



## DFE102

### Solenoid control monoblock diverter valves

- 3 - 6 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		3 - 6
Max. flow rating		90 l/min (23.7 US gpm)
Max. pressure	without drain	200 bar (2900 psi)
	with drain	315 bar (4600 psi)
Available supply voltage	VDC	see reference page 94
Nominal power		60 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
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 <sup>2</sup> /s (from 15 to 75 cSt)
	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.

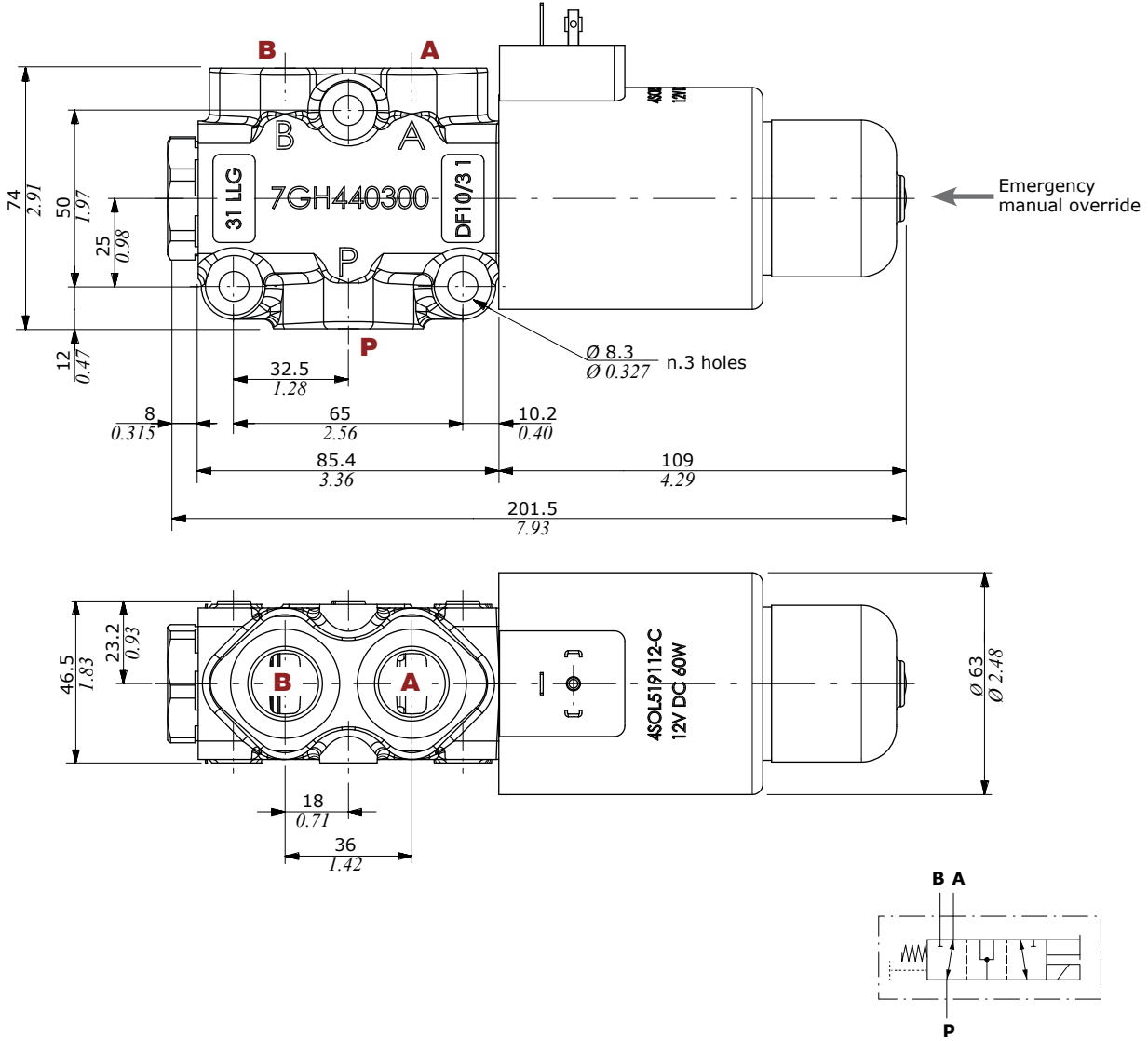
### Available threads

PORTS THREAD		
ALL PORTS	BSP	UN-UNF
<b>DFE10</b>	G 1/2	7/8-14 (SAE 10)
PILOT PORTS		
<b>L</b>	G 1/4	9/16-18 (SAE 6)

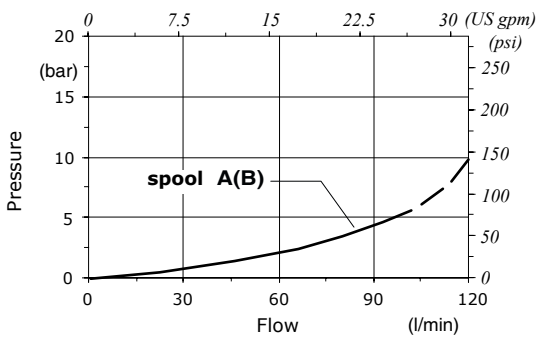
## Dimensional data - hydraulic circuit - performance data

### 3 ways

It's possible to obtain 2 ways diverter valve plugging port

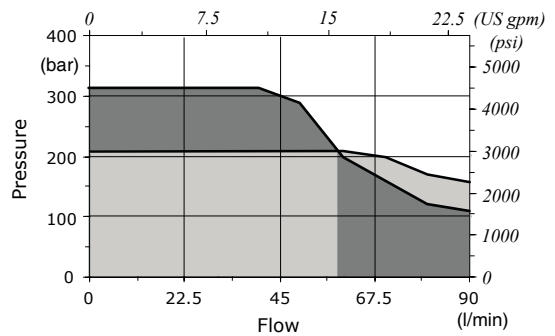


**Pressure drop versus flow**  
P → A(B)



**Minimum dynamic conditions**

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

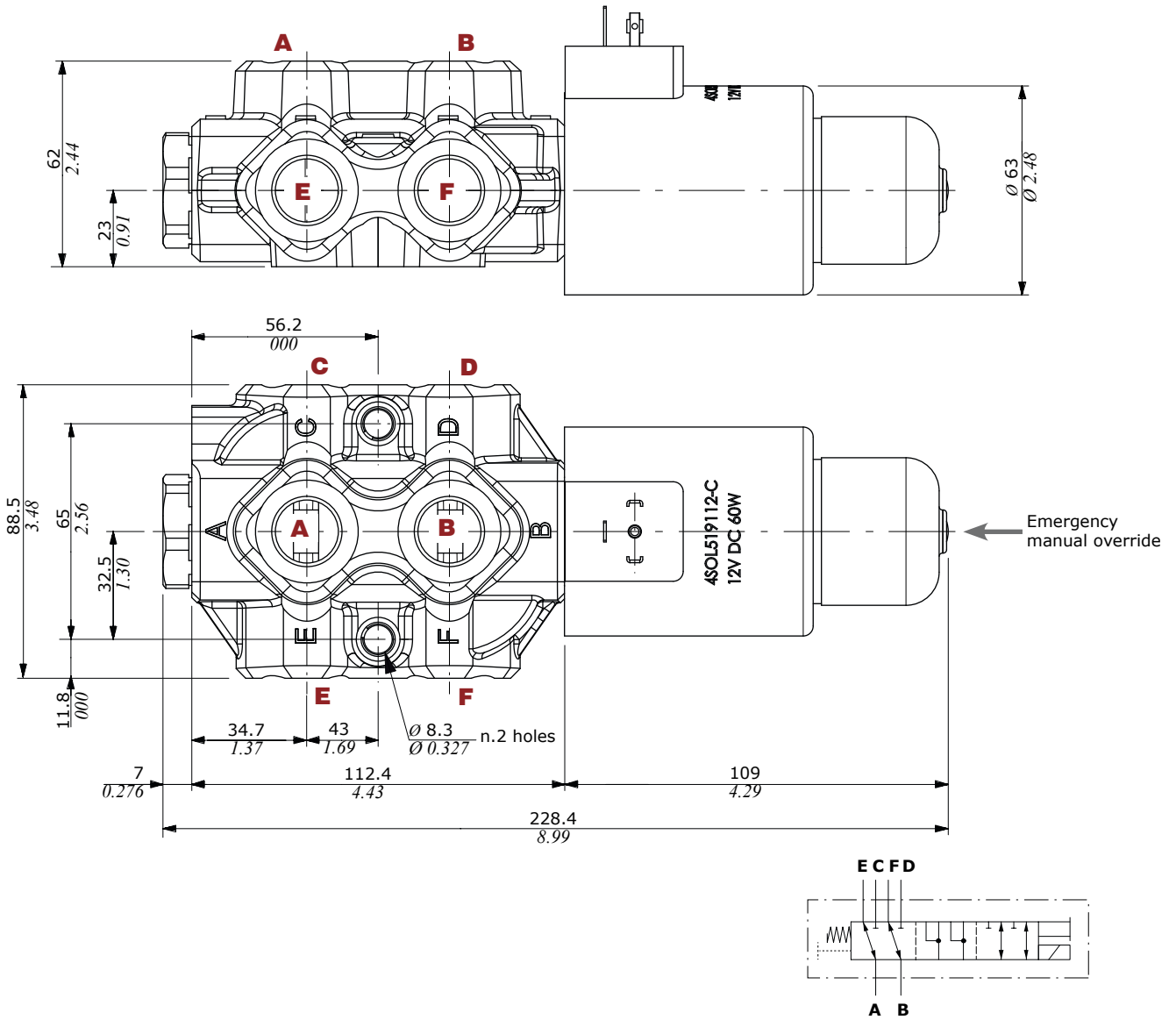


■ With drain  
■ Without drain

Dimensional data - hydraulic circuit - performance data

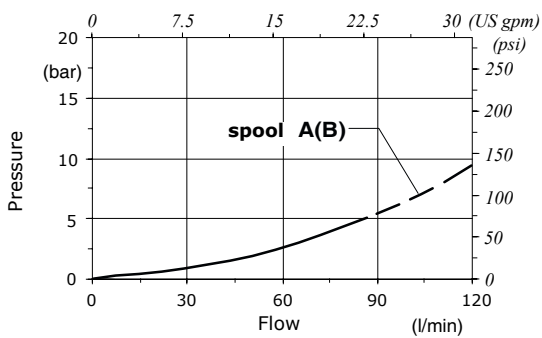
6 ways

36  
000



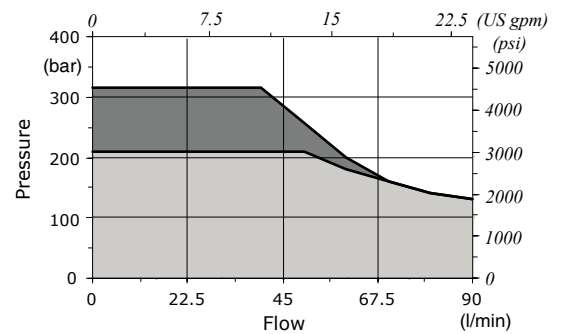
Pressure drop versus flow

A → C(E)



Minimum dynamic conditions

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



■ With drain  
■ Without drain

## Part ordering codes

Example:

For description composition  
see the text below

**DFE102/3 A 18 ES - W 2 0 2 - 12VDC - ... - CRZ**

1            2    3    4            3            4    5            6            Galvanized body

... 2 0 (300) 2 - 12VDC - ...

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

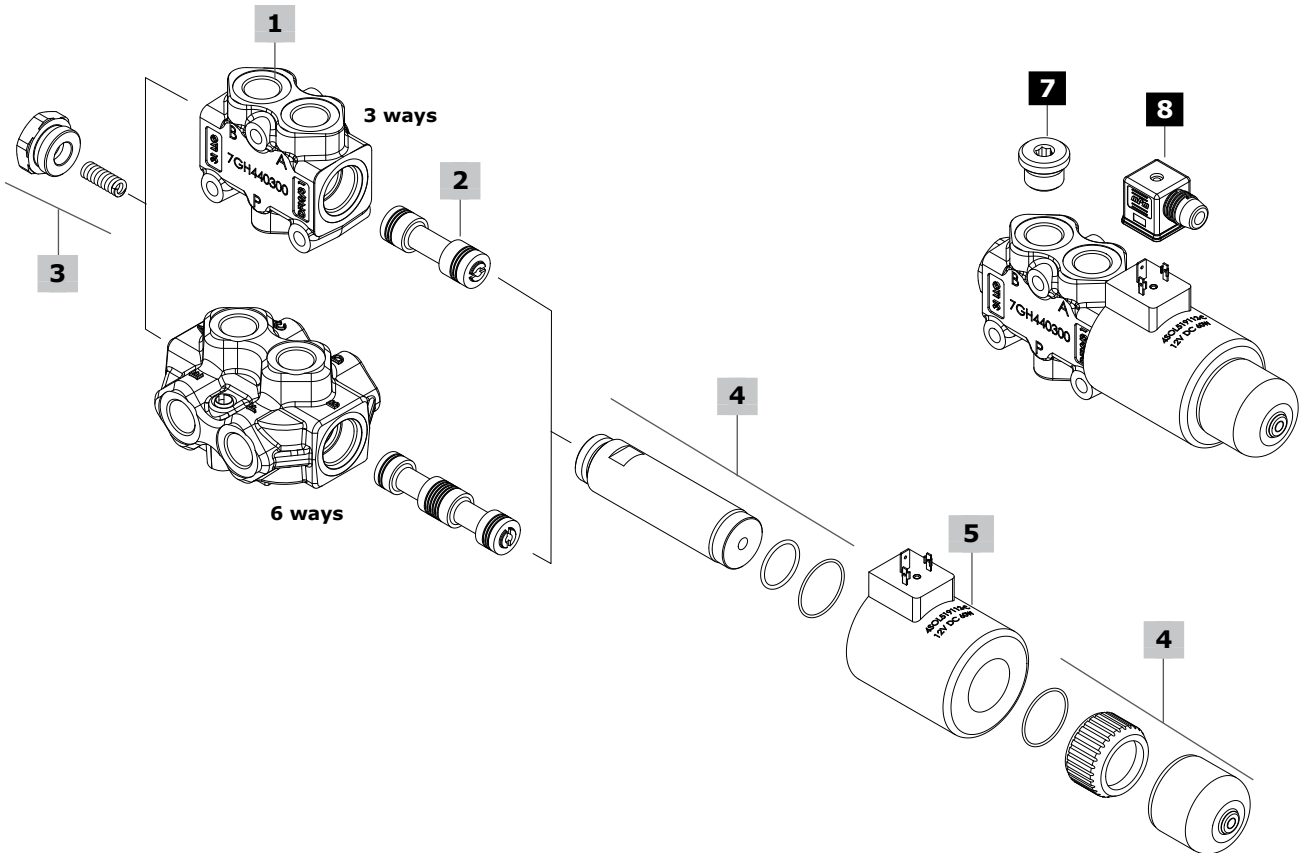
**Connection\***  
0 = ISO (Std)  
2 = AMP-JPT  
3 = Deutsch DT06  
4 = Deutsch DT04-2P Male  
5 = Deutsch DT04-4P Female  
6 = Metri-Pack Female  
7 = Metri-Pack Male  
8 = WeatherPack Male  
9 = WeatherPack Female

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

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

**Coil voltage**

(\*) - For connector options see coils table on page 94



**1 Body kit\***

TYPE	CODE	DESCRIPTION
<b>DFE102/3</b>	3CO2241321Z	3 ways body kit
<b>DFE102/6</b>	3CO2242322Z	6 ways body kit

**2 Spools** **page 92**

TYPE	CODE	DESCRIPTION
<b>For DFE102/3:</b>		
<b>A</b>	3CAS110342	Flow in A in neutral. Ports connected in transit position
<b>B</b>	3CAS110442	Flow in A in neutral. Ports closed in transit position
<b>D</b>	3CAS110541	Closed ports in neutral and connected in transit position

**For DFE102/6:**

<b>A</b>	3CAS110642	Flow in E and F. C and D closed in pos. 1 Ports connected in transit position
<b>B</b>	3CAS110742	Flow in E and F. C and D closed in pos. 1 Ports closed in transit position
<b>H</b>	3CAS110843	D<->C in pos. 1, F<->E in pos. 2 Ports closed in transit position

**3 Positioner kit** **page 93**

TYPE	CODE	DESCRIPTION
<b>18...W</b>	5TAP011	Spring return in pos. 1
<b>18...Y</b>	5GIU017*	Spring return in pos. 1, with G1/4 drain port

**4 Solenoid kit** **page 93**

TYPE	CODE	DESCRIPTION
<b>ES</b>	5SOL519004-C	Tube assembly without protective bellow
<b>ES</b>	5SOL519004A-C	Tube assembly with protective bellow
-	4ACC519-C	Optional protective bellow for tube assembly

**5 Coil**

For list of available coils see pages 94

**6 Body threading**

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

**7 Port plugs\***

It's possible to obtain 2 ways diverter valve plugging port of DFE102/3

CODE	DESCRIPTION
3XTAP727180	G1/2 plug

**8 Accessories**

For list of available connectors see pages 94

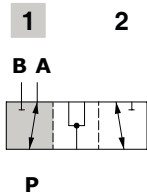
(\*) - Codes are referred to **BSP** thread

Spool circuits

**3 ways**

**Type A**

Ports connected in transit position



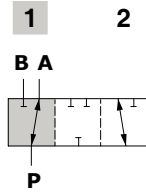
P

**Spool stroke**

Position 2: - 4.6 mm (- 0.18 in)

**Type B**

Ports closed in transit position



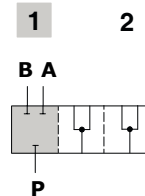
P

**Spool stroke**

Position 2: - 4.6 mm (- 0.18 in)

**Type D**

Closed ports in neutral and connected in transit position



P

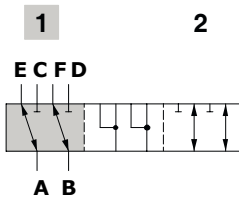
**Spool stroke**

Position 2: - 4.6 mm (- 0.18 in)

**6 ways**

**Type A**

Flow in E and F. C and D closed in pos. 1  
Ports connected in transit position



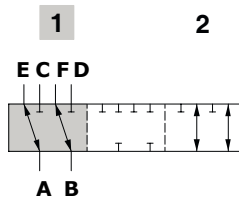
A B

**Spool stroke**

Position 2: - 4.6 mm (- 0.18 in)

**Type B**

Flow in E and F. C and D closed in pos. 1  
Ports closed in transit position



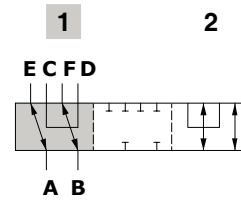
A B

**Spool stroke**

Position 2: - 4.6 mm (- 0.18 in)

**Type H**

D<->C in pos. 1, F<->E in pos. 2  
Ports closed in transit position



A B

**Spool stroke**

Position 2: - 4.6 mm (- 0.18 in)

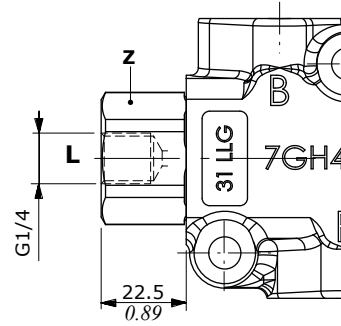
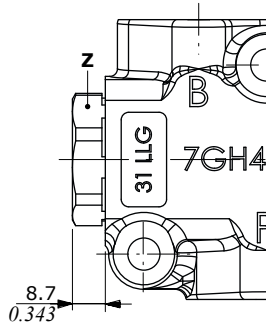
**Positioner kit**

**With spring return in position 1**

**Type 18W**  
With plug

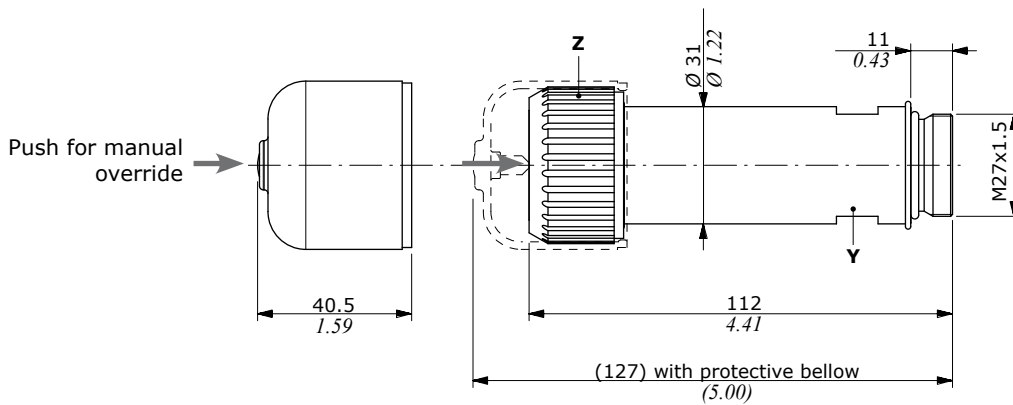
**Type 18Y**  
With G1/4 drain port

**Wrenches and tightening torque**  
Z = wrench 32 - 42 Nm (31 lbft)



**Solenoid kit**

**ES tube assembly kit**



**Wrenches and tightening torque**  
Y = wrench 27 - 24 Nm (17.7 lbft)  
Z = 24 Nm (17.7 lbft)

## Coils and accessories

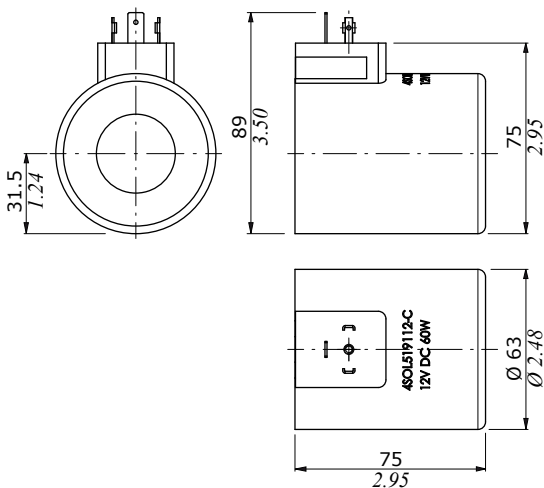
Type	Voltage	Ordering codes					
		ISO4400	Deutsch DT	AMP JPT	Packard Weatherpack	Packard Metri-pack	Flying leads without connector
D19C	12 VDC	4SOL519112-C	4SOL519402-C <sup>(6)</sup> 4SOL519413-C <sup>(2)</sup>	-	-	-	4SOL519113-C
	24 VDC	4SOL519124-C	4SOL519404-C <sup>(6)</sup> 4SOL519425-C <sup>(2)</sup>	-	-	-	-
	28 VDC	-	4SOL519128-C <sup>(6-3)</sup>	-	-	-	-
<b>Mating connectors</b>							
		4CN1009995	5CON140031	-	-	-	-

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

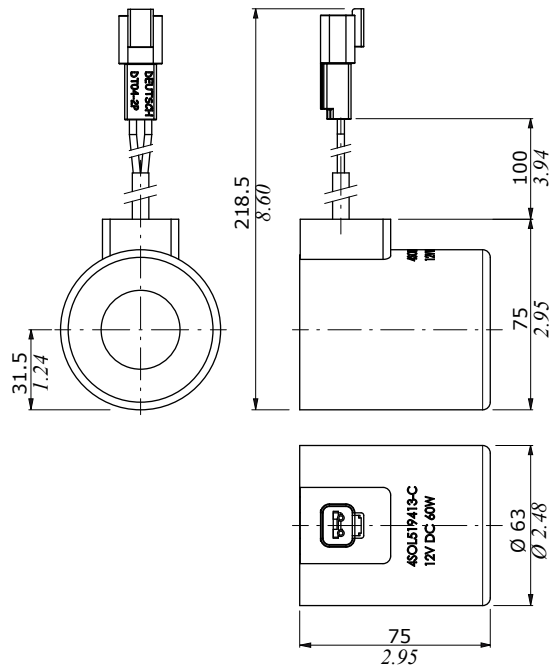
### Features

Nominal voltage tolerance : ±10%  
 Nominal power..... : 60 W - 12/24/28 VDC  
 Nominal current ..... : 5 A @ 12 VDC / 2.5 A @ 24 VDC / 2.14 A @ 28 VDC  
 Insulation ..... : Class H (180°C)  
 Weather protection ..... : IP65 - ISO4400 / IP69K - Deutsch DT  
 Insertion ..... : 100%

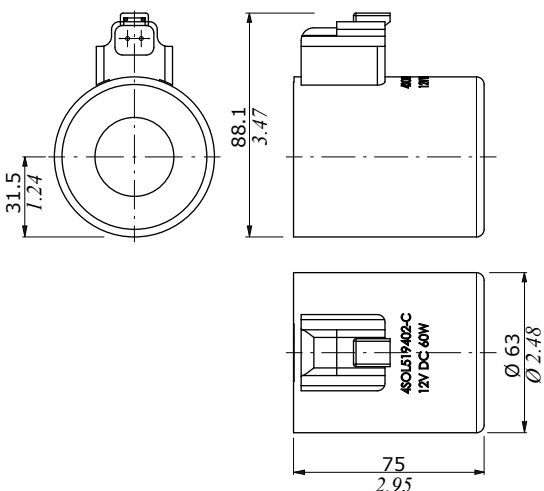
#### ISO4400 connector



#### Flying leads with DEUTSCH DT04 connector



#### DEUTSCH DT04 connector (Parallel type)



#### Flying leads

