

2/2 way solenoid valve normally closed or normally open

type 20, brass body

direct operated, DN 1,5 – 10,0 mm, G1/8 – G1/2



SPECIFICATION	
general	
type of construction	2/2-poppet valve, normally closed NC or normally open NO, coil 360° rotatable
operator	solenoid,
ports	G1/8 – G1/2
ambient temperature	-20°C to +50°C, higher allowed ambient temperatures on request
fluid temperature	dependent on sealing material and coil
viscosity	max. 37 mm ² /s (cst) or 5° E
material	body brass, inner parts brass and stainless steel, sealing - see type selection
mounting	installation into fixed piping systems or by use of 2 threads on the bottom side
installation	in any position, preferable vertical fixed solenoid coil
unit of supply	without connector
electrical data	
voltage	DC voltage or AC voltage
standard voltage	24V DC, 24V AC, 230V AC
special voltage on request	6V-200V DC, 12V-240V, 50Hz or 60Hz
acceptable voltage tolerance	+/- 10%
power consumption	see specifications at solenoid coils
coil type	temperature class F (155°C), winding class H (180°C), coil E3 temperature class H
duty cycle	100% ED (DB), continuous operation
protection class	IP65 according DIN EN 60529 (DIN 40050) with correctly mounted connector
pneumatic – hydraulic	
fluid	all liquids and gases, which don't attack the used material
max. body housing pressure	PN 64 (bar) up to DN 4mm, PN 25 (bar) from DN 5 – 10mm
response time	depending on operating pressure and fluid
special equipment on request	stainless steel AISI303 in place of brass, coil type with cable, bright nickel-plated or chemical nickel-plated, coils for temperature class H (180°C), higher differential pressure, PTFE seal, manual override

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type 20A, normally closed											
type * (order-nr.)	NW DN (mm)	ports	maximum differential pressure in bar **								kv-value (m ³ /h)
			coil E1AA		coil E2AA	coil E3AE		coil F1AA			
			~ (50Hz)	= (DC)	= (DC)	~ (50Hz)	= (DC)	~ (50Hz)	= (DC)		
20A-1.15-A...	1,5	G1/8	40	40						0,08	
20A-2.15-A...		G1/4									
20A-1.20-A...	2,0	G1/8	35	35						0,13	
20A-2.20-A...		G1/4									
20A-1.25-A...	2,5	G1/8	20	20	30	30	35			0,19	
20A-2.25-A...		G1/4									
20A-1.30-A...	3,0	G1/8	10	10	25	23	28			0,25	
20A-2.30-A...		G1/4									
20A-1.35-A...	3,5	G1/8	10	8	20	20	25			0,30	
20A-2.35-A...		G1/4									
20A-1.40-A...	4,0	G1/8	6	4	14	17	22			0,37	
20A-2.40-A...		G1/4									
20A-2.50-A...	5,0	G1/4	3,5	1	4	10	6	11	12	0,55	
20A-3.50-A...		G3/8									
20A-4.50-A...		G1/2									
20A-2.60-A...	6,0	G1/4	0,9	0,5	1,9	3,5	2,5	7,5	5	0,67	
20A-3.60-A...		G3/8									
20A-4.60-A...		G1/2									
20A-3.80-A...	8,0	G3/8	0,5	0,1	0,6	2	1	2,5	1,8	1,25	
20A-4.80-A...	8,0	G1/2	0,5	0,1	0,6	2	1	2,5	1,8	1,25	
20A-3.100-A...	10,0	G3/8	0,4	0,05	0,3	1,2	0,5	1,7	0,9	1,95	
20A-4.100-A...	10,0	G1/2	0,4	0,05	0,3	1,2	0,5	1,7	0,9	2,00	

* Type designation (order-nr.) must be completed with sealing material, short circuit ring, coil and supply voltage. (see order code)

** At DC voltage all pressure specifications apply to a fluid temperature up to 80 °C. At higher fluid temperatures, the maximum differential pressure will be reduced by 0,4% / °C. All specifications refer to fluids with a maximum viscosity of 37 cst. (5°E).

Higher viscosities cause extended response time and need a special specification of the valve.

sealing material	Code	fluid temperature	applicable for	standard voltage	Code
NBR (Perbunan)	B	max. 80°C	neutral gases and liquids	24V = DC	02400
EPDM	E	max. 120°C	hot water, steam, not for oil and grease	24V ~ (50Hz)	02450
FPM	V	max. 130°C	oil, petrol, oxygen	230V ~ (50Hz)	23050

coil power consumption at 20 °C, protection class, interface					
coil type	inrush power ~ (50Hz) VA	rated power ~ (50Hz) VA	power = (DC) (W)	protection class with/without connector	interface
E1AA	32	14	12	IP65 / IP00	Connector DIN EN 175301-803 (DIN 43650) type A
E2AA	-	-	17	IP65 / IP00	Connector DIN EN 175301-803 (DIN 43650) type A
E3AE	70	32	27	IP65 / IP00	Connector DIN EN 175301-803 (DIN 43650) type A
F1AA	70	35	27	IP65 / IP00	Connector DIN EN 175301-803 (DIN 43650) type A

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order code	20 B - 2 E 30 C Z - A E1AA 23050	
	type function ports seal material nominal size seat	supply voltage coil type short circuit ring stroke compensation spring throw off spring
type	type 20	
function	A = normally closed, B = normally open	
ports	1 = G 1/8, 2 = G1/4, 3 = G3/8, 4 = G1/2	
seal material	B = NBR (Perbunan), E = EPDM, V = FPM	
nominal size seat	nominal size x 10 = specification for order code	
throw off spring	C,D,F = only normally open	
stroke compensation spring	Z = only normally open	
short circuit ring	A = copper short circuit ring, X = without short circuit ring	
coil type	see specifications of the particular coil	
supply voltage	always 5-digit, see code of standard voltage	

type 20B, normally open							
type * (order.-nr.)	NW DN (mm)	connection	maximum differential pressure in bar **			kv-value (m ³ /h)	
			coil E1AA	coil E3AE			coil F1AA
			~ (50Hz) and = (DC)	~ (50Hz)	=(DC)		~ (50Hz) and = (DC)
20B-1.15CZ-AE...	1,5	G1/8	35			0,08	
20B-2.15CZ-AE...		G1/4					
20B-1.20CZ-AE...	2,0	G1/8	22			0,13	
20B-2.20CZ-AE...		G1/4					
20B-1.25CZ-AE...	2,5	G1/8	13			0,19	
20B-2.25CZ-AE...		G1/4					
20B-1.30CZ-AE...	3,0	G1/8	10,5			0,25	
20B-2.30CZ-AE...		G1/4					
20B-1.35CZ-AE...	3,5	G1/8	6,5			0,30	
20B-2.35CZ-AE...		G1/4					
20B-1.40CZ-AE...	4,0	G1/8	5,5			0,37	
20B-2.40CZ-AE...		G1/4					
20B-2.50FZ-A...	5,0	G1/4		5	9	0,54	
20B-3.50FZ-A...		G3/8					
20B-4.50FZ-A...	6,0	G1/2		6	6	0,64	
20B-2.60FZ-A...		G1/4					
20B-3.60FZ-A...		G3/8					
20B-4.60FZ-A...		G1/2					

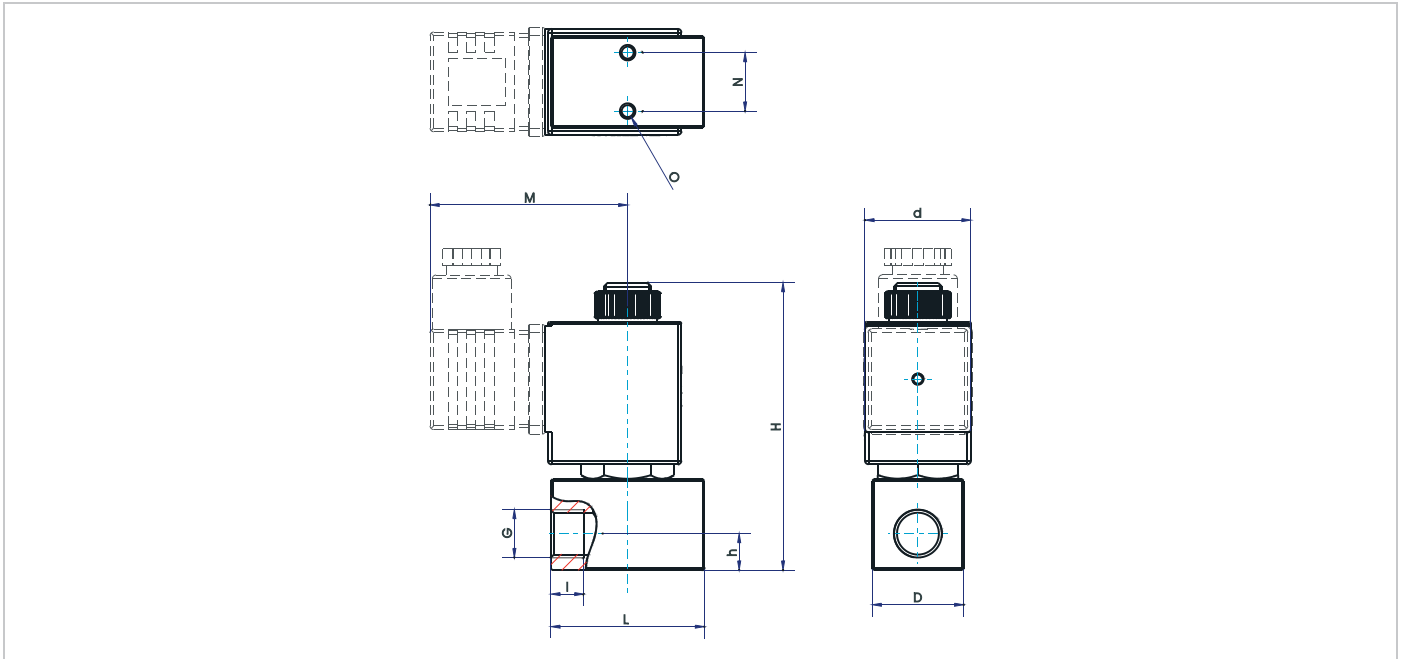
* Type designation (order-nr.) must be completed with sealing material, coil and supply voltage.

** Higher differential pressure on request.

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Dimension table for type 20 in mm, weight approx. in g

G	coil	N	O	M	H		d	h	l	L	D	weight (approx. g)			
					type 20A-	type 20B-						type 20A-	type 20B-		
1/8	E1	16	M4	55.1	90	93	30	10	7.5	42	25	370	390		
	E2			57			79					86	35	436	456
	E3			56			36					456	476		
	F1			57			90					93	38	526	516
G 1/4	E1			55.1	30	360	380								
	E2			57	79	86	35					426	446		
	E3			56	36	446	466								
	F1			57	90	93	38		516			506			
G 3/8	E1			55.1	30	380	400								
	E2			57	79	86	35		446			466			
	E3			56	36	466	486								
	F1			57	90	93	38		536			526			
G 1/2	E1	55.1	30	390	410										
	E2	57	79	86	35	456	476								
	E3	56	36	476	496										
	F1	57	90	93	38	546	536								