



DFE20

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		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.

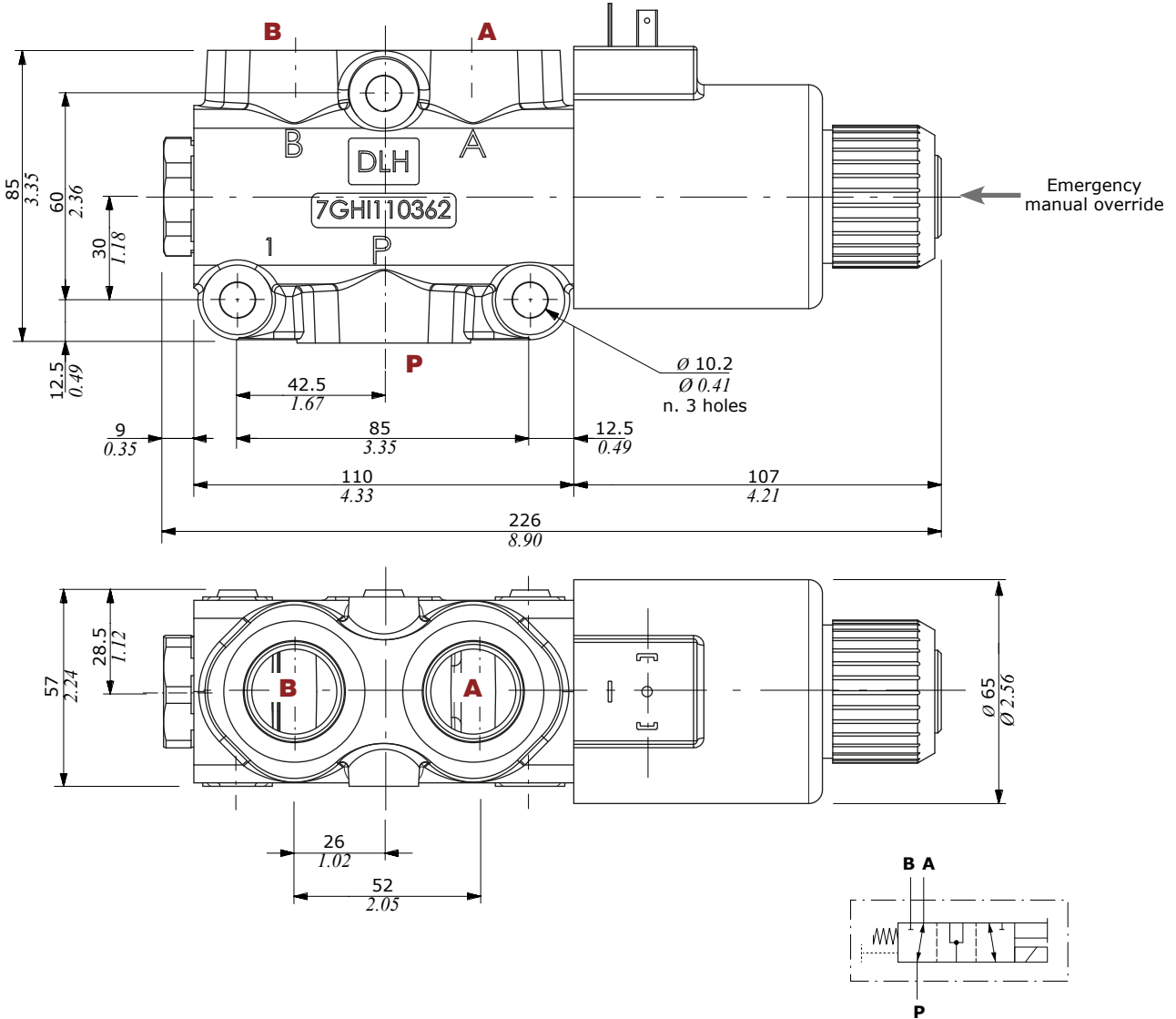
Available threads

PORTS THREAD		
ALL PORTS	BSP	UN-UNF
DFE20	G 3/4	1" 1/16-12 (SAE 12)
PILOT PORTS		
L	G 1/4	9/16-18 (SAE 6)

Dimensional data - hydraulic circuit - performance data

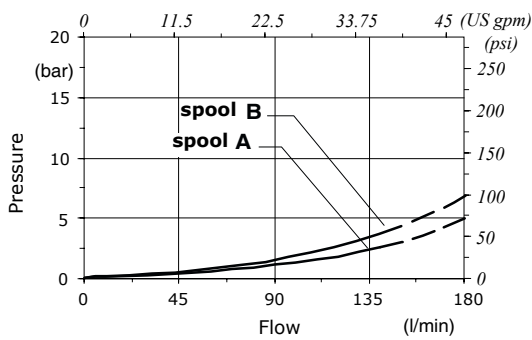
3 ways

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



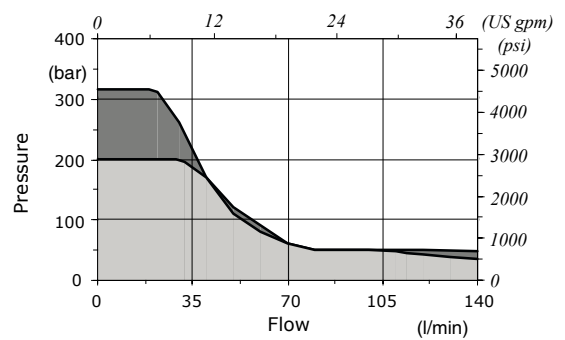
Pressure drop versus flow

P → A(B)



Minimum dynamic conditions

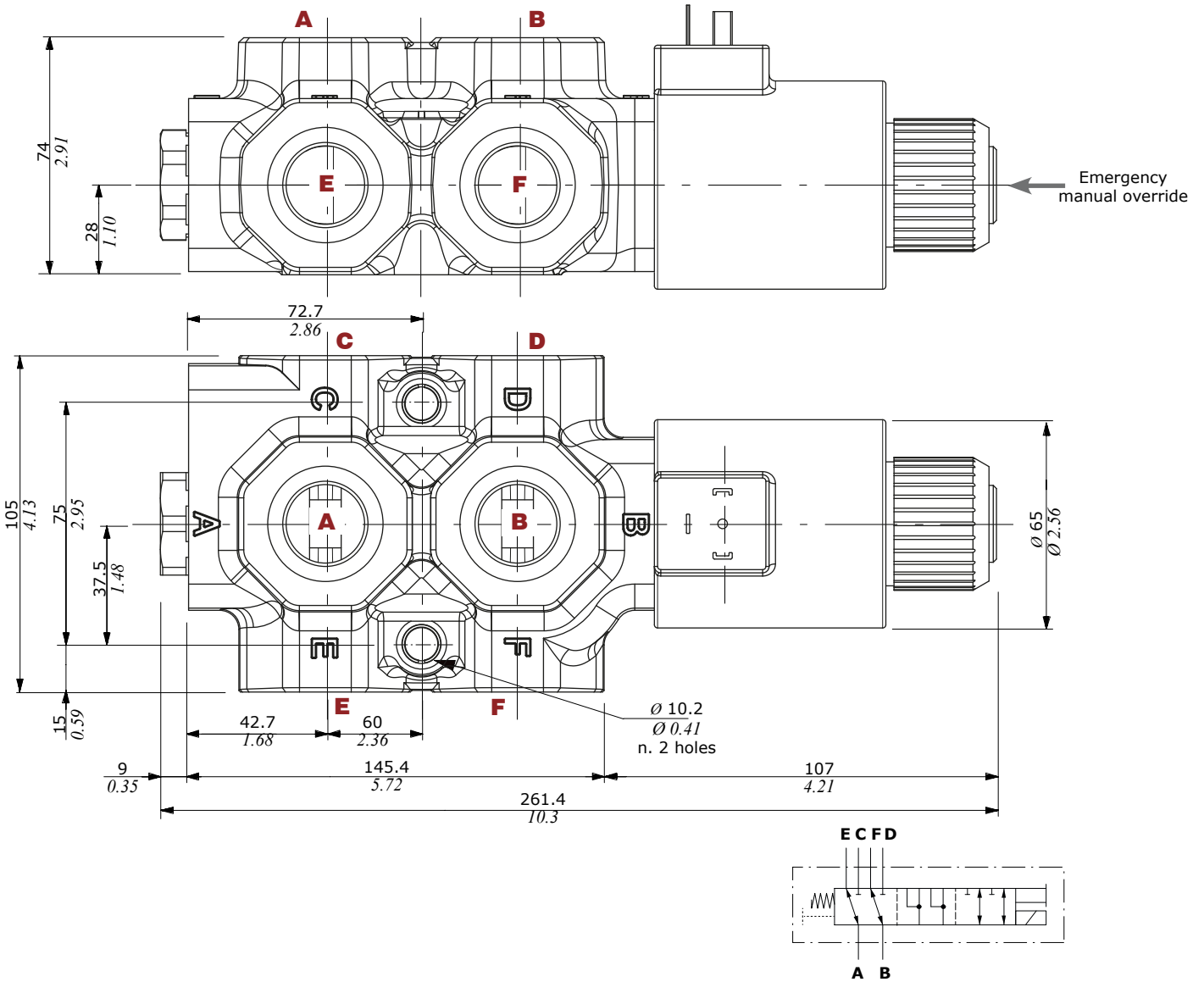
(Supply = Vn-10%, coil at 70 °C - 158 °F)



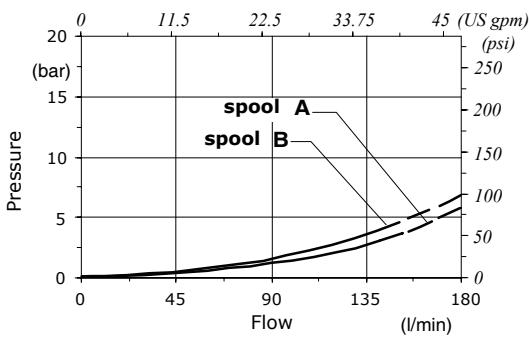
■ With drain
■ Without drain

Dimensional data - hydraulic circuit - performance data

6 ways

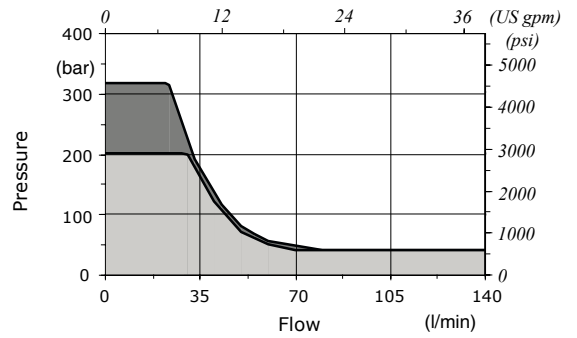


Pressure drop versus flow



Minimum dynamic conditions

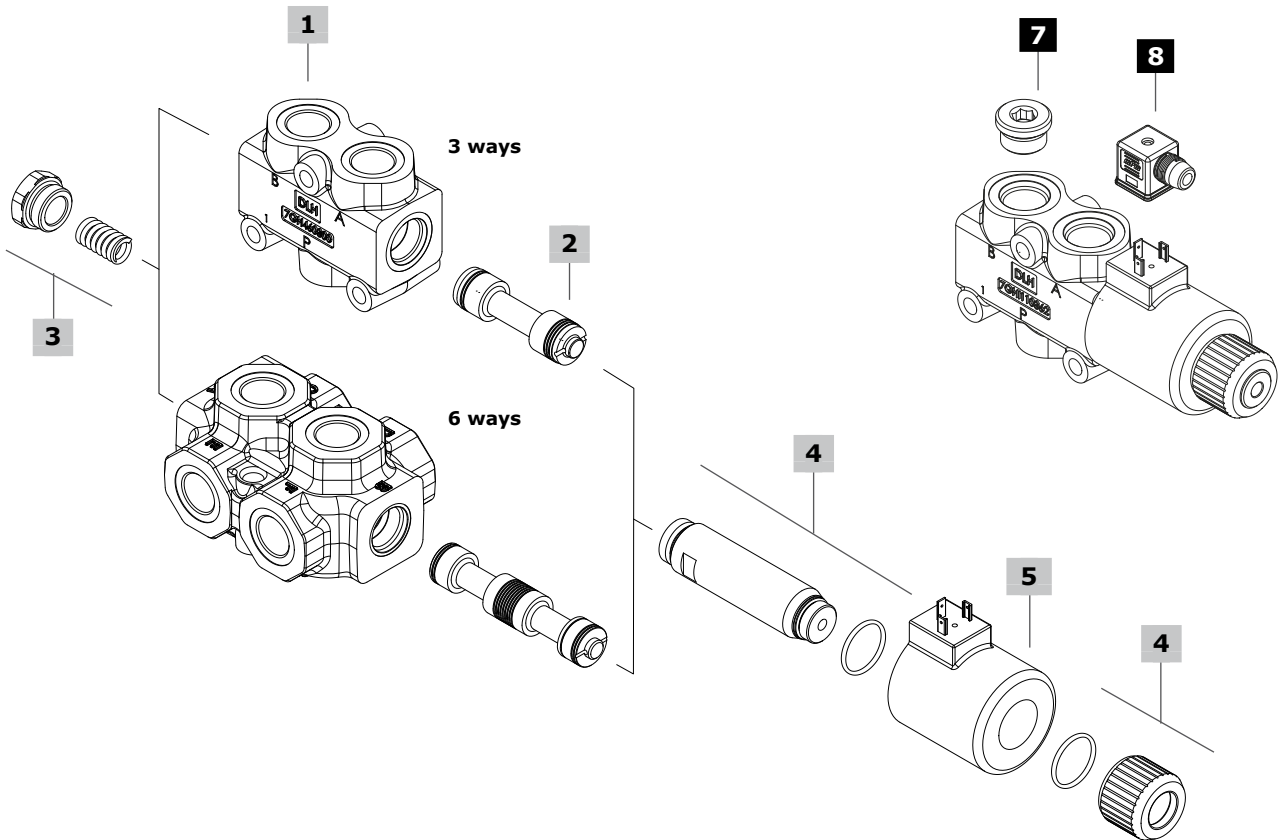
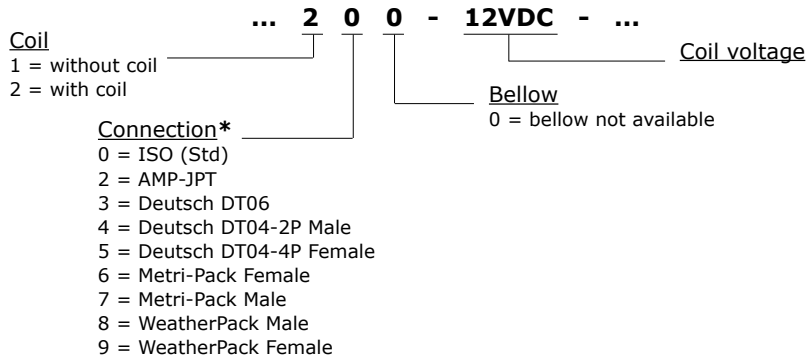
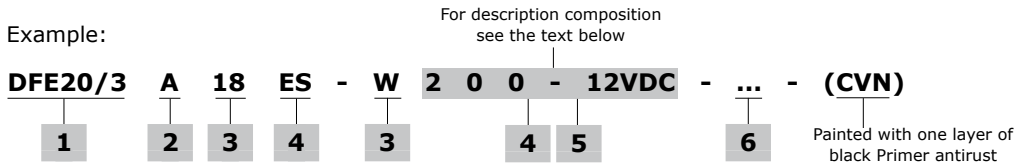
(Supply = Vn-10%, coil at 70 °C - 158 °F)



■ With drain
 ■ Without drain

Part ordering codes

Example:



1 Body kit*

TYPE	CODE	DESCRIPTION
DFE20/3	3CO2261321	3 ways body kit
DFE20/6	3CO2263320	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	5GIU007*	Spring return in pos. 1, with G1/4 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*

CODE	DESCRIPTION
3XTAP732200	G3/4 plug

It's possible to obtain 2 ways diverter valve plugging port of DFE20/3

8 Accessories

For list of available connectors see pages 102

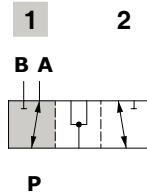
(*) - Codes are referred to **BSP** thread

Spool circuits

3 ways

Type A

Ports connected in transit position

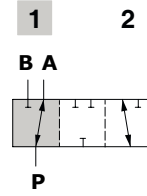


Spool stroke

Position 2: - 4.5 mm (- 0.18 in)

Type B

Ports closed in transit position



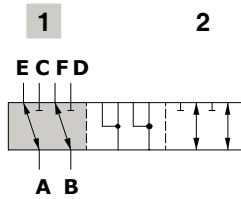
Spool stroke

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

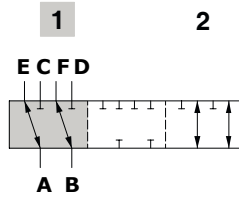


Spool stroke

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

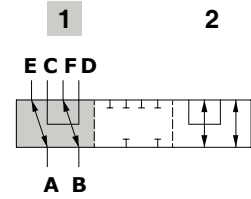


Spool stroke

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)

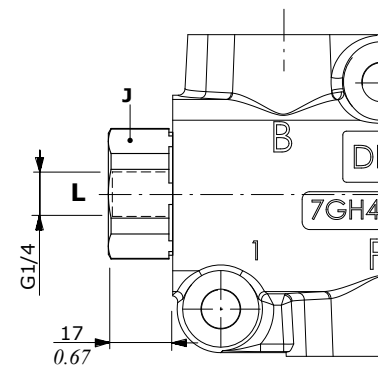
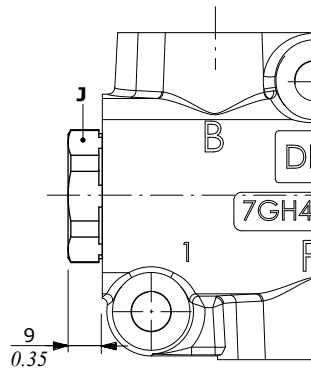
Positioner kit

With spring return in position 1

Type 18W
With plug

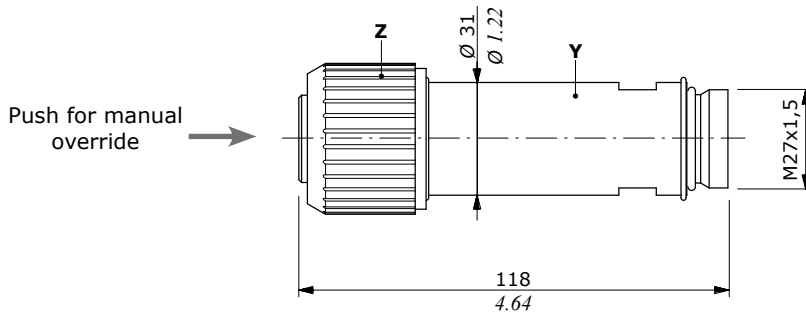
Type 18Y
With G1/4 drain port

Wrenches and tightening torque
J = wrench 27 - 24 Nm (17.7 lbf^t)



Solenoid kit

ES tube assembly kit



Wrenches and tightening torque
Y = wrench 27 - 24 Nm (17.7 lbf^t)
Z = 24 Nm (17.7 lbf^t)

Coil and accessories

Type	Voltage	Ordering codes					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

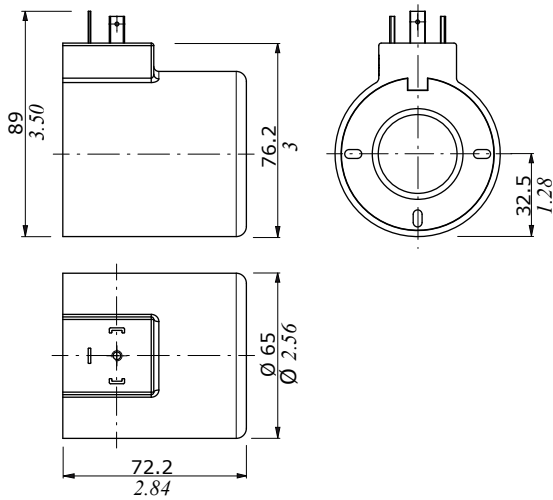
Insulation.....: Class H (180°C - 356 °F)

Weather protection.....: IP65 - ISO4400

: IP69K - Deutsch DT

Insertion.....: 100%

ISO4400 connector



DEUTSCH DT04 connector

(Parallel type)

