/8"

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	$1.8 \text{ } ^\circ\text{C} + 32$
	°F	°C	$0.5556 \text{ } ^\circ\text{F} - 32$
Torque	Nm	ft/lbs	0.7375
	ft/lbs	Nm	1.3558

ADDITIONAL DOCUMENTATION

S9 1/8"

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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