



## DFE085

Solenoid control monoblock diverter valve for special applications

- 4 ways configuration
- Galvanized body designed for in-line mounting
- Specific design for steering applications
- Mechanical detent on working position

This catalogue shows technical specifications and diagrams measured with mineral oil of 46 mm<sup>2</sup>/s (46 cSt) viscosity at 40°C - (104°F) temperature.

### WORKING CONDITIONS

N. of available ways	4	
Max. flow rating	25 l/min (6.6 US gpm)	
Max. pressure	210 bar (3045 psi)	
Available supply voltage	VDC	see reference page 108
Nominal power	38 W	
Internal leakage A(B)⇒T	Δp = 100 bar (1450 psi)	7 cm <sup>3</sup> /min (0.42 in <sup>3</sup> /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 <sup>2</sup> /s (from 15 to 75 cSt)
	min.	12 mm <sup>2</sup> /s (12 cSt)
	max.	400 mm <sup>2</sup> /s (400 cSt)
Max. level of contamination	20/18/15 - ISO 4406 - NAS 1638 - class 9	
Ambient temperature for working conditions	from -40°C to 60°C (from -40°F to 140°F)	

NOTE - For different working conditions please contact Sales Dept.

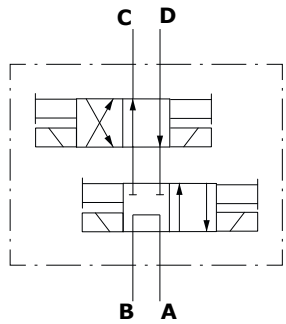
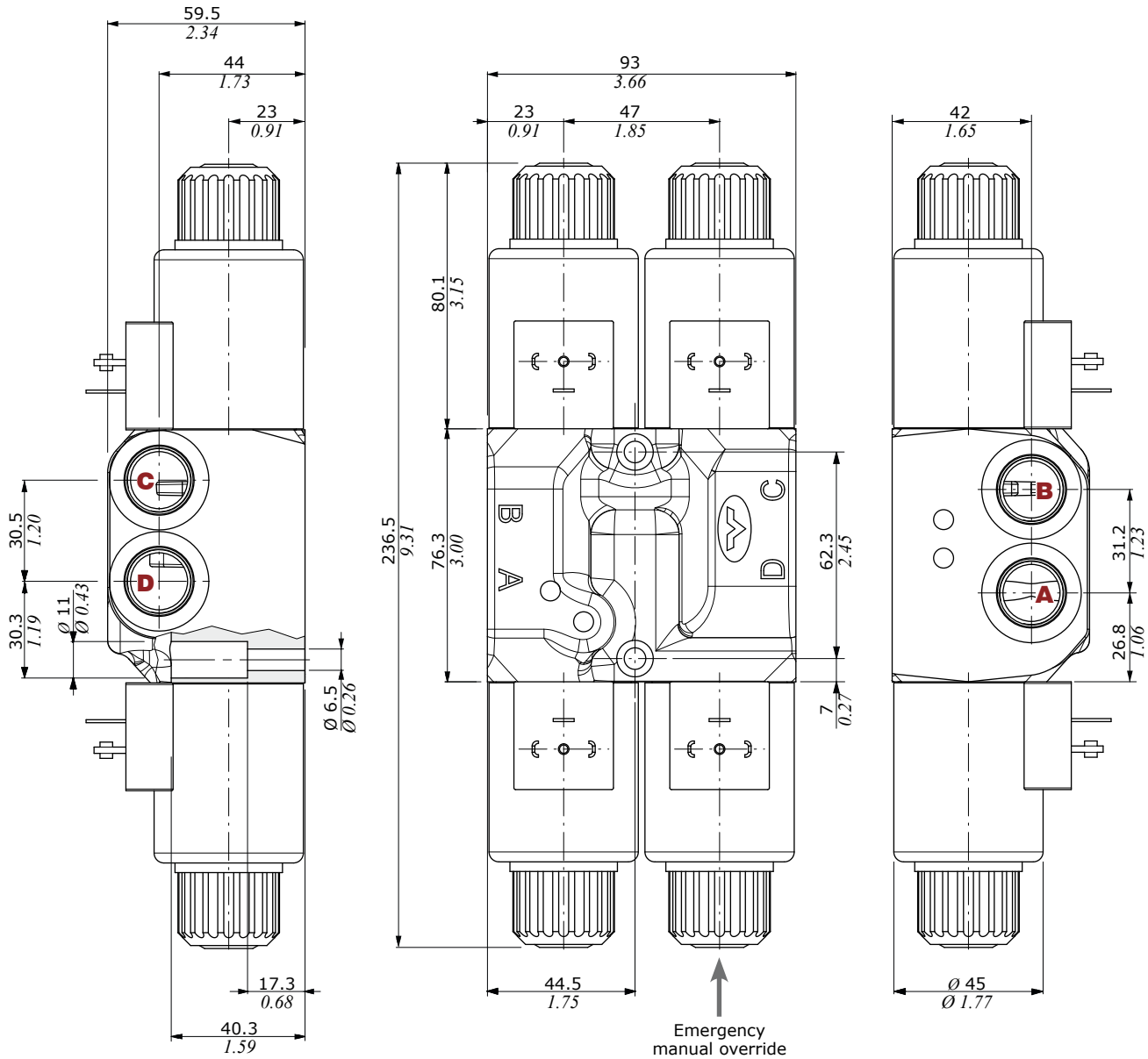
### Available threads

PORTS THREAD			METRIC*	METRIC*
	BSP	UN-UNF	(ISO 9974-1)	(ISO 6149)
ALL PORTS				
<b>DFE085</b>	G 3/8	3/4-16 (SAE 8)	M16x1.5	M16x1.5

(\* ) Optional threads  
for availability contact Sales  
Department

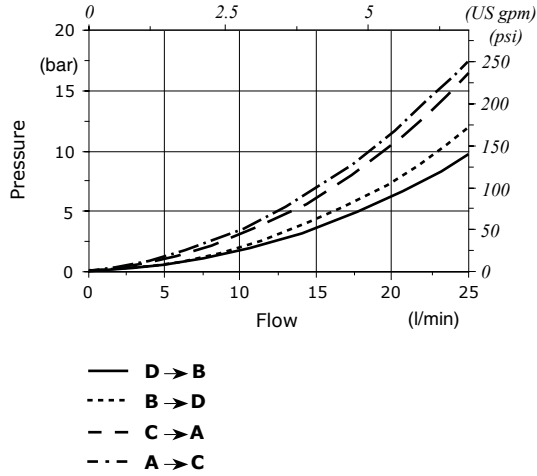
## Dimensional data and hydraulic circuit

### 4 ways

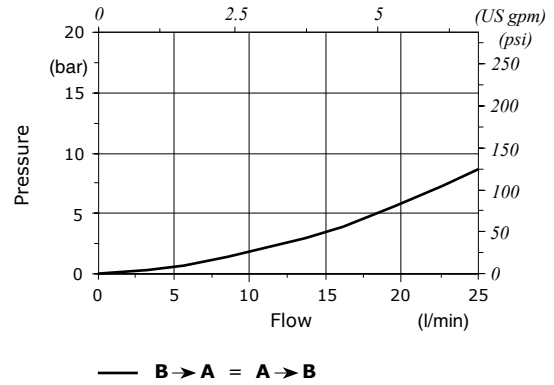


**Pressure drop versus flow :**

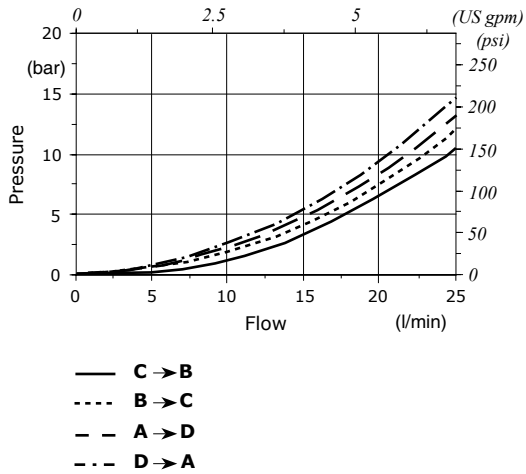
**"Crab" function**



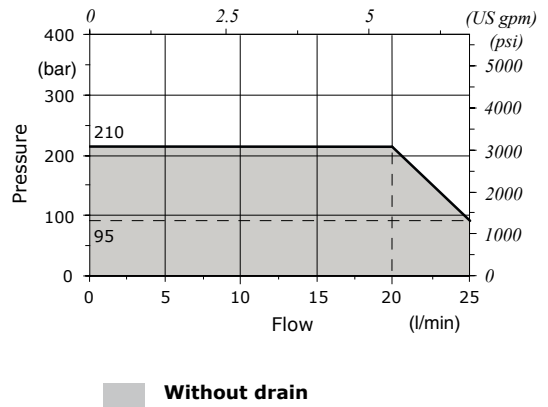
**"Anterior" function**



**"Leading" function**



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



## Part ordering codes

Example:

DFE085/4    BAB 01    16ES3    /    BCD 01    16ES3    -    2 0 2 - 12VDC    -    SAE    -    (CRZ)

1                    2                    3                    /                    2                    3                    -                    4                    5                    -                    5                    -                    (CRZ)

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

Connector orientation\*  
Std (omitted)  
PD = connector perpendicular to coil axis  
PL = connector parallel to coil axis

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

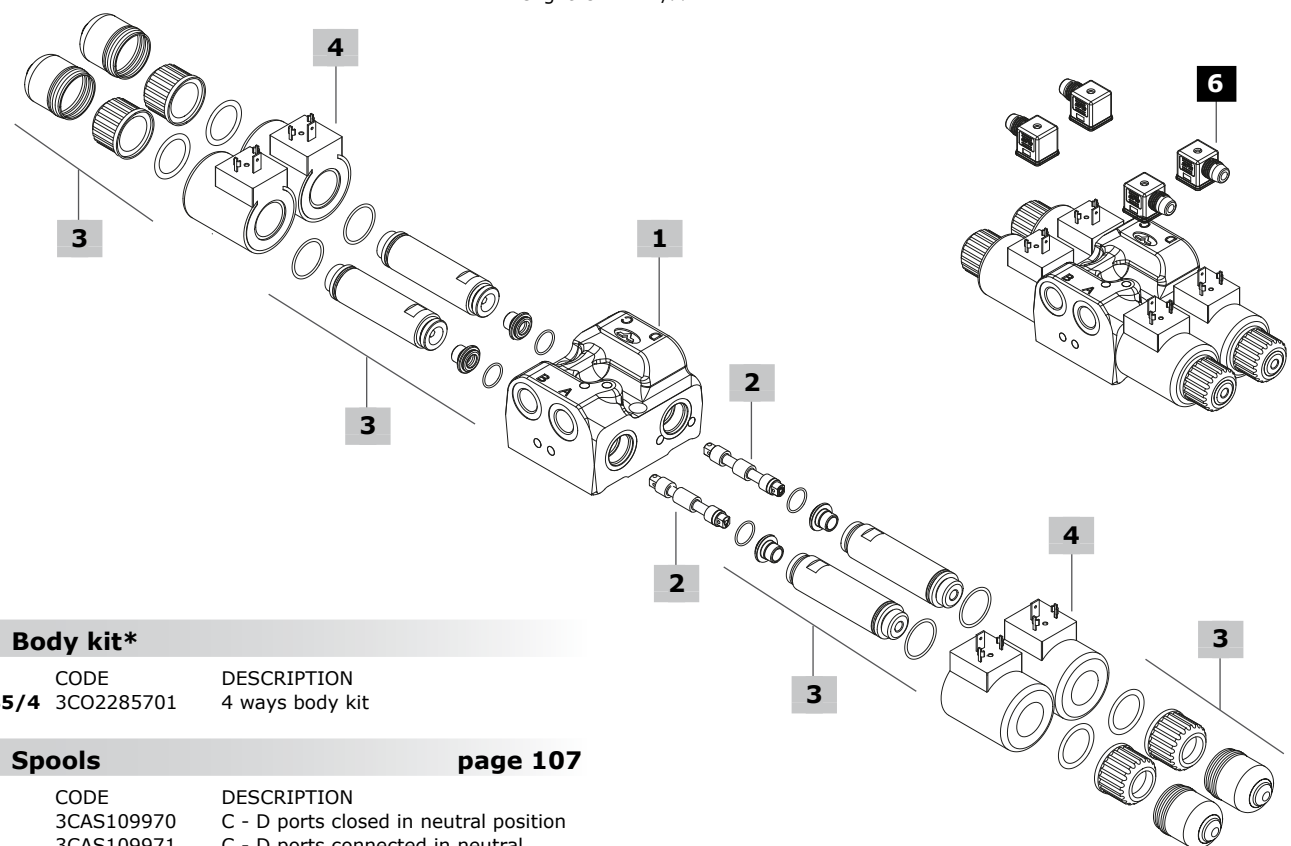
Bellow  
1 = without bellow  
2 = with bellow

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

Coil voltage

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

(\*) - For diode and connector options  
see coils table on page 108



1 Body kit*		
TYPE	CODE	DESCRIPTION
DFE085/4	3CO2285701	4 ways body kit

2 Spools <span style="float: right;">page 107</span>		
TYPE	CODE	DESCRIPTION
AB	3CAS109970	C - D ports closed in neutral position
CD	3CAS109971	C - D ports connected in neutral position

3 Complete controls <span style="float: right;">page 107</span>		
TYPE	CODE	DESCRIPTION
16ES3	5CAN160850	Spring return in pos. 2, without protective bellow
-	4ACC515	Optional assembly tube protective bellow

4 Coil  
For list of available coils see pages 108

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

6 Accessories  
For list of available connectors see pages 108

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

**Spool circuits**

**Type A-B**

C - D ports closed  
in neutral position

**1 2**

**C D**



**B A**

**Spool stroke**

Position 2: + 3 mm (0.11 in)

**Type C-D**

C - D ports connected  
in neutral position

**1 2**

**C D**



**B A**

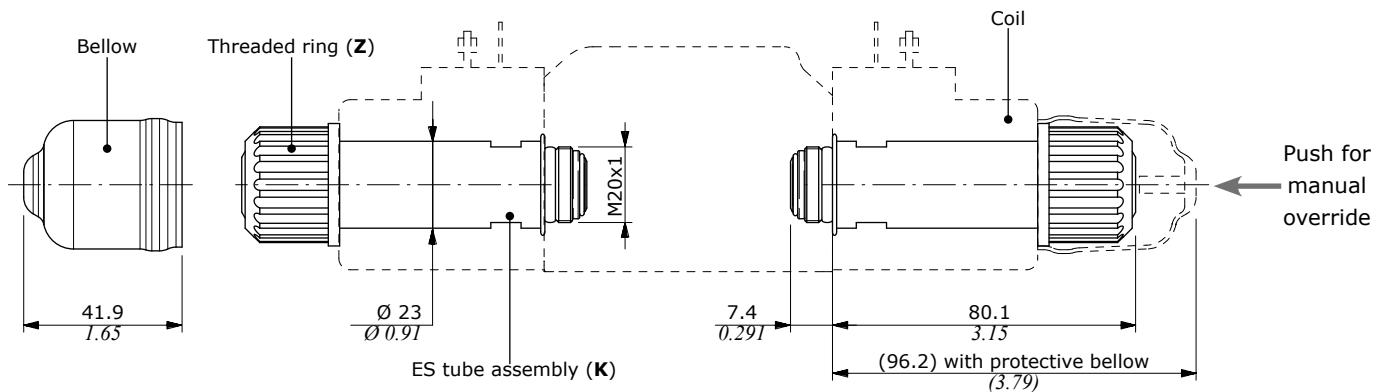
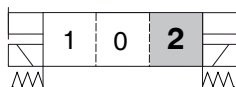
**Spool stroke**

Position 2: + 3 mm (0.11 in)

**Complete controls**

**With spring return in position 2**

**Type 16ES3**



**Wrenches and tightening torque**

**K** = wrench 20 - 20 Nm (14.7 lbf<sup>t</sup>)

**Z** = 24 Nm (17.7 lbf<sup>t</sup>)

## Coils and accessories

Type	Voltage	Ordering codes					
		ISO4400	Deutsch DT	AMP JPT	Packard Weatherpack	Packard Metri-pack	Flying leads without connector
<b>D15</b>	<b>12 VDC</b>	4SOL515012	4SOL515011 <sup>(2)</sup> 4SOL515014A <sup>(3-6)</sup>	4SOL515016 <sup>(5)</sup>	-	-	-
	<b>14 VDC</b>	-	4SOL515014B <sup>(3-6)</sup>	4SOL515016A <sup>(5)</sup>	-	-	-
	<b>24 VDC</b>	4SOL515024	4SOL515025A <sup>(3-6)</sup> 4SOL515021 <sup>(2)</sup>	-	-	-	-
	<b>48 VDC</b>	4SOL515048	-	4SOL515049 <sup>(2)</sup>	-	-	-
	<b>98 VDC</b>	4SOL515098	-	-	-	-	-
	<b>110 VDC</b>	4SOL515110	-	-	-	-	-
<b>Mating connectors</b>		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: ±10%

Nominal power.....: 38 W

Nominal current.....: 12/14/24/48/98/110 VDC

12 VDC : 3.16 A @ 12 VDC  
 14 VDC : 2.9 A @ 14 VDC  
 24 VDC : 1.58 A @ 24 VDC  
 48 VDC : 0.79 A @ 48 VDC  
 98 VDC : 0.41 A @ 98 VDC  
 110 VDC : 0.35 A @ 110 VDC

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

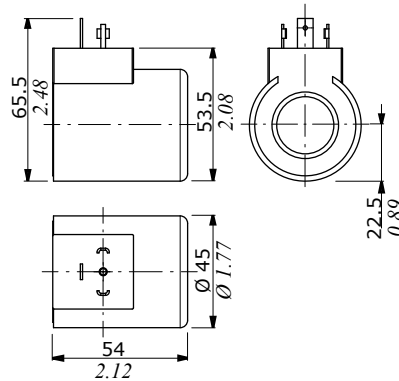
Weather protection.....: IP65 - ISO4400

IP69K - Deutsch DT

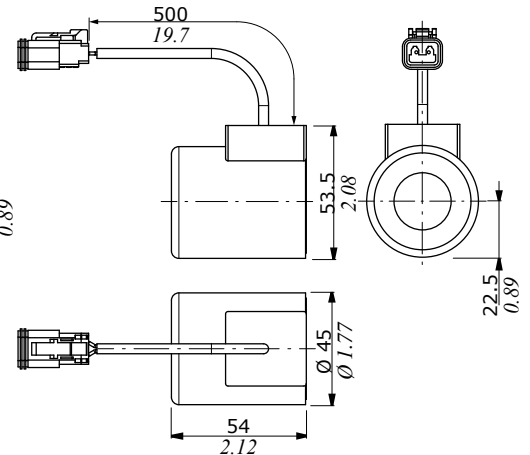
IP65 - AMP JPT

Insertion.....: 100%

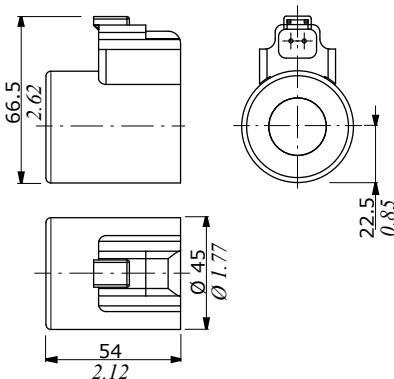
### ISO4400 connector



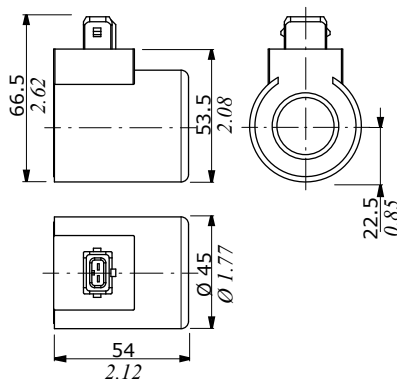
### Flying leads with DEUTSCH DT04 connector



### DEUTSCH DT04 connector (Parallel type)



### AMP JPT connector (Perpendicular type)



### Flying leads with AMP JPT connector

