

2/2 Directional Control Valves
Actuation: Electromagnetic
Solenoid direct operated poppet valves
Port size G 1/4, G 1/2 or 1/4 NPT

- Working from 0 bar up
- Short switching times
- Suited for fine vacuum $1.33 \cdot 10^{-3}$ mbar
- Assembled oil and grease-free
- Free of substances which impair paint wetting
- For AC solenoid systems with integrated rectifier (40 to 60 Hz)



Technical data

Fluid:

For neutral gaseous and liquid fluids ¹⁾

Actuation:

Solenoid direct operated poppet valves

Mounting position:

Optional, preferably with solenoid on top

Nominal size:

1,5 to 12 mm

Port size:

G 1/4, G 1/2, 1/4 NPT

Operating pressure:

0 to 50 bar

Temperature:

-25 °C to +80 °C

Material:

Housing: Brass

Seal: NBR (Perbunan)

Inner parts: Steel 1.4104, brass

Ordering example

See information on next page.

Further versions upon request

Solenoid with small power consumption

Solenoid for higher temperatures

Solenoid in protection class EEx m

Solenoid for outdoor application

Solenoid with FM-/CSA-certification

(NEMA 4, 4X, 7 und 9)

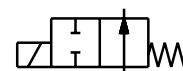
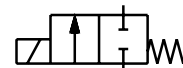
For fluid temperatures from -50 °C to +180 °C

Seat seals FKM, EPDM, FFKM, PTFE, Rubin

Connectors

See data sheet 7503364

1) With contaminated fluids, upstream installation of a dirt trap is recommended.





Type key

950X**X*.*****.*****

Nominal size		Number code		Frequency (Hz)		Number code	
1,5; 2; 3; 4; 5; 6; 8; 12		1, 2, 3, 4, 5, 6, 8, 7		at DC		00	
				at AC (40 to 60 Hz)		50	
Material Seat seal		Number code		Voltage (V)		Number code	
NBR (Perbunan)		0		24		024	
EPDM		1		230		230	
FKM (Viton)		2					
PTFE (Teflon) *(DN1,5 - 4)		3					
FFKM (Kalrez)		4					
Rubin (DN2 + 3)		5					
Solenoid		Number code					
see solenoids							

* Possible only with series 9500XXX

Ordering example

2/2 directional control valve, Nominal size 2, normally closed, port size G 1/4, Protection class IP 00, current draw 16 W, voltage 24 V DC

Part No.: 9500200.0700.024.00

General information

Series 9500XXX and 9503XXX

Switching function: Normally closed

Symbol	Type *	Port size	Nominal size	K _v -value (C _v (US) ≈ k _v x 1,2)	Dimensional drawing	Weight without solenoid (kg)
	9500100	G 1/4	1,5	0,07	M01	0,21
	9503100	1/4 NPT				
	9500200	G 1/4	2	0,12	M01	0,21
	9503200	1/4 NPT				
	9500300	G 1/4	3	0,20	M01	0,21
	9503300	1/4 NPT				
	9500400	G 1/4	4	0,35	M01	0,21
	9503400	1/4 NPT				

* When ordering please indicate solenoid, voltage and current type (frequency).

Solenoids and operating pressures

Protection class	Solenoid type / Solenoid power							
	DC	AC	DC	AC	DC	AC	DC	AC
IP 00 without conn. DIN 43650 form A	0700 16 W	3703 18 VA	0712 7 W	3705 10 VA	0200 12 W	3204 12 VA	0246 7 W	3206 8 VA
IP 65 with connector DIN 43650 form A	0701 16 W	3704 18 VA	0716 7 W	3706 10 VA	0201 12 W	3205 12 VA	0247 7 W	3207 8 VA
EEx m II T5 with 3 m cable					0270 11 W	0271 13 VA	0272 7 W	0273 9 VA
EEx me II T4/T5/T6 with terminal box	3930 12 W	3931 13 VA	3920 8 W	3921 9 VA	3920 8 W	3921 9 VA	3910 4 W	3911 5 VA
Nom. size / Pressures								
1,5 mm	50 bar	50 bar	50 bar	50 bar	50 bar	50 bar	40 bar	40 bar
2 mm	50 bar	50 bar	50 bar	50 bar	40 bar	40 bar	35 bar	35 bar
3 mm	35 bar	35 bar	16 bar	16 bar	10 bar	10 bar	8 bar	8 bar
4 mm	12 bar	12 bar	5 bar	5 bar	4 bar	4 bar	3 bar	3 bar

The solenoid systems which appear in a given column are all suitable for the specified operating pressure even if their power ratings vary.



Series 9501XXX and 9504XXX

Switching function: Normally closed

Symbol	Type *	Port size	Nominal size	Operating pressure (bar)	k _v -value (C _v (US) ≈ k _v x 1,2)	Dimensional drawing	Weight without solenoid (kg)
	9501400	G 1/4	4	see solenoids	0,35	M02	0,25
	9504400	1/4 NPT					
	9501500	G 1/4	5	see solenoids	0,45	M02	0,25
	9504500	1/4 NPT					
	9501600	G 1/4	6	see solenoids	0,55	M02	0,25
	9504600	1/4 NPT					
	9501800	G 1/2	8	see solenoids	1,20	M04	0,80
	9501700	G 1/2					

* When ordering please indicate solenoid, voltage and current type (frequency).

Solenoids and operating pressures

Protection class	Solenoid type / Solenoid power			
	DC	AC	DC	AC
IP 00 without conn. DIN 43650 form A	0800 16 W	3803 18 VA	0827 7 W	3805 10 VA
IP 65 with connector DIN 43650 form A	0801 16 W	3804 18 VA	0813 7 W	3806 10 VA
EEx me II T5/T6 with terminal box	3980 12 W	3981 13 VA	3970 7 W	3971 9 VA
Nom. size / Pressures				
4 mm	14 bar	14 bar	8 bar	8 bar
5 mm	7 bar	7 bar	3,5 bar	3,5 bar
6 mm	5 bar	5 bar	2 bar	2 bar
8 mm	2,5 bar	2,5 bar	1 bar	1 bar
12 mm	1 bar	1 bar	–	–

The solenoid systems which appear in a given column are all suitable for the specified operating pressure even if their power ratings vary.

Series 9502XXX and 9505XXX

Switching function: Normally open

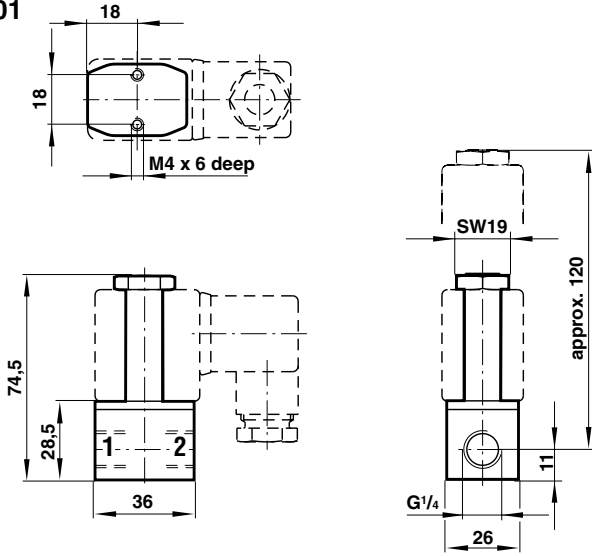
Symbol	Type *	Solenoid type		Port size	Nominal size	Operating pressure (bar)		k _v -value (C _v (US) ≈ k _v x 1,2)	Dimensional drawing	Weight without solenoid (kg)
		DC	AC			Min.	Max.			
	9502210	0246	3206	G 1/4	2	0	20	0,10	M03	0,21
	9505210	0246	3206	1/4 NPT						
	9502310	0246	3206	G 1/4	3	0	10	0,16	M03	0,21
	9505310	0246	3206	1/4 NPT						
	9502430	0827	3805	G 1/4	4	0	6	0,30	M03	0,25
	9505430	0827	3805	1/4 NPT						

* When ordering please indicate solenoid, voltage and current type (frequency).

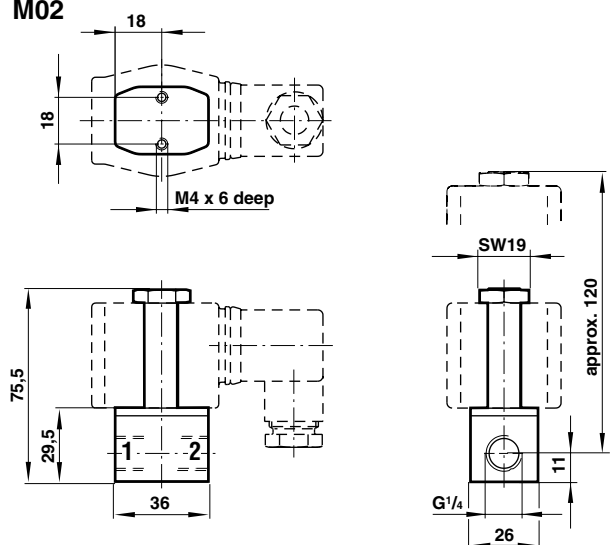


Dimensional drawings: Valves

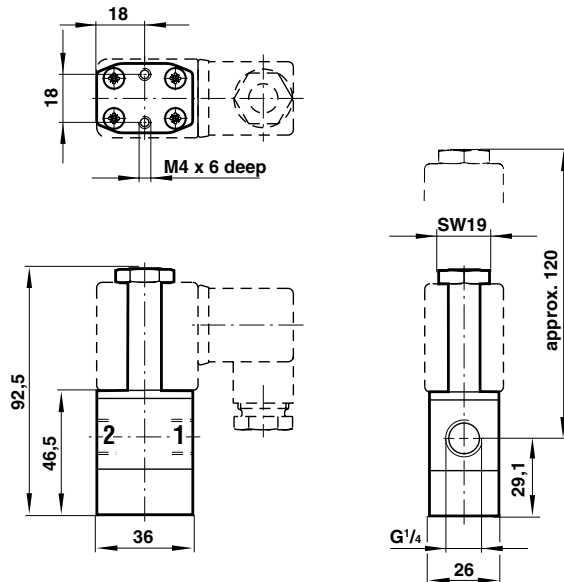
M01



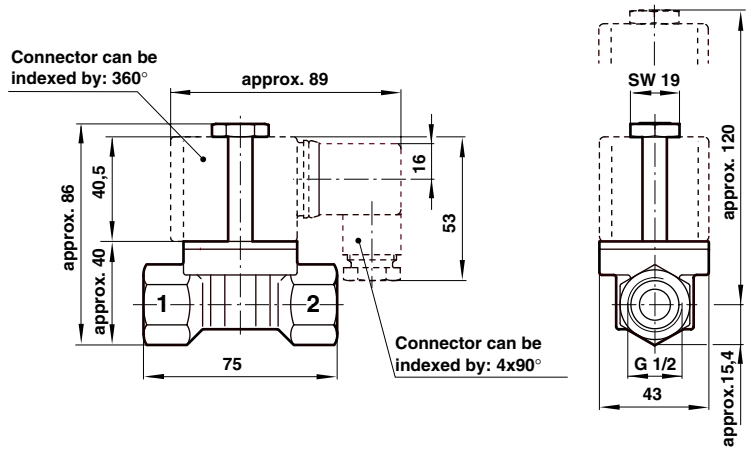
M02



M03

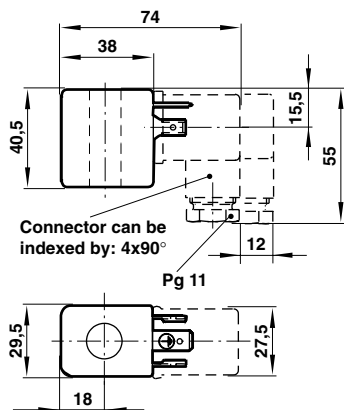


M04

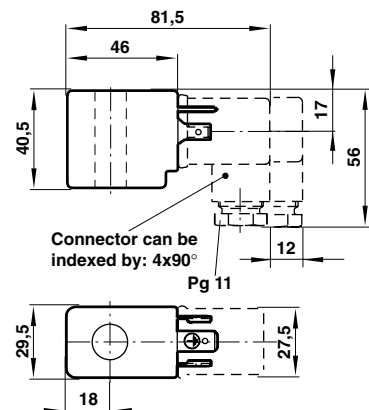


Dimensional drawings: Solenoids

Type: 020X, 024X



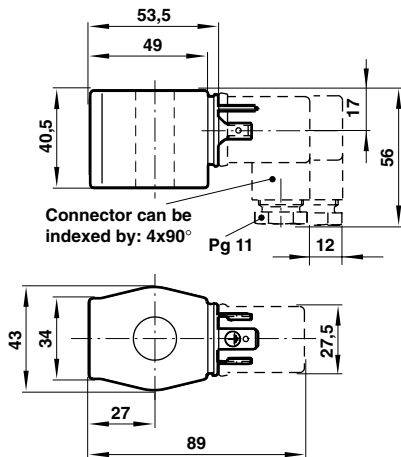
Type: 320X



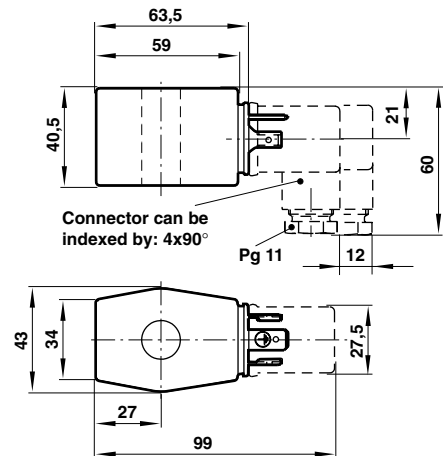


Dimensional drawings: Solenoids

Type: 07XX, 08XX

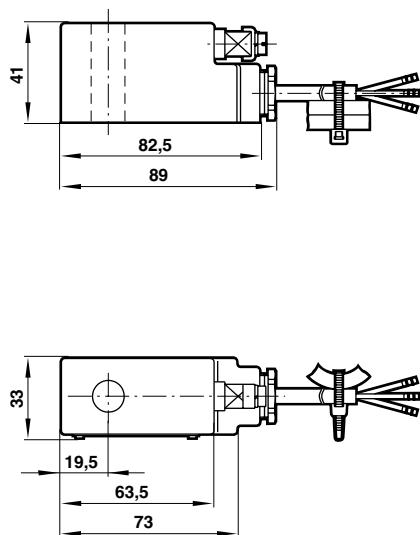


Type: 37XX, 38XX



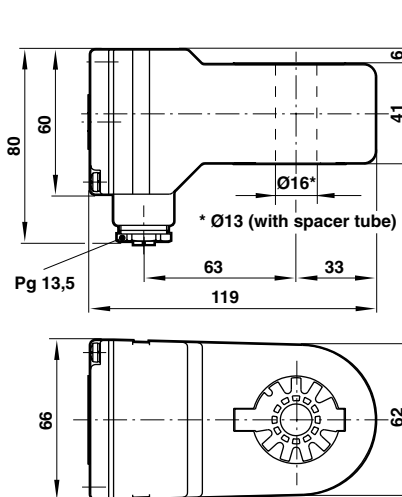
Protection class EEx m

Type: 027X



Protection class EEx me

Type: 39XX



Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under 'Technical Data'. Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult NORGREN. Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes. The system designer is warned to consider the failure modes of all

component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure. **System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.** System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products where applicable.





