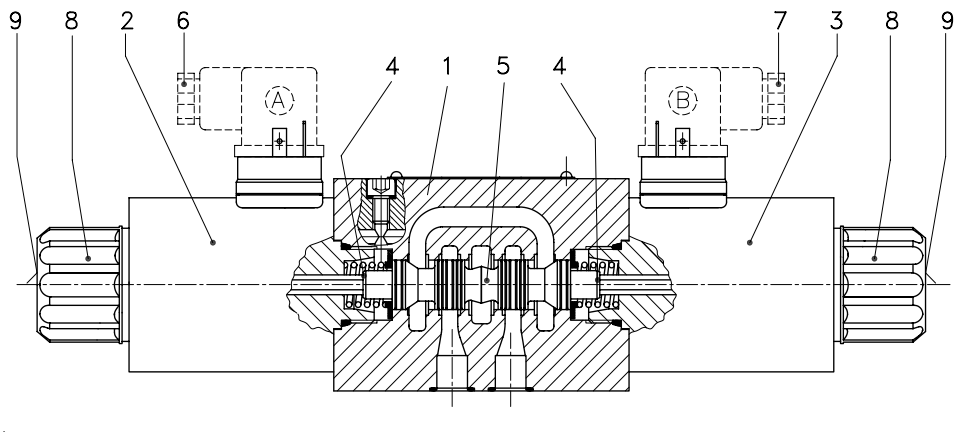
DCV05 Solenoid Valves Technical Information

OVERVIEW



DCV 05 directional control valves consist of: housing (1), control spool (5), centering springs (4), and operating solenoids (2, 3).

The three-position directional valves have two solenoids and two springs. The two position directional valves have one solenoid and one return spring.

The operating solenoids are DC and are supplied through connectors A and B (6, 7). For AC supply, the solenoids are provided with rectifiers integrated directly into the coil. T

The connectors must be ordered separately. By loosening nut (8), the solenoid can be rotated in four positions 90° apart.

Provided that the pressure in T-port does not exceed 360 psi [25 bar], the valve can be actuated by manual override (9).

The valve housing (1) is phosphate coated. The operating solenoids (2, 3) are zinc coated.

FEATURES

- 3 position, 4-way and 2 position, 4-way directional valves
- Solenoids can be fixed in three positions 90° apart
- Push button manual override
- Installation dimensions to DIN 24340 and ISO 4401



ORDER CODE

DCV05 - 3Z11 - 01200 - E10 - K1 - N2 - B

Directional control valves

Nominal size

Operating positions

Code	Description
2	Two positions
3	Three positions

Spool

See *Spool options*, page 4

Voltage

Code	Description
01200	12 VDC/ 3.17 A
02400	24 VDC / 1.73 A
12060	115 VAC / 0.35 A / 60 Hz
23050	230 VAC / 0.17 A / 50 Hz

The AC coils correspond with E5 connectors only.

Connector

Code	Description
E1	DIN 43650
E2	DIN 43650 diode in coil
E5	DIN 43650 rectifier in coil
E8	Lead wires
E9	Lead wires with diode in coil
E10	Deutsch on lead wires
E11	Deutsch on lead w/ diode in coil

Connector plug (DIN 43650)

Code	Description
Omit	No plug
K1	Connector plug
K2	Connector plug with LED

Manual override

Code	Description
00	Standard
N2	Protective rubber boot

Seals

Code	Description
B	Buna-N
V	Viton

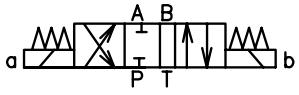
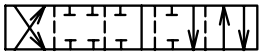
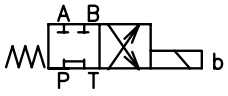
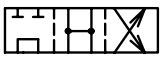
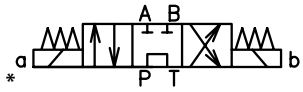
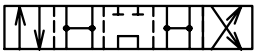
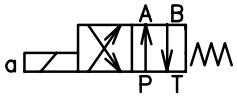
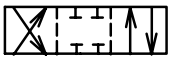
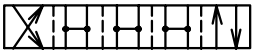
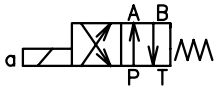
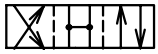
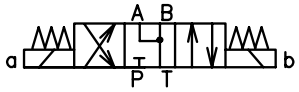
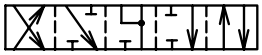
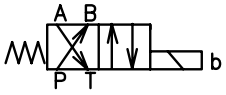
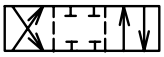
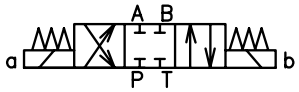
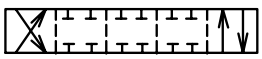
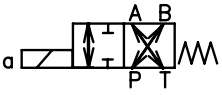
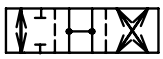
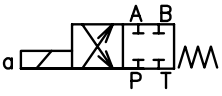
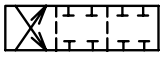
TECHNICAL DATA

Specifications

Nominal size		10 [0.39]
Maximum flow	**l/min [US gal/min]**	See p-Q characteristics, below. Replace valves with: NFPA D05, CETOP 5, NG10
Max. operating pressure	**bar [psi]**	350 [5075]
Max. back pressure (port T)	**bar [psi]**	210 [3045]
Pressure drop	**bar [psi]**	see Δ p-Q characteristics, page 4
Weight – with 1 solenoid with 2 solenoids	**Kg [lb]**	3.9 [8.6] 5.4 [11.9]

SPOOL OPTIONS

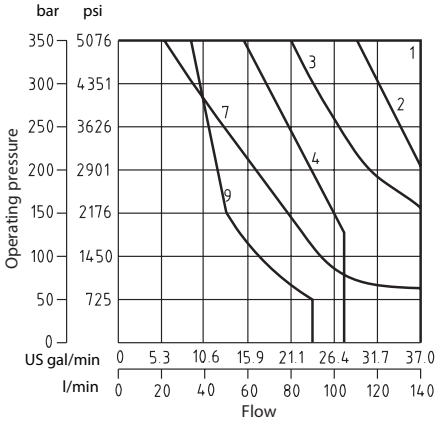
Functional Symbols

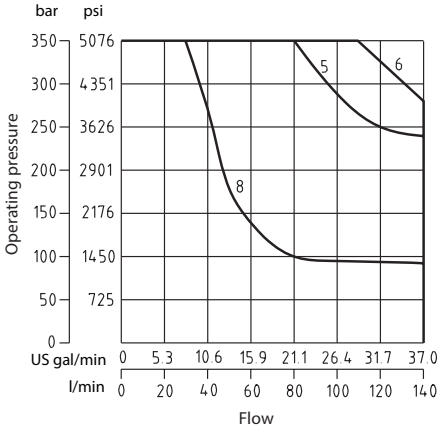
3 - Position			2 - Position		
Code	**Symbol**	**Transition**	**Code**	**Symbol**	**Transition**
B11			**C11**		
C11			**R11**		
H11			**R21**		
Y11			**X11**		
Z11			**X25**		
			Y51		
			Z51		

CHARACTERISTICS

p - Q Characteristics

Operating limits for maximum hydraulic power transferred by the directional valve.
For respective spool type – see *Spool Options*, page 5. Measured at viscosity = 32 mm^2/s (cSt) [156 SUS] .

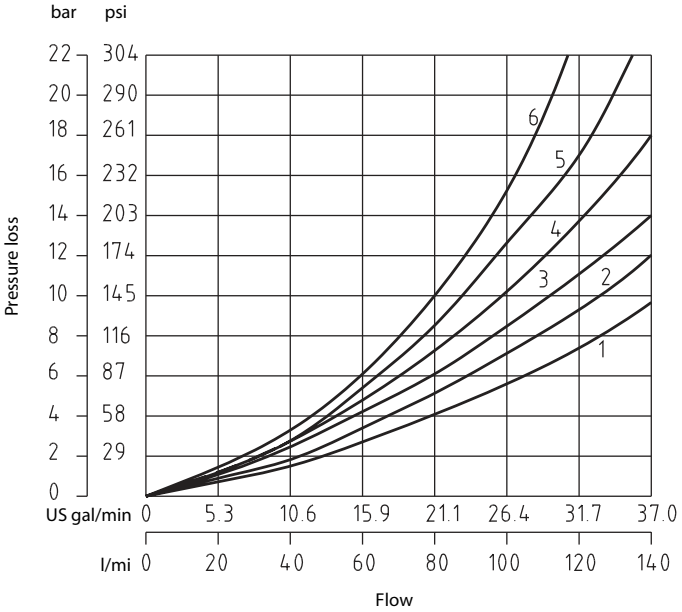




Spool	Curve
B11	4
C11	3
H11	1
R11	2
R21	2
Y11	5
X11	2
X25	
Y51	5
Z11	1
Z51	1

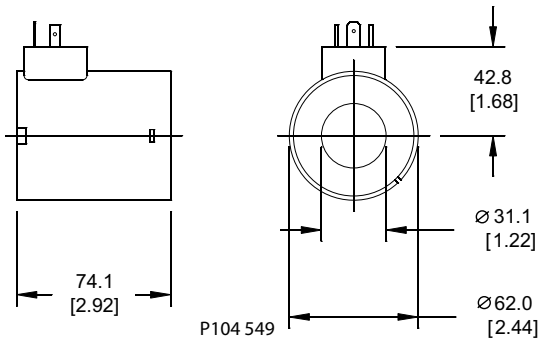
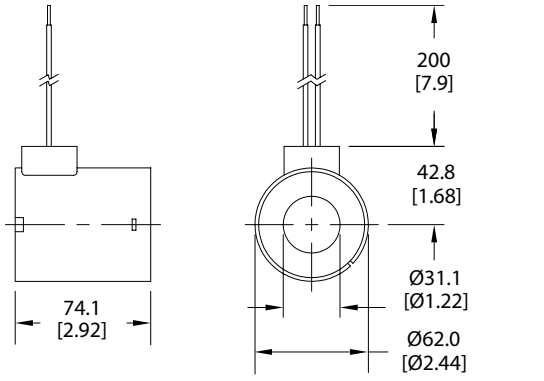
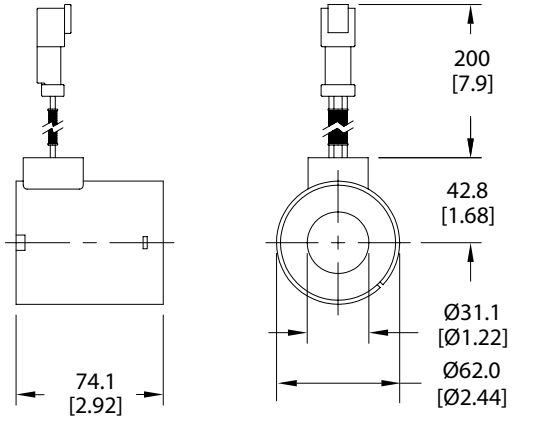
p - Q Characteristics

Measured at viscosity = 32 mm^2/s (cSt) [156 SUS].



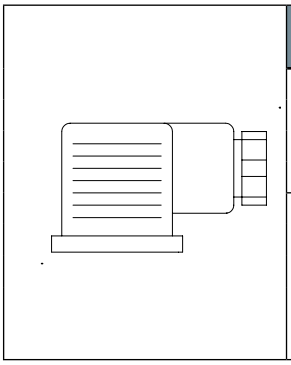
Spool	P-A	P-B	A-T	B-T	P-T
B11	1	1	2	2	
C11	4	3	4	5	1
H11	1	1	2	2	1
R11	1	1	2	2	
R21	1	1	1	3	
X11	1	1	2	2	
Y11	1	1	2	2	
Y51		1	2		
Z11	1	1	2	2	
Z51		1	2		

TERMINAL OPTIONS

Code	Sketch
E1, E2, E5	
E8, E9	
E10, E11	

CONNECTOR OPTIONS

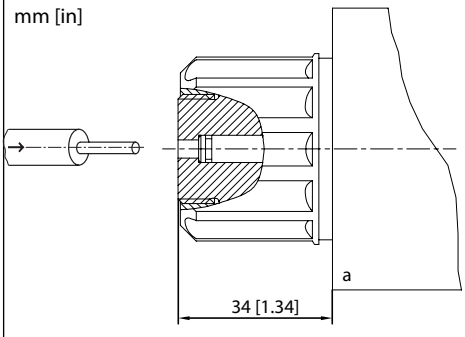
DIN 43650

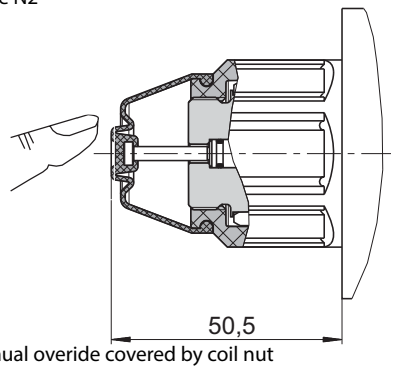


Code	Type	Model	Max. input voltage
K1	Plug B (black)	Without rectifier	250 VDC
			230 VAC
	Plug A (grey)	Without rectifier	250 VDC
			230 VAC
K2	Plug B (black)	Without rectifier and LED	30 VDC
			230 VAC
	Plug A (grey)	Without rectifier and LED	30 VDC
			230 VAC

MANUAL OVERIDE OPTION

Standard	*Covered by coil nut*
Code 00 mm [in]	Code N2



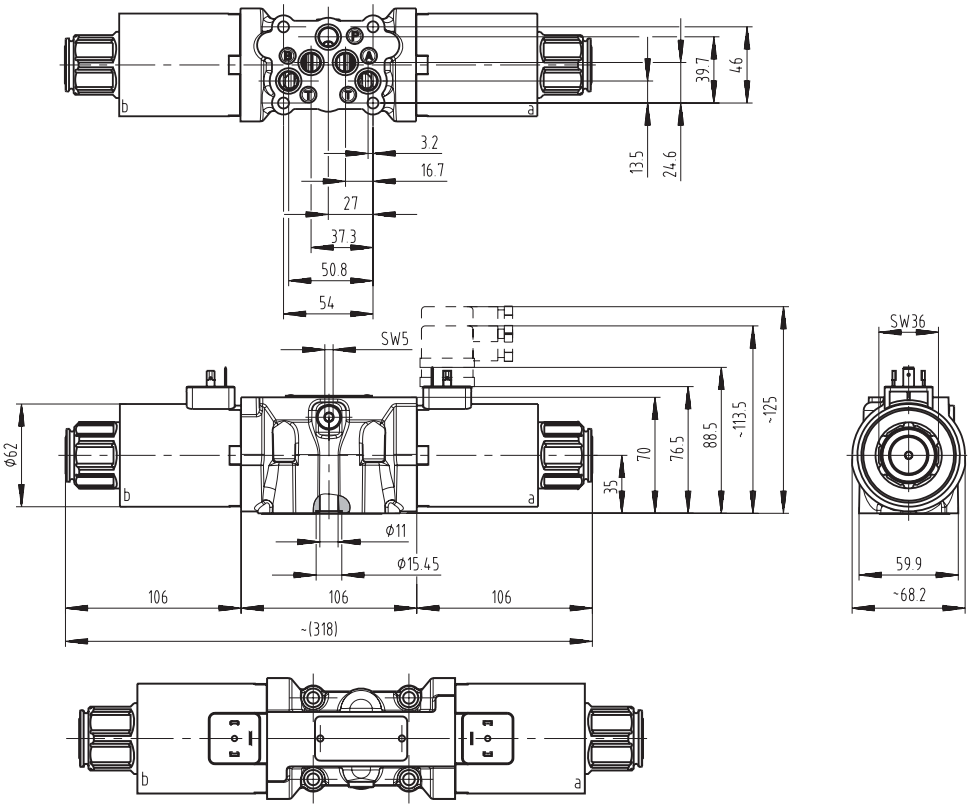


Manual overide covered by coil nut

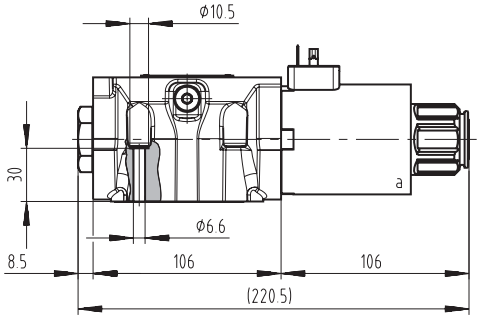
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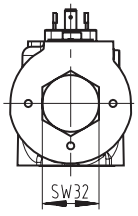
mm [in]

Valve with two solenoids



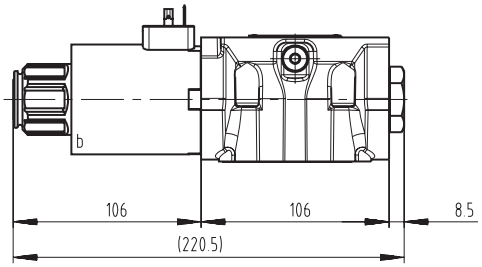
Valve with solenoids- side a





Functional symbols
R11, R21, Y51, Z51, X25

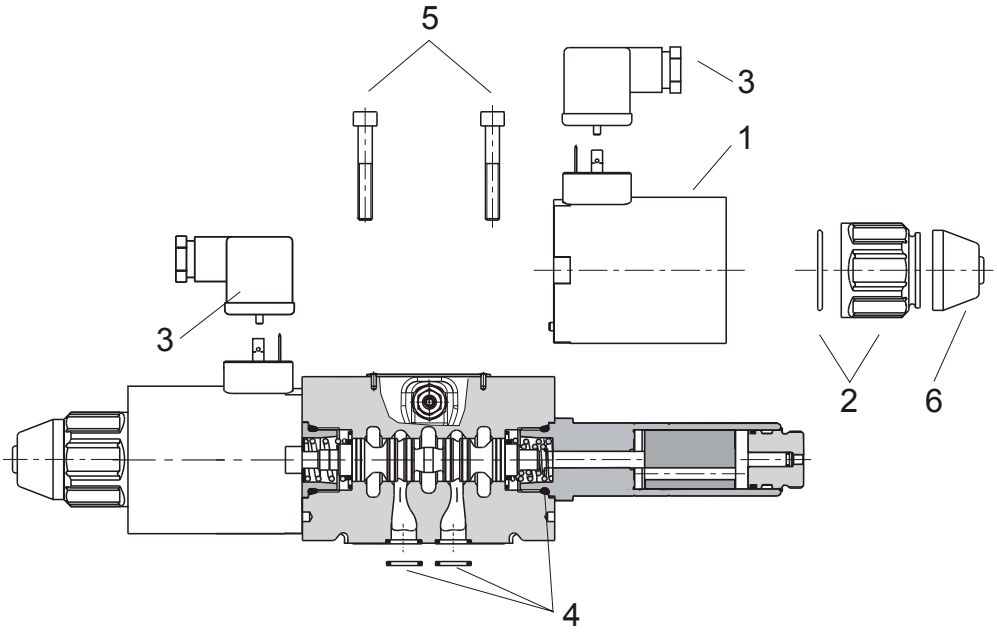
Valve with solenoids - side b



Functional symbols
X11, C11

REPLACEMENT PARTS

1. Solenoid coil
2. Nut + sealing ring
3. Connector plug
4. Set of sealing
5. mounting bolts
6. boots



Solenoid

Voltage	E1 DIN 43650	E2 DIN 43650 w/Diode	E5 DIN w/Rectifier	E8 Lead Wires	E9 Lead Wires w/ Diode	E10 Deutsch on Leads	E11 Deutsch on Leads w/Diode	E12 Deutsch	E13 Deutsch w/Diode
	Ordering Number								
01200	158-8019	***	***	***	***	158-8102	158-8099	11041824	158-8105
02400	158-8021	***	***	***	***	***	***	158-8100	***
12060	***	***	158-8027	Not Available					
23050	***	***	158-8020						

*** Consult Factory

REPLACEMENT PARTS (continued)

Solenoid nut

Manual override Code	Type of nut	Ordering number
No Code	Standard nut	158-8068
N2	Protective Rubber Boot	Consult factory

Connector (DIN 43650)

Code	Model	Connector plug A gray	Connector plug B black
		Ordering number	
K1	No rectifier or LED	158-8076	158-8075
K2	With LED	Consult factory	Consult factory

Seal kit

Type	Ordering number
Buna-N	158-8023
Viton	158-8094

Mounting bolts – set

Type	Ordering number
M6 x 40 bolts	158-8024
1/4-20 bolts	158-8095