

# 6 to 14/2 ways/positions bankable flow diverters flangeable

RE 18302-09/07.12 1/10  
Replaces: 12.09

L732.... (VS241F-VS245F-VS246F-VS247F)

Size 6  
Series 00  
Maximum operating pressure 310 bar [4500 psi]  
Maximum flow 50 l/min [13.2 gpm]  
Ports G 3/8 - SAE8 - M18x1,5



DVI0087

## Summary

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## General specifications

- 6 way 2 position valve.
- Directional spool valve with direct solenoid control.
- Hydraulic / pneumatic pilot, or manual push and twist control available as option.
- Usable as stand-alone, or as multiple stackable units.
- Control spool operated by solenoid, with easily removable coil fastened by a ring nut.
- Wet pin tube for DC coil, with push rod for mechanical override in case of voltage shortage.
- Unrestricted 360° orientation of DC coil.
- Control spool held in normal position by return spring.
- Optional manual override (push-button or screw type).
- Connectors available: DIN 43650 – ISO 4400, AMP Junior, DT04-2P (Deutsch), Free leads.



## Principles of operation, cross section

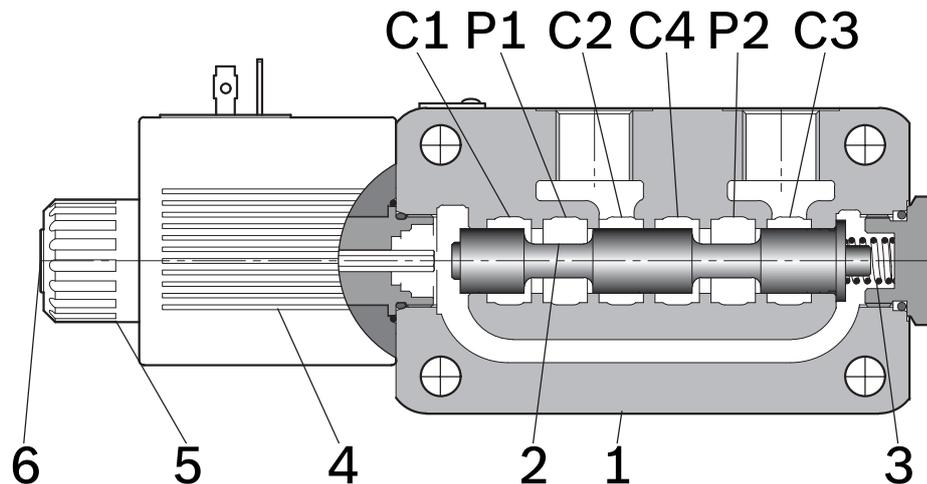
A valve basically consists of a housing (1), a control spool (2), a return spring (3) and a solenoid (5). It is designed to connect two inlet lines P1 – P2 (normally a set of hoses) and divert them to either the outlet ports (C1 – C4) with spool in position “0”, when the solenoid is de-energized, or to the outlet ports (C2 – C3) with spool in position “1”, when the solenoid is energized.

With the coil de-energized, the return spring (3) pushes back the spool (2) and holds it in position “0”

The coil (5) is fastened to the tube by the ring nut (6). The manual override (6) allows to shift the spool (2) also in case of voltage shortage.

An external drain, to be connected to tank, ensures shifting operations also at higher working pressure.

Hydraulic / pneumatic pilot control, or manual push and twist control for spool shifting are available upon request.



## Technical Data (for applications with different specifications consult us)

### General

Valve weight	kg [lbs]	3.2 [7.06]
Mounting position		unrestricted
Ambient Temperature	°C [°F]	-20....+50 [-4....+122] (NBR seals)

### Hydraulic

Maximum pressure with external drain ("E" type)	bar [psi]	310 [4500]
Maximum pressure with internal drain ("I" type)	bar [psi]	250 [3625]
Maximum pressure with internal drain and 6F or 6G or 6H scheme	bar [psi]	310 [4500]
Maximum inlet flow	l/min [gpm]	50 [13.2]
Hydraulic fluid		Mineral oil based hydraulic fluids HL (DIN 51524 part 1). Mineral oil based hydraulic fluids HLP (DIN 51524 part 2). For use of environmentally acceptable fluids (vegetable or polyglycol base) please consult us.
Fluid Temperature	°C [°F]	-20....+80 [-4....+176] (NBR seals)
Permissible degree of fluid contamination		ISO 4572: $\beta_x \geq 75$ X=12...15 ISO 4406: classe 20/18/15 NAS 1638: classe 9
Viscosity range	mm <sup>2</sup> /s	5....420
Internal leakage with 100 bar [1450 psi] secondary pressure at C	cc/min [in <sup>3</sup> /min]	min.10 [0.61] max. 25 [1.52]

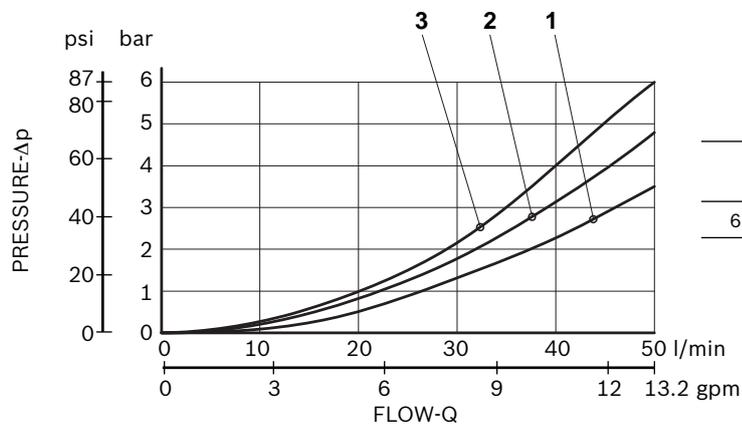
**Electrical**

Voltage type	DC										
Voltage tolerance (nominal voltage)	%	-10 .... +10									
Duty	%	Continuous, with ambient temperature $\leq 50^{\circ}\text{C}$ [122°F]									
Coil wire temperature not to be exceeded	$^{\circ}\text{C}$ [°F]	150 [302]									
Insulation class	H										
Compliance with	Low Voltage Directive LVD 73/23/EC (2006/95/EC), 2004/108/EC										
Coil weight with DIN 43650 – ISO 4400 connector	kg [lbs]	0.5 [1.1]									
Voltage	V	12	13	24	27	48					
Voltage type		DC	DC	DC	DC	DC					
Power consumption	W	36	36	36	36	36					
Current (nominal at 20°C [68°F])	A	3.0	2.77	1.53	1.32	0.75					
Resistance (nominal at 20°C [68°F])	$\Omega$	3.97	4.68	15.67	20.42	63.60					

	Voltage (V)	Connector type	Coil description	Marking	Coil Mat no.
=OB 01	12 DC	EN 175301-803 (Ex. DIN 43650)	C4801 12DC	12 DC	R933000063
=OB 03	12 DC	AMP JUNIOR	C4803 12DC	12 DC	R933000065
=OB 07	12 DC	DEUTSCH DT 04-2P	C4807 12DC	12 DC	R933000068
=OB 31	12 DC	Cable 350 mm long	C4831 12DC	12 DC	R933000064
=AD 01	13 DC	EN 175301-803 (Ex. DIN 43650)	C4801 13DC	13 DC	R933000069
=AD 07	13 DC	DEUTSCH DT 04-2P	C4807 13DC	13 DC	R933000073
=OC 01	24 DC	EN 175301-803 (Ex. DIN 43650)	C4801 24DC	24 DC	R933000076
=OC 03	24 DC	AMP JUNIOR	C4803 24DC	24 DC	R933000071
=OC 07	24 DC	DEUTSCH DT 04-2P	C4807 24DC	24 DC	R933000075
=OC 31	24 DC	Cable 350 mm long	C4831 24DC	24 DC	R933000070
=AC 01	27 DC	EN 175301-803 (Ex. DIN 43650)	C4801 27DC	27 DC	R933000077
=AC 07	27 DC	DEUTSCH DT 04-2P	C4807 27DC	27 DC	R933000074
=OD 01	48 DC	DIN EN 175301-803 ISO 4400	C4801 48DC	48 DC	R933000078

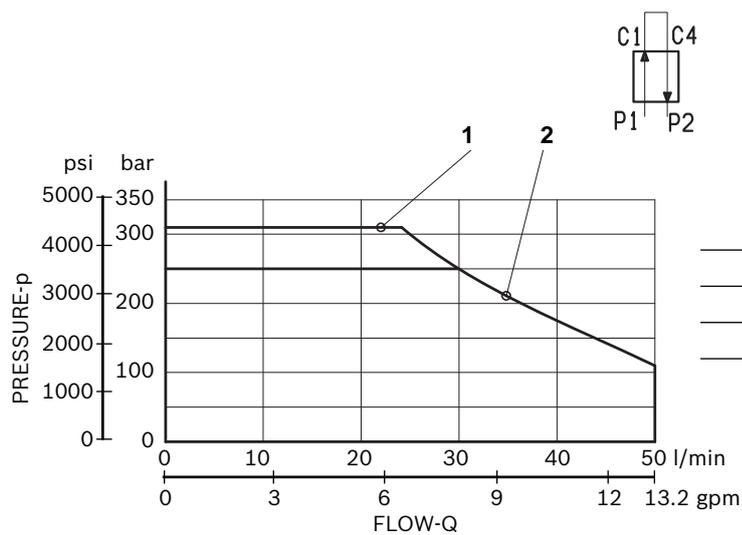
### Characteristic curves

Measured with hydraulic fluid ISO-VG32 at  $45^{\circ} \pm 5^{\circ} \text{ C}$  [ $113^{\circ} \pm 9^{\circ} \text{ F}$ ]; ambient temperature  $20^{\circ} \text{ C}$  [ $68^{\circ} \text{ F}$ ].



Scheme	Curve n.			
	P1>C1	P1>C2	P2>C4	P2>C3
6B - 6D - 6E - 6F - 6G - 6H	1	2	2	3

### Performances limits

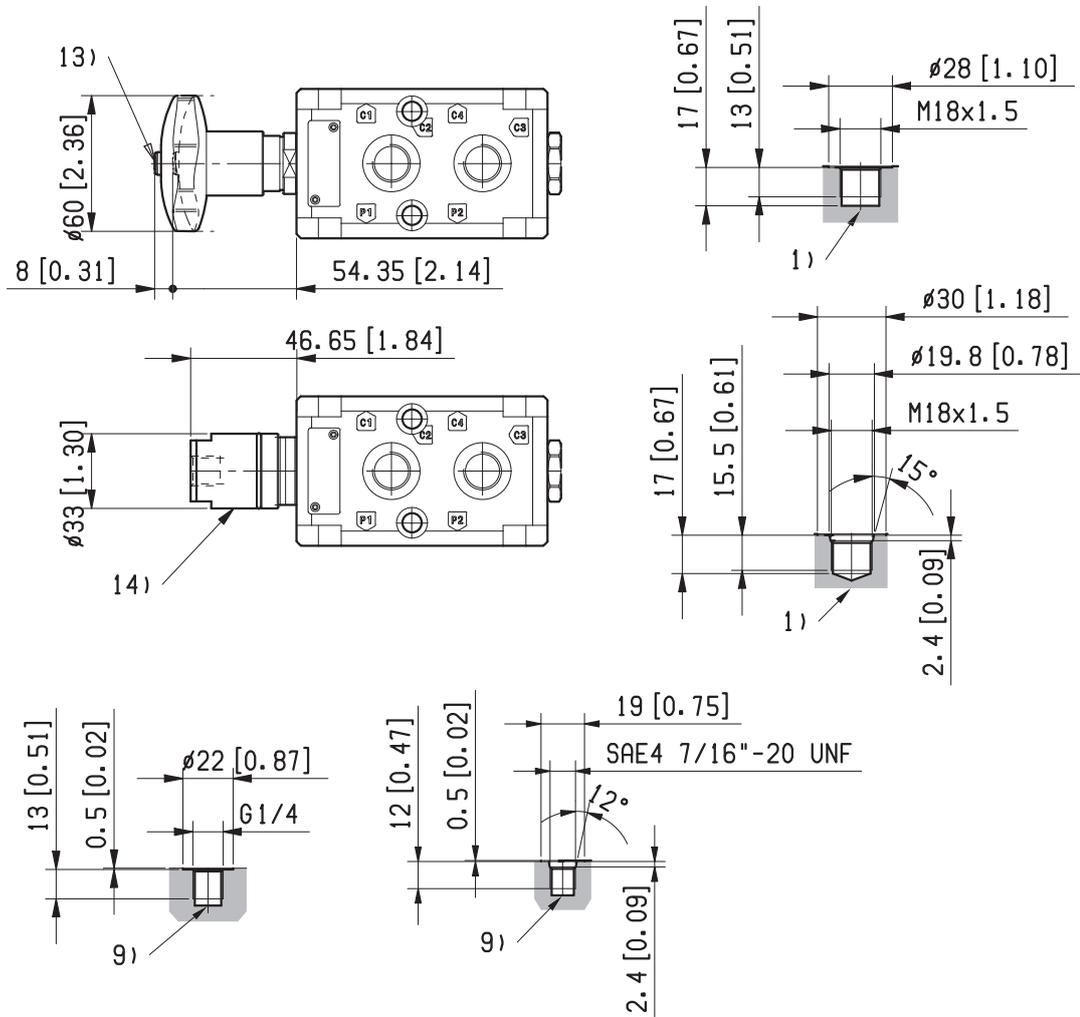


Scheme	Drain type
1	External (-E-)
2	Internal (-I-)

Flow across both ways: forward across P1>C1 and reverse across C4>P2



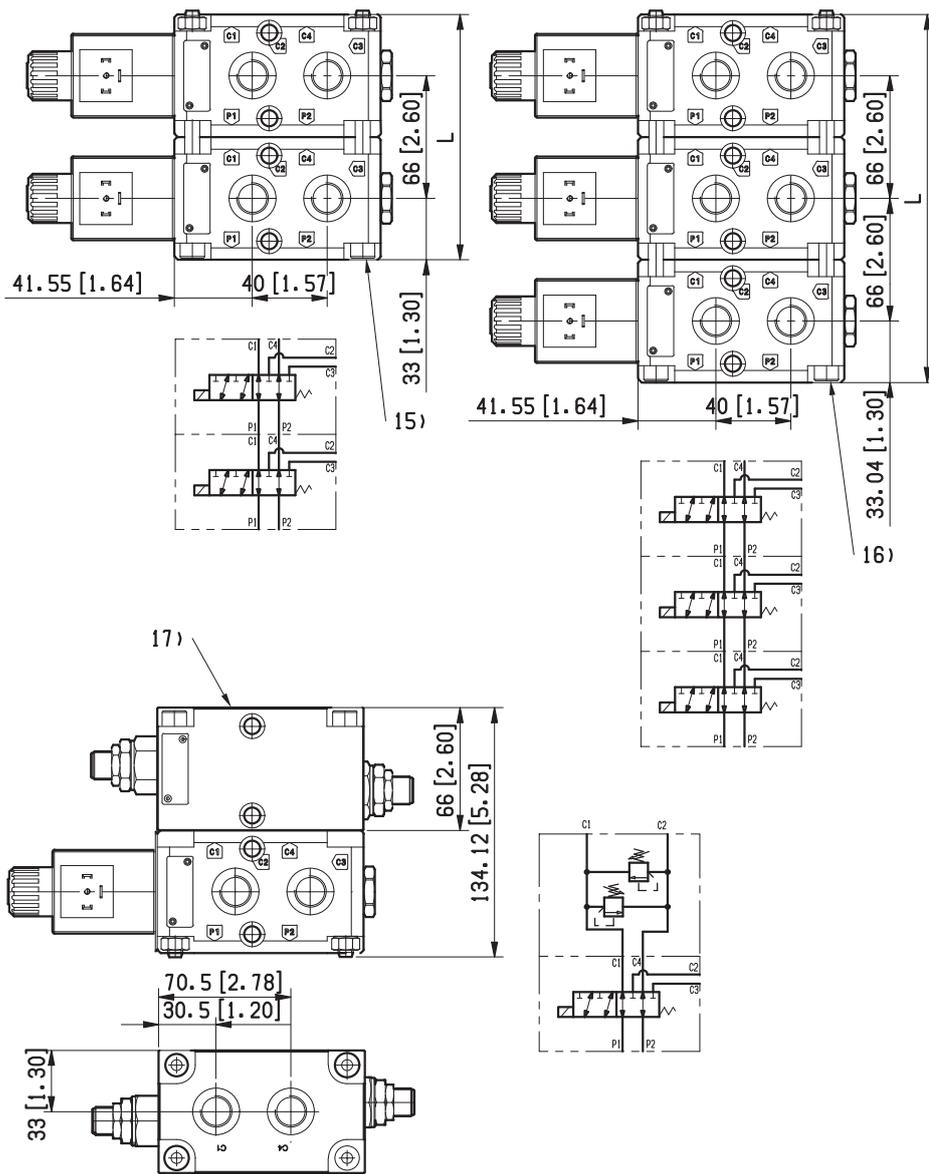
## External Dimensions and Fittings



13 Dimensions of manual version, push and twist type.

14 Dimensions of hydraulic / pneumatic piloted version.  
Pilot port plug available with G 1/4.

## External Dimensions and Fittings



Total stacked units	Total ports	Total length mm	Bolts (v) or Tie Rods (t)	Torque Nm / ft-lb
2	8	132	M8x125 (v)	16-18 / [11.8-13.2]
3	10	198	M8x190 (v)	16-18 / [11.8-13.2]
4	12	264	M8x270 (t)	16-18 / [11.8-13.2]
5	14	330	M8x330 (t)	16-18 / [11.8-13.2]

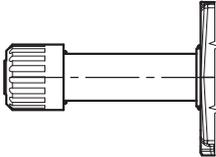
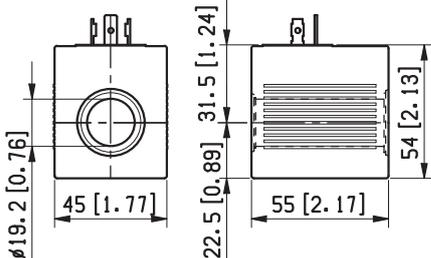
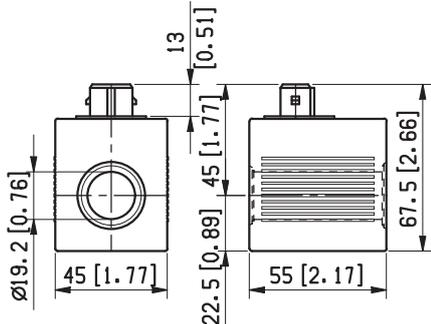
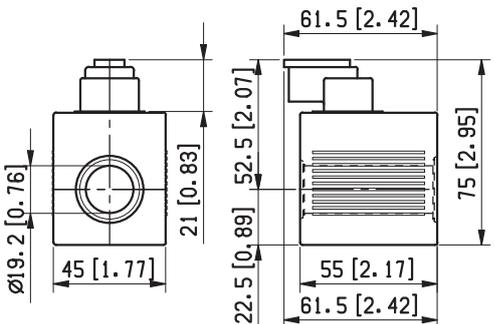
15 Four screws M8x125 DIN 912 for coupling together 2 diverter valves. Suggested bolt strength class DIN 8.8. Torque 16 – 18 Nm [11.8-13.3 ft-lb].

16 Four screws M8x190 DIN 912 for coupling together 3 diverter valves. Suggested bolt strength class DIN 8.8.

Torque 16-18 Nm [11.-13.3 ft lb].

17 Modular relief valves (cartridges VMD1040SV): with G 3/8 ports, code L7313610214SV00 with SAE 8 ports, code L731C610214SV00. Max pressure 250 bar [3625psi].

### Electric connections

<p>=00</p>		<p>=01</p>	
<p>=03</p>	<p>Protection class: IP 65 with female connector properly fitted (see drawing).</p> 	<p>=07</p>	<p>Protection class: IP 69 K with female connector properly fitted (see drawing).</p> 
<p>=31</p>	