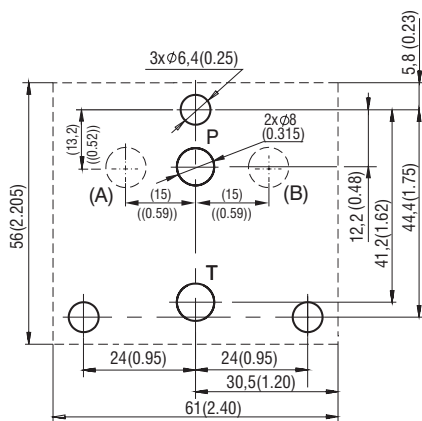


**Technical Features**

- › Direct acting, directional control valve with bankable mounting interface
- › Designed to be assembled in series or parallel, mounting up to 8 body modules
- › High transmitted hydraulic power up to 250 bar, optimized design to minimize the pressure drop
- › Housing with three chambers for production cost savings
- › The valve is available with interchangeable DC solenoids
- › Wide range of solenoid electrical terminal versions available
- › Wide range of interchangeable spools and manual overrides available
- › Suitable for compact applications in the mobile and mini-power pack industries
- › Space and cost saving! With optional end valves
- › No need for bar manifold to construct complex circuit assemblies from stock
- › In the standard version, the valve housing is phosphated and steel parts are zinc-coated for 240 h protection acc. to ISO 9227
- › Enhanced surface protection for mobile sector up to 520h salt spray acc to ISO 9227 available

**Technical Data**

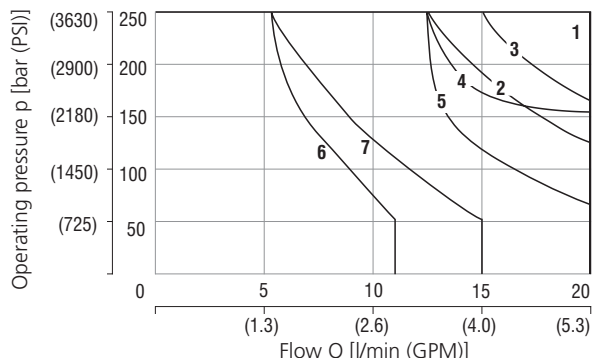
Valve size	03		
Max. flow	l/min (GPM)	20 (5.3)	
Max. operating pressure at port P, A, B	bar (PSI)	250 (3630)	
Max. operating pressure at port T	bar (PSI)	210 (3050)	
Fluid temperature range (NBR)	°C (°F)	-30 ... +80 (-22 ... +176)	
Fluid temperature range (FPM)	°C (°F)	-20 ... +80 (-4 ... +176)	
Ambient temperature range	°C (°F)	-30 ... +50 (-22 ... +122)	
Supply voltage tolerance	%	DC: ±10	
Max. switching frequency	1/h	15 000	
Switching time at v=32 mm <sup>2</sup> /s (156 SUS)	ON	ms	30 ... 50
	OFF	ms	30 ... 50
Mass	- valve with 1 solenoid	kg (lbs)	0.90 (1.98)
	- valve with 2 solenoids		1.05 (2.32)
	Data Sheet	Type	
General information	GI_0060	Products and operating conditions	
Coil types / connectors	C_8007 / K_8008	C14B* / K*	
Mounting interface	SMT_0019	Size 03	
Spare parts	SP_8010		



**Characteristics** measured at v = 32 mm<sup>2</sup>/s (156 SUS)

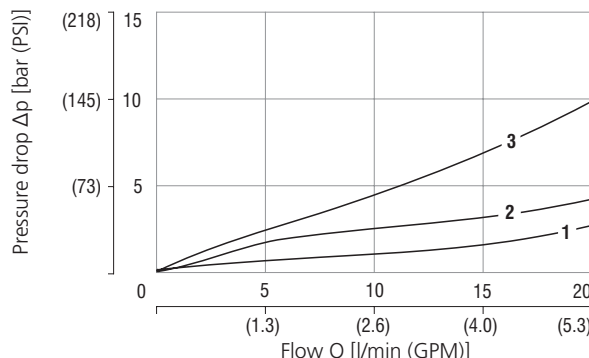
**Operating limits**

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



Spool symbol	
Z11, Z51, R11, P11	1
C11, C51, X11	2
H11, Y11, H51	3
C11, Y11, Y51	4
R21	5
A51, Y82	6
Z81	7

**Pressure drop related to flow rate**



Spool symbol	P-A	P-B	A-T	B-T	P-T
Z11, Y11, P11	1	1	1	1	
R11, R21, X11	2	2	2	2	
Y51, Z51		1	1		
C11	3	3	3	3	2
H11, H51	1	1	1	1	2
C51	3			3	2
A51	2	2			
X11	2	2	2	2	
Y82	2	2	1	3	
Z81			1	2	

For operating limits under conditions other than shown consult our technical department. Admissible operating limits may be considerably lower with only one direction of flow (A or B plugged or without flow).

### Ordering Code

RPEK1-03 [ ] [ ] [ ] / [ ] [ ] [ ] [ ] - [ ]

**4/2 and 4/3 directional control valve, solenoid operated, bankable**

**Valve size**

**Type of connection**

thread A, B - G1/4  
thread A, B SAE6 - 9/16-18UNF  
stackable

**Number of valve positions**

two positions **2**  
three positions **3**

**Spool symbols**

see the table of "Spool Symbols"

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

12 V DC / 1.83 A **01200**  
24 V DC / 0.92 A **02400**

**Connector**

EN 175301-803-A **E1**  
E1 with quenching diode **E2**  
AMP Junior Timer - axial direction (2 pins; male) **E3A**  
E3A with quenching diode **E4A**  
Deutsch DT04-2P - axial direction (2 pins; male) **E12A**  
E12A with quenching diode **E13A**

**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)

**Model**

**No designation** standard, P, T through ports, without ports A1, B1  
**P1** P, T through ports, A1, B1 side ports, all ports sealed  
**P2** P, T through ports, A1, B1 side ports inverted (not sealed)  
**Z1** end valve, one side P, T sealed ports  
**Z2** end valve, one side P, T ports inverted (not sealed)  
**Z3** end valve, one side P, T ports, A1, B1 side ports, all ports not sealed  
**Z4** end valve, one side P, T, A1, B1 side ports inverted, all ports not sealed

**Manual override**

**No designation** standard  
**N2** protected with rubber boot  
**N5** socket head screw

- For directional valves with two solenoids, one solenoid must be de-energized before the other solenoid can be energized.
- For other solenoid voltages see data sheet C\_8007.
- The solenoid operated valves are delivered without connectors. For connectors version see data sheet K\_8008.
- The orifice to the P port can be ordered separately, see data sheet SP\_8010.
- Besides the commonly used valve versions shown other special models are available. Contact our technical support for their identification, feasibility and operating limits.

### Spool Symbols

Type	Symbol	Interposition	Type	Symbol	Interposition	Type	Symbol	Interposition
Z11			R11			H51		
C11			R21			Z51		
H11			A51			Z11		
P11			Y51			X11		
Y11			C51			C11		
Y82			Z81			Y11		

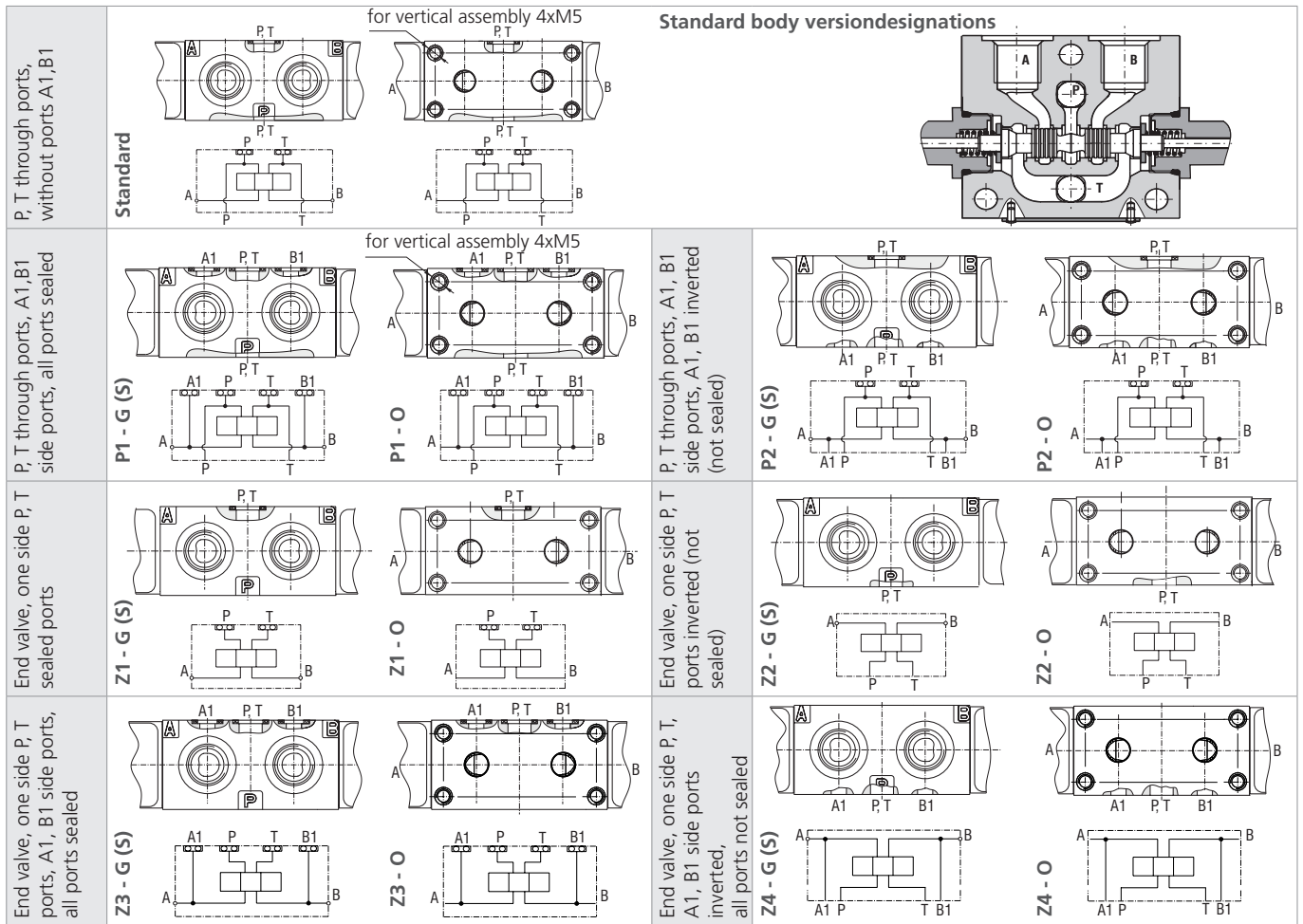
### Solenoid Coil in millimeters (inches)

E1, E2 - Protection degree IP65	E3A, E4A - Protection degree IP67	E12A, E13A - Protection degree IP67 / IP69	
			The indicated IP protection level is only reached with a properly mounted connector.

### Manual Override in millimeters (inches)

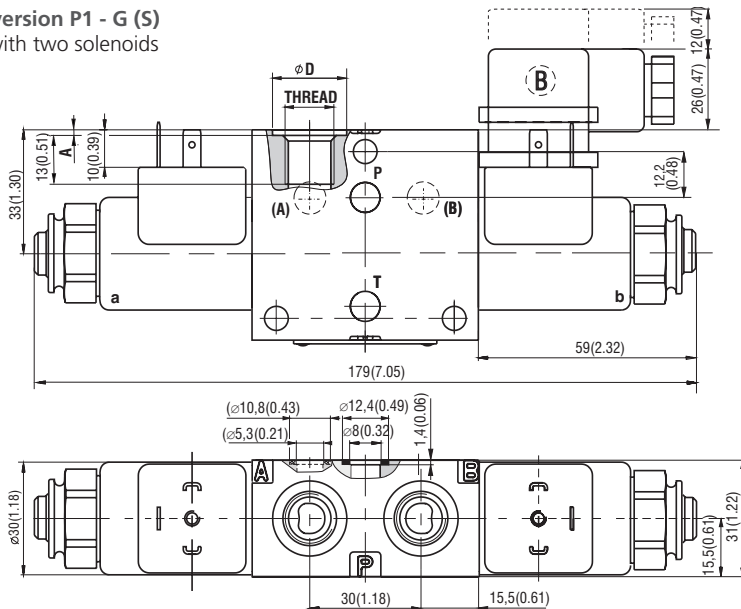
No designation - standard	N2- protected with rubber boot	N5 - socket head screw 3	
			In case of solenoid malfunction or power failure, the spool of the valve can be shifted by manual override as long as the pressure in port T does not exceed 25 bar (363 PSI). For alternative manual overrides contact our technical support.

## Design Forms G (S), O in millimeters (inches)

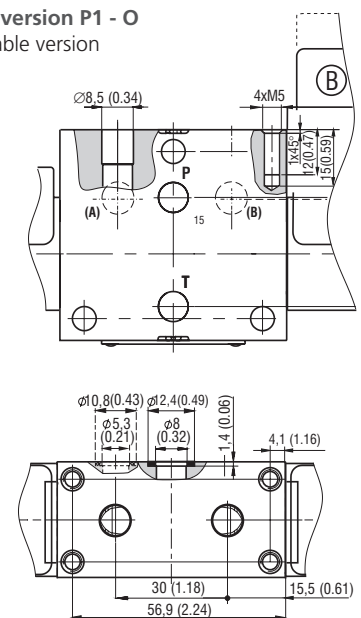


## Dimensions in millimeters (inches)

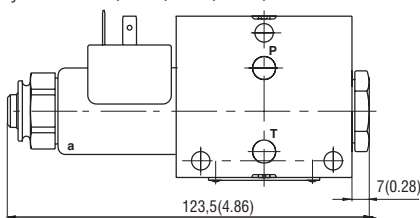
**Body version P1 - G (S)**  
Valve with two solenoids



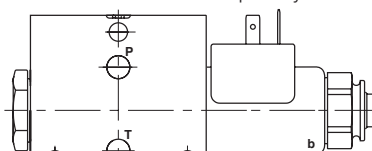
**Body version P1 - O**  
Stackable version



**Valve with one solenoid „a“**  
Spool symbols R11, R21, Y51, C51, Z51

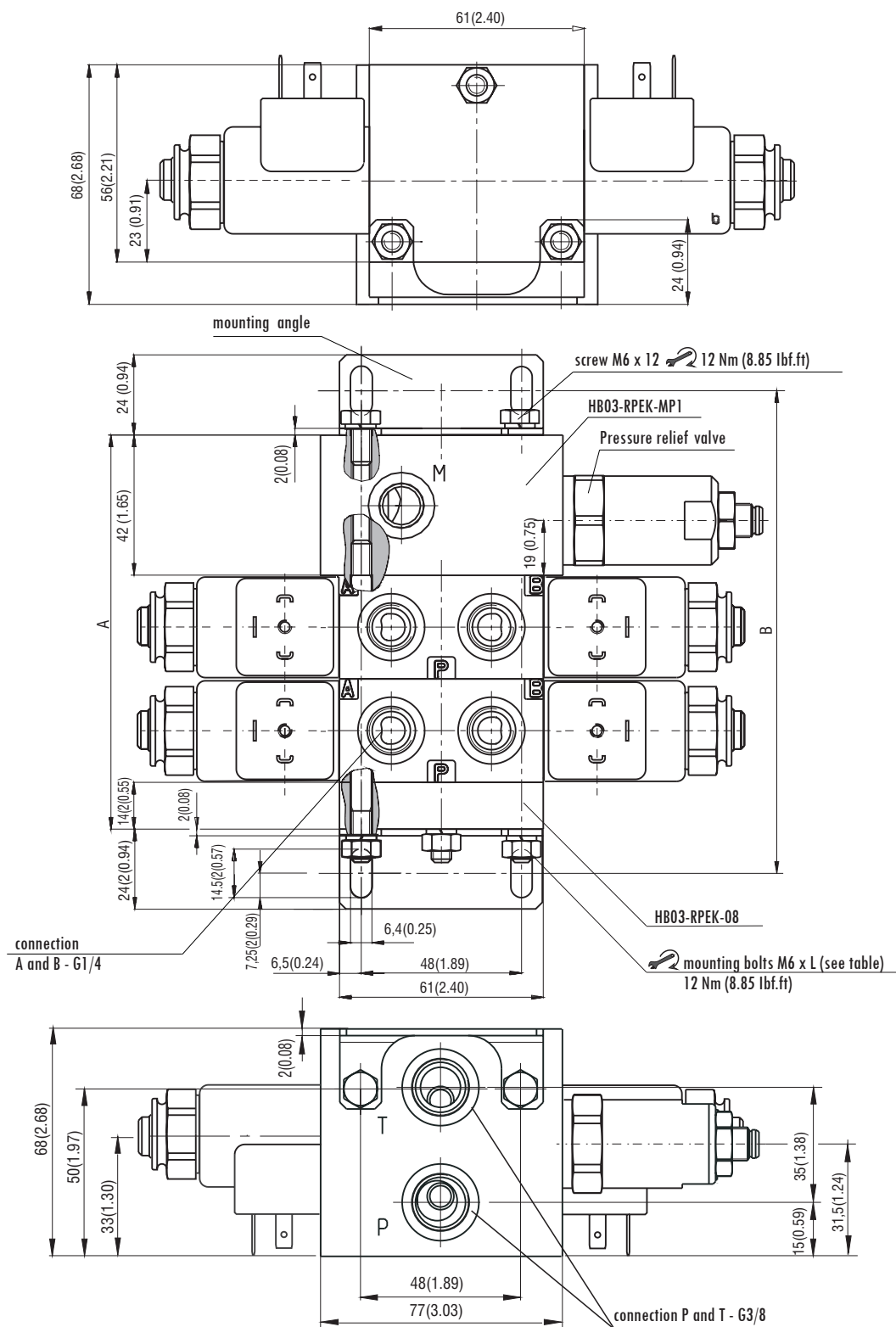


**Valve with one solenoid „b“**  
Spool symbols H11



	G	S
THREAD	G1/4	SAE6-9/16-18UNF
∅ D [mm]	20.9H13	25+0.5
∅ D [in]	0.823	0.984+0.02
A [mm (in)]	1 (0.039)	0.5 (0.020)

VERSION - valve with inlet block and pressure relief valve see datasheet 4057 - RPEK1-03/B



Dimensions mm (inches)								
Number of sections	1	2	3	4	5	6	7	8
Dimension A	87 (3.43)	118 (4.65)	149 (5.87)	180 (7.09)	211 (8.31)	242 (9.53)	273 (10.75)	304 (11.97)
Dimension B	114 (4.49)	145 (5.71)	176 (6.93)	207 (8.15)	238 (9.37)	269 (10.59)	300 (11.81)	331 (13.03)
Dimension L	60 (2.36)	100 (3.94)	133 (5.24)	163 (6.42)	194 (7.64)	224 (8.82)	256 (10.08)	287 (11.30)