



DFE20

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		140 l/min (36.9 US gpm)
Max. pressure	without drain	200 bar (2900 psi)
	with drain	315 bar (4600 psi)
Available supply voltage	VDC	see reference page 102
Nominal power		60 W
Internal leakage A(B)⇒T	Δp = 100 bar (1450 psi)	15 cm ³ /min (0.91 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.

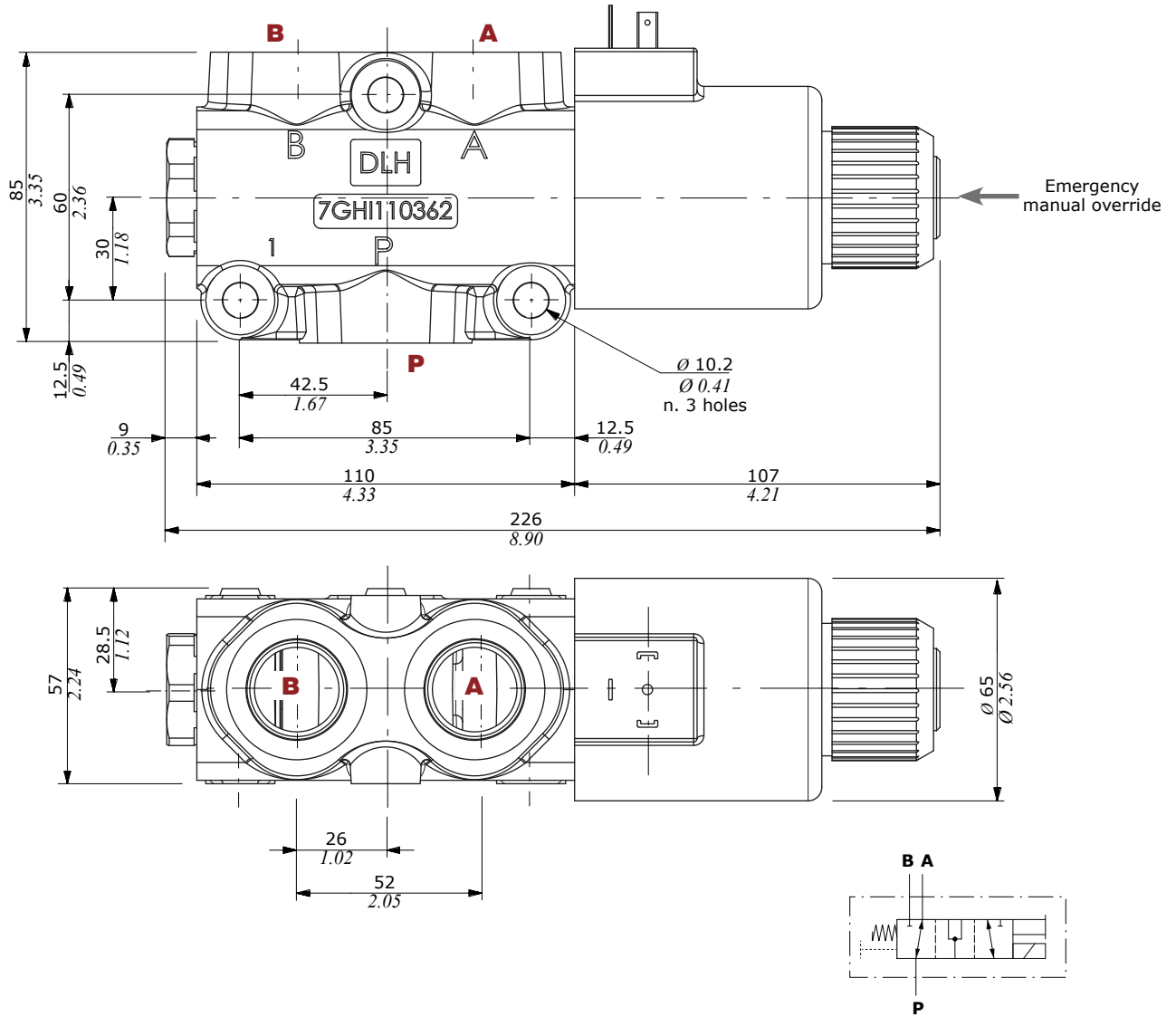
Available threads

PORTS THREAD		
ALL PORTS	BSP	UN-UNF
DFE20	G 3/4	1" 1/16-12 (SAE 12)
PILOT PORTS		
L	G 1/4	7/16-20 (SAE 4)

Dimensional data - hydraulic circuit - performance data

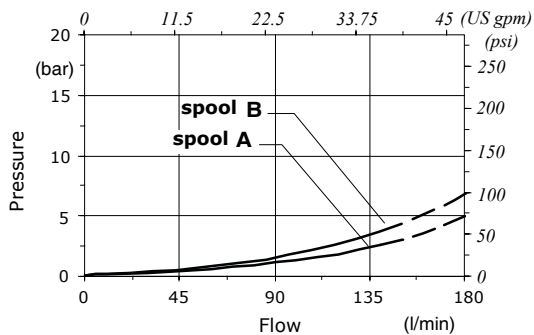
3 ways

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



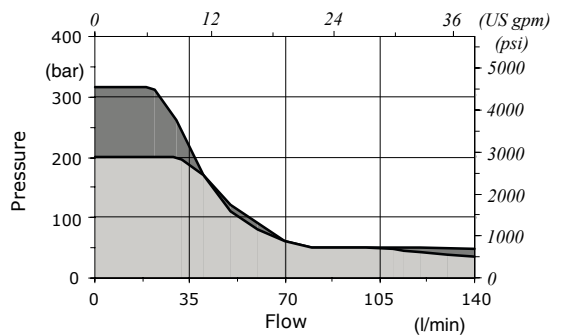
Pressure drop versus flow

P → A(B)



Minimum dynamic conditions

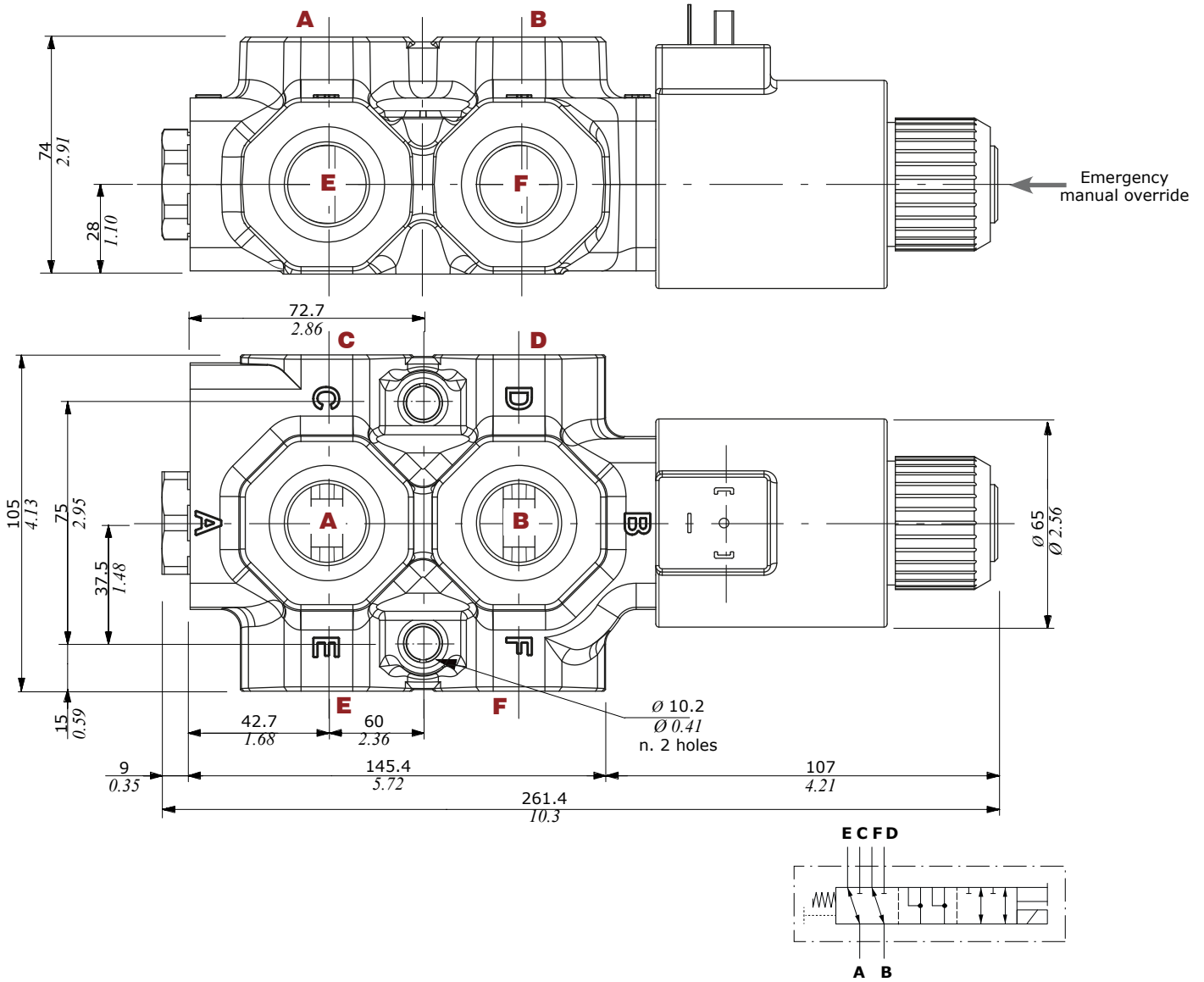
(Supply = Vn-10%, coil at 70 °C - 158 °F)



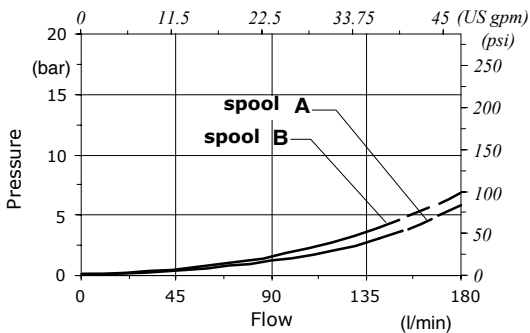
■ With drain
■ Without drain

Dimensional data - hydraulic circuit - performance data

6 ways

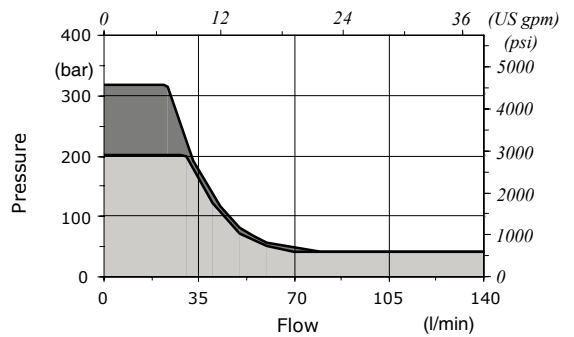


Pressure drop versus flow



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

DFE20/3 A 18 ES - W 2 0 0 - 12VDC - SAE - (CRZ)

1 2 3 4 3 4 5 6 Galvanized body

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

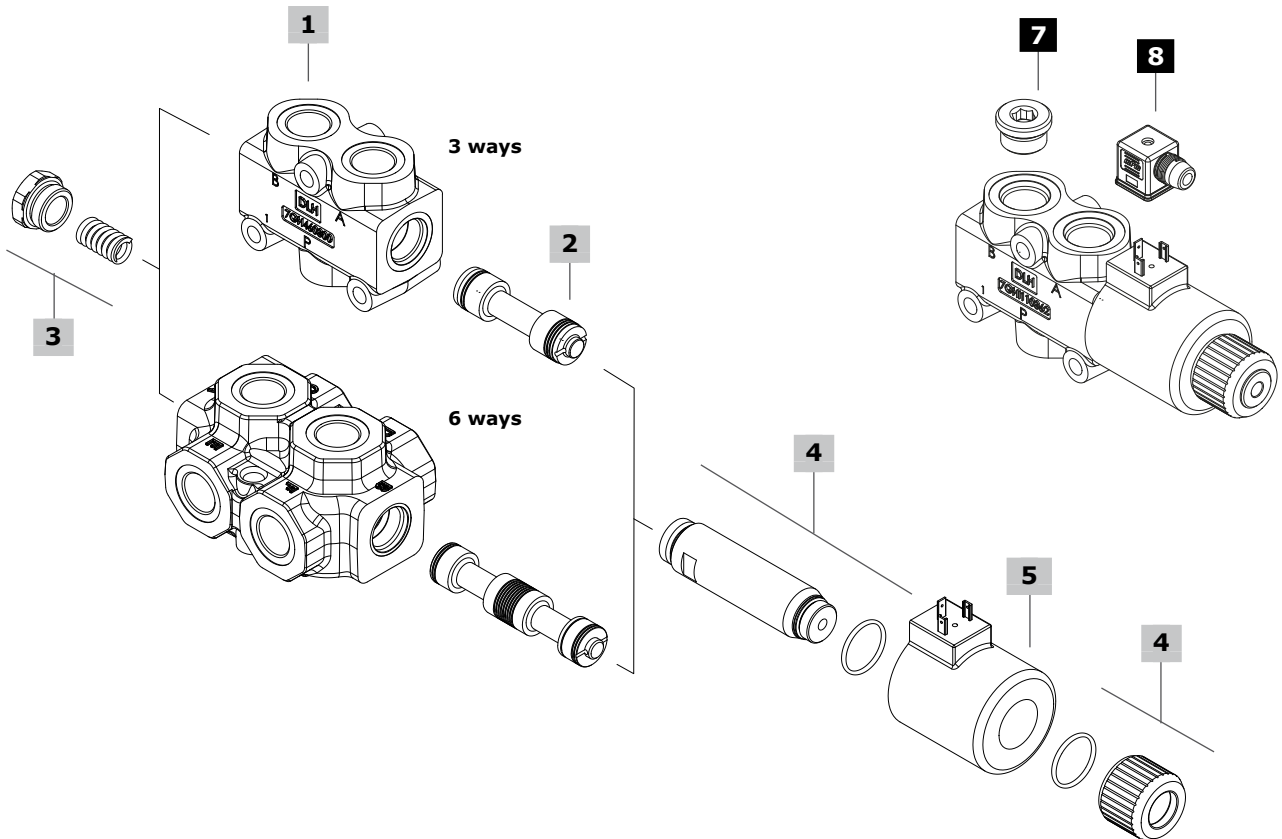
Coil
1 = without coil
2 = with coil

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 102



1 Body kit*

TYPE	CODE	DESCRIPTION
DFE20/3	3CO2261721Z	3 ways body kit
DFE20/6	3CO2263720Z	6 ways body kit

2 Spools **page 100**

TYPE	CODE	DESCRIPTION
for DFE20/3:		
A	3CAS120341	Flow in A in neutral. Ports connected in transit position
B	3CAS120441	Flow in A in neutral. Ports closed in transit position
for DFE20/6:		
A	3CAS120641	Flow in E and F. C and D closed in pos. 1 Ports connected in transit position
B	3CAS120741	Flow in E and F. C and D closed in pos. 1 Ports closed in transit position
H	3CAS120841	D<->C in pos. 1, F<->E in pos. 2 Ports closed in transit position

3 Positioner kit **page 101**

TYPE	CODE	DESCRIPTION
18...W	5TAP003	Spring return in pos. 1
18...Y	5GIU008Z*	Spring return in pos. 1, with SAE4 drain port

4 Solenoid kit **page 101**

TYPE	CODE	DESCRIPTION
ES	5SOL519003	Tube assembly without protective bellow

5 Coil

For list of available coils see pages 102

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 DFE20/3

CODE	DESCRIPTION
3XTAP832200	SAE12 plug

8 Accessories

For list of available connectors see pages 102

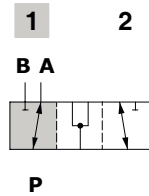
(*) - Codes are referred to **UN-UNF** thread

Spool circuits

3 ways

Type A

Ports connected in transit position

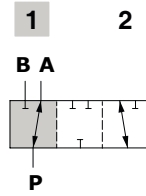


Spool stroke

Position 2: - 4.5 mm (- 0.18 in)

Type B

Ports closed in transit position



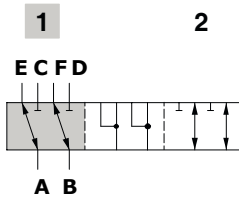
Spool stroke

Position 2: - 4.5 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

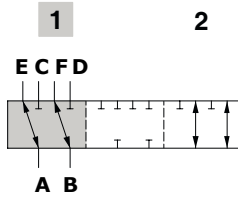


Spool stroke

Position 2: - 4.5 mm (- 0.18 in)

Type B

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

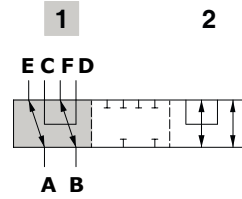


Spool stroke

Position 2: - 4.5 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: - 4.5 mm (- 0.18 in)

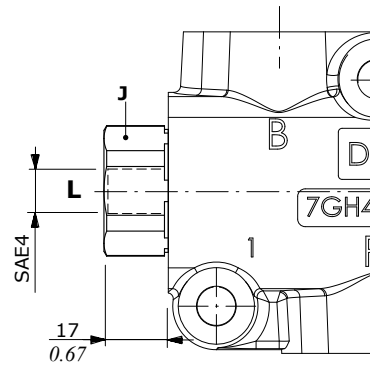
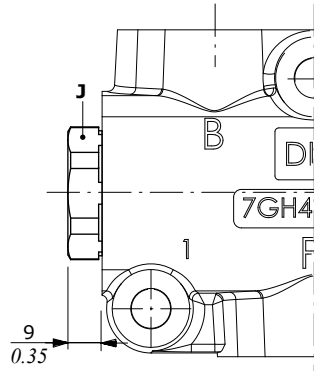
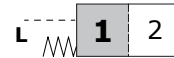
Positioner kit

With spring return in position 1

Type 18W
With plug

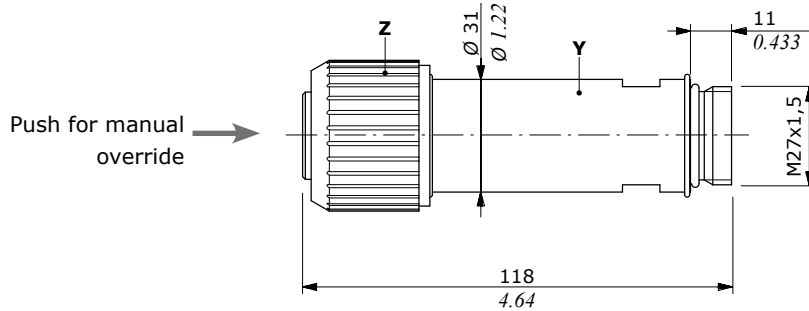
Type 18Y
With SAE6 drain port

Wrenches and tightening torque
J = 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)

Coil and accessories

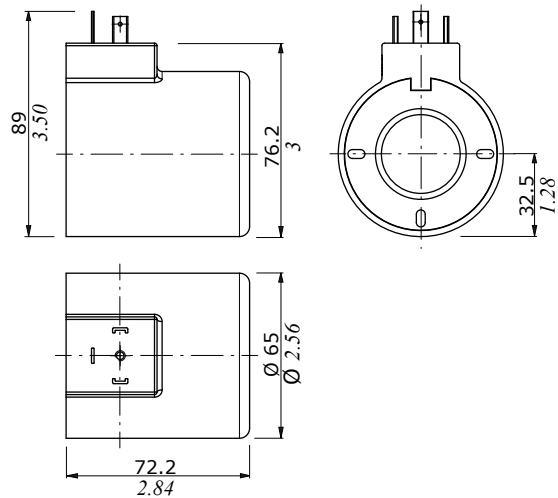
		Ordering codes					
Type	Voltage	Connector types					Flying leads without connector
		ISO4400	Deutsch DT	AMP JPT	Packard Weatherpack	Packard Metri-pack	
D19	12 VDC	4SOL519112	4SOL519402 ⁽⁶⁾	-	-	-	-
	20 VDC	4SOL519120	-	-	-	-	-
	24 VDC	4SOL519124	4SOL519404 ⁽⁶⁾	-	-	-	-
	94 VDC	4SOL519194	-	-	-	-	-
	192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

