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 mm²/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 cm³/min *(0.42 in³/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 mm²/s *(from 15 to 75 cSt)*
	min.	12 mm²/s *(12 cSt)*
	max.	400 mm²/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.

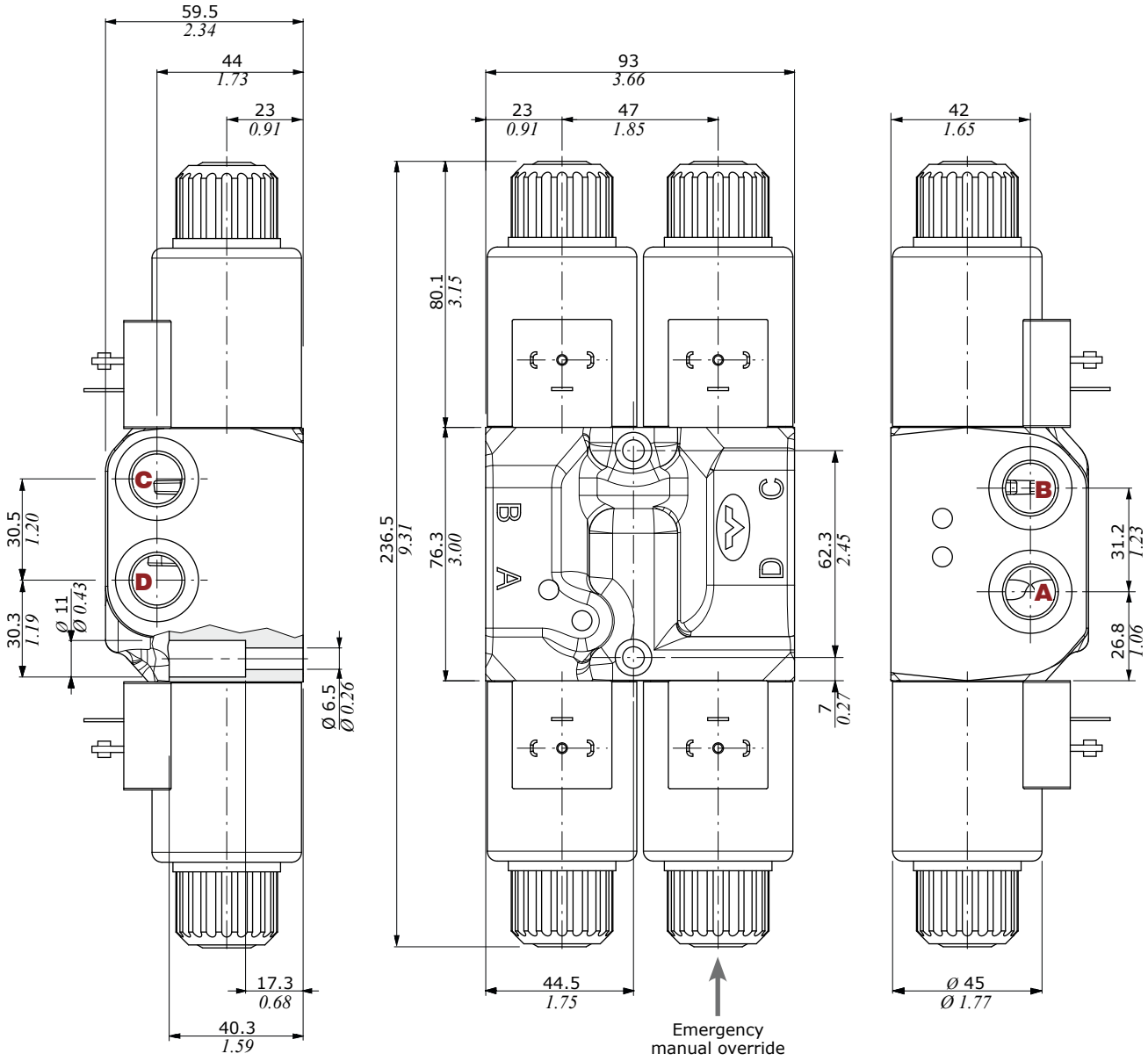
Available threads

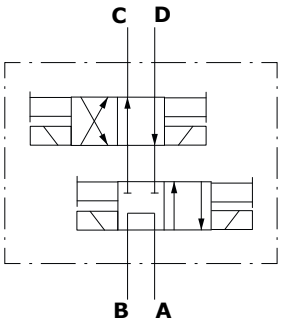
PORTS THREAD				
ALL PORTS	**BSP**	**UN-UNF**	**METRIC*** (ISO 9974-1)	**METRIC*** (ISO 6149)
DFE085	G 3/8	3/4-16 (SAE 8)	M16x1.5	M16x1.5

(*) Optional threads for availability contact Sales Department

Dimensional data and hydraulic circuit

4 ways

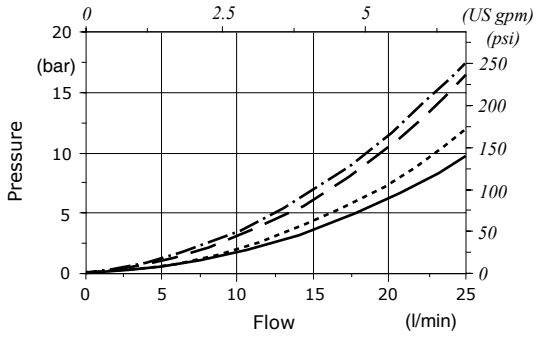




Performance data

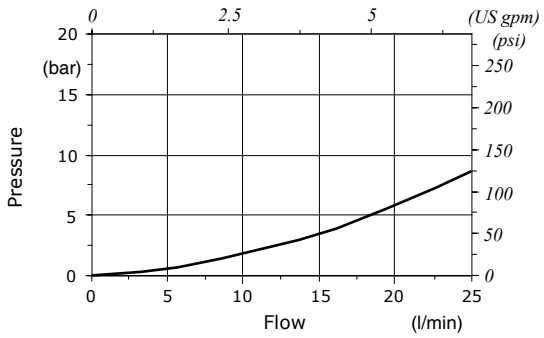
Pressure drop versus flow :

"Crab" function



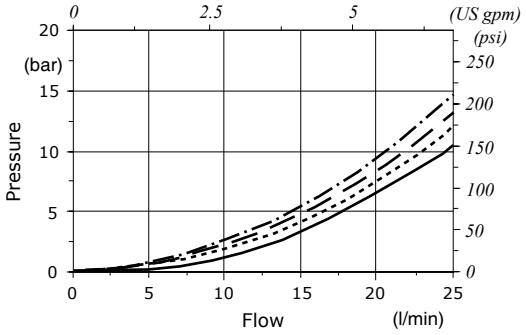
D ➔ B
B ➔ D
C ➔ A
A ➔ C

"Anterior" function



B ➔ A = A ➔ B

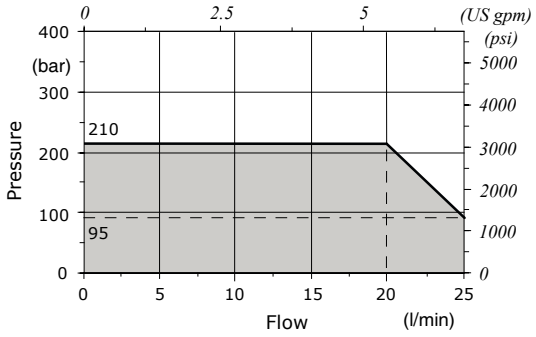
"Leading" function



C ➔ B
B ➔ C
A ➔ D
D ➔ A

Minimum dynamic conditions

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



Without drain

Part ordering codes

Example:

For description composition see the text below

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

1 2 3 2 3 4 5 5 Galvanized body

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

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

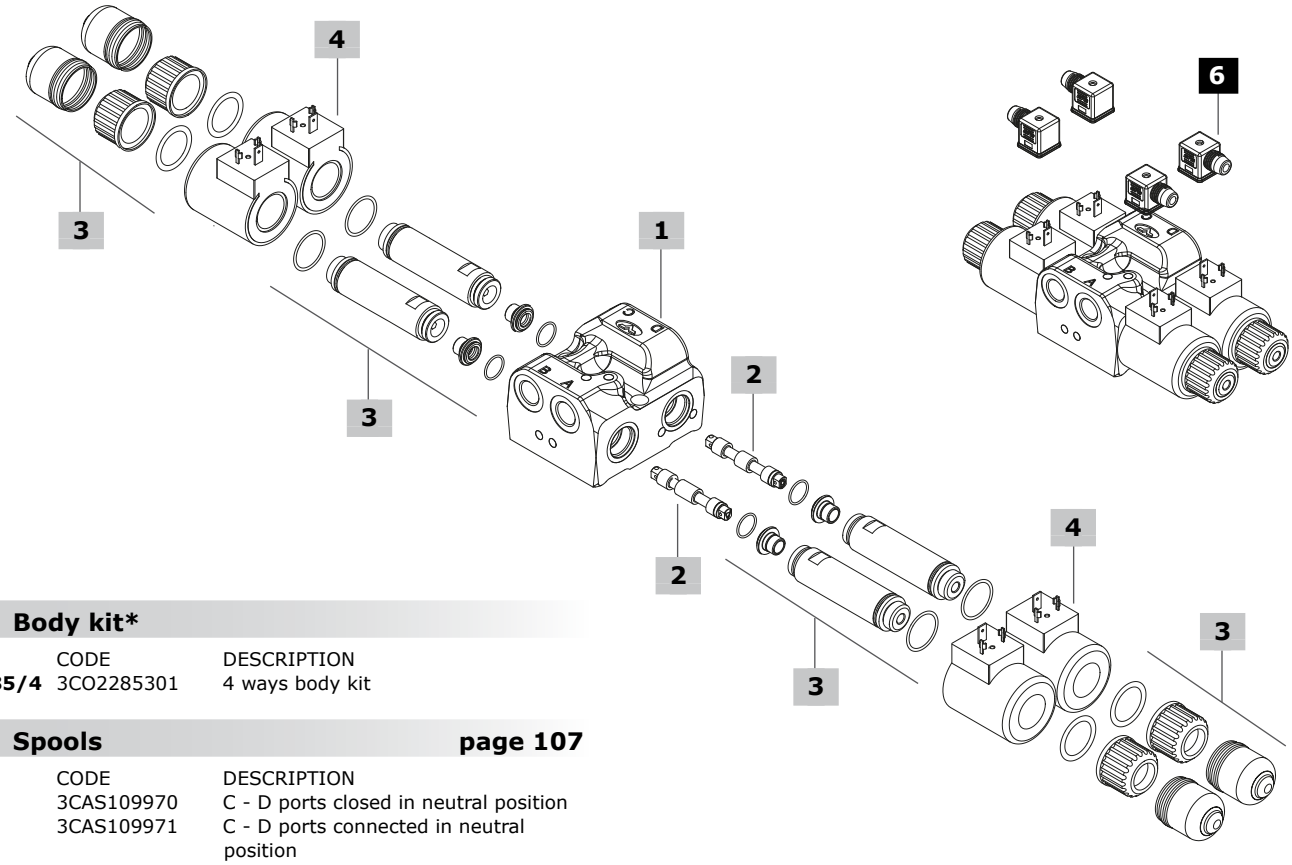
Lenght cables
(only if it's present)
Lenght is in mm/*in*

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

Bellow
1 = without bellow
2 = with bellow

Coil voltage

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



1 Body kit*

TYPE	CODE	DESCRIPTION
DFE085/4	3CO2285301	4 ways body kit

2 Spools page 107

TYPE	CODE	DESCRIPTION
AB	3CAS109970	C - D ports closed in neutral position
CD	3CAS109971	C - D ports connected in neutral position

3 Complete controls page 107

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

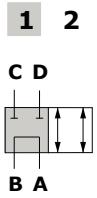
6 Accessories

For list of available connectors see pages 108

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

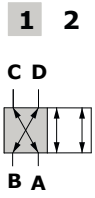
Spool circuits

Type A-B
C - D ports closed
in neutral position



Spool stroke
Position 2: + 3 mm *(0.11 in)*

Type C-D
C - D ports connected
in neutral position

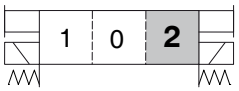


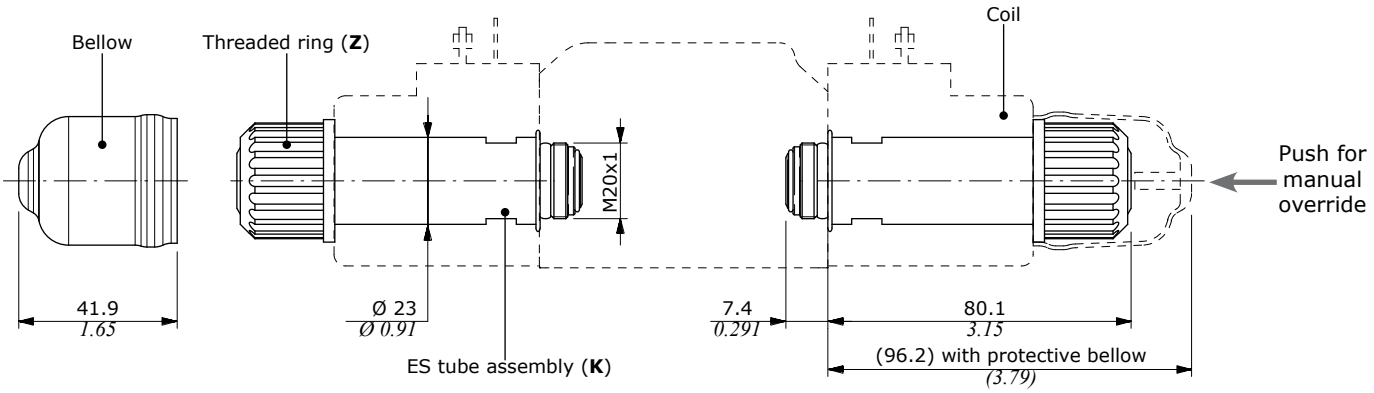
Spool stroke
Position 2: + 3 mm *(0.11 in)*

Complete controls

With spring return in position 2

Type 16ES3





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

Coils and accessories

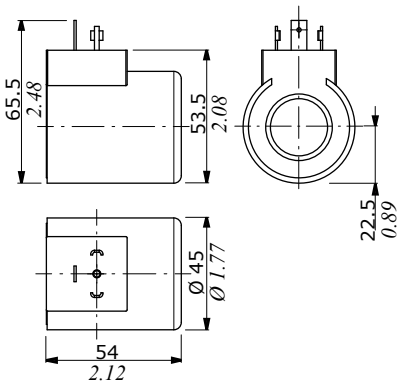
Type	Voltage	Ordering codes – Connector types					
		ISO4400	Deutsch DT	AMP JPT	Packard Weatherpack	Packard Metri-pack	Flying leads without connector
D15	**12 VDC**	4SOL515012	4SOL515011(2) 4SOL515014A(3-6)	4SOL515016(5)	-	-	-
	14 VDC	-	4SOL515014B(3-6)	4SOL515016A(5)	-	-	-
	24 VDC	4SOL515024	4SOL515025A(3-6)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

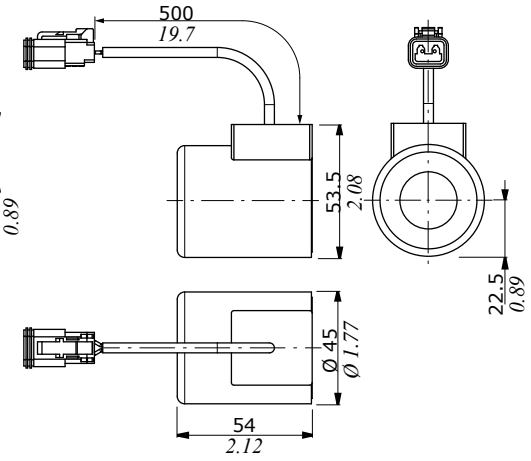
Features

Nominal voltage tolerance: ±10%
Nominal power.....: 38 W
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%

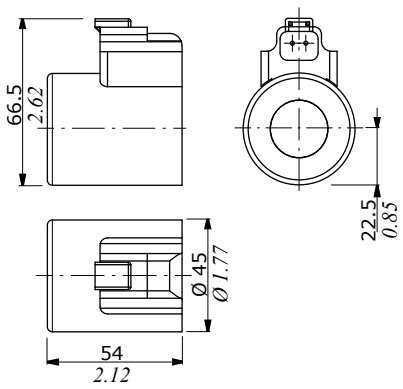
ISO4400 connector



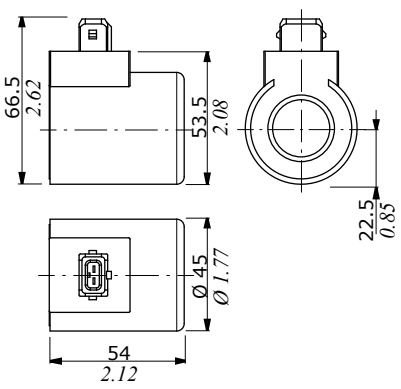
Flying leads with DEUTSCH DT04 connector



DEUTSCH DT04 connector
(Parallel type)



AMP JPT connector
(Perpendicular type)



Flying leads with AMP JPT connector