



DFE141

Solenoid control monoblock diverter valve for special applications

- 6 - 8 ways configuration
- Antishock valves with cross return
- Double outlet ports in neutral position; for nr. 2 cylinder connection
- Designed for Front-end Loader Applications

This catalogue shows technical specifications and diagrams measured with mineral oil of 46 mm²/s (46 cSt) viscosity at 40°C - (104°F) temperature.

WORKING CONDITIONS		
N. of available ways		6 - 8
Max. flow rating		80 l/min - (21.1 US gpm)
Max. pressure		250 bar - (3625 psi)
	D1-D2-C1-C2 ports	315 bar (4600 psi)
Available supply voltage	VDC	see reference page 122
Nominal power		60 W
Internal leakage A(B)⇒T	Δp = 100 bar (1450 psi)	5 cm ³ /min (0.31 in ³ /min)
Fluid		Mineral based oil
Fluid temperature	with NBR (BUNA-N) seals	from -20°C to 80°C (from -4°F to 176°F)
	with FPM (VITON) seals	from -20°C to 100°C (from -4°F to 212°F)
Viscosity	operating range	from 15 to 75 mm ² /s (from 15 to 75 cSt)
	min.	12 mm ² /s (12 cSt)
	max.	400 mm ² /s (400 cSt)
Max. level of contamination		20/18/15 - ISO 4406 - NAS 1638 - class 9
Ambient temperature for working conditions		from -40°C to 60°C (from -40°F to 140°F)

NOTE - For different working conditions please contact Sales Dept.

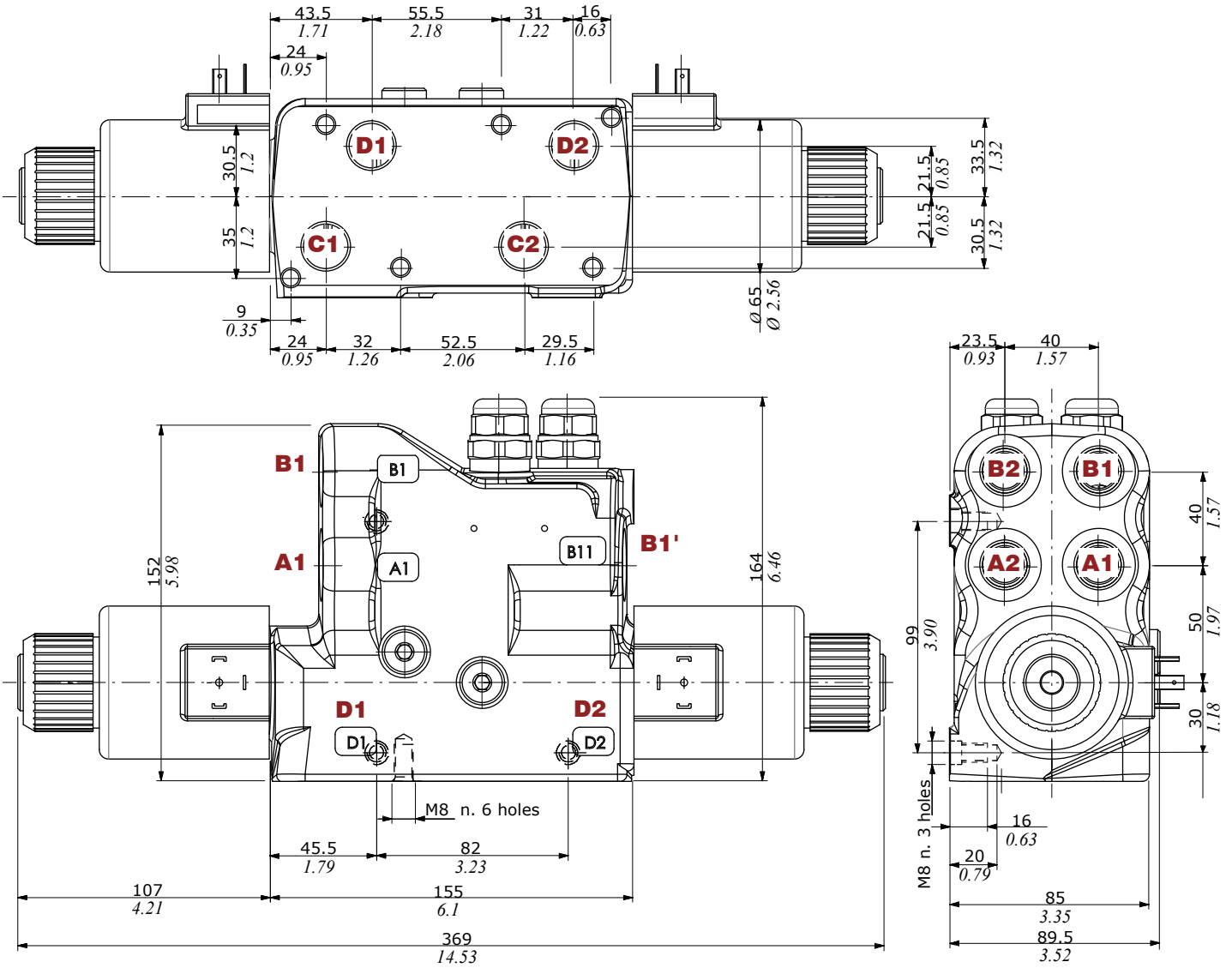
Available threads

PORTS THREAD	
ALL PORTS	BSP
DFE141	G 1/2

Dimensional data - hydraulic circuit - performance data

8 ways

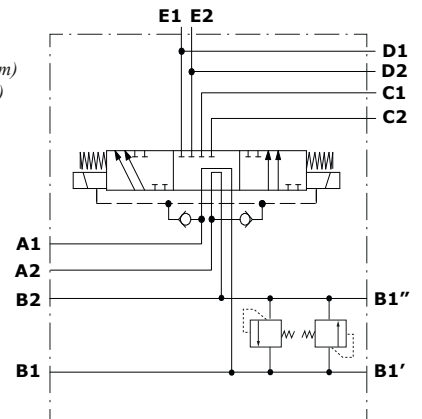
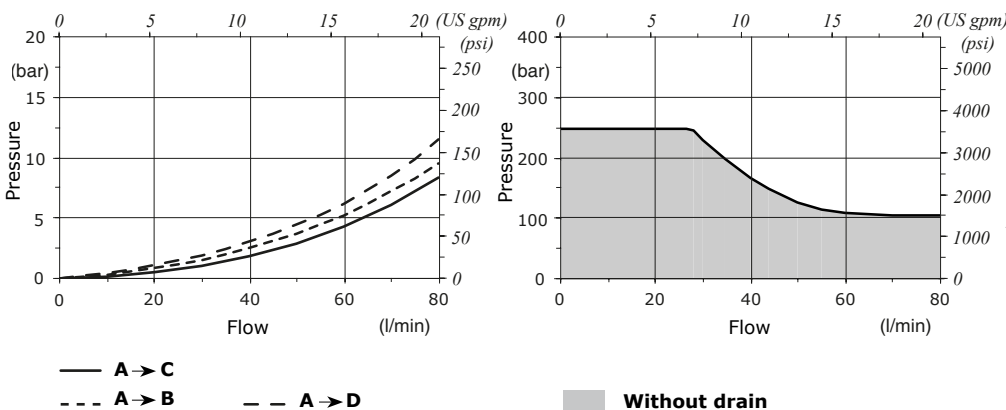
8ES3 configuration



Minimum dynamic conditions

(Supply = $V_n - 10\%$, coil at $70\text{ }^\circ\text{C} - 158\text{ }^\circ\text{F}$)

Pressure drop versus flow

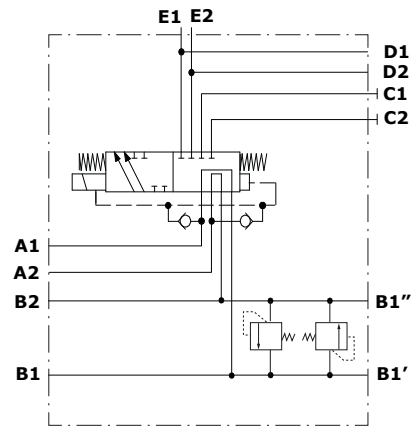
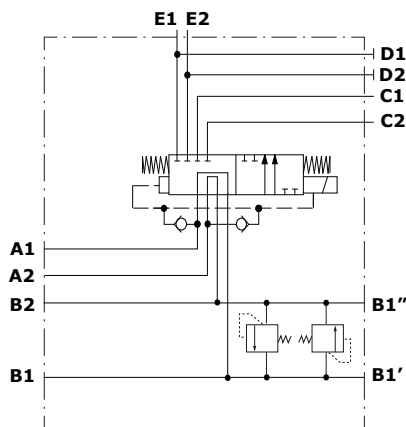
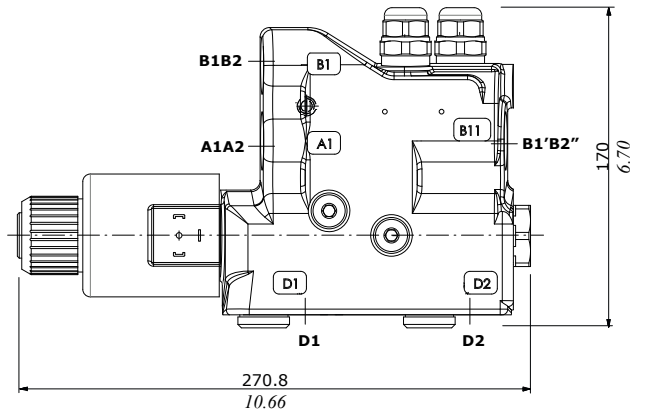
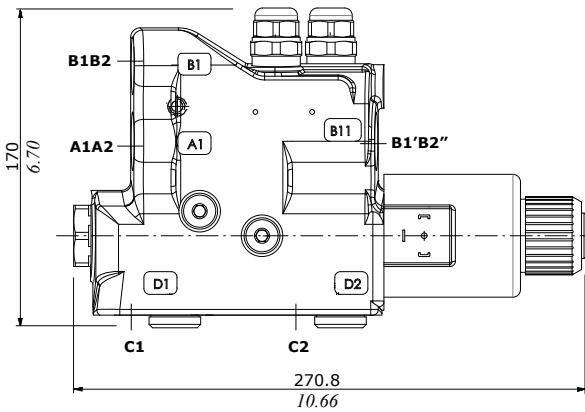


Dimensional data and hydraulic circuit

6 ways

8ES1 configuration

8ES2 configuration



Part ordering codes

8 ways standard configuration example (ES3):

DFE141/8 B 8 ES3 - P3(D4-210) - 2 0 0 - 12VDC - ... - (CVN)

1 2 3 4 5 4 5 8

Painted with one layer of black Primer antirust

For description composition see next page

Coil
1 = without coil
2 = with coil

... 2 0 0 - 12VDC - ...

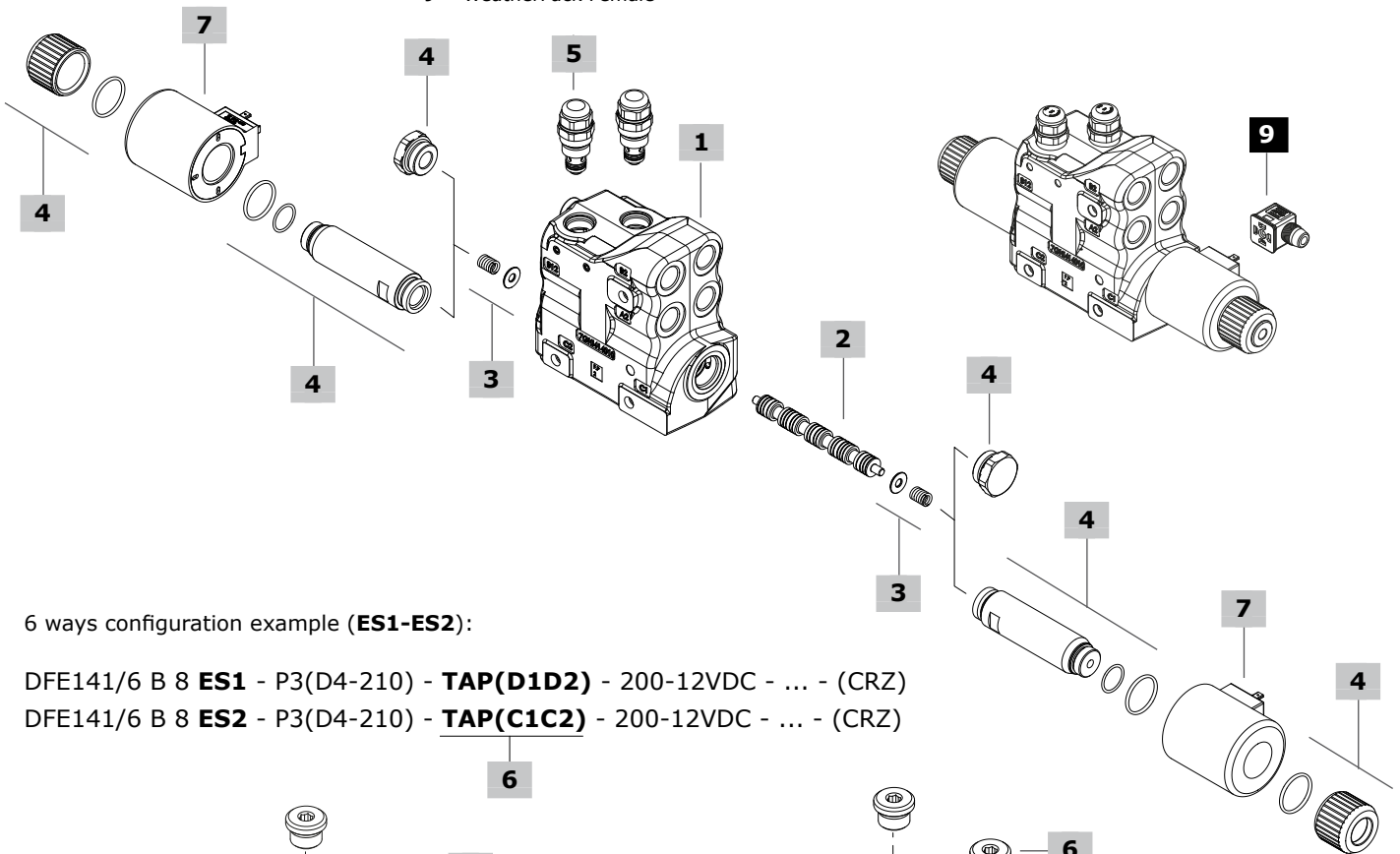
Coil voltage

Bellow
0 = bellow not available

Connection*

- 0 = ISO (Std)
- 2 = AMP-JPT
- 3 = Deutsch DT06
- 4 = Deutsch DT04-2P Male
- 5 = Deutsch DT04-4P Female
- 6 = Metri-Pack Female
- 7 = Metri-Pack Male
- 8 = WeatherPack Male
- 9 = WeatherPack Female

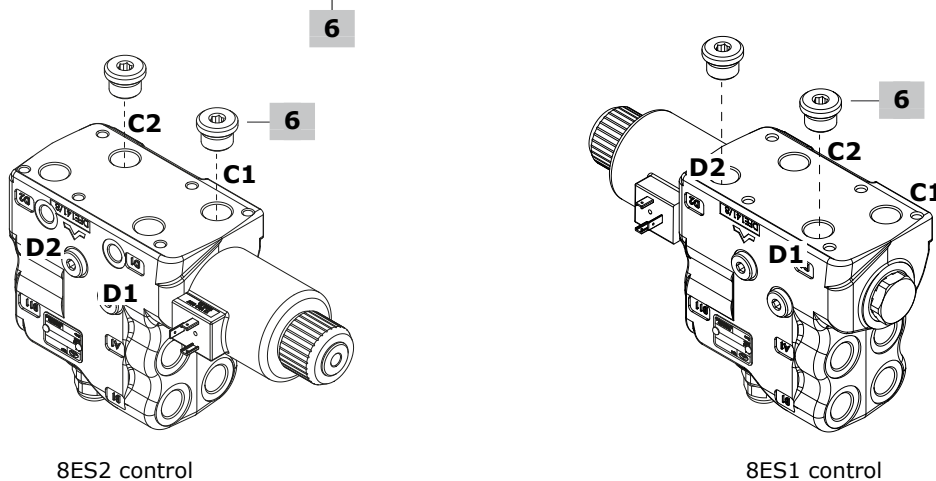
(*) - For connector options see coils table on page 122



6 ways configuration example (ES1-ES2):

DFE141/6 B 8 ES1 - P3(D4-210) - TAP(D1D2) - 200-12VDC - ... - (CRZ)

DFE141/6 B 8 ES2 - P3(D4-210) - TAP(C1C2) - 200-12VDC - ... - (CRZ)



8ES2 control

8ES1 control

Part ordering codes

1 Body kit*

TYPE	CODE	DESCRIPTION
DFE141/8	5CO2231351	8 ways body kit

2 Spool **page 119**

TYPE	CODE	DESCRIPTION
B	3CAS110B71	A1<->B1, A2<->B2 and D1, D2, C1, C2 ports closed in pos. 0 A1<->D1, A2<->D2 and B1, B2, C1, C2 ports closed in pos. 1 A1<->C1, A2<->C2 and D1, D2, B1, B2 ports closed in pos. 2

3 Positioner kit

TYPE	CODE	DESCRIPTION
8	5V08001	Spring return in pos. 0

4 ES control kit **page 120**

TYPE: **ES3** CODE: 5SOL519003 (n°2)
DESCRIPTION: 3 positions control for 8-way configuration (ports C1C2-D1D2 open), without protective bellow
TYPE: **ES1** CODE: 5SOL519003+XTAP332190
DESCRIPTION: 2 positions control for 6-way configuration (ports D1 e D2 plugged), without protective bellow
TYPE: **ES2** CODE: 5SOL519003+XTAP332190
DESCRIPTION: 2 positions control for 6-way configuration (ports C1 e C2 plugged), without protective bellow

5 Antishock valves **page 121**

With fixed setting: setting is referred to valve opening

TYPE	CODE	DESCRIPTION
P(D2-80)	X005125095	Setting 80 bar (1150 psi)
P(D2-110)	X005125110	Setting 110 bar (1590 psi)
P(D3-125)	X005125145	Setting 125 bar (1800 psi)
P(D3-140)	X005125155	Setting 140 bar (2050 psi)
P(D3-170)	X005125190	Setting 170 bar (2450 psi)
P(D4-185)	X005125216	Setting 185 bar (2700 psi)
P(D4-210)	X005125245	Setting 210 bar (3050 psi)
P(D4-240)	X005125270	Setting 240 bar (3500 psi)
P1T - P2T	3XTAP524290	Blanking plug P1-P2

6 Plug for ES1 - ES2 controls

TYPE	CODE	DESCRIPTION
-	3XTAP727180	G1/2 plug for ES1-ES2 execution

7 Coil

For list of available coils see pages 122

8 Body threading

Specify threading always when it is different from **BSP** standard

9 Accessories

For list of available connectors see pages 122

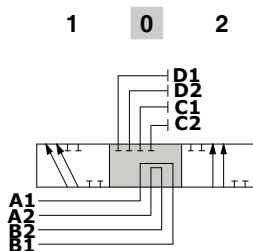
(*) - Codes are referred to **BSP** thread

Spool circuits

Type B

8 way configuration (ES3)

A1<->B1, A2<->B2 and D1, D2, C1, C2 ports closed in pos. 0

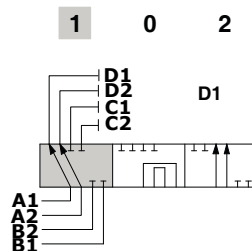


Spool stroke

Position 1: + 5.8 mm (0.23 in)
Position 2: - 5.8 mm (- 0.23 in)

6 way configuration (ES1)

A1<->D1, A2<->D2 and B1, B2, C1, C2 ports closed in pos. 1

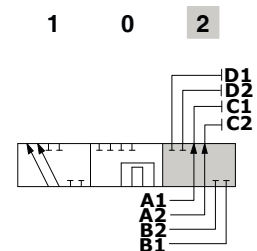


Spool stroke

Position 2: - 5.8 mm (- 0.23 in)

6 way configuration (ES2)

A1<->C1, A2<->C2 and D1, D2, B1, B2 ports closed in pos. 2



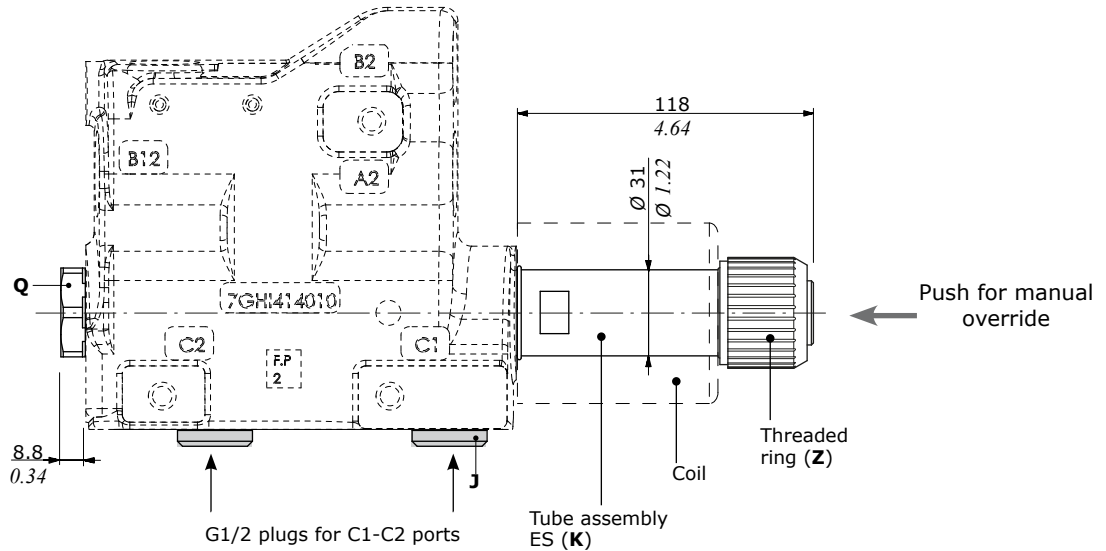
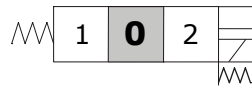
Spool stroke

Position 1: + 5.8 mm (0.23 in)

ES control kit

With spring return in position 0

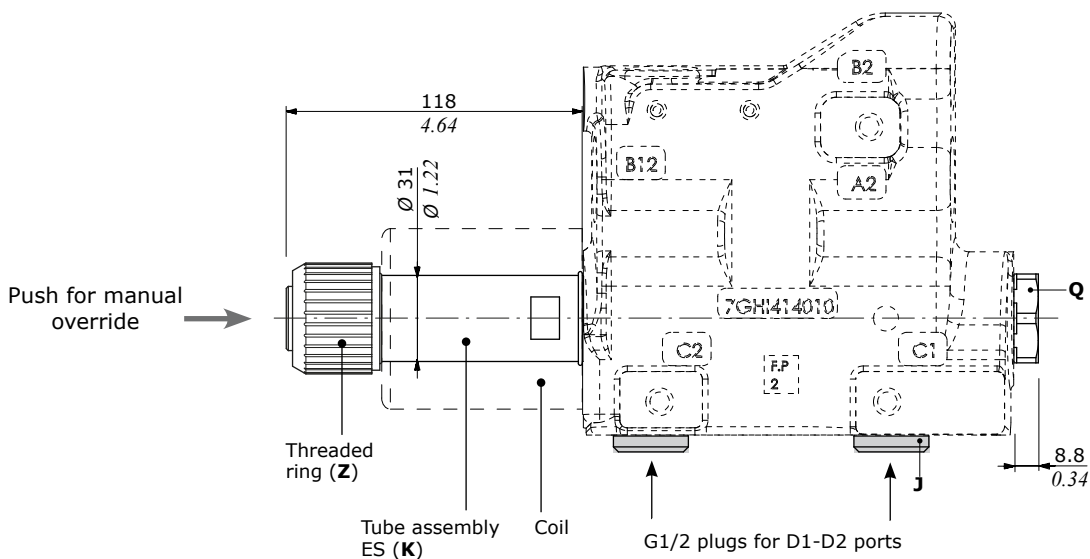
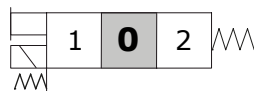
Tipo 8ES2



Wrenches and tightening torque

- J** = wrench 8 - 24 Nm (17.7 lbf ft)
- K** = wrench 27 - 24 Nm (17.7 lbf ft)
- Z** = 24 Nm (17.7 lbf ft)
- Q** = wrench 32 - 42 Nm (31 lbf ft)

Tipo 8ES1

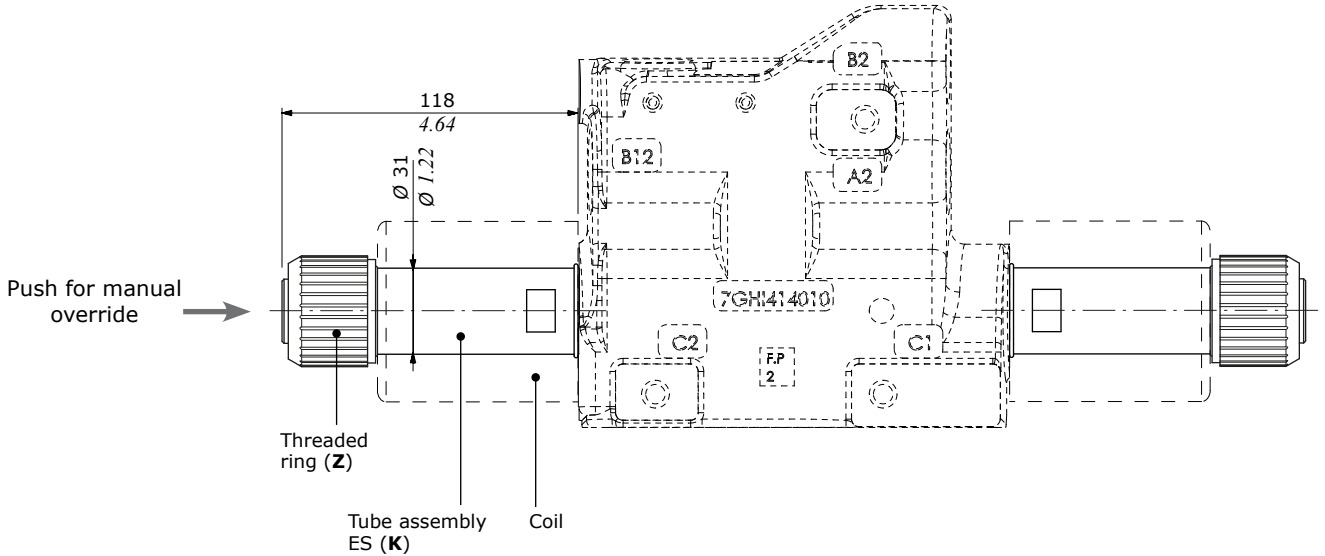
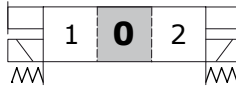


With spring return in position 0

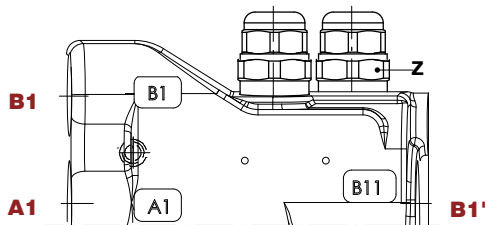
Tipo 8ES3

Wrenches and tightening torque

- J** = wrench 8 - 24 Nm (17.7 lbf^t)
- K** = wrench 27 - 24 Nm (17.7 lbf^t)
- Z** = 24 Nm (17.7 lbf^t)
- Q** = wrench 32 - 42 Nm (31 lbf^t)



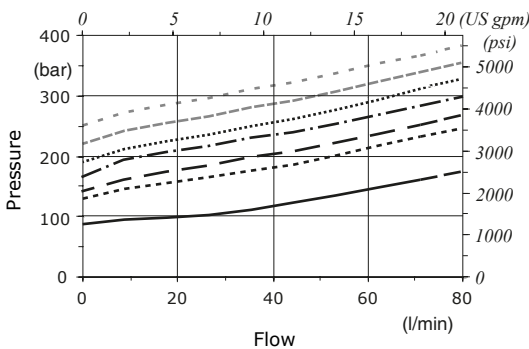
Antishock valves



Wrenches and tightening torque

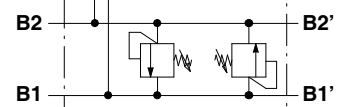
- Z** = wrench 27 - 42 Nm (31 lbf^t)

Antishock valves performance data

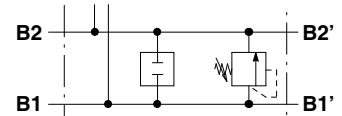


- setting - 80 bar (1150 psi)
- setting - 125 bar (1800 psi)
- - - setting - 140 bar (2050 psi)
- . - . setting - 170 bar (2450 psi)
- setting - 185 bar (2700 psi)
- - - setting - 210 bar (3050 psi)
- setting - 240 bar (3500 psi)

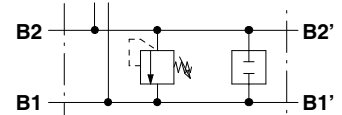
Configuration with valve on each workport (P3)



Configuration with valve on workport B1 (P1)



Configuration with valve on workport B2 (P2)



Coils and accessories

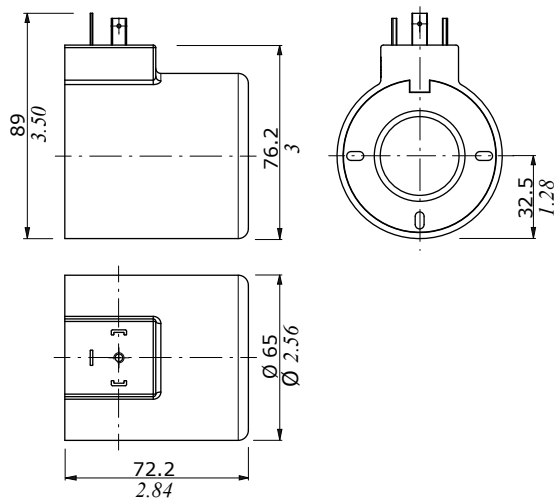
Type	Voltage	Ordering codes					Flying leads without connector
		ISO4400	Deutsch DT	AMP JPT	Packard Weatherpack	Packard Metri-pack	
D19	12 VDC	4SOL519112	4SOL519402 ⁽⁶⁾	-	-	-	-
	20 VDC	4SOL519120	-	-	-	-	-
	24 VDC	4SOL519124	4SOL519404 ⁽⁶⁾	-	-	-	-
	94 VDC	4SOL519194	-	-	-	-	-
	192 VDC	4SOL519292	-	-	-	-	-
Mating connectors		4CN1009995	5CON140031	-	-	-	-

Notes: ⁽¹⁾ supply with AC and use only with rectifier connector - ⁽²⁾ with flying leads - ⁽³⁾ with bidirectional diode - ⁽⁴⁾ with unidirectional diode
⁽⁵⁾ integrated perpendicular type - ⁽⁶⁾ integrated parallel type

Features

Nominal voltage tolerance: ±10%
 Nominal power.....: 60 W
 12/20/24/94/192 VDC
 Nominal current.....: 5 A @ 12 VDC
 : 3 A @ 20 VDC
 : 2.5 A @ 24 VDC
 : 2.5 A @ 94 VDC
 : 0.31 A @ 192 VDC
 Insulation.....: Class H (180°C - 356 °F)
 Weather protection..... : IP65 - ISO4400
 : IP69K - Deutsch DT
 Insertion.....: 100%

ISO4400 connector



DEUTSCH DT04 connector (Parallel type)

