



## DFE100

### Solenoid control sectional diverter valves

- 6 - 8 - 10 ways configuration
- Galvanized body

This catalogue shows technical specifications and diagrams measured with mineral oil of 46 mm<sup>2</sup>/s (46 cSt) viscosity at 40°C - (104°F) temperature.

WORKING CONDITIONS		
N. of available ways		6 - 8 - 10
Max. flow rating		50 l/min (13.2 US gpm)
Max. pressure	without drain	200 bar (2900 psi)
	with drain	315 bar (4600 psi)
Available supply voltage	VDC	see reference page 138
Nominal power		38 W
Internal leakage A(B)⇒T	Δp = 100 bar (1450 psi)	10 cm <sup>3</sup> /min (0.61 in <sup>3</sup> /min)
Fluid		Mineral based oil
Tie rod tightening		18 Nm (13.3 lbft)
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)
	operating range	from 15 to 75 mm <sup>2</sup> /s (from 15 to 75 cSt)
Viscosity	min.	12 mm <sup>2</sup> /s (12 cSt)
	max.	400 mm <sup>2</sup> /s (400 cSt)
Max. level of contamination		20/18/15 - ISO 4406 - NAS 1638 - class 9
Ambient temperature for working conditions		from -20°C to 50°C (from -4°F to 122°F)

NOTE - For different working conditions please contact Sales Dept.

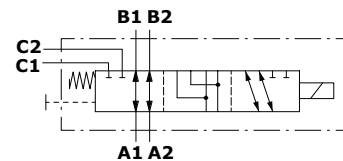
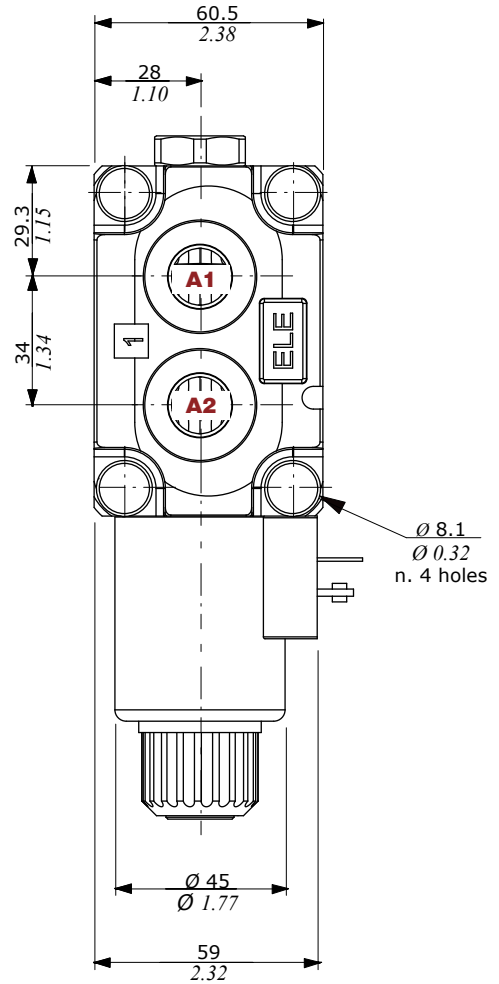
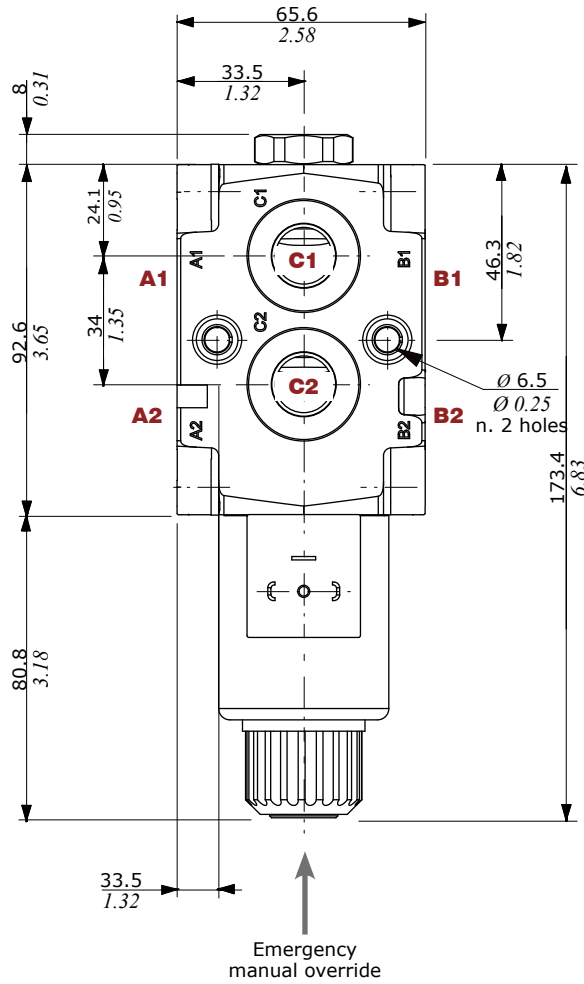
### Available threads

PORTS THREAD				
ALL PORTS	BSP	UN-UNF	METRIC* (ISO 9974-1)	METRIC* (ISO 6149)
<b>DFE100</b>	G 3/8	3/4-16 (SAE 8)	M18x1.5	M18x1.5
PILOT PORTS				
<b>L</b>	G 1/4	9/16-18 (SAE 6)	M12x1.5	M12x1.5

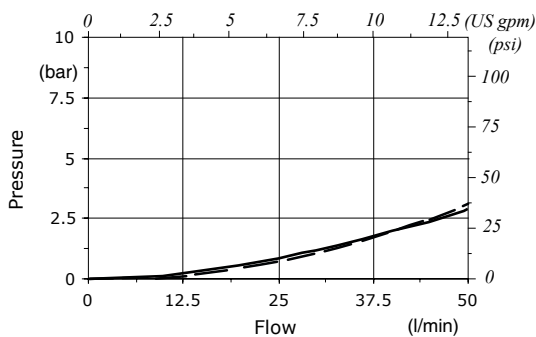
(\* ) Optional threads  
for availability contact Sales  
Department

## Dimensional data - hydraulic circuit - performance data

6 ways



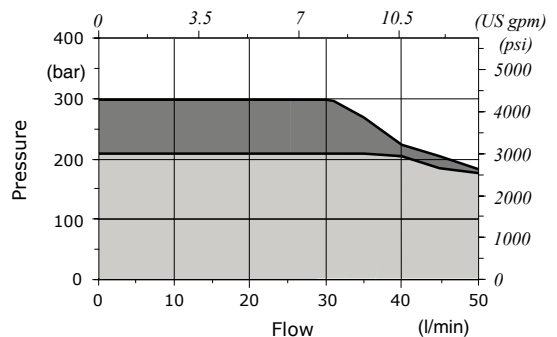
Pressure drop versus flow



— A1 → B1  
 - - A1 → C1

Minimum dynamic conditions

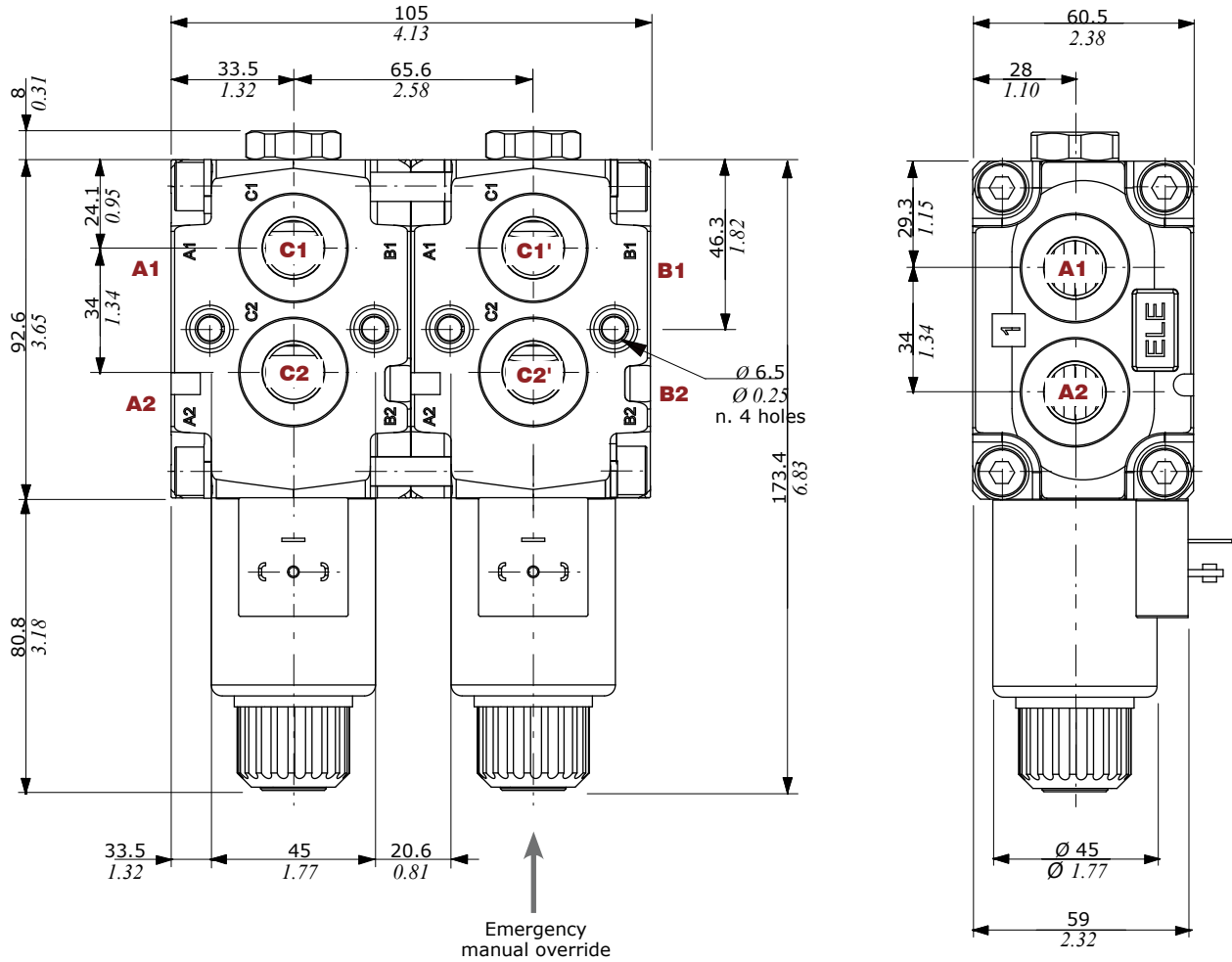
(Supply = Vn-10%, coil at 70 °C - 158 °F)



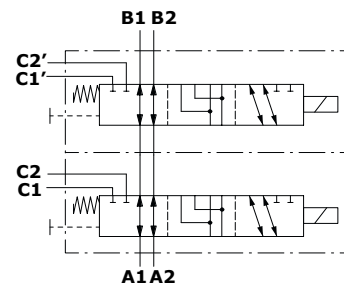
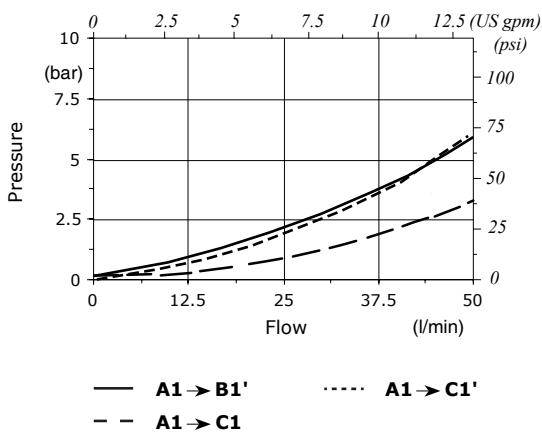
■ With drain  
 ■ Without drain

**Dimensional data - hydraulic circuit - performance data**

**8 ways**

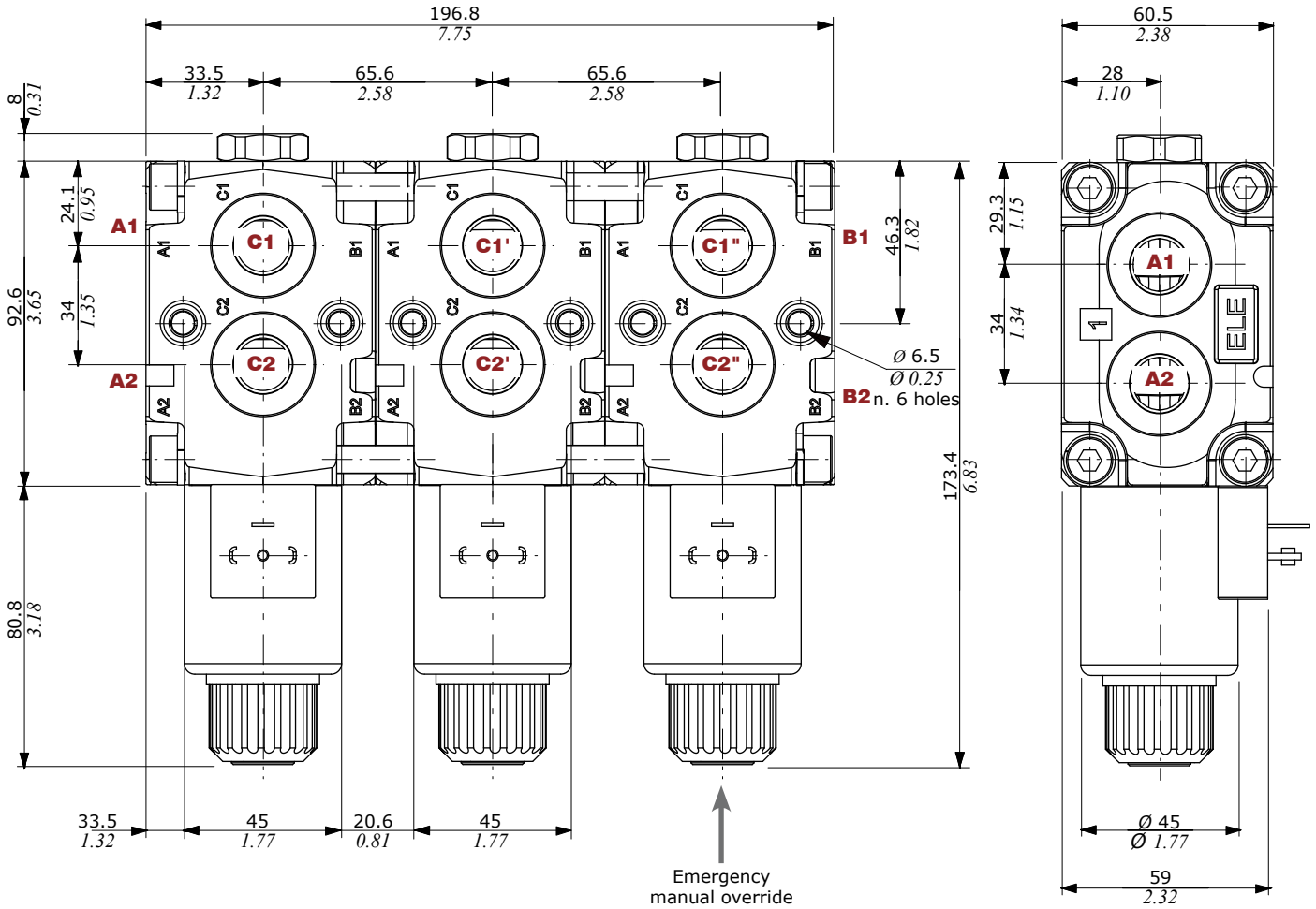


**Pressure drop versus flow**

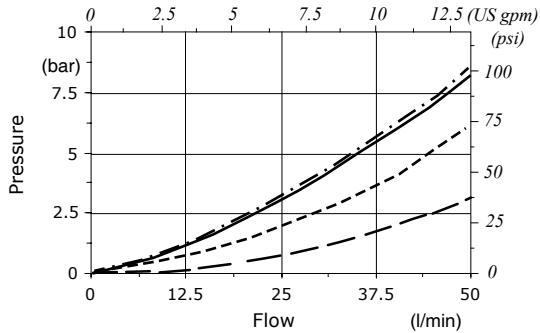


## Dimensional data - hydraulic circuit - performance data

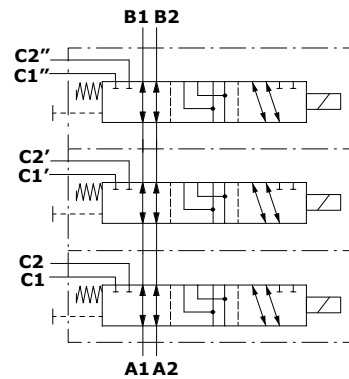
### 10 ways



Pressure drop versus flow



- A1 → B1''      ····· A1 → C1'
- - - A1 → C1      - · - · A1 → C1''



**Part ordering codes**

Example:

**DFE100/10 A 18 ES - W 2 0 2 - 12VDC - SAE - (CRZ)**

For description composition see the text below

**Coil**  
1 = without coil  
2 = with coil

**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

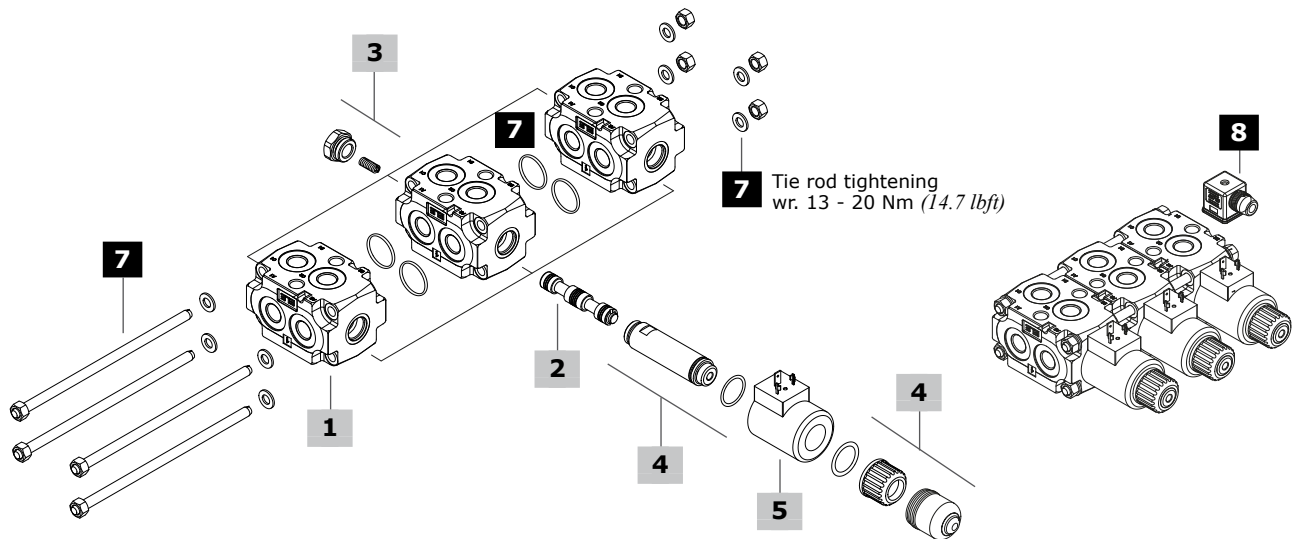
**Diode\***  
(text omitted if diode is not present)  
DB = bidirectional diode

**Lenght cables**  
(only if it's present)  
Lenght is in mm

**Bellow**  
1 = without bellow  
2 = with bellow

**Coil voltage**

(\*) - For diodes and connector options see coils table on page 138



**1 Body kit\***

TYPE	CODE	DESCRIPTION
<b>DFE100/6-8-10</b>	3CO2244721	6 ways body kit

**2 Spools** **page 136**

TYPE	CODE	DESCRIPTION
<b>A</b>	3CAS110647	A1/A2 in B1/B2 in pos. 1. A1/A2 in C1/C2 in pos. 2. Ports connected in transit position
<b>B</b>	3CAS110747	A1/A2 in B1/B2 in pos. 1. A1/A2 in C1/C2 in pos. 2. Ports closed in transit position
<b>H</b>	3CAS110847	A1/A2 in B1/B2 in pos. 1. A1/A2 in C1/C2 in pos. 2. Port connected to drain in transit position
<b>N</b>	3CAS110947	As type A, for right inlet

**3 Positioner kit** **page 137**

TYPE	CODE	DESCRIPTION
<b>18...W</b>	5TAP006	Spring return in pos. 1
<b>18...Y</b>	5GIU014*	Spring return in pos. 1, with SAE6 drain port

**4 Solenoid kit** **page 137**

TYPE	CODE	DESCRIPTION
<b>ES</b>	5SOL515000	Tube assembly without protective bellow
-	4ACC515	Optional assembly tube protective bellow

**5 Coil**

For list of available coils see pages 138

**6 Body threading**

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

**7 Tie rods kit and O-ring seals**

CODE	DESCRIPTION
5TIR108132	For DFE100/8 diverter valves
5TIR108198	For DFE100/10 diverter valves

**8 Accessories**

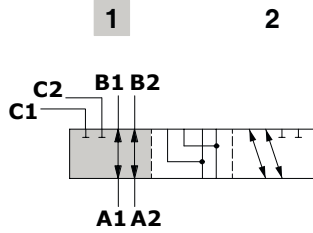
For list of available connectors see pages 138

(\*) - Codes are referred to **UN-UNF** thread

## Spool circuits

### Type A

A1/A2 in B1/B2 in pos. 1.  
Ports connected in transit position

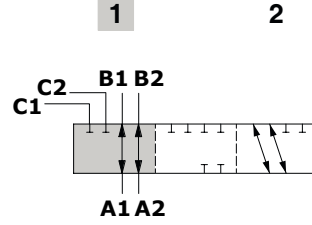


**Spool stroke**

Position 2: + 4 mm (0.15 in)

### Type B

A1/A2 in B1/B2 in pos. 1.  
Ports closed in transit position

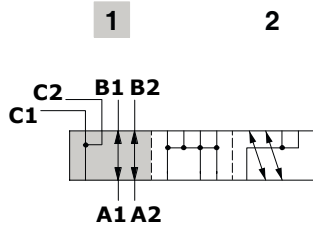


**Spool stroke**

Position 2: + 4 mm (0.15 in)

### Type H

A1/A2 in B1/B2 in pos. 1.  
Port connected to drain in transit position

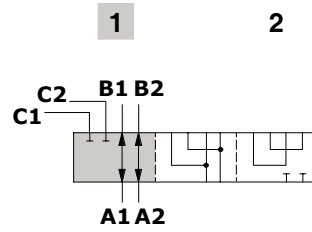


**Spool stroke**

Position 2: + 4 mm (0.15 in)

### Type N

As type A, for right inlet



**Spool stroke**

Position 2: + 4 mm (0.15 in)

**Positioner kit**

**With spring return in position 1**

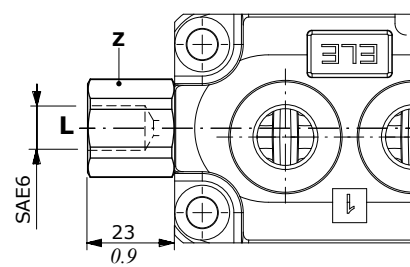
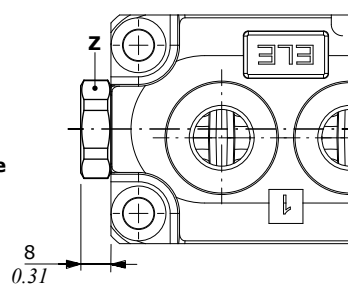
**Type 18W**  
With plug



**Type 18Y**  
With SAE6 drain port

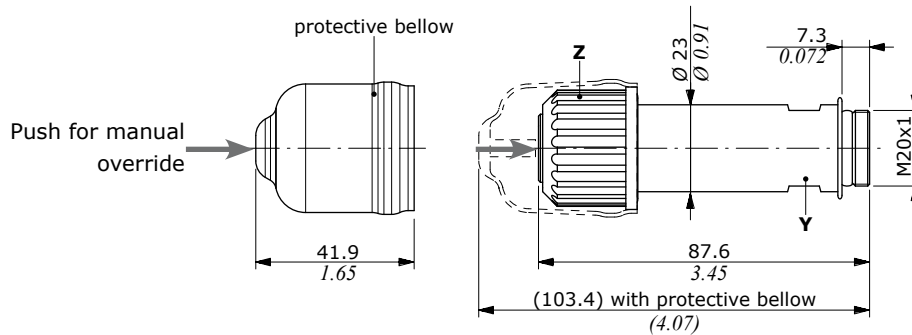


**Wrenches and tightening torque**  
Z = wrench 24 - 42 Nm (31 lbft)



**Solenoid kit**

**ES tube assembly kit**



**Wrenches and tightening torque**  
Y = wrench 20 - 20 Nm (14.7 lbft)  
Z = 24 Nm (17.7 lbft)

## Coils and accessories

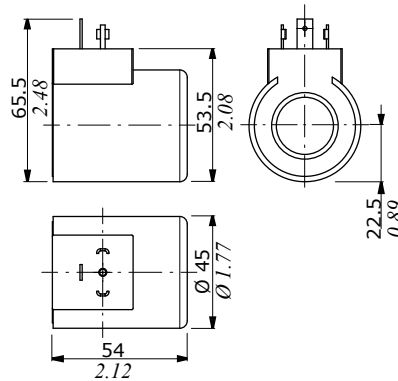
Type	Voltage	Ordering codes					
		ISO4400	Deutsch DT	AMP JPT	Packard Weatherpack	Packard Metri-pack	Flying leads without connector
<b>D15</b>	<b>12 VDC</b>	4SOL515012	4SOL515011 <sup>(2)</sup> 4SOL515014A <sup>(3-6)</sup>	4SOL515016 <sup>(5)</sup>	-	-	-
	<b>14 VDC</b>	-	4SOL515014B <sup>(3-6)</sup>	4SOL515016A <sup>(5)</sup>	-	-	-
	<b>24 VDC</b>	4SOL515024	4SOL515025A <sup>(3-6)</sup> 4SOL515021 <sup>(2)</sup>	-	-	-	-
	<b>48 VDC</b>	4SOL515048	-	4SOL515049 <sup>(2)</sup>	-	-	-
	<b>98 VDC</b>	4SOL515098	-	-	-	-	-
	<b>110 VDC</b>	4SOL515110	-	-	-	-	-
<b>Mating connectors</b>		4CN1009995	5CON140031	5CON003	-	-	-

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

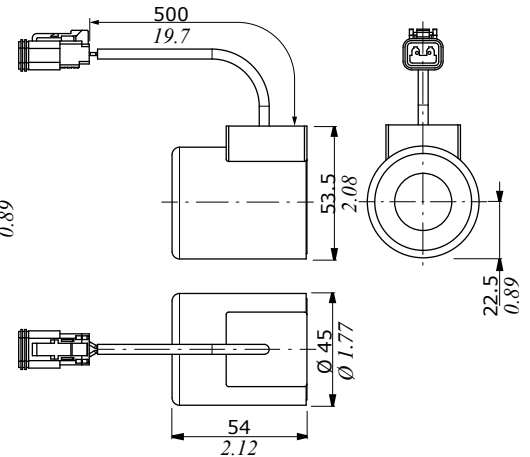
### Features

- Nominal voltage tolerance: ±10%
- Nominal power.....: 38 W
- 12/14/24/48/98/110 VDC
- Nominal current.....: 3.16 A @ 12 VDC
- : 2.9 A @ 14 VDC
- : 1.58 A @ 24 VDC
- : 0.79 A @ 48 VDC
- : 0.41 A @ 98 VDC
- : 0.35 A @ 110 VDC
- Insulation.....: Class H (180°C - 356°F)
- Weather protection.....: IP65 - ISO4400
- : IP69K - Deutsch DT
- : IP65 - AMP JPT
- Insertion.....: 100%

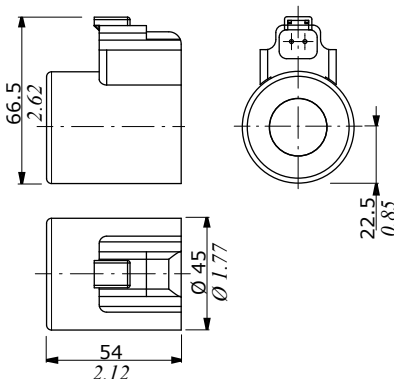
### ISO4400 connector



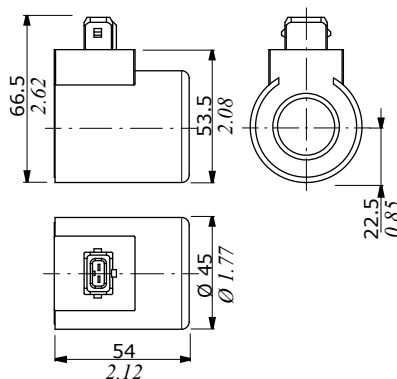
### Flying leads with DEUTSCH DT04 connector



### DEUTSCH DT04 connector (Parallel type)



### AMP JPT connector (Perpendicular type)



### Flying leads with AMP JPT connector

