



DFE10

Solenoid control monoblock diverter valves

- 3 - 6 ways configuration

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.

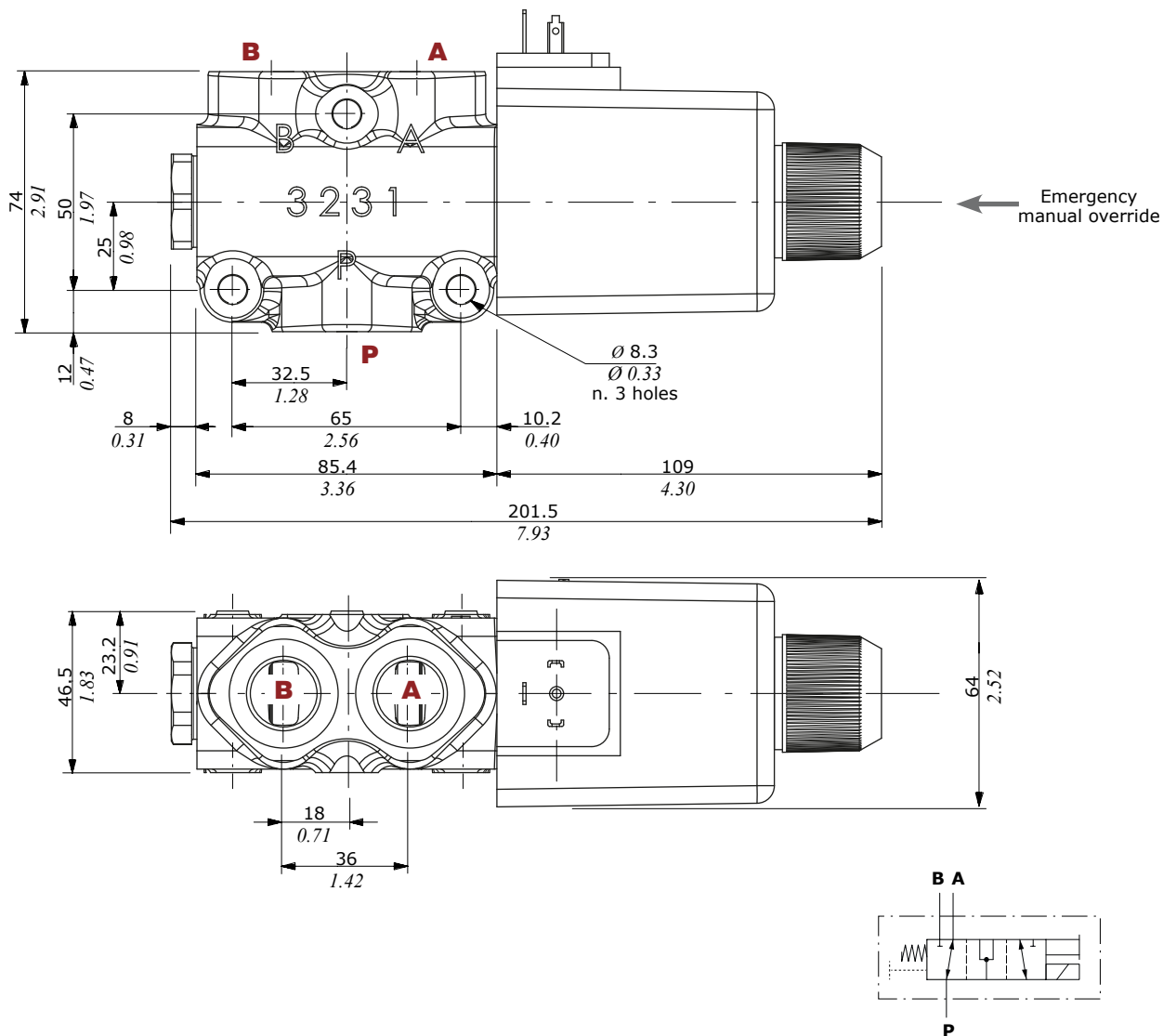
Available threads

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

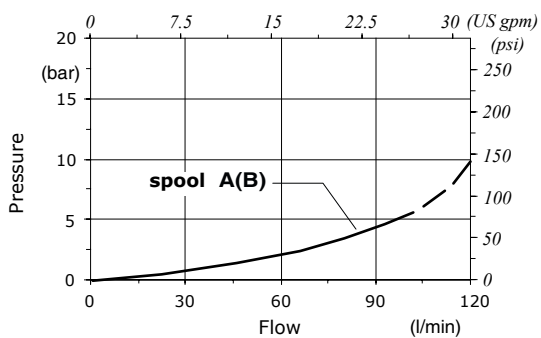
3 ways

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



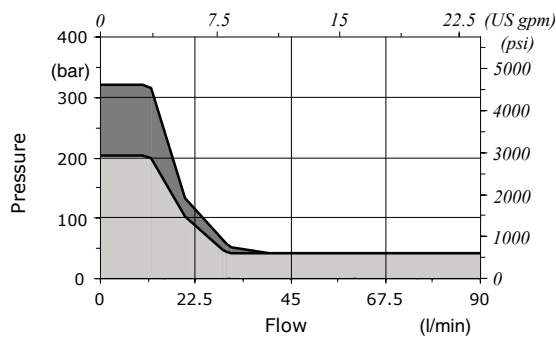
Pressure drop versus flow

P → A(B)



Minimum dynamic conditions

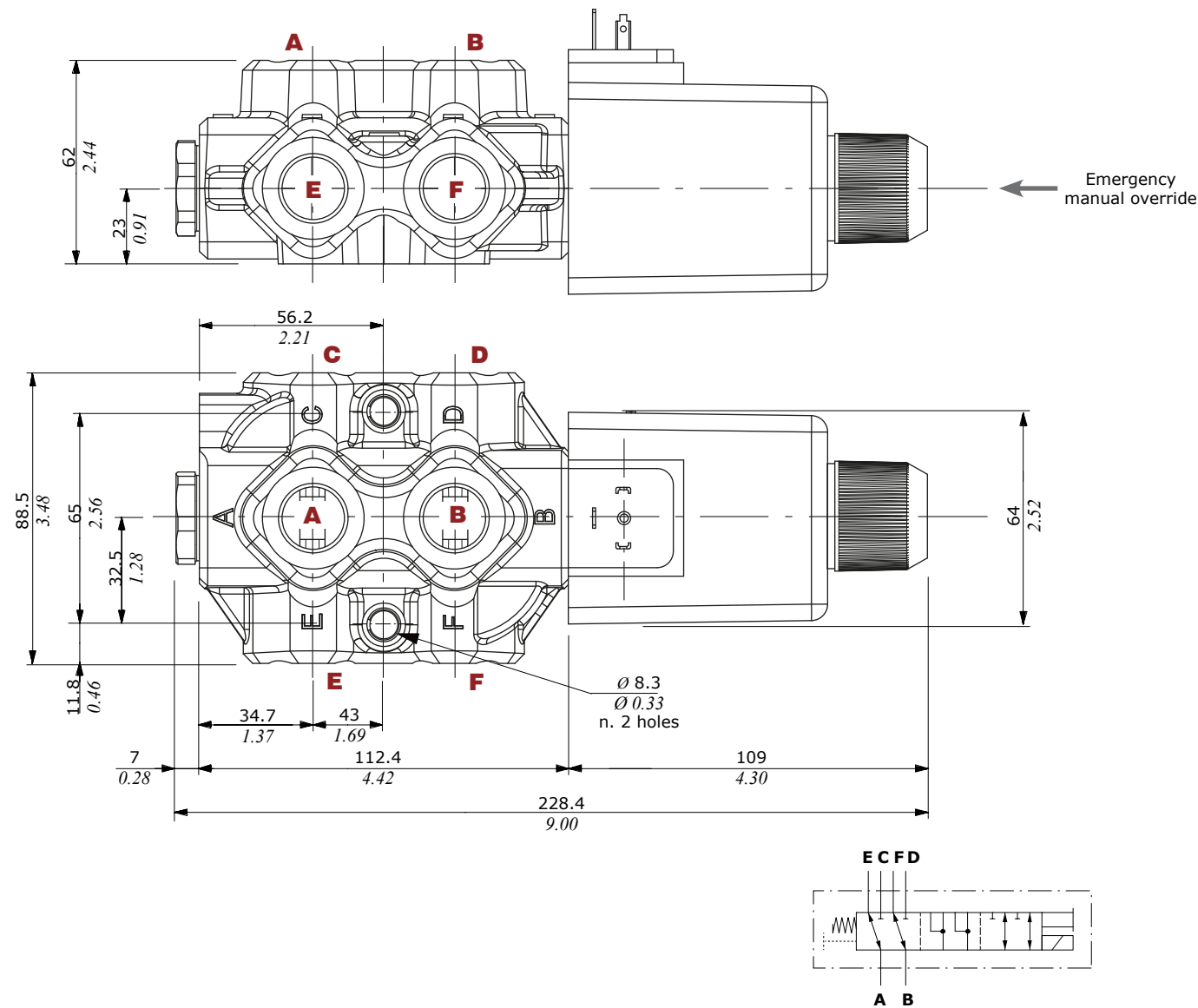
(Supply = Vn-10%, coil at 70 °C - 158 °F)



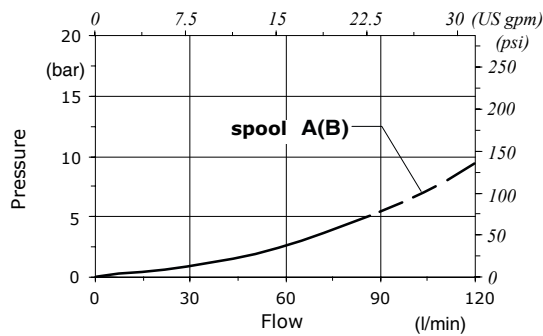
With drain
Without drain

Dimensional data - hydraulic circuit - performance data

6 ways

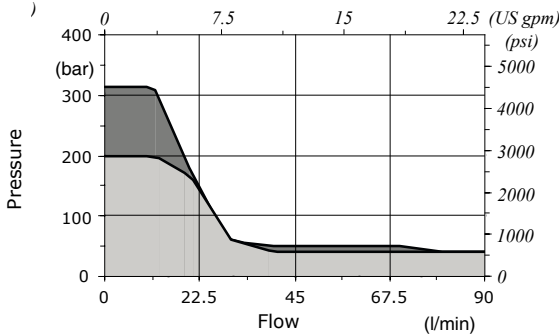


Pressure drop versus flow
A → C(E)



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

DFE10/3 A 18 ES - W 2 0 2 - 12VDC - ... - (CVN)

1 2 3 4 3 4 5 6

Painted with one layer of black Primer antirust

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

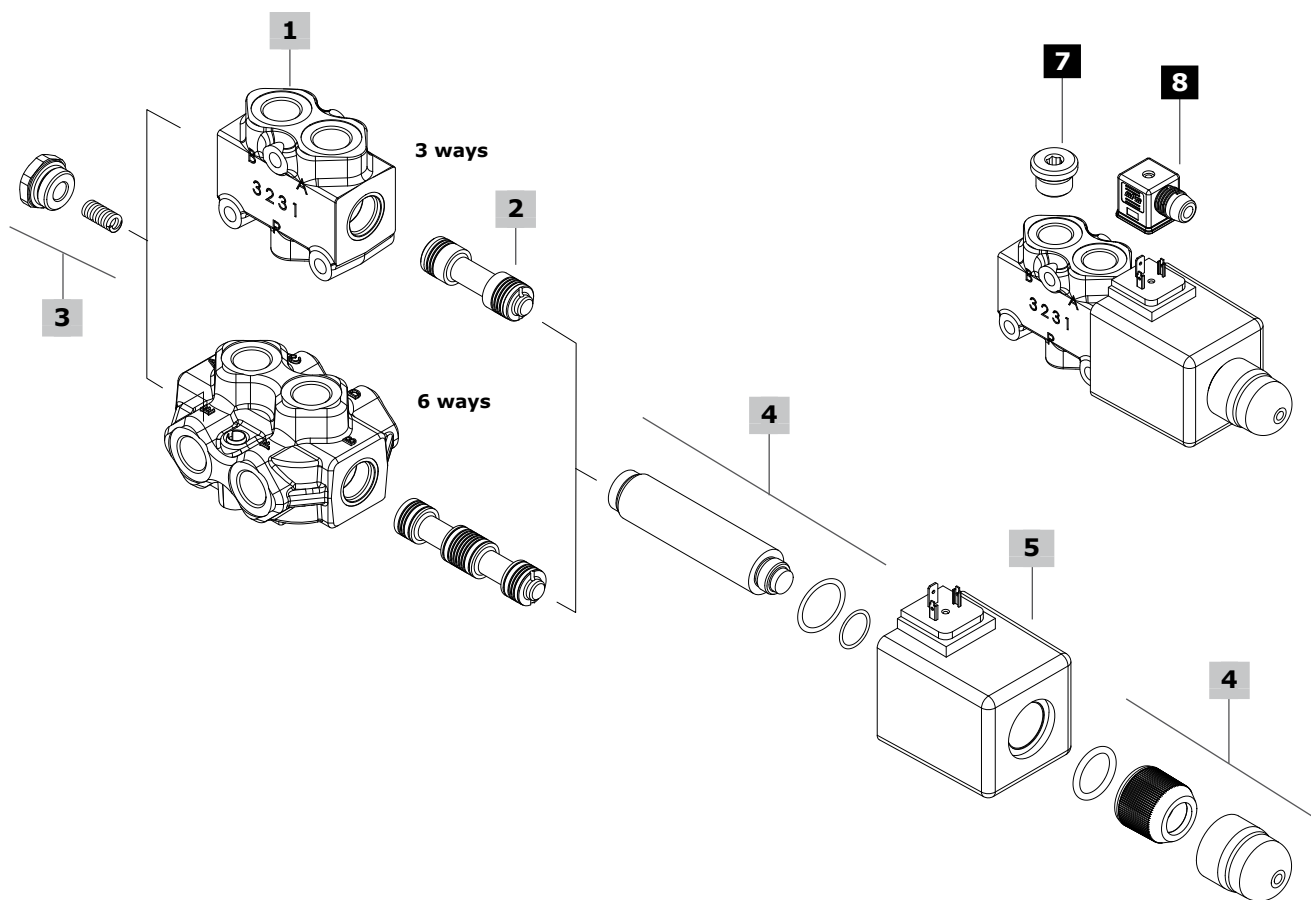
Length cables
(only if it's present)
Length is in mm

Bellow
1 = without bellow
2 = with bellow

Coil voltage

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

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



1 Body kit*

TYPE	CODE	DESCRIPTION
DFE10/3	3CO2241320	3 ways body kit
DFE10/6	3CO2242322	6 ways body kit

2 Spools **page 92**

TYPE	CODE	DESCRIPTION
for DFE10/3:		
A	3CAS110341	Flow in A in neutral. Ports connected in transit position
B	3CAS110441	Flow in A in neutral. Ports closed in transit position
D	3CAS110540	Closed ports in neutral and connected in transit position
for DFE10/6:		
A	3CAS110641	Flow in E and F. C and D closed in pos. 1 Ports connected in transit position
B	3CAS110741	Flow in E and F. C and D closed in pos. 1 Ports closed in transit position
H	3CAS110841	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	5TAP002	Spring return in pos. 1
18...Y	5GIU004*	Spring return in pos. 1, with G1/4 drain port

4 Solenoid kit **page 93**

TYPE	CODE	DESCRIPTION
ES	5SOL516000A	Tube assembly with protective bellow
ES	5SOL516000B	Tube assembly without protective bellow
-	4ACC516	Optional tube assembly protective bellow

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 DFE10/3

CODE	DESCRIPTION
3XTAP727180	G1/2 plug

8 Accessories

For list of available connectors see pages 94

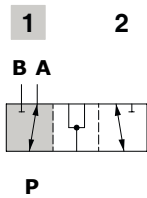
(*) - Codes are referred to **BSP** thread

Spool circuits

3 ways

Type A

Ports connected
in transit position

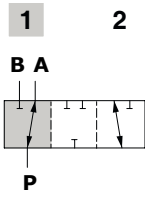


Spool stroke

Position 2: - 4.6 mm (- 0.18 in)

Type B

Ports closed
in transit position

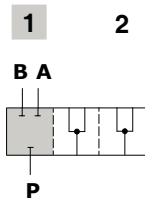


Spool stroke

Position 2: - 4.6 mm (- 0.18 in)

Type D

Closed ports in neutral and
connected in transit position



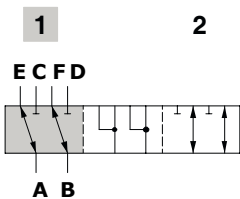
Spool stroke

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

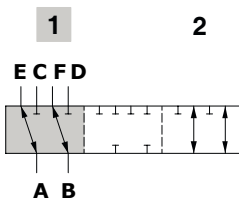


Spool stroke

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

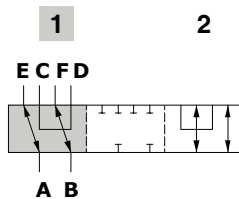


Spool stroke

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



Spool stroke

Position 2: - 4.6 mm (- 0.18 in)

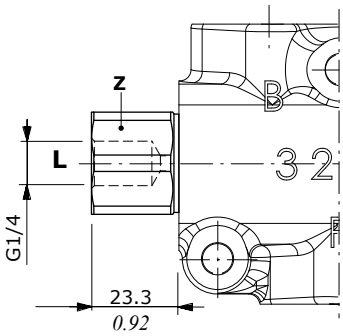
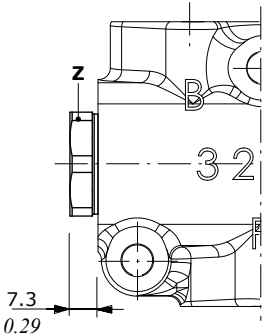
Positioner kit

With spring return in position 1

Type 18W
With plug

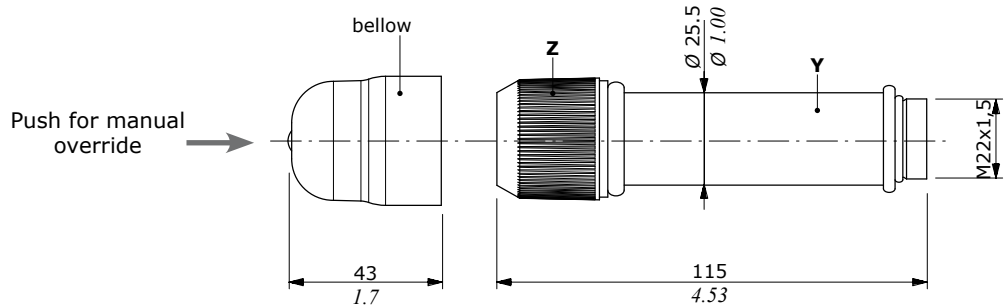
Type 18Y
With G1/4 drain port

Wrenches and tightening torque
Z = wrench 27 - 42 Nm (31 lbft)



Solenoid kit

ES tube assembly kit



Wrenches and tightening torque
Y = wrench 22 - 24 Nm (17.7 lbft)
Z = 24 Nm (17.7 lbft)

Coils and accessories

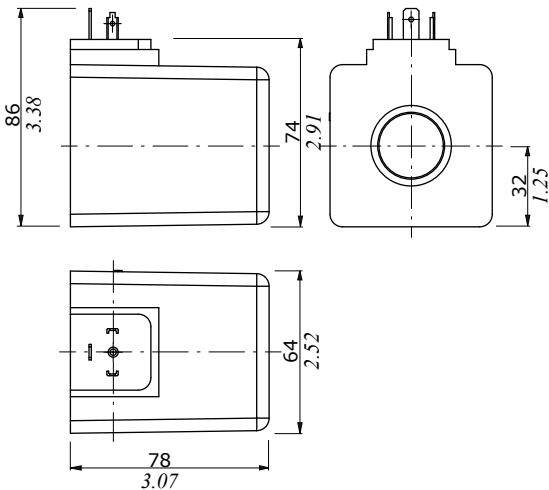
Ordering codes							
Type	Voltage	Connector types					
		ISO4400	Deutsch DT	AMP JPT	Packard Weatherpack	Packard Metri-pack	Flying leads without connector
D16	12 VDC	4SOL516012A	4SOL516412A ⁽²⁾	-	-	-	-
	24 VDC	4SOL516024A	4SOL516424A ⁽²⁾	-	-	-	-
	48 VDC	4SOL516048A	-	-	-	-	-
	94 VDC	4SOL516094A	-	-	-	-	-
	110 VDC	4SOL516110A	-	-	-	-	-
	192 VDC	4SOL516192A	-	-	-	-	-
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
 12/24/48/94/110/192 VDC
Nominal current.....: 5 A @ 12 VDC
 : 2.5 A @ 24 VDC
 : 1.25 A @ 48 VDC
 : 0.64 A @ 94 VDC
 : 0.55 A @ 110 VDC
 : 0.31 A @ 192 VDC
Insulation.....: Class H (180°C - 356 °F)
Weather protection.....: IP65 - ISO4400
 : IP69K - Deutsch DT
Insertion.....: 100%

ISO4400 connector



Flying leads with DEUTSCH DT04 connector

