



DFE100

Solenoid control sectional diverter valves

- 6 - 8 - 10 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		6 - 8 - 10
Max. flow rating		50 l/min (13.2 US gpm)
Max. pressure	without drain	200 bar (2900 psi)
	with drain	315 bar (4600 psi)
Available supply voltage	VDC	see reference page 138
Nominal power		38 W
Internal leakage A(B)⇒T	Δp = 100 bar (1450 psi)	10 cm ³ /min (0.61 in ³ /min)
Fluid		Mineral based oil
Tie rod tightening		18 Nm (13.3 lbft)
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)
	operating range	from 15 to 75 mm ² /s (from 15 to 75 cSt)
Viscosity	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.

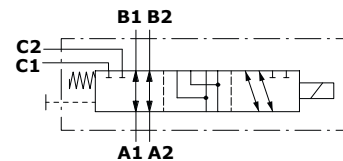
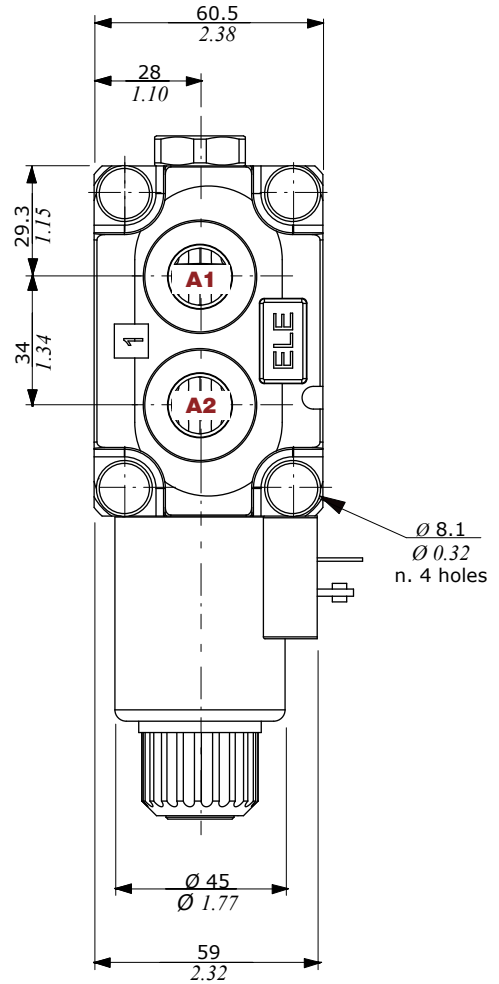
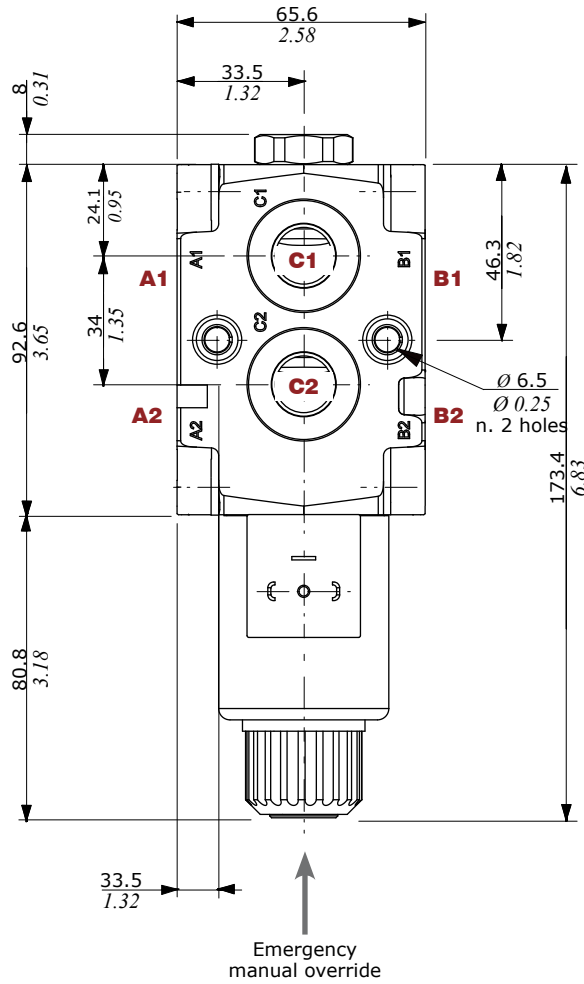
Available threads

PORTS THREAD				
ALL PORTS	BSP	UN-UNF	METRIC* (ISO 9974-1)	METRIC* (ISO 6149)
DFE100	G 3/8	3/4-16 (SAE 8)	M18x1.5	M18x1.5
PILOT PORTS				
L	G 1/4	9/16-18 (SAE 6)	M12x1.5	M12x1.5

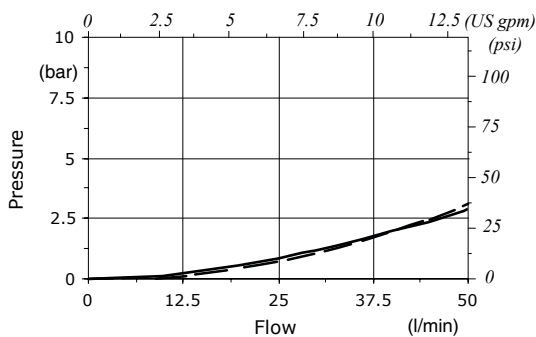
(*) Optional threads
for availability contact Sales
Department

Dimensional data - hydraulic circuit - performance data

6 ways

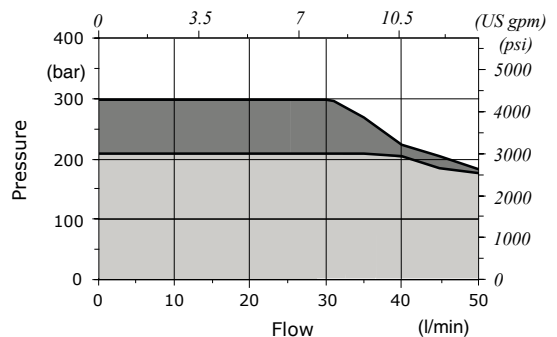


Pressure drop versus flow



— A1 → B1
 - - A1 → C1

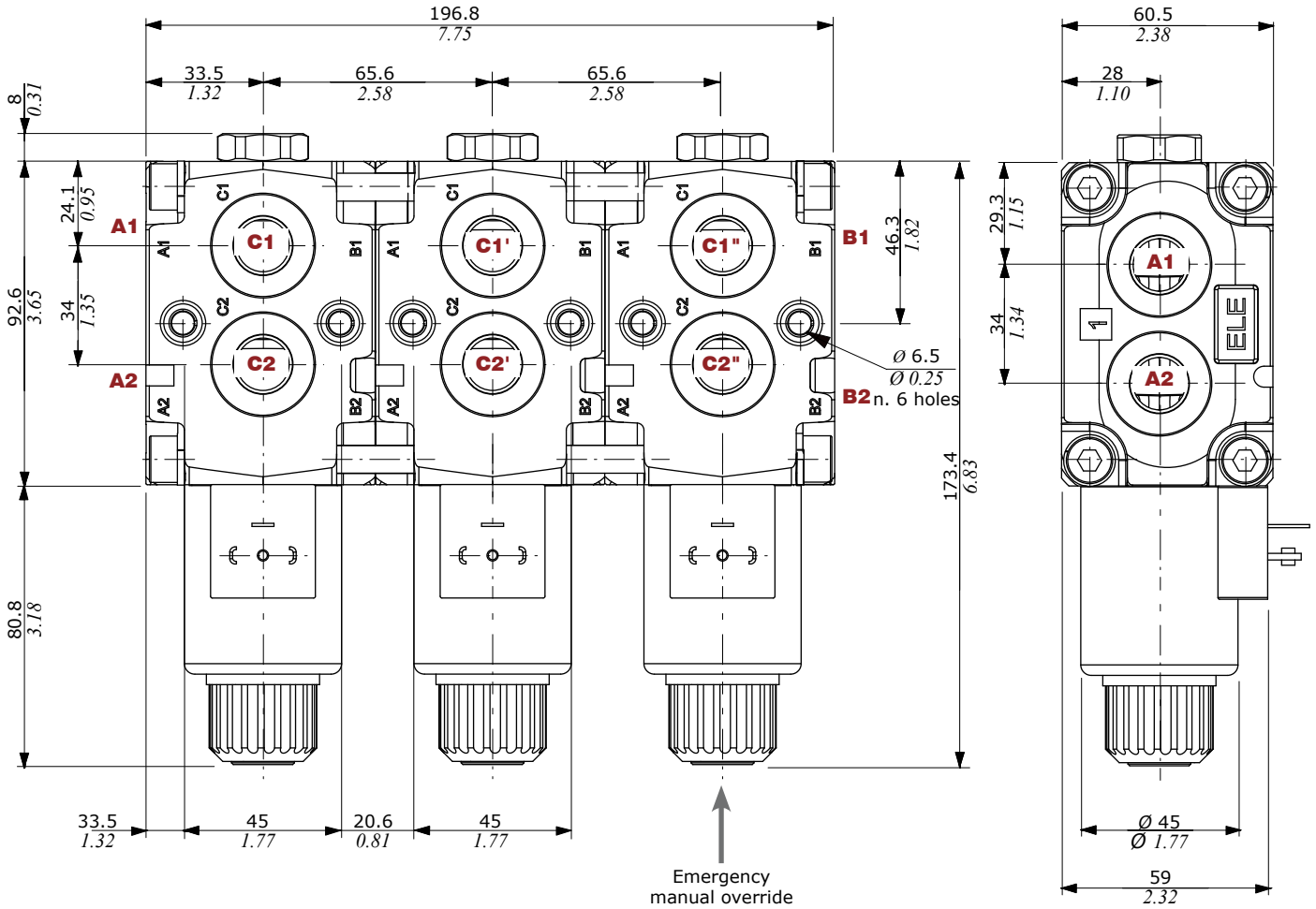
Minimum dynamic conditions
 (Supply = Vn-10%, coil at 70 °C - 158 °F)



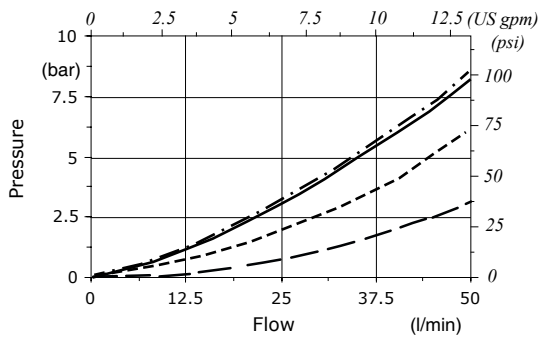
■ With drain
 ■ Without drain

Dimensional data - hydraulic circuit - performance data

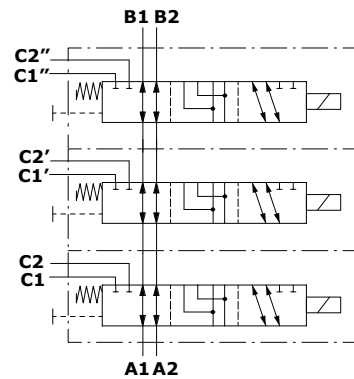
10 ways



Pressure drop versus flow



- A1 → B1''
- A1 → C1'
- - - A1 → C1
- · - · A1 → C1''



Part ordering codes

Example:

DFE100/10 A 18 ES - W 2 0 2 - 12VDC - SAE - (CRZ)

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

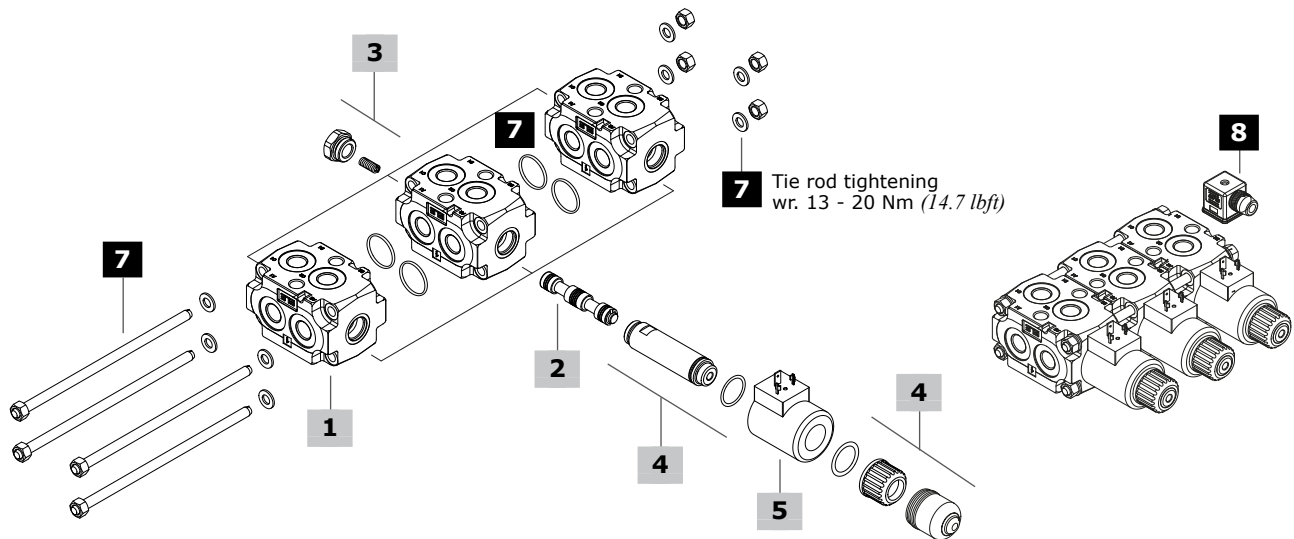
Diode*
(text omitted if diode is not present)
DB = bidirectional diode

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

Bellow
1 = without bellow
2 = with bellow

Coil voltage

(*) - For diodes and connector options see coils table on page 138



1 Body kit*

TYPE	CODE	DESCRIPTION
DFE100/6-8-10	3CO2244721	6 ways body kit

2 Spools **page 136**

TYPE	CODE	DESCRIPTION
A	3CAS110647	A1/A2 in B1/B2 in pos. 1. A1/A2 in C1/C2 in pos. 2. Ports connected in transit position
B	3CAS110747	A1/A2 in B1/B2 in pos. 1. A1/A2 in C1/C2 in pos. 2. Ports closed in transit position
H	3CAS110847	A1/A2 in B1/B2 in pos. 1. A1/A2 in C1/C2 in pos. 2. Port connected to drain in transit position
N	3CAS110947	As type A, for right inlet

3 Positioner kit **page 137**

TYPE	CODE	DESCRIPTION
18...W	5TAP006	Spring return in pos. 1
18...Y	5GIU014*	Spring return in pos. 1, with SAE6 drain port

4 Solenoid kit **page 137**

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

5 Coil

For list of available coils see pages 138

6 Body threading

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

7 Tie rods kit and O-ring seals

CODE	DESCRIPTION
5TIR108132	For DFE100/8 diverter valves
5TIR108198	For DFE100/10 diverter valves

8 Accessories

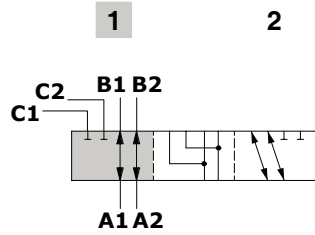
For list of available connectors see pages 138

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

Spool circuits

Type A

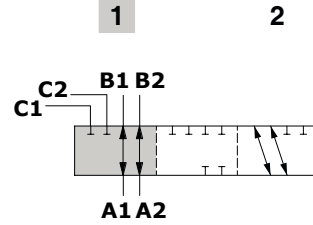
A1/A2 in B1/B2 in pos. 1.
Ports connected in transit position



Spool stroke
Position 2: + 4 mm (0.15 in)

Type B

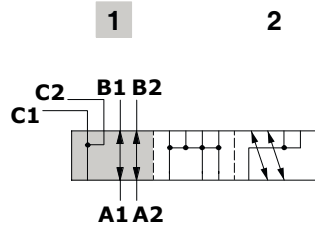
A1/A2 in B1/B2 in pos. 1.
Ports closed in transit position



Spool stroke
Position 2: + 4 mm (0.15 in)

Type H

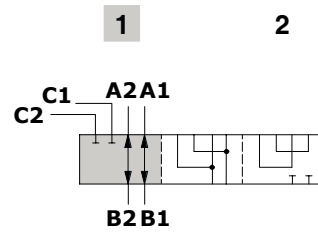
A1/A2 in B1/B2 in pos. 1.
Port connected to drain in transit position



Spool stroke
Position 2: + 4 mm (0.15 in)

Type N

As type A, for right inlet



Spool stroke
Position 2: + 4 mm (0.15 in)

Positioner kit

With spring return in position 1

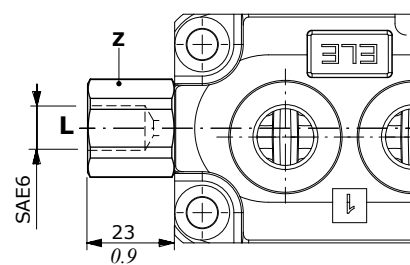
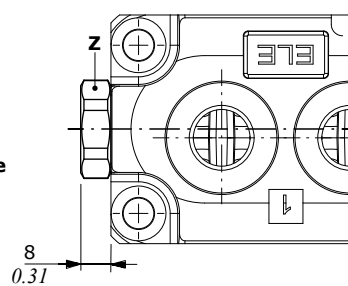
Type 18W
With plug



Type 18Y
With SAE6 drain port

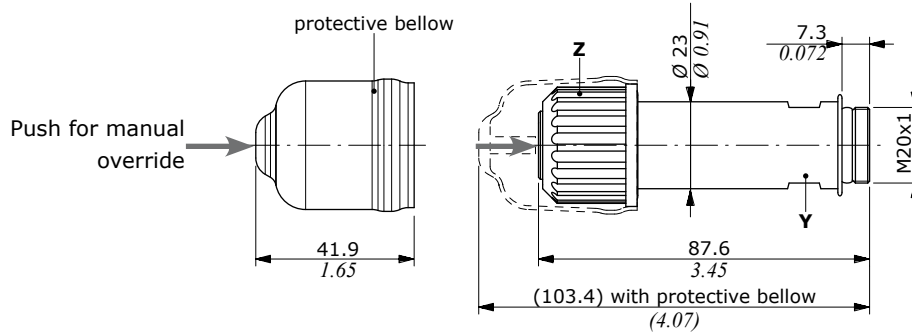


Wrenches and tightening torque
Z = wrench 24 - 42 Nm (31 lbft)



Solenoid kit

ES tube assembly kit



Wrenches and tightening torque
Y = wrench 20 - 20 Nm (14.7 lbft)
Z = 24 Nm (17.7 lbft)

Coils and accessories

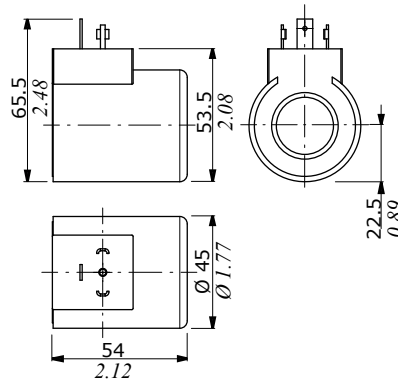
Type	Voltage	Ordering codes					
		Connector types					
		ISO4400	Deutsch DT	AMP JPT	Packard Weatherpack	Packard Metri-pack	Flying leads without connector
D15	12 VDC	4SOL515012	4SOL515011 ⁽²⁾ 4SOL515014A ⁽³⁻⁶⁾	4SOL515016 ⁽⁵⁾	-	-	-
	14 VDC	-	4SOL515014B ⁽³⁻⁶⁾	4SOL515016A ⁽⁵⁾	-	-	-
	24 VDC	4SOL515024	4SOL515025A ⁽³⁻⁶⁾ 4SOL515021 ⁽²⁾	-	-	-	-
	48 VDC	4SOL515048	-	4SOL515049 ⁽²⁾	-	-	-
	98 VDC	4SOL515098	-	-	-	-	-
	110 VDC	4SOL515110	-	-	-	-	-
Mating connectors		4CN100995	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

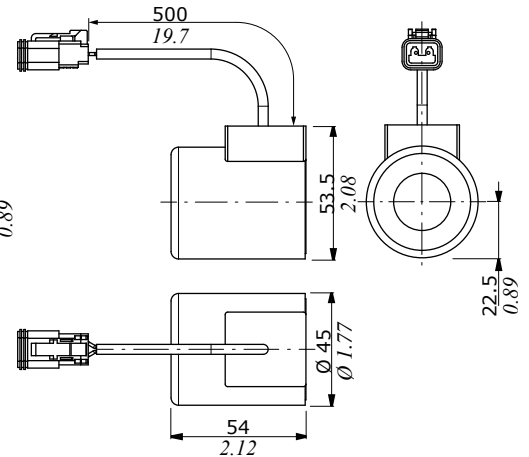
Features

- Nominal voltage tolerance: ±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%

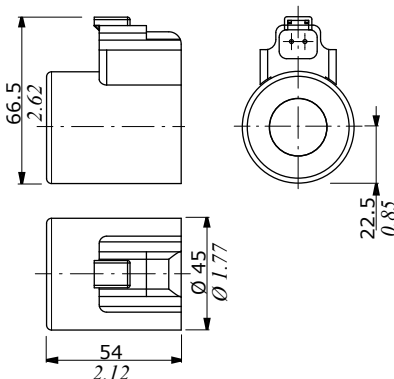
ISO4400 connector



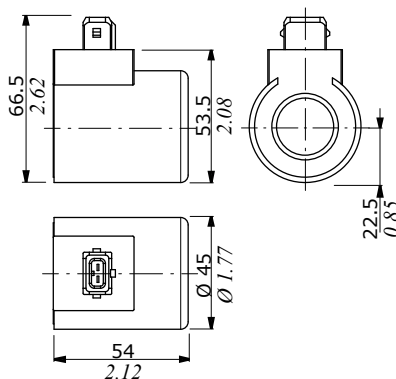
Flying leads with DEUTSCH DT04 connector



DEUTSCH DT04 connector (Parallel type)



AMP JPT connector (Perpendicular type)



Flying leads with AMP JPT connector

