



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 mm²/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 ³ /min (0.61 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 -20°C to 50°C (from -4°F to 122°F)

NOTE - For different working conditions please contact Sales Dept.

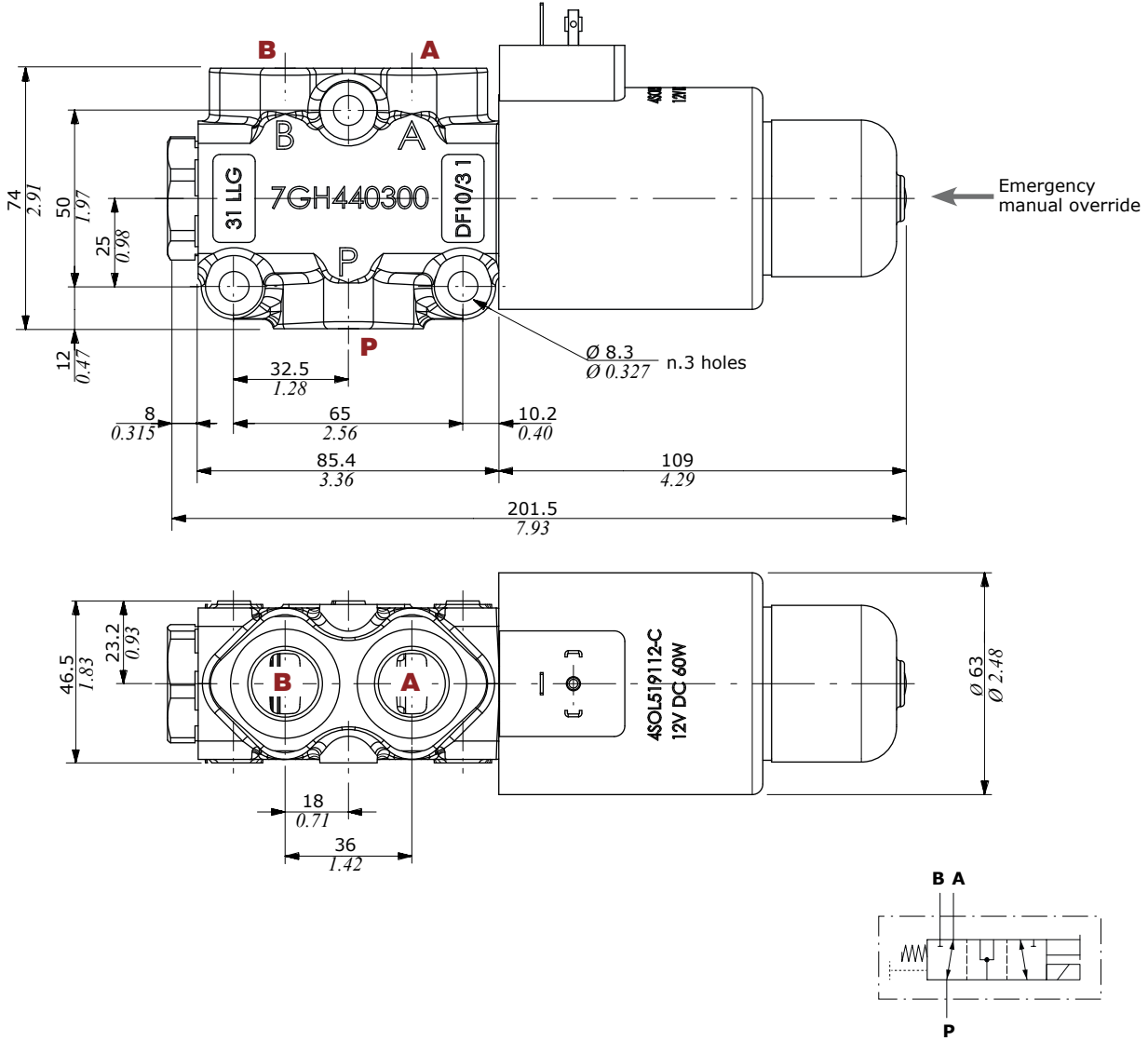
Available threads

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

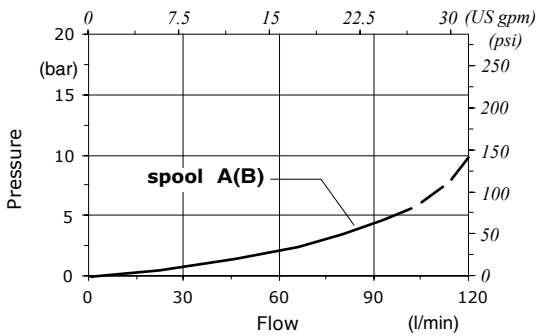
Dimensional data - hydraulic circuit - performance data

3 ways

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

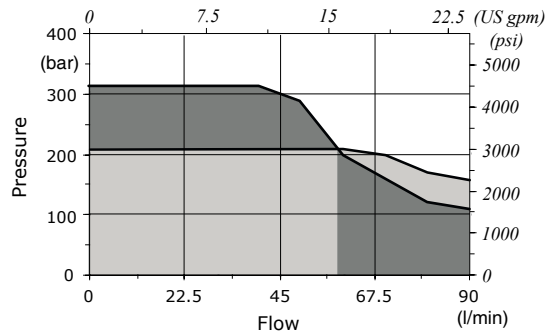


Pressure drop versus flow
P → A(B)



Minimum dynamic conditions

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

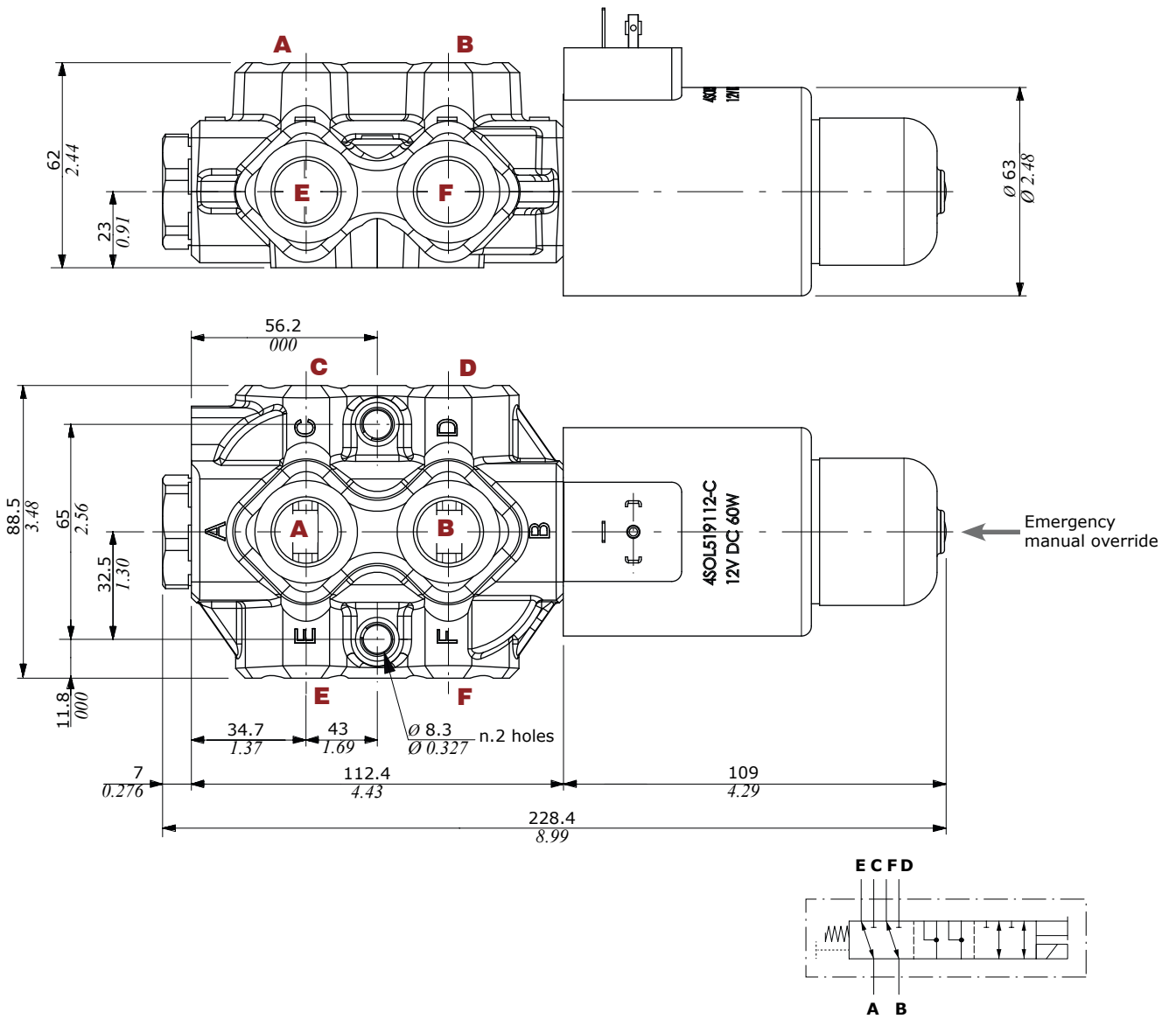


■ With drain
■ Without drain

Dimensional data - hydraulic circuit - performance data

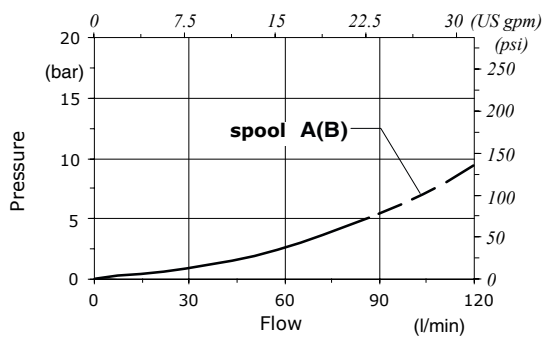
6 ways

36
000



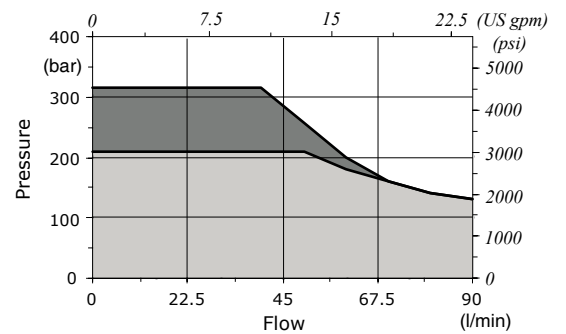
Pressure drop versus flow

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

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

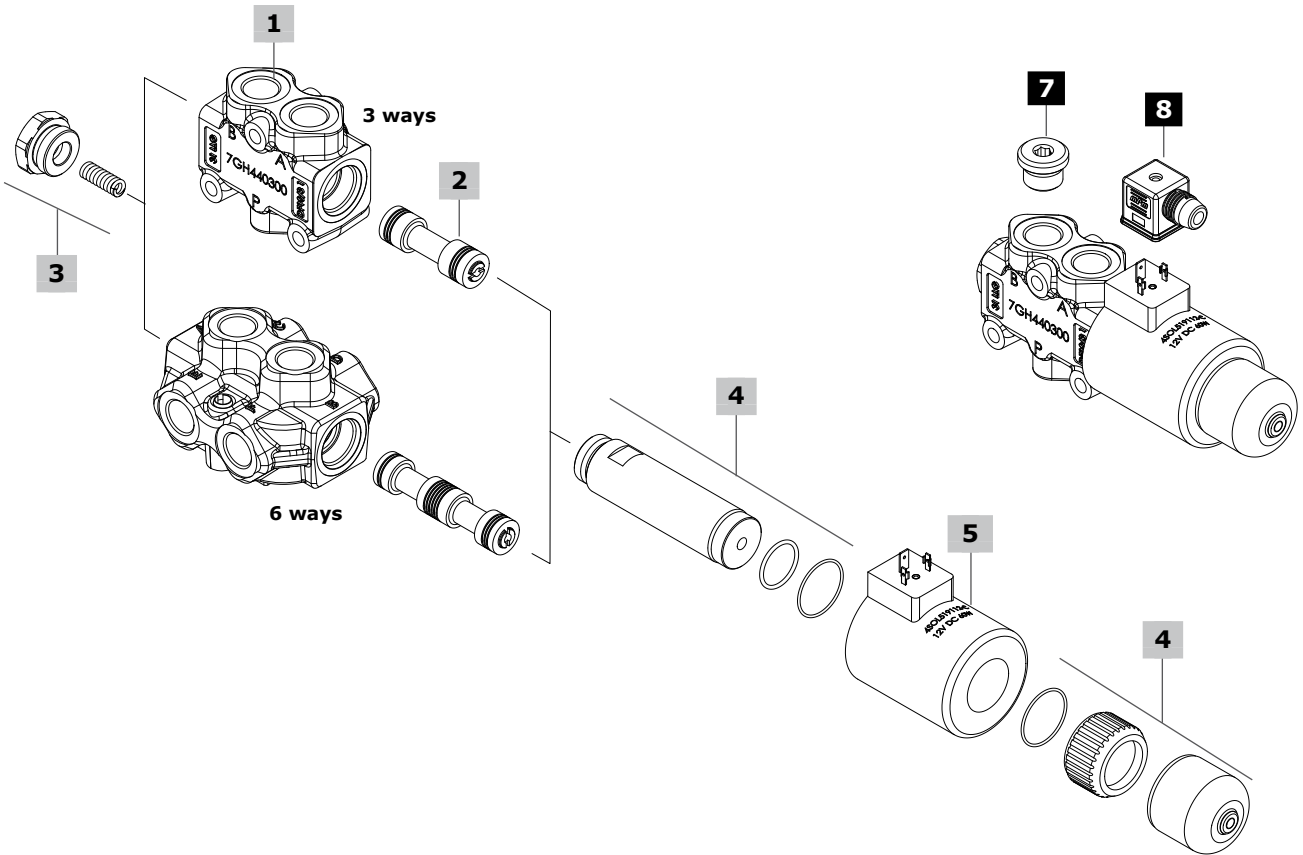
... 2 0 (300) 2 - 12VDC - ...

Bellow
 1 = without bellow
 2 = with bellow

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

Coil voltage

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



1 Body kit*

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

2 Spools **page 92**

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

For DFE102/6:

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

3 Positioner kit **page 93**

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

4 Solenoid kit **page 93**

TYPE	CODE	DESCRIPTION
ES	5SOL519004-C	Tube assembly without protective bellow
ES	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

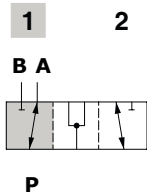
(*) - Codes are referred to **BSP** thread

Spool circuits

3 ways

Type A

Ports connected in transit position



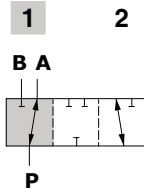
P

Spool stroke

Position 2: - 4.6 mm (- 0.18 in)

Type B

Ports closed in transit position



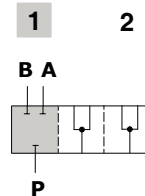
P

Spool stroke

Position 2: - 4.6 mm (- 0.18 in)

Type D

Closed ports in neutral and connected in transit position



P

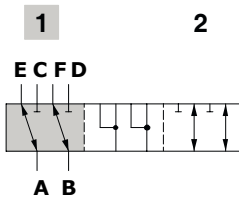
Spool stroke

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



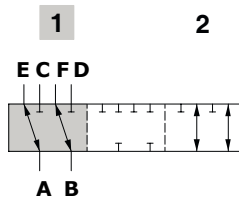
A B

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



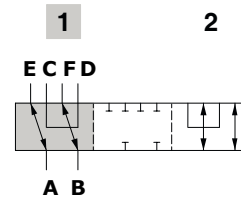
A B

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)

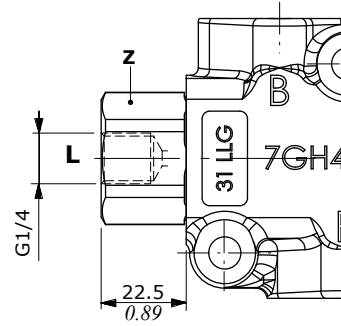
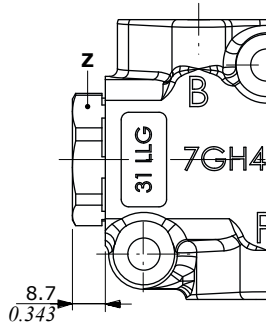
Positioner kit

With spring return in position 1

Type 18W
With plug

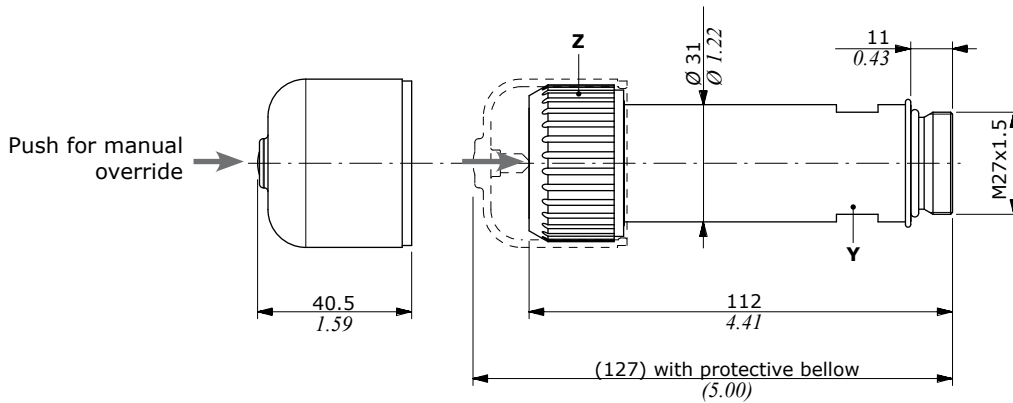
Type 18Y
With G1/4 drain port

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

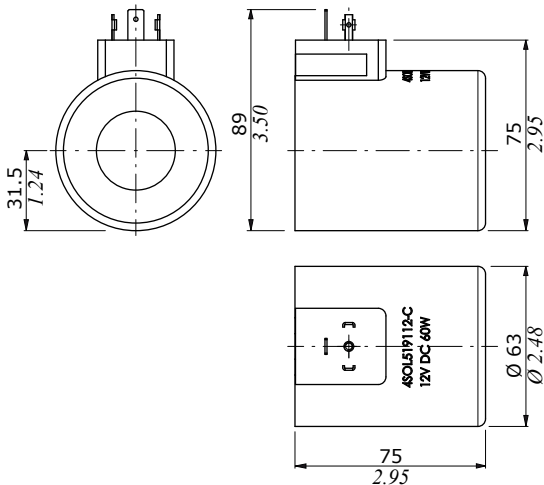
Type	Voltage	Ordering codes					
		ISO4400	Deutsch DT	AMP JPT	Packard Weatherpack	Packard Metri-pack	Flying leads without connector
D19C	12 VDC	4SOL519112-C	4SOL519402-C ⁽⁶⁾ 4SOL519413-C ⁽²⁾	-	-	-	4SOL519113-C
	24 VDC	4SOL519124-C	4SOL519404-C ⁽⁶⁾ 4SOL519425-C ⁽²⁾	-	-	-	-
	28 VDC	-	4SOL519128-C ⁽⁶⁻³⁾	-	-	-	-
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

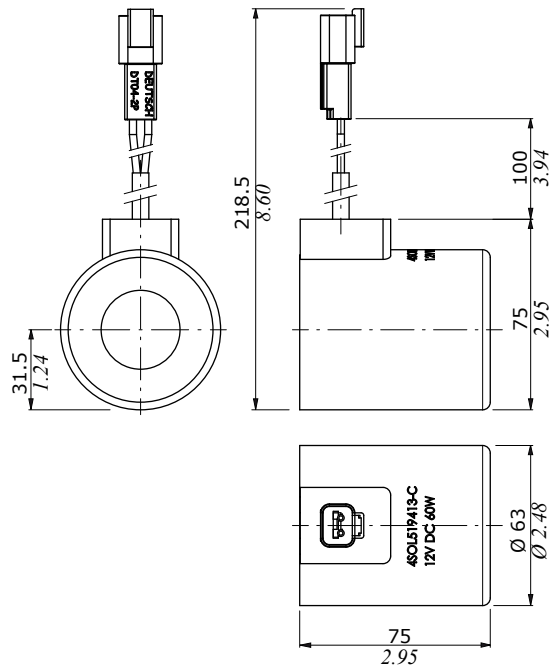
Features

Nominal voltage tolerance : ±10%
 Nominal power..... : 60 W - 12/24/28 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%

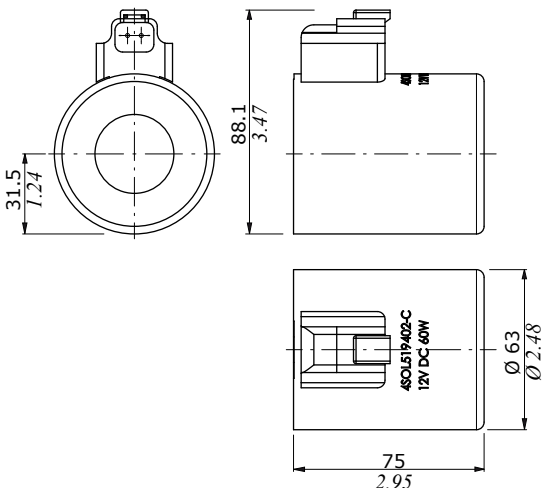
ISO4400 connector



Flying leads with DEUTSCH DT04 connector



DEUTSCH DT04 connector (Parallel type)



Flying leads

