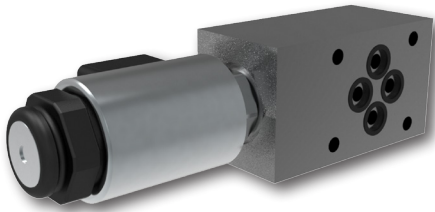


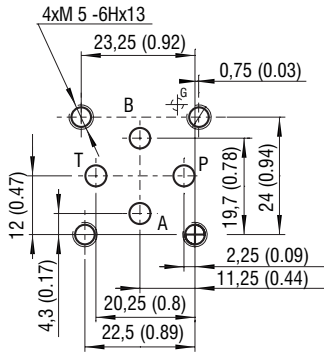
2/2 Directional Valve, Solenoid Operated, Poppet Type, Blocking, Direct Acting, Modular

**ROE3-042S5(S6)/M**

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

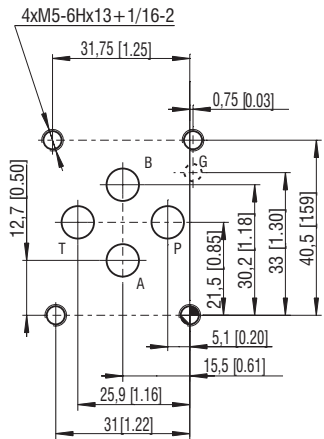


ISO 4401-02-01-0-05



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)

**Technical Features**

- › 2/2 directional valve, solenoid operated, poppet type, blocking, direct acting with subplate interface acc. ISO 4401, DIN 24340 (CETOP 02 and 03) or as an in-line device
- › Hardened precision parts
- › High flow capacity and leak-free closing
- › High transmitted hydraulic power
- › Normally open (NO) and normally closed (NC) versions
- › Wide range of manual overrides available
- › All ports may be fully pressurized
- › Coils interchangeable across ROE / RPE3-04 product line
- › In the standard version, the valve is zinc-coated for 240 h protection acc. to ISO 9227 and the valve body is phosphated

**Functional Description**

2-way, 2-position high pressure direct acting poppet valve in the form of a screw-in cartridge. Usable in various subplate and in-line arrangements. The valve is used mainly for ON-OFF bi-directional control of flow from and to actuators with secure leak-free closing in both directions.

**Technical Data**

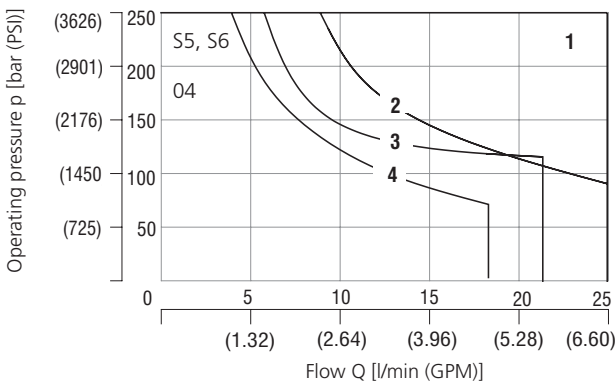
Valve size / Cartridge cavity		04 (02) / QG2	06 (03) / QG2
Max. flow	l/min (GPM)	25 (6.6)	25 (6.6)
Max. operating pressure	bar (PSI)	250 (3630)	
Fluid temperature range (NBR)	°C (°F)	-30 ... +80 (-22 ... +176)	
Fluid temperature range (FPM)	°C (°F)	-20 ... +80 (-4 ... +176)	
Ambient temperature range	°C (°F)	-20 ... +50 (-4 ... +122)	
Supply voltage tolerance	%	AC, DC: $\pm$ 10	
Max. switching frequency	1/h	15 000	
Switching time, at $v = 32 \text{ mm}^2/\text{s}$ (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
Mass	- valve with 1 solenoid	Modular 1.2 (2.5)	Modular 1.5 (3.2)
	- valve with 2 solenoids	Modular 1.7 (3.6)	Modular 2.0 (4.3)
		In-line 1.6 (3.5)	

	Data Sheet	Type
General information	GI_0060	Products and operating conditions
Cavity details	SMT_0019	Size 04, 06
Spare parts	SP_8010	

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

**Operating limits**

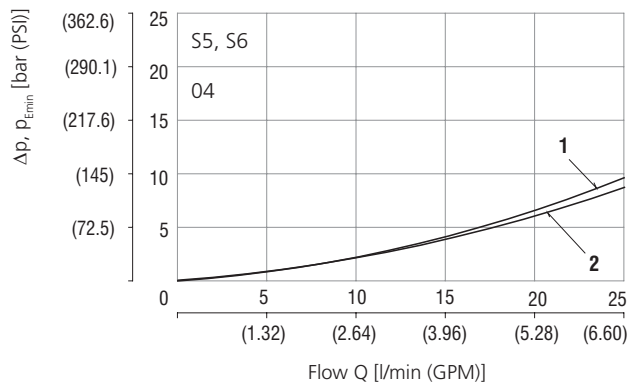
Operating limits for maximum hydraulic power at rated temperature and supplied with voltage equal to 90% of the nominal value



	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\*

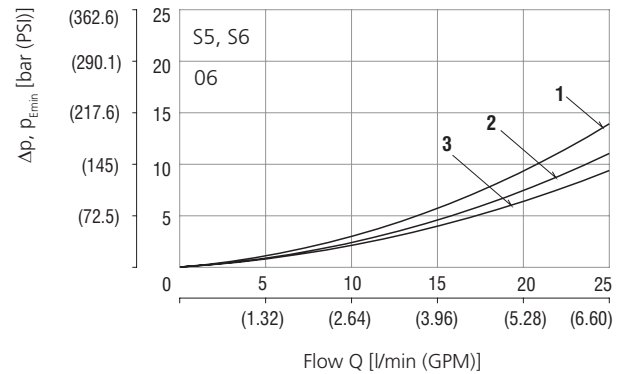
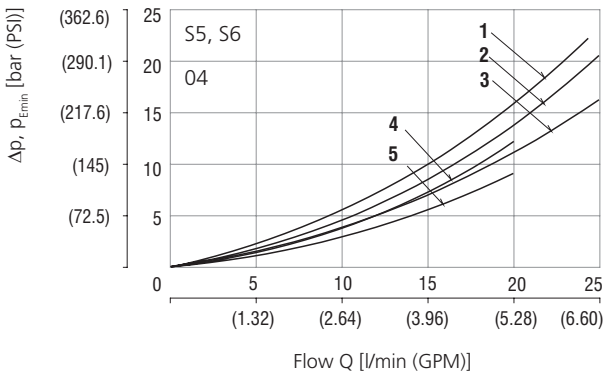


	1	2
Model	R1, R3	R2, R4
Direction	A-B, B-A	A-B, B-A

**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, A2-A1
3	MA04	A2-A1	5	MB04	B1-B2, B2-B1
		MB04			B1-B2, B2-B1
					MC04
		B1-B2, B2-B1			

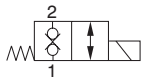
S5	Model	Direction	S6	Model	Direction (to 20 l/min)
1	MD06	A-T, T-A	1	MD06	T-A
	ME06	B-T, T-B		ME06	T-B
	MF06	A-T, B-T / T-A, T-B		MF06	T-A, T-B
2	MA06	A1-A2	2	MD06	A-T
	MB06	B1-B2		ME06	B-T
	MC06	A1-A2 / B1-B2		MF06	A-T, B-T
3	MA06	B-A	3	MA06	A1-A2, A2-A1
	MA06	A2-A1		MB06	B1-B2, B2-B1
	MB06	B1-B2	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

**Ordering Code**

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

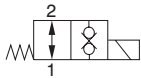
**2/2 directional valve, solenoid operated, poppet type, blocking, direct acting, modular**

normally closed (NC), blocking



**S5**

normally open (NO), blocking



**S6**

**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**
- modular valve, connection A-T, B2-B1 **MI**
- in-line valve, 2 ports, thread G3/8 **R1**
- in-line valve, 2 ports, thread G1/2 **R2**
- in-line valve, 2 ports, thread SAE 8, 3/4-16 **R3**
- in-line valve, 2 ports, thread SAE 10, 7/8-14 **R4**
- in-line valve, 2 ports, thread SAE 10, 7/8-14 **R7**

\*only available for size O6 (D03)

**Modular plate size**

- ISO 4401-02-01-0-05, DIN 24340 (CETOP 02), NG04 **04**
- ISO 4401-03-02-0-05, DIN 24340 (CETOP 03), NG06 **06**

**No designation**

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

**Surface treatment**

- phosphated body, steel parts
- zinc-coated (ZnCr-3), ISO 9227 (240 h)
- zinc-coated (ZnNi), ISO 9227 (520 h)

**No designation**

- V** NBR
- FPM (Viton)

**Seals**

- NBR
- FPM (Viton)

**No designation**

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

**Manual override**

- standard
- covered with rubber boot with hand screw

**Connector type**

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

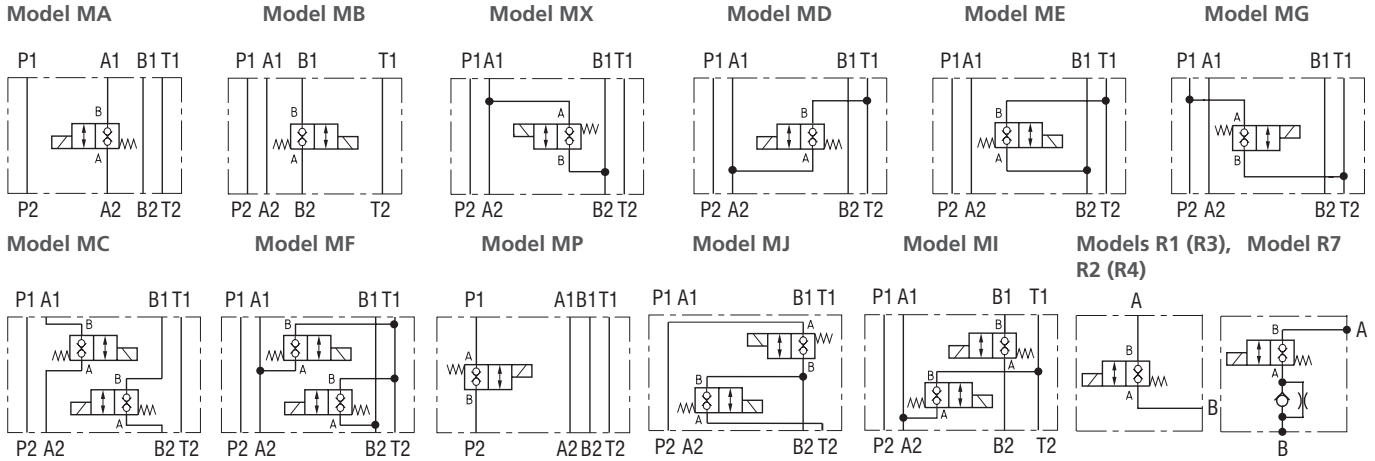
The AC coils correspond to E5.

**Rated supply voltage of solenoids (at the coil terminals)**

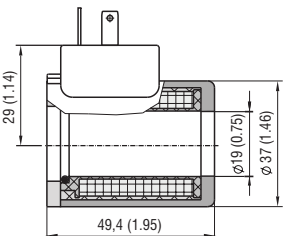
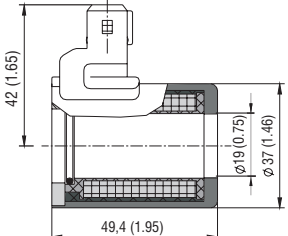
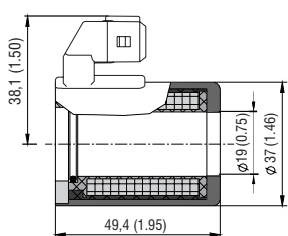
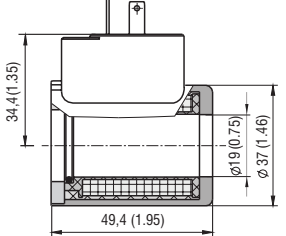
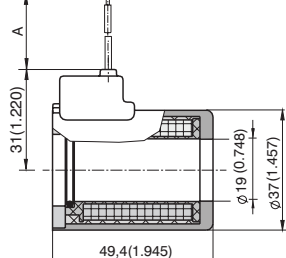
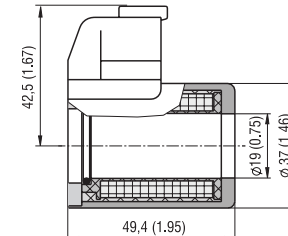
- 01200** 12 V DC / 2.41 A
- 01400** 14 V DC / 1.66 A
- 02100** 21 V DC / 1.31 A
- 02400** 24 V DC / 1.15 A
- 02700** 27 V DC / 0.89 A
- 20500** 205 V DC / 0.12 A
- 02450** 24 V AC / 1.44 A / 50 (60) Hz
- 12060** 120 V AC / 0.22 A / 50 (60) Hz
- 23050** 230 V AC / 0.12 A / 50 (60) Hz

### Functional Symbols

Example: ROE3-042S5M\*

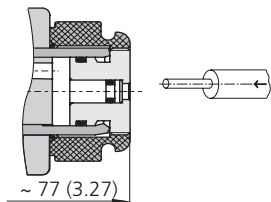
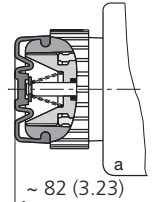
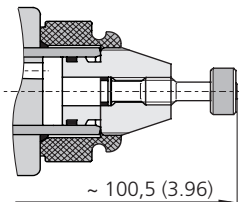


### Solenoid Coil in millimeters (inches)

<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) Protection degree IP65</p>  <p><b>Note:</b> 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> 		

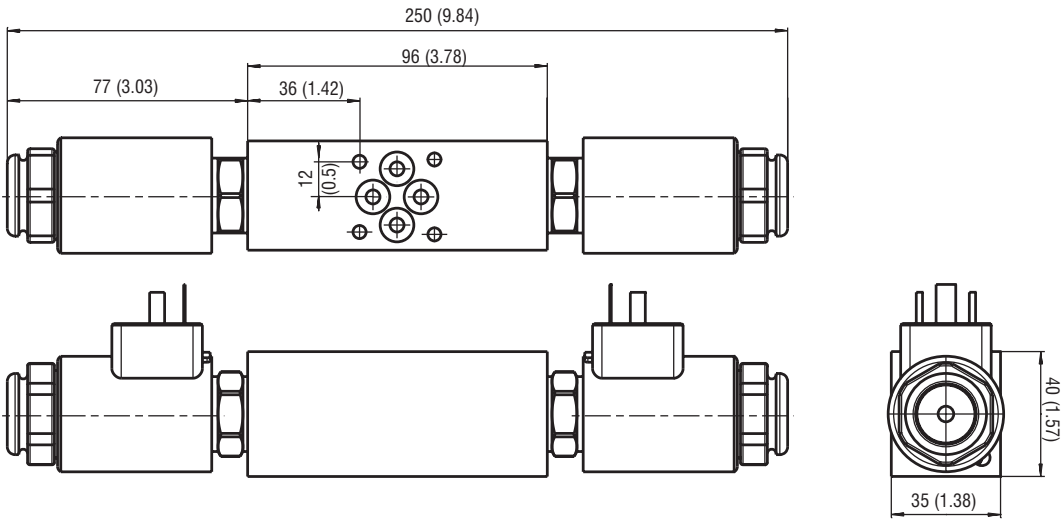
The indicated IP protection level is only reached with a properly mounted connector.

### Manual Override in millimeters (inches)

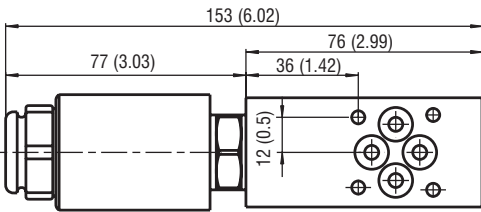
<p>No designation - standard</p>  <p>~ 77 (3.27)</p>	<p>Designation N2 - rubber boot</p>  <p>~ 82 (3.23)</p>	<p>Designation N4 - hand screw</p>  <p>~ 100,5 (3.96)</p>
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Dimensions in millimeters (inches)

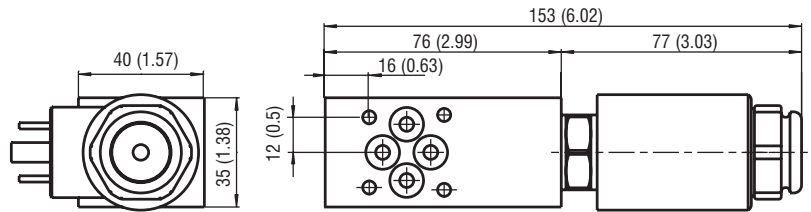
Models MC, MF, MI, MJ



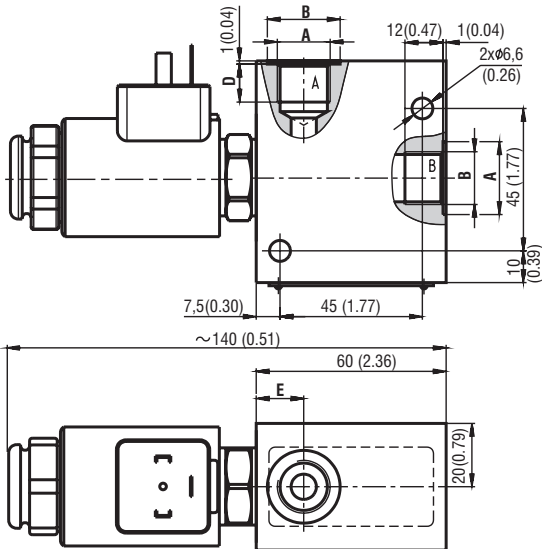
Models MA, MX, MD, MG, MP



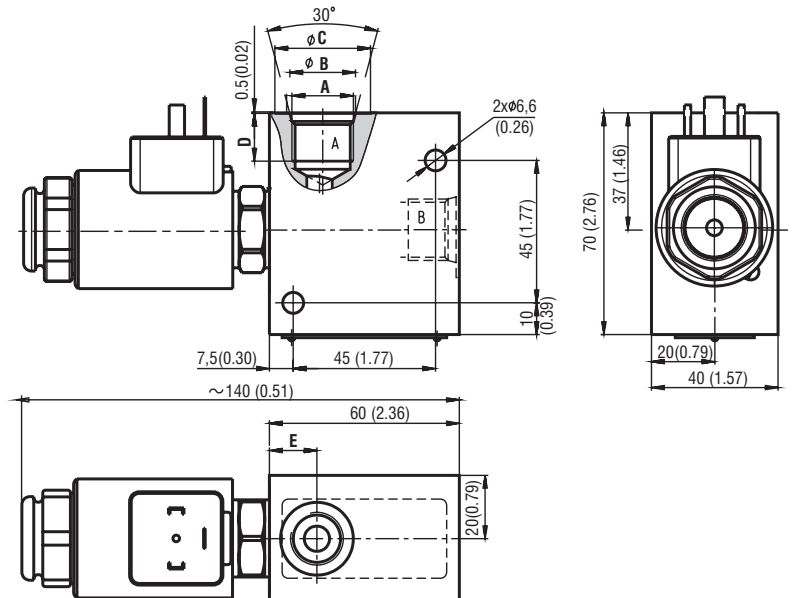
Models MB, ME



Models R1 (R2)



Models R3 (R4)



	A	B	D
R1	G3/8-A	∅ 23	12 (0.47)
R2	G1/2-A	∅ 28	14 (0.55)

	A	B	C	D	E
R3	3/4-16UNF-2B	∅ 20.6	∅ 30	15 (0.59)	16 (0.61)
R4	7/8-14UNF-2B	∅ 23.9	∅ 34	16.7 (0.66)	18 (0.71)