



DFE052

Solenoid control monoblock diverter valves

- 2 - 3 - 6 - 8 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		2 - 3 - 6 - 8
Max. flow rating		60 l/min (15.8 US gpm)
Max. pressure	without drain	200 bar (2900 psi)
	with drain	315 bar (4600 psi)
Available supply voltage	VDC	see reference page 85
Nominal power		38 W
Internal leakage A(B)⇒T	Δp = 100 bar (1450 psi)	7 cm ³ /min (0.42 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

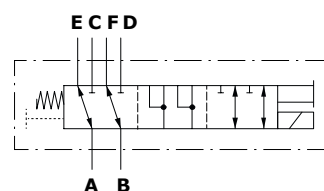
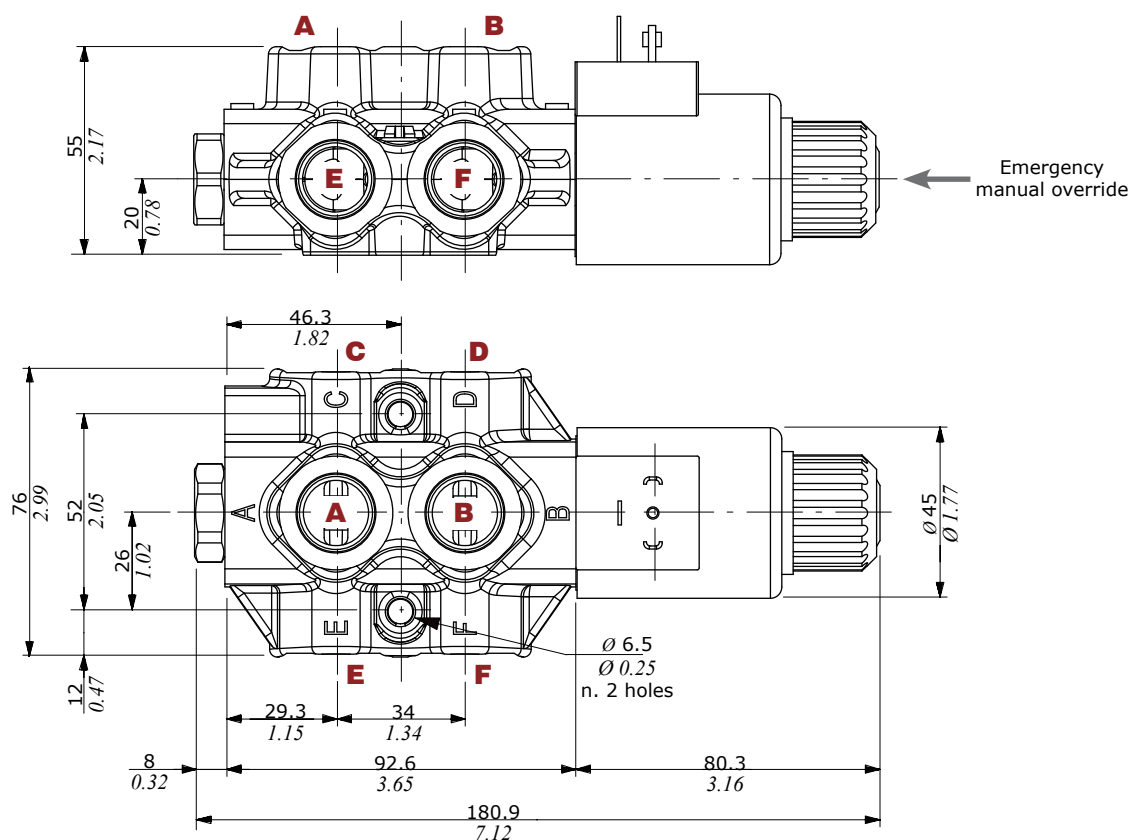
PORTS THREAD			METRIC* (ISO 9974-1)
ALL PORTS	BSP	UN-UNF	
DFE052	G 3/8	3/4-16 (SAE 8)	M18x1.5
PILOT PORTS			
L	G 1/4	9/16-18 (SAE 6) 7/16-20 (SAE 4)**	M12x1.5

(**): for DFE052/8 diverter valves

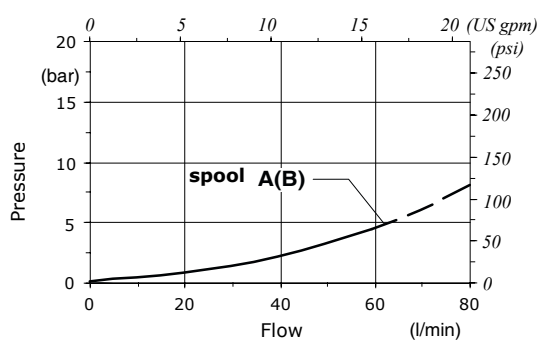
(*) Optional threads
for availability contact Sales
Department

Dimensional data - hydraulic circuit - performance data

6 ways

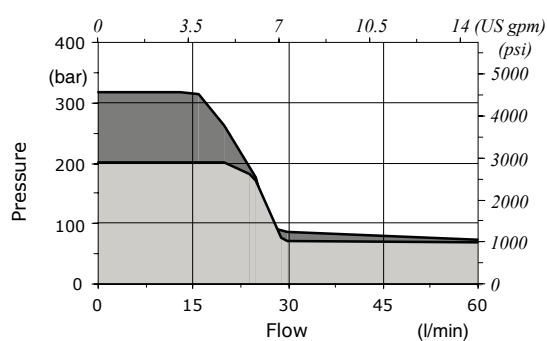



Pressure drop versus flow

$$\mathbf{A} \rightarrow \mathbf{C}(\mathbf{E})$$


Minimum dynamic conditions

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



 With drain
 **Without drain**

Part ordering codes

Example:

DFE052/3 A 18 ES - W 2 0 2 - 12VDC - ... - (CRZ)

1 2 3 4 3 4 5 6 Galvanized body

For description composition
see the text below

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) DB 2 - 12VDC - ...

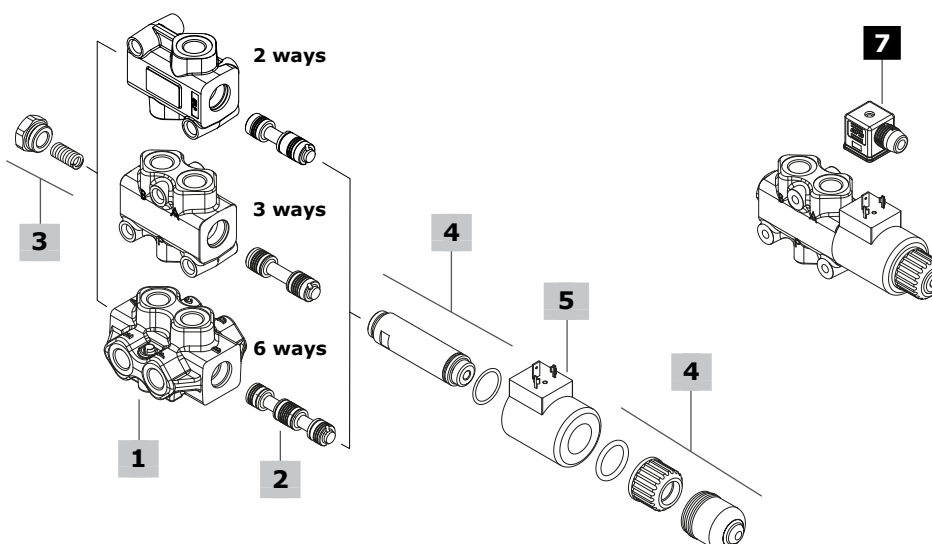
Coil voltage

Bellow
1 = without bellow
2 = with bellow

Diode*
(text omitted if diode is not present)
DB = bidirectional diode

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

(*) - For diodes and connector options
see coils table on page 85



1 Body kit*

TYPE	CODE	DESCRIPTION
DFE052/2	3CO2220321Z	2 ways body kit
DFE052/3	3CO2221325Z	3 ways body kit
DFE052/6	3CO2222326Z	6 ways body kit

2 Spools

page 82

TYPE	CODE	DESCRIPTION
for DFE052/2:		
A	3CAS105245	Open port in neutral
B	3CAS105145	Closed port in neutral
for DFE052/3:		
A	3CAS105345	Flow in A in neutral. Ports connected in transit position
B	3CAS105445	Flow in A in neutral. Ports closed in transit position
D	3CAS105546	Closed ports in neutral and connected in transit position
for DFE052/6:		
A	3CAS105645	Flow in E and F. C and D closed in pos. 1 Ports connected in transit position
B	3CAS105746	Flow in E and F. C and D closed in pos. 1 Ports closed in transit position
H	3CAS105845	D<->C in pos. 1, F<->E in pos. 2 Ports closed in transit position

3 Positioner kit

page 83

TYPE	CODE	DESCRIPTION
18...W	5TAP001	Spring return in pos. 1
18...Y	5GIU001*	Spring return in pos. 1, with G1/4 drain port

4 Solenoid kit

page 84

TYPE	CODE	DESCRIPTION
ES	5SOL515000	Tube assembly without protective bellow
-	4ACC515	Optional tube assembly protective bellow

5 Coil

For list of available coils see pages 85

6 Body threading

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

7 Accessories

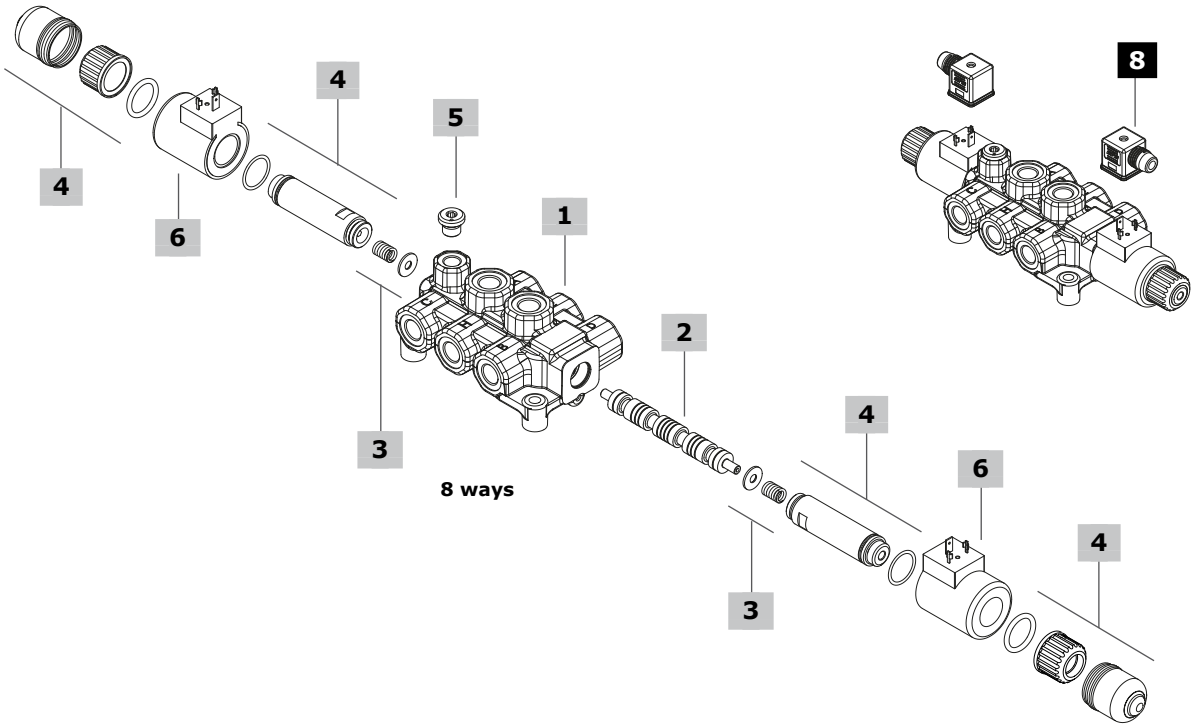
For list of available connectors see pages 85

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

Part ordering codes

For description composition see the text on previous page

DFE052/8	B	8	ES3	-	W	2	0	2	-	12VDC	-	...	-	(CRZ)
1	2	3	4	5		4	6				7			Galvanized body



1 Body kit*

TYPE	CODE	DESCRIPTION
DFE052/8	3CO2224350MZ	8 ways body kit

2 Spools page 83

TYPE	CODE	DESCRIPTION
A	3CAS105A70M	Flow in C and D. E, F, G and H closed in pos. 0. Ports connected in transit position
B	3CAS105B70M	Flow in C and D. E, F, G and H closed in pos. 0. Ports closed in transit position
I	3CAS105I70M	Flow in C and D. E, F, G and H closed in pos. 0.

3 Positioner kit page 84

TYPE	CODE	DESCRIPTION
8 (ES)	5V080528	Spring return in pos. 0

4 Solenoid kit page 84

TYPE	CODE	DESCRIPTION
ES	5SOL515000	Tube assembly without protective bellow
-	4ACC515	Optional tube assembly protective bellow

5 Drain* page 84

TYPE	CODE	DESCRIPTION
W	3XTAP719150	Without drain, with plug G1/4
Y	-	With G1/4 drain port

6 Coil

For list of available coils see pages 85

7 Body threading

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

8 Accessories

For list of available connectors see pages 85

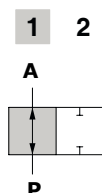
(*) - Codes are referred to **BSP** thread

Spool circuits

2 ways

Type A

Open port in neutral position

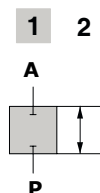


Spool stroke

Position 2: - 4 mm (- 0.15 in)

Type B

Closed port in neutral position



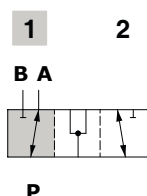
Spool stroke

Position 2: - 4 mm (- 0.15 in)

3 ways

Type A

Ports connected in transit position

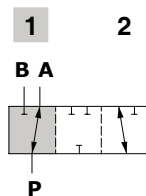


Spool stroke

Position 2: - 4 mm (- 0.15 in)

Type B

Ports closed in transit position

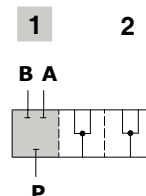


Spool stroke

Position 2: - 4 mm (- 0.15 in)

Type D

Closed ports in neutral and connected in transit position



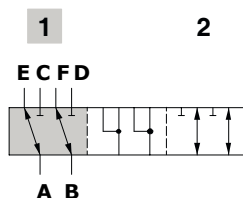
Spool stroke

Position 2: - 4 mm (- 0.15 in)

6 ways

Type A

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

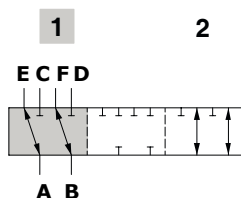


Spool stroke

Position 2: - 4 mm (- 0.15 in)

Type B

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

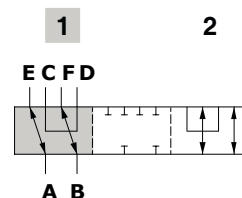


Spool stroke

Position 2: - 4 mm (- 0.15 in)

Type H

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



Spool stroke

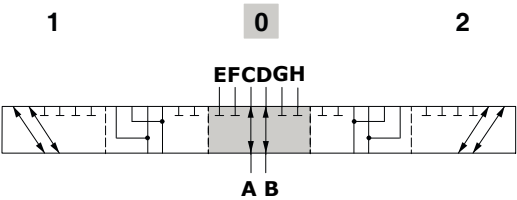
Position 2: - 4 mm (- 0.15 in)

Spool circuits

8 ways

Type A

Flow in C and D. E, F, G and H closed in pos. 0. Ports connected in transit position

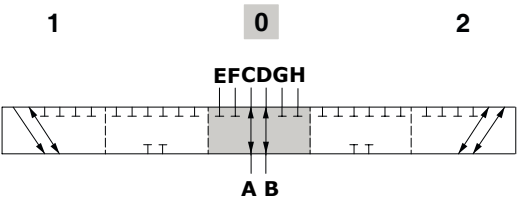


Spool stroke

Position 1: + 3.4 mm (0.13 in)
Position 2: - 3.4 mm (- 0.13 in)

Type B

Flow in C and D. E, F, G and H closed in pos. 0. Ports closed in transit position

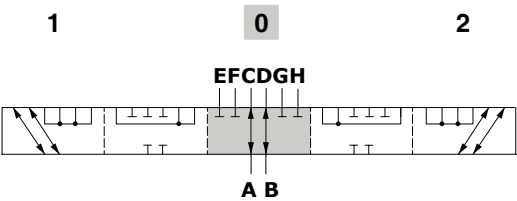


Spool stroke

Position 1: + 3.4 mm (0.13 in)
Position 2: - 3.4 mm (- 0.13 in)

Type I

Flow in C and D. E, F, G and H closed in pos. 0.



Spool stroke

Position 1: + 3.4 mm (0.13 in)
Position 2: - 3.4 mm (- 0.13 in)

Positioner kit

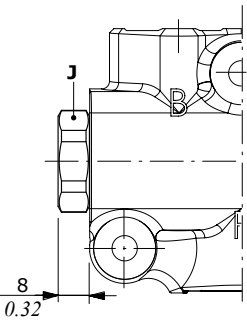
With spring return in position 1

Type 18W

With plug

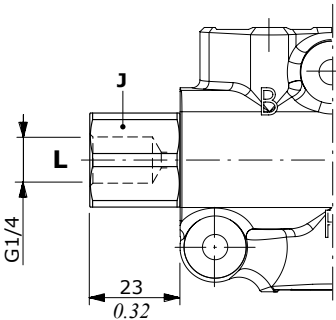
Wrenches and tightening torque

J = wrench 24 - 24 Nm (17.7 lbft)



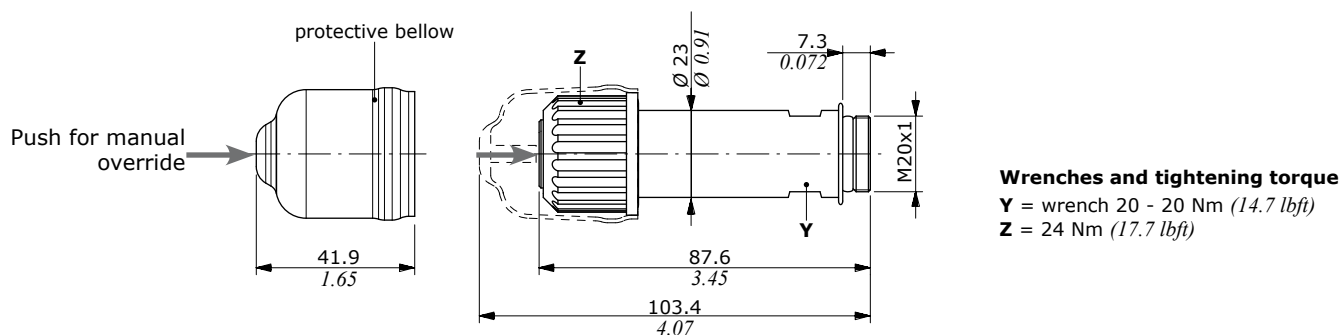
Type 18Y

With G1/4 drain port



Solenoid kit

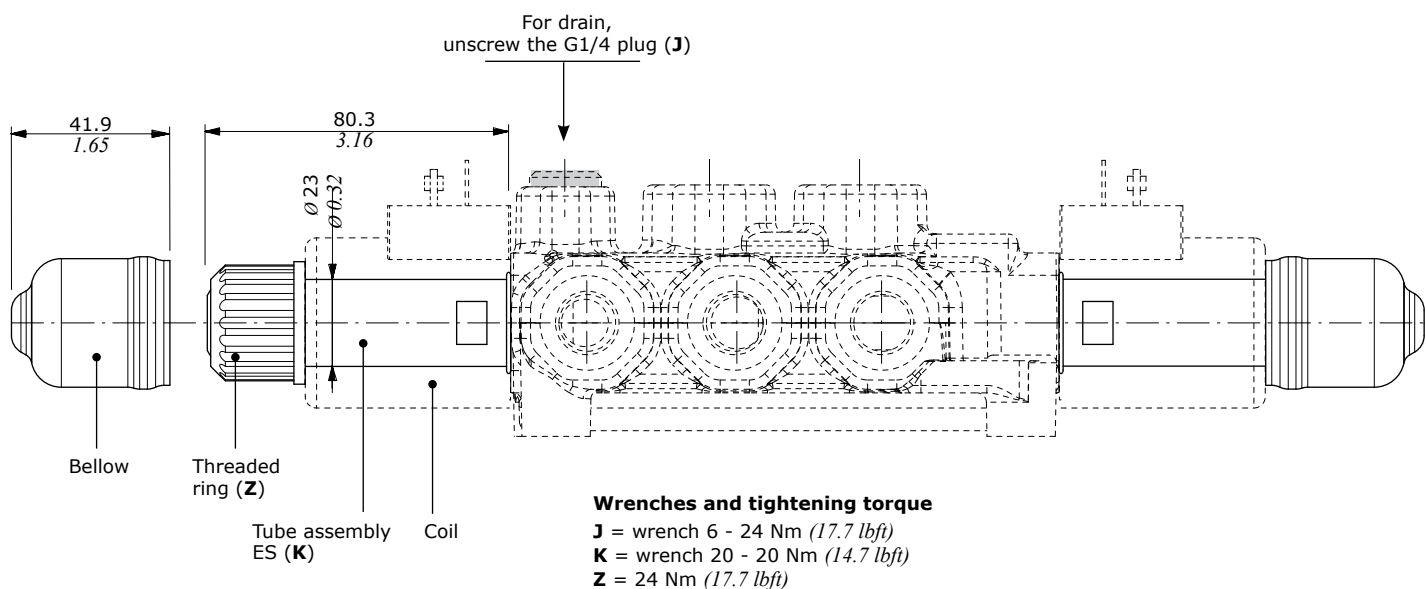
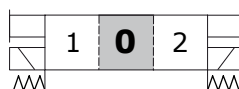
ES tube assembly kit



Positioner kit and solenoid kit - DFE052/8

With spring return in position 0

Type 8ES3



Coils and accessories

		Ordering codes					
Type	Voltage	Connector types					
		ISO4400	Deutsch DT	AMP JPT	Packard Weatherpack	Packard Metri-pack	Flying leads without connector
D15	12 VDC	4SOL515012	4SOL515011 ⁽²⁾ 4SOL515014A ⁽³⁻⁶⁾	4SOL515016 ⁽⁵⁾	-	-	-
	14 VDC	-	4SOL515014B ⁽³⁻⁶⁾	4SOL515016A ⁽⁵⁾	-	-	-
	24 VDC	4SOL515024	4SOL515025A ⁽³⁻⁶⁾ 4SOL515021 ⁽²⁾	-	-	-	-
	48 VDC	4SOL515048	-	4SOL515049 ⁽²⁾	-	-	-
	98 VDC	4SOL515098	-	-	-	-	-
	110 VDC	4SOL515110	-	-	-	-	-
	Mating connectors						
		4CN1009995	5CON140031	5CON003	-	-	-

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: $\pm 10\%$

Nominal power.....: 38 W

12/14/24/48/98/110 VDC

Nominal current.....: 3.16 A @ 12 VDC

: 2.9 A @ 14 VDC

: 1.58 A @ 24 VDC

: 0.79 A @ 48 VDC

: 0.41 A @ 98 VDC

: 0.35 A @ 110 VDC

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

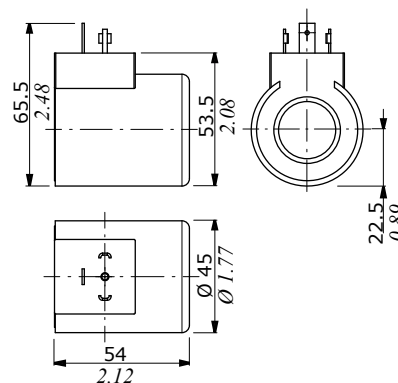
Weather protection.....: IP65 - ISO4400

: IP69K - Deutsch DT

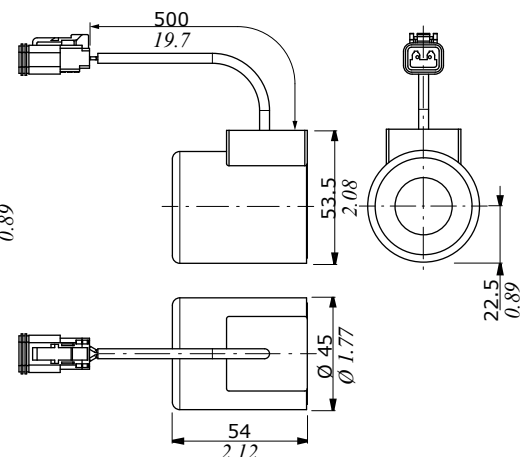
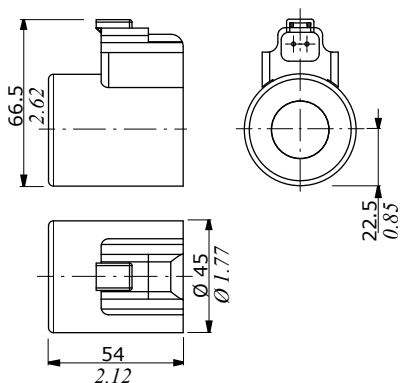
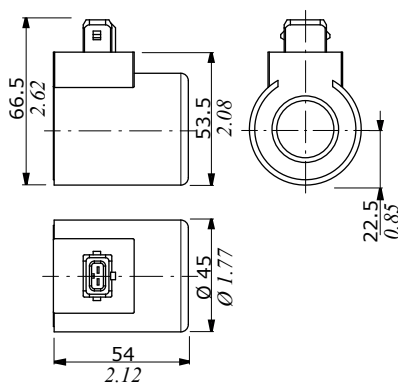
: IP65 - AMP JPT

Insertion.....: 100%

ISO4400 connector



Flying leads with DEUTSCH DT04 connector

DEUTSCH DT04 connector
(Parallel type)AMP JPT connector
(Perpendicular type)

Flying leads with AMP JPT connector

