L765... (VS570-VS575)

Size 2
Series 00
Maximum operating pressure 210 bar *[3045 psi]*
Maximum flow 10 l/min *[2.6 gpm]*
Ports G 1/4 - SAE 4

General specifications

- 8 way 2 position valve.
- Directional spool valve with direct solenoid control.
- Normally used to set up the remote control (ISO – SAE) in the earth moving machine.
- Control spool operated by screwed-in solenoid, with easily extractable 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.
- Connectors available: DIN 43650 – ISO 4400, AMP Junior, DT04-2P (Deutsch), Free leads.

L765 Series

Solenoid Operated Selector Valves

Ordering details

L	7	6 5	_	1 0	_ _	I	_ _	_ _	0

Family
Compact directional valve

Type
Flow Diverters

Ports
G 1/4 = 2
SAE4 = A

Control type
Solenoid (coil C36) without emergency

Configuration
8 ways / 2 positions = BY
8 ways / 2 positions with detent = CY

Drain type
Internal drain

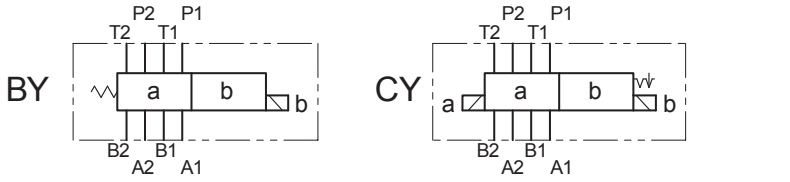
Electric connections
00 = Without coil
01 = With coil, without connector
02 = With coil and with non-assembled connector, type DIN 43650 – ISO 4400
03 = With coil having AMP Junior connector
04 = With coil having AMP Junior Horiz. connector
07 = With coil having DEUTSCH DT 04-2P connect.
31 = With coil and bipolar sheathed lead 350mm *[13.8"]* long

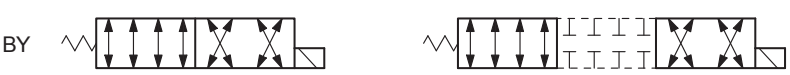
Voltage supply

	31	07	04	03	02	01	00	
00 =							■	Without coil
OB =	■	■	■	■	■	■		12V DC
AD =		■			■	■		13V DC
OC =	■	■	■	■	■	■		24V DC
AC =		■			■	■		27V DC
OD =			■		■	■		48V DC
OE =					■	■		110V DC

Available connections

Configuration





Principles of operation, cross section

A valve basically consists of a housing (1), a control spool (2), one or two solenoid (3), and a return spring (4).

L76510BY..

If the solenoid is energized, the spool goes from position “0” to position “b”.

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

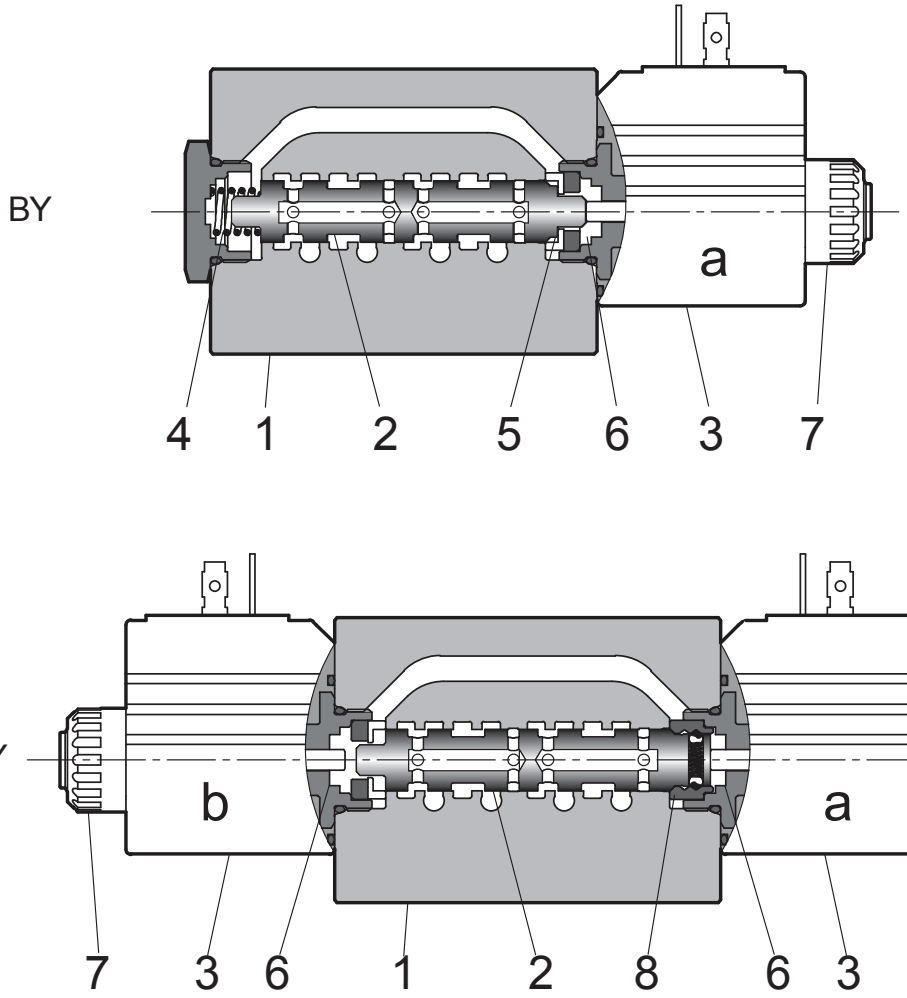
The coil (6) is fastened to the tube by the ring nut (7).

L76510CY..

If the solenoid “a” is energized, the spool goes from position “a” to position “b”. The position “b” is held by the detent (8).

The return to position “a” is obtained energising the solenoid “b”.

The coil (6) is fastened to the tube by the ring nut (7).



L765 Series

Solenoid Operated Selector Valves

Technical Data (for applications with different specifications consult us)

General

Valve weight CY	kg *[lbs]*	1.88 *[4.15]*
Valve weight BY	kg *[lbs]*	2.18 *[4.8]*
Mounting position		unrestricted
Ambient temperature, with standard NBR seals	°C *[°F]*	–20....+50 *[-4....+122]*

Hydraulic

Maximum pressure	bar *[psi]*	210 *[3045]*
Maximum flow	l/min *[gpm]*	10 *[2.64]*
Hydraulic fluid General properties: it must have physical lubricating and chemical properties suitable for use in hydraulic systems such as, for example:		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: class 20/18/15 NAS 1638: class 9
Viscosity range	mm^2/s	5....420
Internal leakage with 100 bar *[1450 psi]* secondary pressure at C	cc/min *[in^3/min]*	min.10 *[0.61]* max. 20 *[1.2]*

Electrical

Voltage type		DC								
Voltage tolerance (nominal voltage)	%	-10 .... +10								
Duty		Continuous (100%), with ambient temperature ≤ 50°C *[122°F]*								
Maximum coil temperature	°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]*	0.215 *[0.44]*								
Voltage	V	12	13	24	27	48	110			
Voltage type		DC	DC	DC	DC	DC	DC			
Power consumption	W	26	26	26	26	26	26			
Current (1)	A	2.15	2.00	1.10	1.00	0.54	0.27			
Resistance (2)	Ω	5.5	6.5	22	28	89	413			

1) Nominal - 2) ± 7% at temperature 20°C *[68°F]*

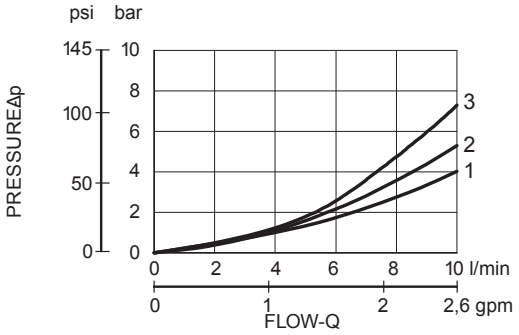
L765 Series

Solenoid Operated Selector Valves

	Voltage (V)	Connector type	Coil description	Marking	Coil Mat no.
=OB 01 =OB 02	12 DC	EN 175301-803 (Ex. DIN 43650)	C3601 12DC	12 DC	R933000044
=OB 03	12 DC	AMP JUNIOR	C3603 12DC	12 DC	R933000047
=OB 04	12 DC	AMP JUNIOR Horizontal	C3604 12DC	12 DC	R933002913
=OB 07	12 DC	DEUTSCH DT 04-2P	C3607 12DC	12 DC	R933000048
=OB 31	12 DC	Cable 350 mm long	C3631 12DC	12 DC	R933000045
=AD 01 =AD 02	13 DC	EN 175301-803 (Ex. DIN 43650)	C3601 13DC	13 DC	R933000051
=AD 07	13 DC	DEUTSCH DT 04-2P	C3607 13DC	13 DC	R933000049
=OC 01 =OC 02	24 DC	EN 175301-803 (Ex. DIN 43650)	C3601 24DC	24 DC	R933000053
=OC 03	24 DC	AMP JUNIOR	C3603 24DC	24 DC	R933000057
=OC 04	24 DC	AMP JUNIOR Horizontal	C3604 24DC	24 DC	R933002914
=OC 07	24 DC	DEUTSCH DT 04-2P	C3607 24DC	24 DC	R933000058
=OC 31	24 DC	Cable 350 mm long	C3637 24DC	24 DC	R933000055
=AC 01 =AC 02	27 DC	EN 175301-803 (Ex. DIN 43650)	C3601 27DC	27 DC	R933000056
=AC 07	27 DC	DEUTSCH DT 04-2P	C3607 27DC	27 DC	R933000050
=OD 01 =OD 02	48 DC	EN 175301-803 (Ex. DIN 43650)	C3601 48DC	48 DC	R933000059
=OD 04	48 DC	AMP JUNIOR Horizontal	C3604 48DC	48 DC	R933002915
=OE 01 =OE 02	110 DC	EN 175301-803 (Ex. DIN 43650)	C3601 110DC	110 DC	R933000061

Characteristic curves

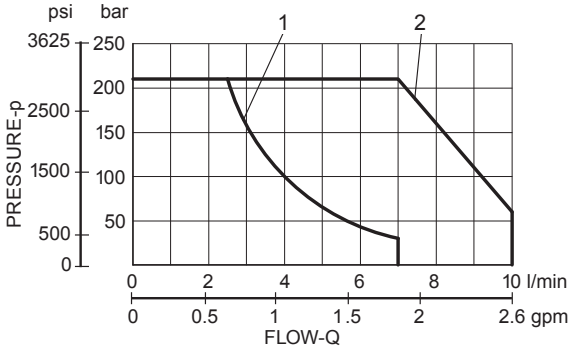
Measured with hydraulic fluidSO-VG32 at 45° ± 5° C *[113° ± 9° F]*; ambient temperature 20° C *[68° F]*



Scheme	Curve n.							
	A1>P1	B1>T1	A2>P2	B2>T2	A1>T1	B1>P1	A2>T2	B2>P2
BY - CY	2	1	2	1	2	3	2	3

Performances limits

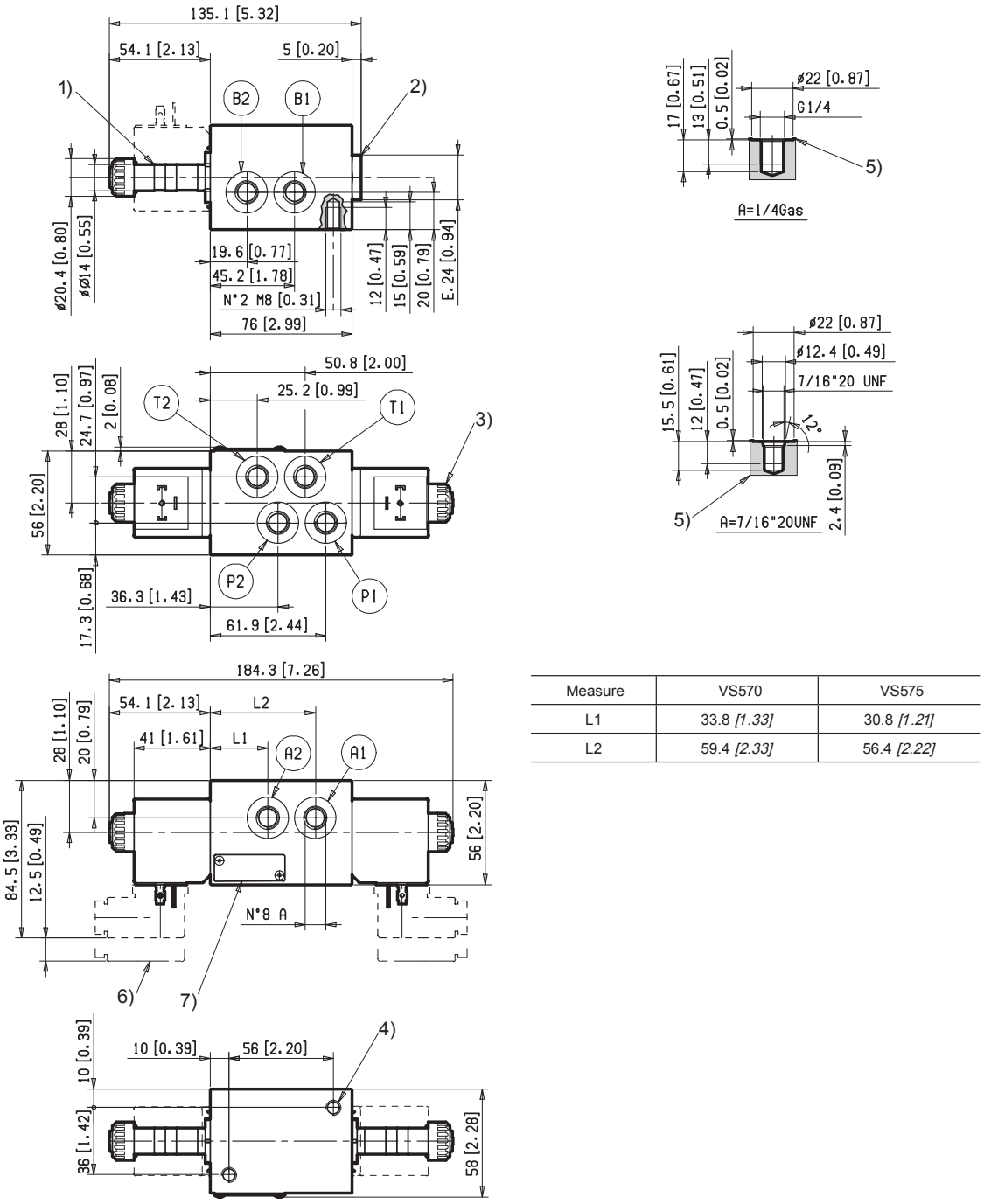
The performance limits refer to the following conditions: coils at operating temperature, voltage supply 10% below nominal, no back pressure in the tank line



Scheme	Curve n.
BY	1
CY	2

The performance curves are measured with flow going across and caming back.

External Dimensions and Fittings



Measure	VS570	VS575
L1	33.8 *[1.33]*	30.8 *[1.21]*
L2	59.4 *[2.33]*	56.4 *[2.22]*

1 Solenoid tube hex 24 mm. Torque 22-24Nm *[16.2-17.7 ft-lb].*

2 Plug for 2 way version, hex 24 mm. Torque 22-24Nm *[16.2-17.7 ft-lb].*

3 Ring nut for coil locking OD 20,4 mm *[0.8 in].* Torque 3 – 4 Nm *[2.2 – 3.0 ft-lb].*

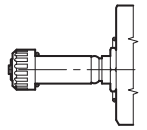
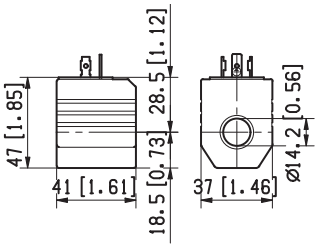
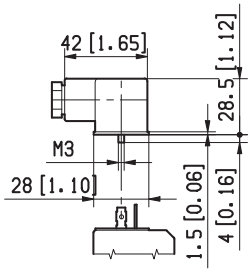
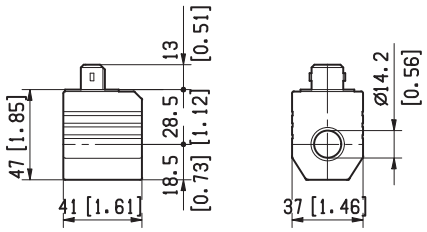
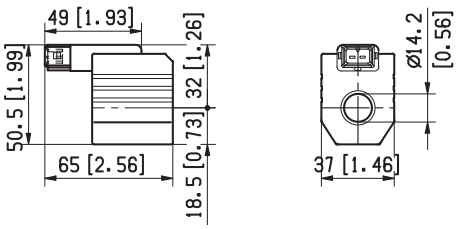
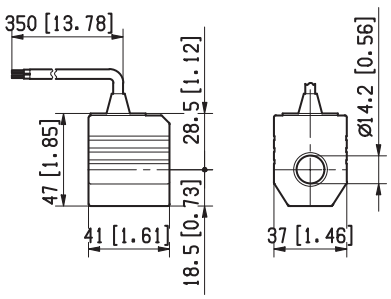
4 Two through holes for installation. Recommended screws M8 with strength class DIN 8.8.

5 Hydraulic Ports (G1/4- SAE4).

6 Minimum clearance needed for connector removal.

7 Identification label.

Electric connection

=00	Without coils, but with ring nut and O-Rings for coil fitting (solution recommended for flexible stock handling) 	=01	With coils having plug-in pins EN 175301-803, without connectors 
=02	With coils and with connectors non-assembled, type EN 175301-803. Protection class: IP 65 when connector with seal is properly screwed down, and cable clamp is correctly tightened. 182-09: Standard. 182-LED-T-A1: with LED monitoring presence of voltage. 182-09-G-DO-2-1: with VDR (Voltage Dependent Resistor), to prevent input voltage over-shootings.  Mat. No. Description R933002885 182-09 GRAY R933002889 182-09 BLACK R933002893 182-LED-T-A1 12 DC R933002894 182-LED-T-A1 24 DC R933002896 182-LED-T-A1 48 DC R933002897 182-LED-T-A1 110 DC R933002886 182-09 -G-DO-2-1 12DC with VDR R933002887 182-09 -G-DO-2-1 24DC with VDR		
=03	With coils having AMP Junior connector, and with bi-directional diode. Protection class: IP 65 with female connector properly fitted (see drawing). 	=04	With coils having Horizontal AMP Junior connector, and with bi-directional diode. Protection class: IP 65 with female connector properly fitted (see drawing). 
=31	With coils having bi-directional diode and bipolar sheathed free lead, 350 mm long, without pins. 	=07	With coils having DEUTSCH DT 04-2P connector, and with bi-directional diode. Protection class: IP 69 K with female connector properly fitted (see drawing).