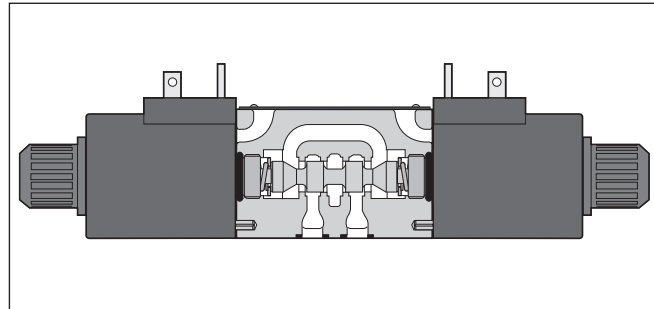
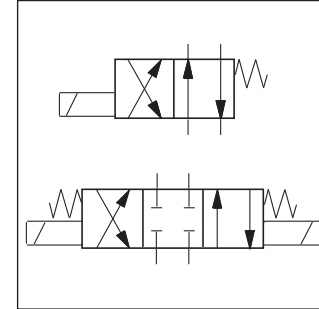


The D1MW is a 3-chamber, electrically controlled 4/3 or 4/2 way directional control valve. It is activated directly by solenoids with screwed-in wet pin armature.

The series D1MW is a high-quality valve for usage in applications with a maximum pressure of 350 bar and maximum flow of 80 l/min.

With the optional high corrosion protection and the solenoid interfaces offered, the D1MW is a valve designed for mobile or marine applications.



2

Technical features

- High corrosion protection optional
- Standard mobile solenoid interfaces
- Robust design for rough applications

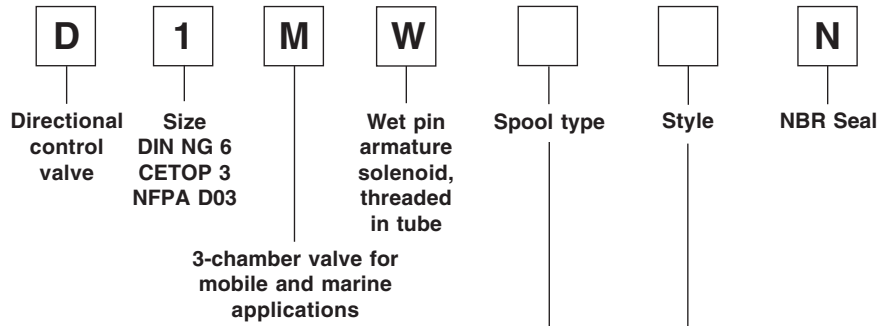
Technical data

General		Directional spool valve	
Design		Solenoid	
Actuation		DIN NG6 / CETOP 03 / NFPA D03	
Size		DIN 24340 A6 / ISO 4401 / CETOP RP 121-H / NFPA D03	
Mounting interface		Unrestricted, preferably horizontal	
Mounting position			
Ambient temperature		[°C]	-25...+50
Weight		[kg]	1.5 (1 solenoid), 2.1 (2 solenoids)
Hydraulic			
Max. operating pressure		[bar]	P, A B: 350; T: 210
Fluid		Hydraulic oil in accordance with DIN 51524 / 51525	
Fluid temperature		[°C]	-25 ... +70
Viscosity permitted		[mm ² /s]	2.8...400 (2.8...400 cSt)
Viscosity recommended		[mm ² /s]	30...80
Filtration		ISO 4406 (1999); 18/16/13 (meet NAS 1638: 7)	
Flow max.		[l/min]	80
Leakage at 50 bar		[ml/min]	Up to 10 per flow path, depending on spool
Static / Dynamic			
Step response at 95%		[ms]	Energized: 32 De-energized: 40
Electrical characteristics			
Duty ratio		100% ED; CAUTION: coil temperature up to 150 °C possible	
Max. switching frequency		[1/h]	15000
Protection class		IP 65 in accordance with DIN 40050 (plugged and mounted)	
		Code	
Supply voltage		K	J
Tolerance supply voltage		12 VDC	24 VDC
Current consumption hold		±10	±10
Power consumption hold		2.5	1.25
		[A]	[W]
		30	30
Solenoid connection		Connector as per EN 175301-803, AMP Junior Timer, DP4 2-pin "Deutsch" connector. Solenoid identification as per ISO 9461.	
Wiring min.		[mm ²]	3 x 1.5 recommended
Wiring length max.		[m]	50 recommended

With electrical connections the protective conductor (PE ⚡) must be connected according to the relevant regulations.

D1MW.PMD RH





2

3 position spools	
Code	Spool type
1	
2	
4	
6	
11	
21	
22	
81	
82	

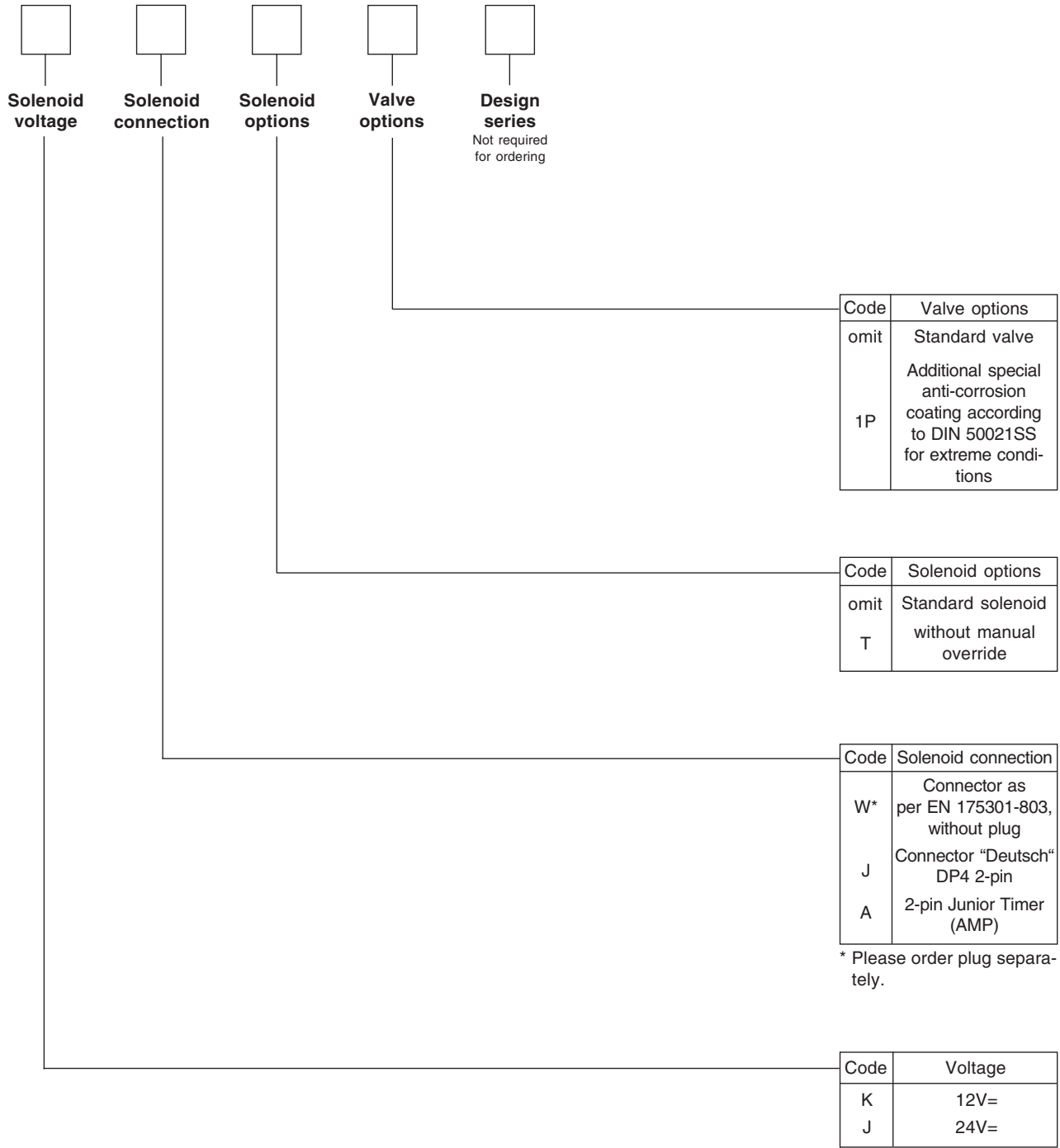
3 position spools	
Code	Spool type
8	

2 position spools	
Code	Spool type
20	
30	

3 position spools (except spool 8)	
Code	Description
C	3 positions. Spring offset in position "0". Operated in position "a" or "b".
E	2 positions. Spring offset in position "0". Operated in position "a".
F	2 positions. Spring offset in position "b". Operated in position "0".
K	2 positions. Spring offset in position "0". Operated in position "b".
M	2 positions. Spring offset in position "a". Operated in position "0".

3 position spools (only for spool 8)	
Code	Description
C	3 positions. Spring offset in position "0". Operated in position "a" or "b".
E	2 positions. Spring offset in position "0". Operated in position "b".
F	2 positions. Spring offset in position "a". Operated in position "0".
K	2 positions. Spring offset in position "0". Operated in position "a".
M	2 positions. Spring offset in position "b". Operated in position "0".

2 position spools	
Code	Description
B	2 positions. Spring offset in position "b". Operated in position "a".
D	2 positions, detent. Operated in position "a" or "b". No centre or offset position.
H	2 positions. Spring offset in position "a". Operated in position "b".



2

Code	Valve options
omit	Standard valve
1P	Additional special anti-corrosion coating according to DIN 50021SS for extreme conditions

Code	Solenoid options
omit	Standard solenoid
T	without manual override

Code	Solenoid connection
W*	Connector as per EN 175301-803, without plug
J	Connector "Deutsch" DP4 2-pin
A	2-pin Junior Timer (AMP)

* Please order plug separately.

Code	Voltage
K	12V=
J	24V=

Other spool types on request.

The flow curve diagram shows the flow versus pressure drop curves for all spools listed. To read the values in the diagram, the curve number for the selected spool and

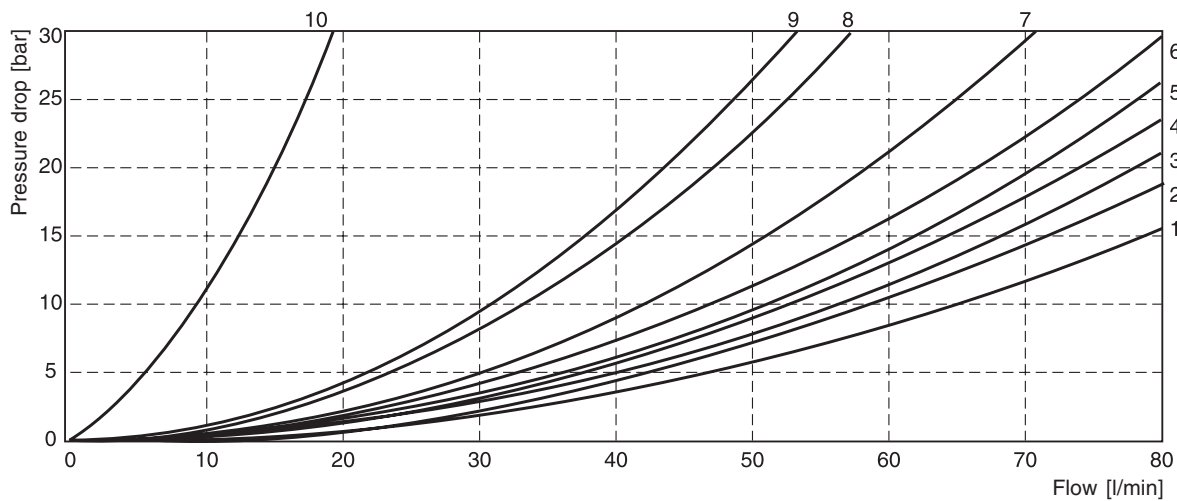
desired operating position must first be determined from the table below.

2

Spool	Position "b"		Position "a"		Position "0"					
	P->A	B->T	P->B	A->T	P->A	P->B	A->T	B->T	P->T	A->B
1	3	1	3	1	-	-	-	-	-	-
2	2	1	2	1	2	2	1	1	2	1
4	4	1	4	1	-	-	1	1	-	9
6	2	4	2	4	7	7	-	-	-	7
11	6	2	6	2	-	-	9	9	-	-
20	5	3	5	3	-	-	-	-	-	-
30	3	1	3	1	-	-	-	-	-	-
81	10	10	10	10	-	-	-	-	-	-
82	10	10	10	10	-	-	1)	1)	-	-
	P->B	A->T	P->A	B->T	P->A	P->B	A->T	B->T	P->T	A->B
8	2	2	2	2	-	-	-	-	8	-
	Position "b"			Position "a"						
	P->A	P->B	A->B	P->B	A->T					
21	3	3	3	6	1					
	P->A	B->T		P->A	P->B	A->B				
22	6	1		3	3	3				

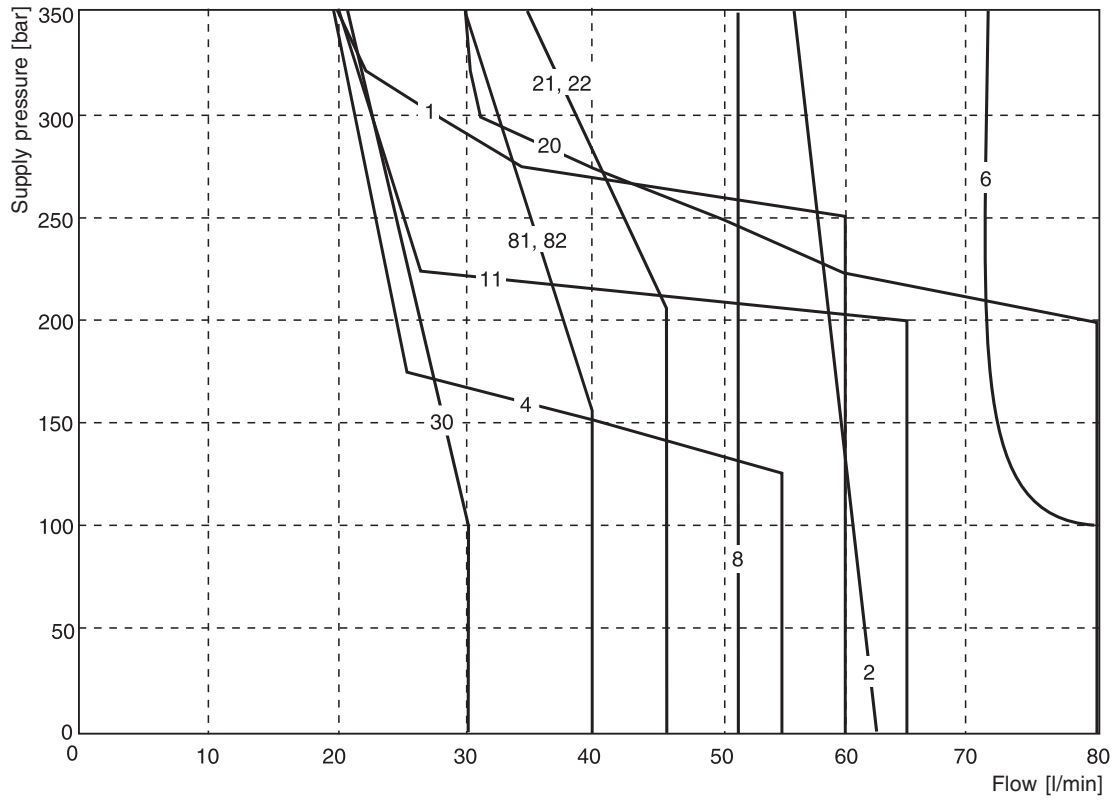
1) Only for pressure compensation, no higher flow possible.

Flow curve



The diagram below specifies the shift limits for valves with DC solenoids. Valves of style "F" and "M" may only be loaded at 70% of the value. The specifications apply to a viscosity of 35 mm²/s and equal flow at A and B port.

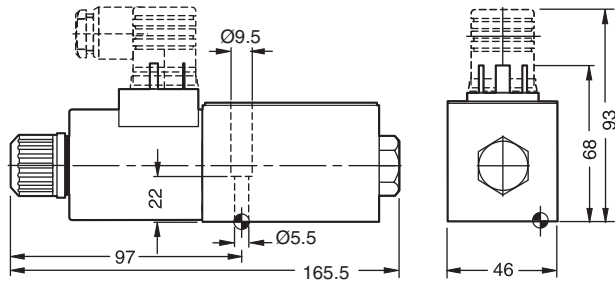
These values can be considerably lower than the represented ones by unequal flow at A and B port. To avoid flow rates above the shift limits of the valve, a plug-in orifice can be inserted in the P port.



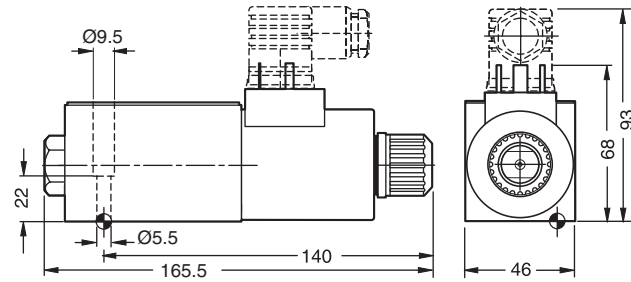
2

Dimensions with EN 175301-803 Connector

B, E, F -style

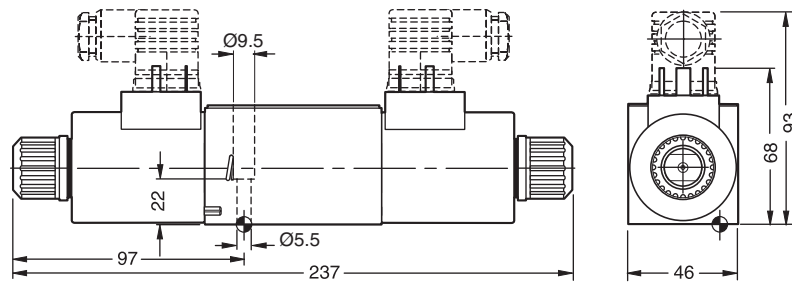


H, K, M -style

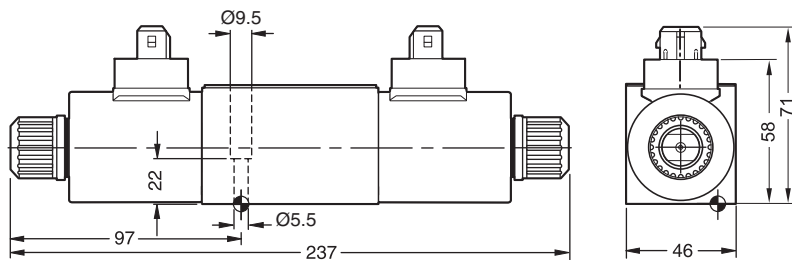


2

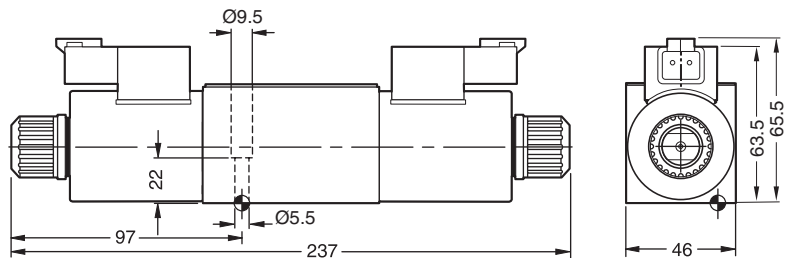
C and D -style





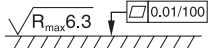


Dimensions with 2pin Junior Timer Connector (only C and D -style shown)



Dimensions with "Deutsch" DP4 2pin Connector (only C and D -style shown)



Surface finish	 Kit	 Kit	 Kit	 Kit
	BK375	4x M5x30 DIN 912 12.9	6.8 Nm ± 15%	NBR: SK-D1VW-70 FPM: SK-D1VW-V70

The space necessary to remove the plug per EN 175301-803, design type AF is at least 15 mm.
 The torque for the screw M3 of the plug has to be 0.5 to 0.6 Nm.

D1MW.PMD RH

