

2/2 Solenoid Operated Poppet Valve, Direct Acting, Modular

ROE3-042S5(S6)M

Size 04 (D02), 06 (D03) • Q_{max} 25 l/min (7 GPM) • p_{max} 250 bar (3600 PSI)



Technical Features

- › Valve built-in a modular block with subplate interface acc. ISO 4401, DIN 24340 (CETOP 02 and 03) or an in-line body
- › All ports may be fully pressurized with maximum pressure 250 bar
- › Valve closes leak-free in both flow directions
- › Precisely manufactured parts and hardened poppet
- › Normally open (NO) and normally closed (NC) versions
- › Optional type of manual override
- › Coils interchangeable across ROE / RPE3-04 product line
- › In the standard version, the valve housing is phosphated for basic surface corrosion protection and as preparation for painting. Steel parts are zinc-coated for 240 h salt spray protection acc. to ISO 9227
- › Enhanced surface protection for mobile sector available for the valve housing and steel parts (ISO 9227, 520 h salt spray)

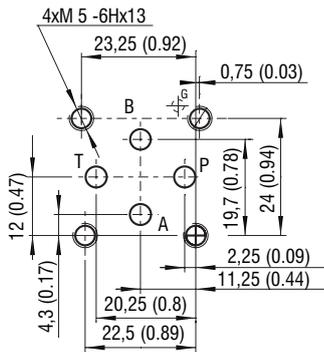
Functional Description

Solenoid operated poppet valve, direct acting, built-in a modular block size (DN) 04 or 06, designed for creating hydraulic circuits by vertical grouping. The second variant is the valve in an in-line body. The bi-directional valve is used for leak-free closing in both flow directions (see Functional Symbols).

Technical Data

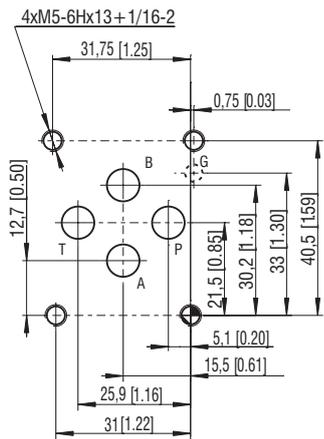
Valve size / Cartridge cavity		04 (02) / QG2	06 (03) / QG2
Max. flow	l/min (GPM)	25 (6.6)	25 (6.6)
Max. operating pressure	bar (PSI)	250 (3600)	
Max. internal leakage in the direction 2→1	cm ³ /min	≤ 0.25 at 250 bar (v=32 mm ² /s)	
Fluid temperature range (NBR)	°C (°F)	-30 ... +80 (-22 ... +176)	
Fluid temperature range (FPM)	°C (°F)	-20 ... +80 (-4 ... +176)	
Ambient temperature range	°C (°F)	-20 ... +50 (-4 ... +122)	
Fluid viscosity range	mm ² s ⁻¹	10 ... 500	
Switching time, at v=32 mm ² /s (156 SUS)	ON	DC 25 ... 35 AC 25 ... 35	DC 30 ... 50 AC 30 ... 110
	OFF	DC 15 ... 25 AC 50 ... 100	DC 80 ... 130 AC 100 ... 150
Weight	Modular	- valve with 1 solenoid - valve with 2 solenoids	kg (lbs)
	In-line		1.2 (2.5) / 1.5 (3.2) 1.7 (3.6) / 2.0 (4.3)
		Datasheet	1.6 (3.5)
General information		HA 0060	Products and operating conditions
Cavity details		HA 0019	Size 04, 06
Spare parts		HA 8010	

ISO 4401-02-01-0-05



Ports P, A, B, T - max \varnothing 4.5 mm (0.18 in)

ISO 4401-03-02-0-05

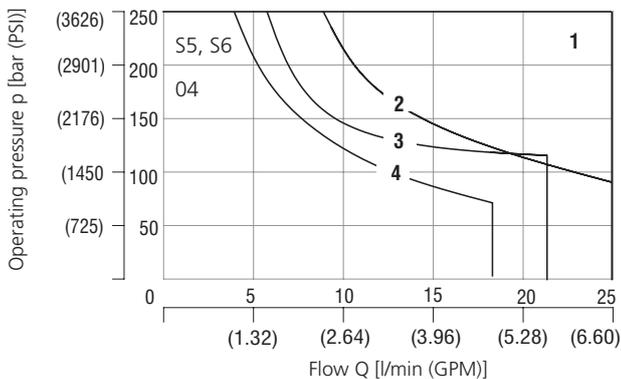


Ports P, A, B, T - max \varnothing 7.5 mm (0.29 in)

Characteristics measured at v = 32 mm²/s (156 SUS)

Operating limits

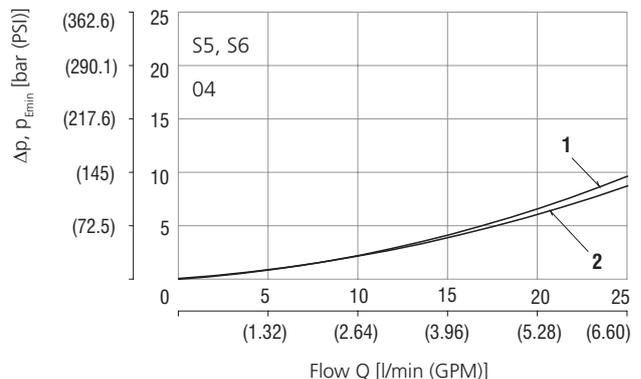
Operating limits for maximum hydraulic power at rated temperature and supplied with voltage equal to 90% of the nominal value.



	1	2	3	4
Model	S5	S5	S6	S6
Direction	A-B	B-A	A-B	B-A

Pressure drop related to flow rate

In-line body design R*

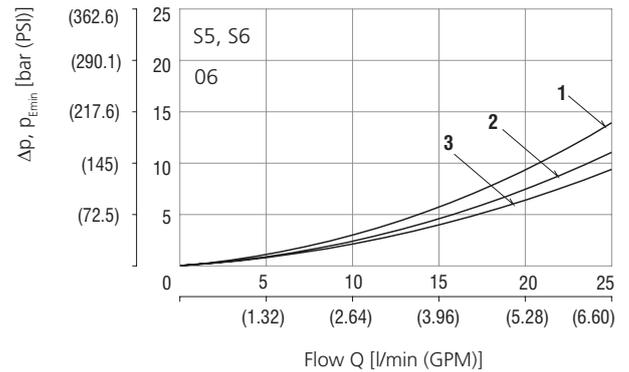
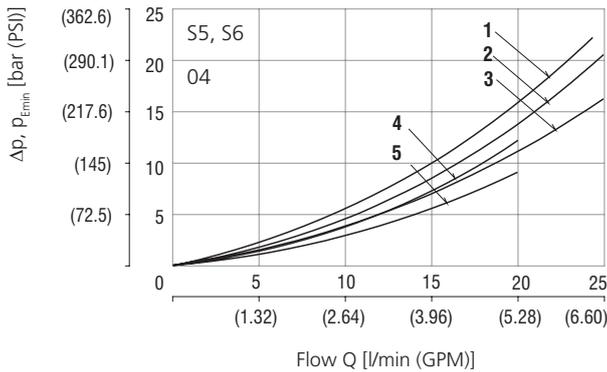


	1	2
Model	R1, R3	R2, R4
Direction	A-B, B-A	A-B, B-A

Characteristics measured at $v = 32 \text{ mm}^2/\text{s}$ (156 SUS)

Pressure drop related to flow rate

Modular plate M*



S5	Model	Direction	S6	Model	Direction
1	MD04	A-T, T-A	2	MD04	A-T, T-A
	ME04	B-T, T-B		ME04	B-T, T-B
	MF04	A-T, T-A		MF04	A-T, B-T
		A-T, B-T			T-A, T-B
2	MX04	A-B, B-A	4	MX04	A-B, B-A
	MA04	A1-A2		MA04	A1-A2, A2-A1
A2-A1		MB04	B1-B2, B2-B1		
3	MB04	B1-B2, B2-B1	5	MC04	A1-A2, A2-A1
		A1-A2, A2-A1			B1-B2, B2-B1
	MC04	B1-B2, B2-B1			

S5	Model	Direction	S6	Model	Direction (to 20 l/min)
1	MD06	A-T, T-A	1	MD06	T-A
	ME06	B-T, T-B		ME06	T-B
	MF06	A-T, B-T / T-A, T-B		MF06	T-A, T-B
2	MA06	A1-A2	2	MD06	A-T
	MB06	B1-B2		ME06	B-T
	MC06	A1-A2 / B1-B2		MF06	A-T, B-T
3	MX06	B-A	3	MA06	A1-A2, A2-A1
	MA06	A2-A1		MB06	B1-B2, B2-B1
	MB06	B1-B2		MC06	A1-A2, A2-A1
	MC06	A2-A1 / B2-B1			B1-B2, B2-B1
	MX06	A-B			

Ordering Code

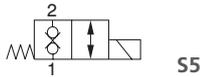
ROE3 - 042 [] [] [] / [] [] [] [] - []

2/2 Solenoid Operated Poppet Valve, Direct Acting, Modular

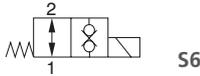
Valve size

Functional symbol

normally closed (NC), blocking



normally open (NO), blocking



Model

- modular valve, connection A2-A1 **MA**
- modular valve, connection B2-B1 **MB**
- modular valve, connection A-B **MX**
- modular valve, connection A-T **MD**
- modular valve, connection B-T **ME**
- modular valve, connection B2-B1, A2-A1 **MC**
- modular valve, connection B-T, A-T **MF**
- modular valve, connection P-T **MG**
- *modular valve, connection P2-P1 **MP**
- modular valve, connection B2-P2, B2-T2 **MJ**
- in-line valve, 2 ports, thread G3/8" **R1**
- in-line valve, 2 ports, thread G1/2" **R2**
- in-line valve, 2 ports, thread 3/4-16, (SAE 8) **R3**
- in-line valve, 2 ports, thread 7/8-14 (SAE 10) **R4**
- in-line valve, 2 ports, thread G3/8", G1/4" **R7**
- in-line valve, 2 ports, thread G3/8", M18x1,5 **R8**

*only available for size 06 (D03)

Modular plate size

- ISO 4401-02-01-0-05, DIN 24340 (CETOP 02), size 04 **04**
- ISO 4401-03-02-0-05, DIN 24340 (CETOP 03), size 06 **06**

No designation

- A** zinc-coated (ZnCr-3), ISO 9227 (240 h)
- B** zinc-coated (ZnNi), ISO 9227 (520 h)

Surface treatment

standard

No designation

- V**

Seals

NBR

FPM (Viton)

Manual override

standard

- N2** covered with rubber boot
- N4** with hand screw

No designation

- N2**
- N4**

Connector type

EN 175301-803-A

- E1** E1 with quenching diode
- E2** AMP Junior Timer - radial direction (2 pins; male)
- E3** E3 with quenching diode
- E4** AMP Junior Timer - axial direction (2 pins; male)
- E3A** E3A with quenching diode
- E4A** EN 175301-803-A with integrated rectifier
- E5** loose conductors (two insulated wires)
- E8** E8 with quenching diode
- E9** Deutsch DT04-2P - axial direction
- E12A** E12A with quenching diode
- E13A**

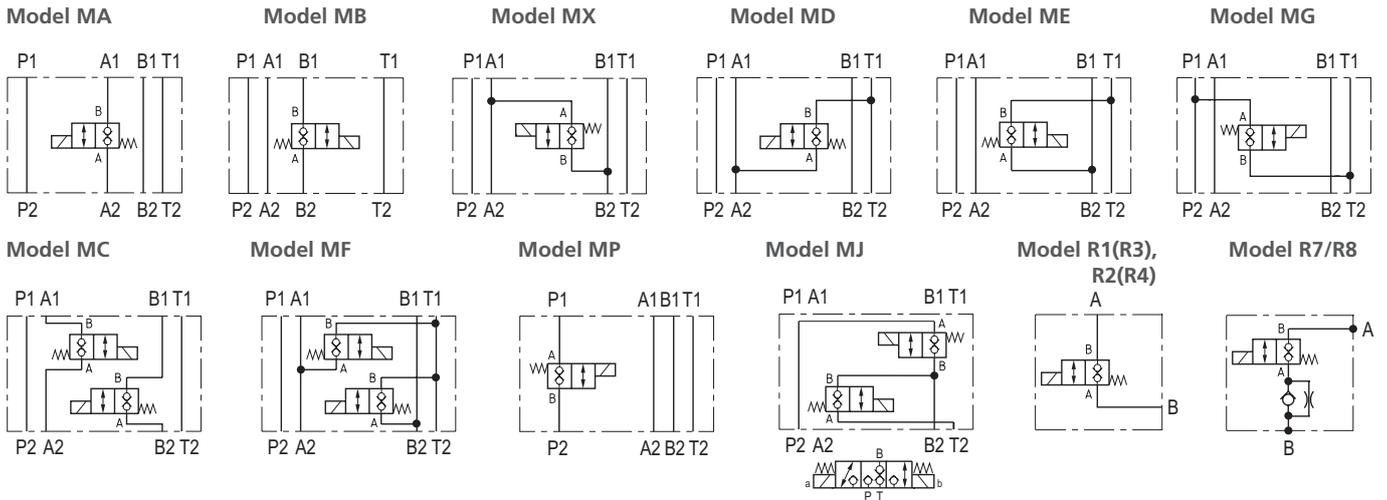
The AC coils correspond to E5.

Rated supply voltage of solenoids (at the coil terminals)

- 01200** 12 V DC / 2.41 A
- 01400** 14 V DC / 1.66 A
- 02100** 21 V DC / 1.31 A
- 02400** 24 V DC / 1.15 A
- 02700** 27 V DC / 0.89 A
- 20500** 205 V DC / 0.12 A
- 02450** 24 V AC / 1.44 A / 50 (60) Hz
- 12060** 120 V AC / 0.22 A / 50 (60) Hz
- 23050** 230 V AC / 0.12 A / 50 (60) Hz

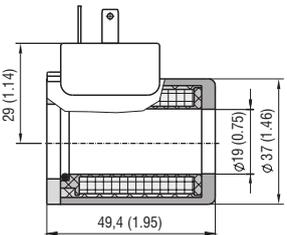
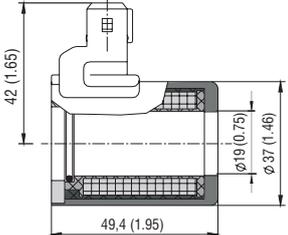
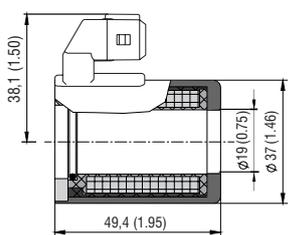
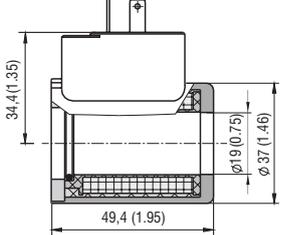
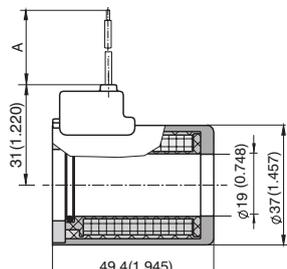
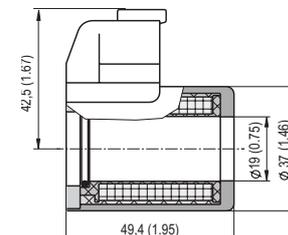
Functional Symbols

Example: ROE3-042S5(S6)M*



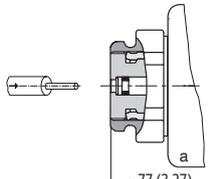
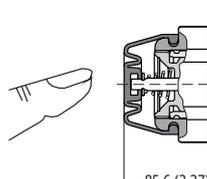
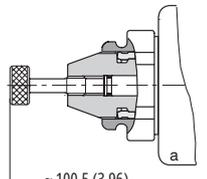
Ports designation	
Valve side	P1, A1, B1, T1
Subplate or manifold side	P2, A2, B2, T2

Solenoid Coil in millimeters (inches)

<p>E1 - EN 175301-803-A E2 - E1 with quenching diode Protection degree IP65</p> 	<p>E3 - AMP Junior Timer - radial direction E4 - E3 with quenching diode Protection degree IP67</p> 	<p>E3A - AMP Junior Timer - axial direction E4A - E3A with quenching diode Protection degree IP67</p> 	<p>E5 - EN 175301-803-A and integrated rectifier Protection degree IP65</p> 
<p>E8 - Loose conductors (two insulated cables) E9 - (E8 with quenching diode)</p>  <p>Note: A = Standard 300 mm (11.81 in), other sizes on demand</p>	<p>E12A - Deutsch DT04-2P E13A - E12A with quenching diode Protection degree IP67 / IP69K</p> 		

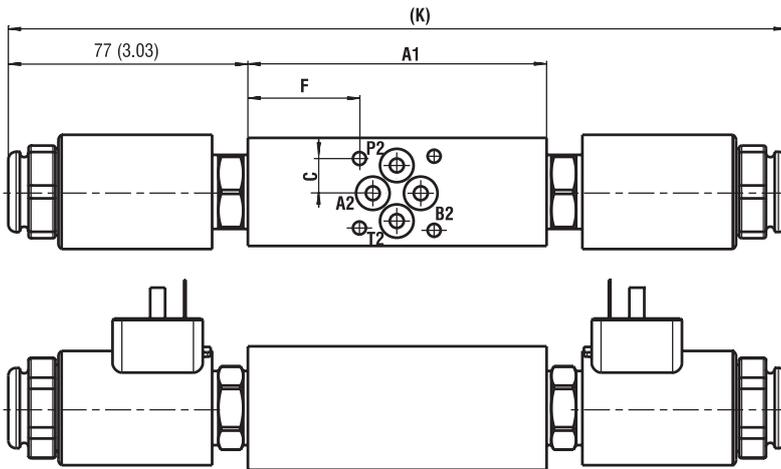
The indicated IP protection level is only reached with a properly mounted connector.

Manual Override in millimeters (inches)

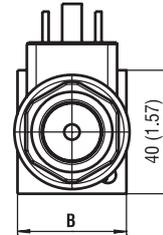
<p>No designation - standard</p> 	<p>Designation N2 - rubber boot protected</p> 	<p>Designation N4 - hand screw</p> 
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Dimensions in millimeters (inches)

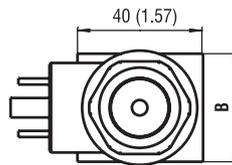
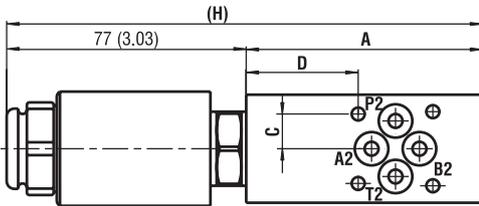
Dn 04, 06
Models MC, MF, MJ



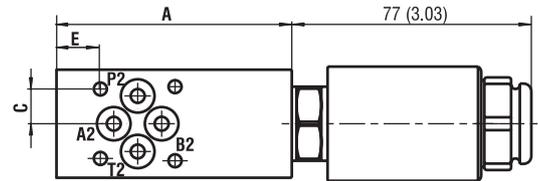
	Size 04	Size 06
A	76 (2.99)	80 (3.15)
A1	96 (3.78)	94 (3.70)
B	35 (1.38)	45 (1.77)
C	11.25 (0.44)	15.5 (0.61)
D	36 (1.42)	28 (1.10)
E	16 (0.63)	11.5 (0.45)
F	36 (1.42)	25.5 (1.00)
H	153 (6.02)	157 (6.18)
K	250 (9.84)	248 (9.76)



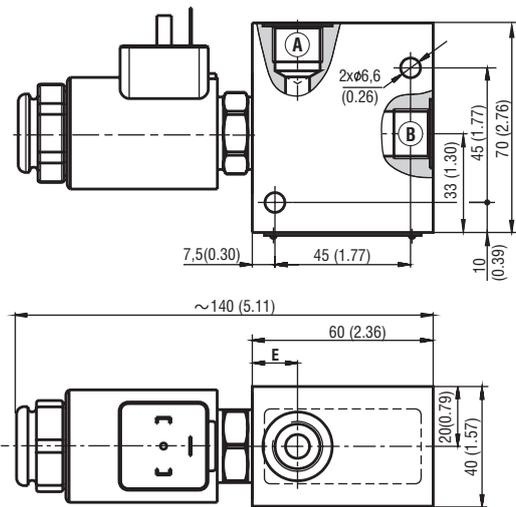
Models MA, MX, MD, MG, MP*
*only available for size 06 (D03)



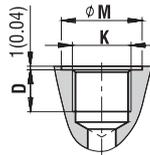
Models MB, ME



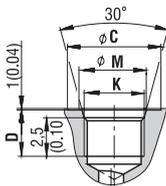
Models R1 (R2)
Models R3 (R4)



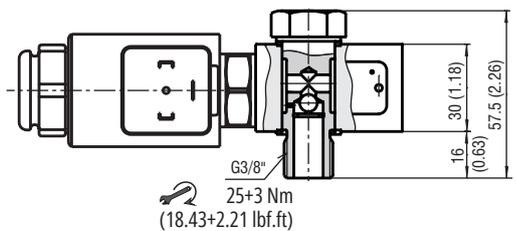
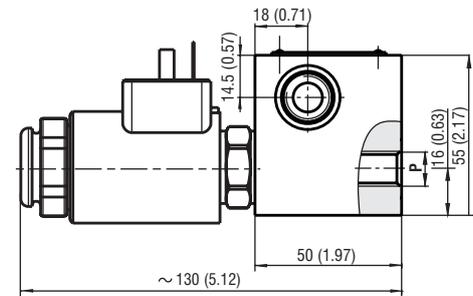
Cavity A, B
for models **R1 (R2)**
DIN 3852



for models **R3 (R4)**
ISO 11926



Model R7 / R8



Model	K	M	C	D	E
R1	G3/8"	Ø23 (0.91)	-	12 (0.47)	15 (0.59)
R2	G1/2"	Ø28 (1.10)	-	14 (0.55)	16 (0.61)
R3	3/4-16UNF-2B (SAE 8)	Ø20.6 (0.81)	Ø30 (1.18)	14.3 (0.56)	16 (0.61)
R4	7/8-14UNF-2B (SAE 10)	Ø23.9 (0.94)	Ø34 (1.34)	16.7 (0.66)	18 (0.71)

Model	P
R7	G1/4"
R8	M18x1,5

