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P40
Hydraulic directional control
valves Max. operating
pressure up to 250 bar
Nominal flow up to 40 lpm



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Description

Manually or mechanically controlled hydraulic directional control valve P40 is designed for distribution and control the flow of oil between pump and the cylinder/hydro-motor etc. It is manufactured with 1 to 6 spools, with parallel or series function, with common or individual back valve for each spool, with or without safety valve.

Construction: P40 is a mono-block distributor. Its body is made of cast iron EN-GJL300. Spool are made of carburized steel with hard chrome plating.

Mounting: The distributor is fixed with two bolts M8.

Specification:-

Valve monoblock	Valve monoblock
Mounting	2 bolts M8
Pressure connections	internal thread
Ambient temperature	-40°C~+60°C
Pressure medium	Mineral oil based hydraulic oil
Viscosity	12...800mm ² /s permissible range, 20...100mm ² /s recommended range
Fluid temperature	-15°C...+80°C
Filtration	Oil contamination 10 to NAS1638
Max. operating pressure	P= 250bar T= 50bar A,B = 300bar
Leakage	15cm ³ /min at 120bar
Nominal flow	40l/min(see "operating" diagram)
Spool stroke	±6mm
Actuating force	<200N in spool axis direction

Ordering code

	FH	0	*	P40	R	1	A	1	A	1	G	KZ1	T	H	E	C2	11	1X
FH make																		
Block with common check valve																		
Number of spools (table 3)																		
Directional control valve type																		
Inlet high pressure-right																		
Way of distribution/parallel or(table 4)																		
First spool distribution type (table 5)																		
Spool control/detend and ets. (table 6)																		
Second spool distribution type (table 5)																		
Spool control/detend and ets. (table 6)																		
Ports/treads/ (table 9)																		
General operation feature (table 10)																		
With "dedent"																		
Operation feature/pneumatic,....																		
With electric switch																		
High pressure carry over																		
Connection ports in use																		

	A	B	C	D	P1	P2	T1	T2
01P40	60	80	85	60	+	-	+	-
02P40	60	80	129	97	+	+	+	+
03P40	60	80	164	132	+	+	+	+
04P40	60	80	199	167	+	+	+	+
05P40	60	80	234	202	+	+	+	+
06P40	60	80	269	237	+	+	+	+

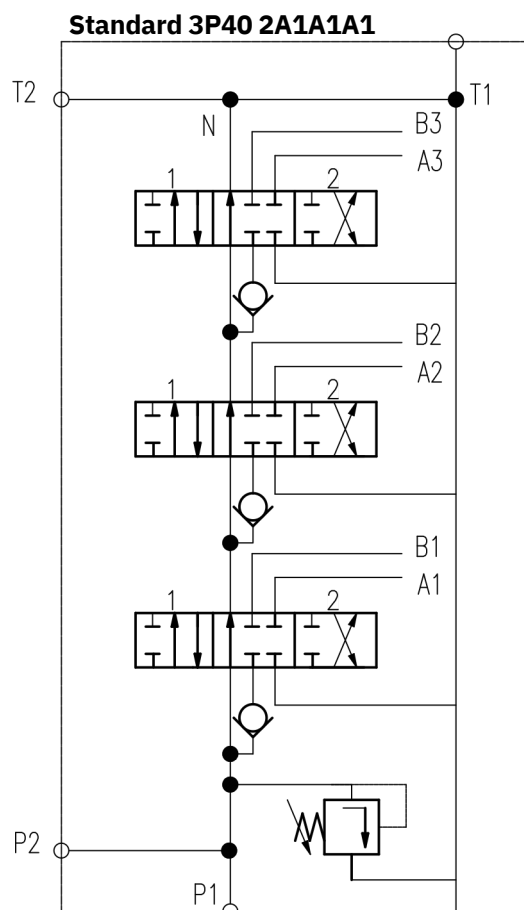
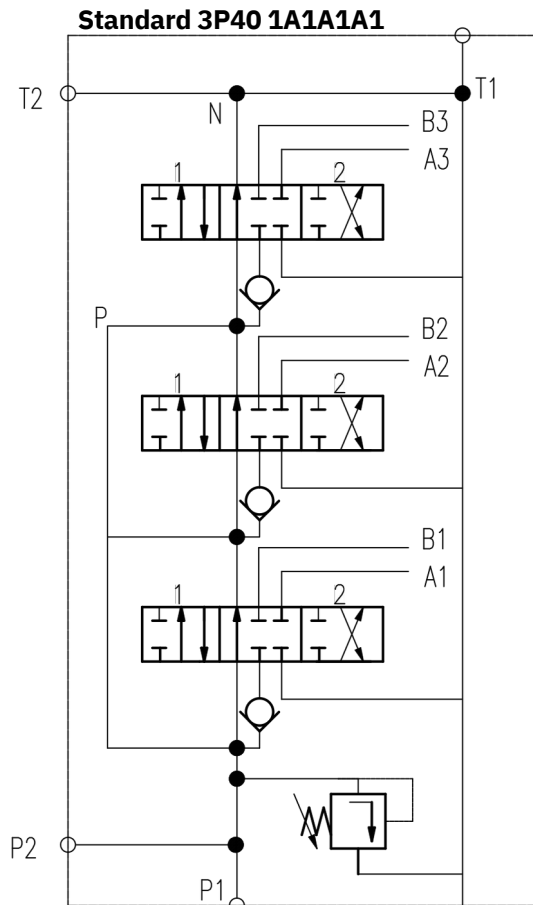
Spool control	E	F
1; 4; 5; 6; 7; 8; 9; 10; 11	40	193
2; 3	72	225
16	+	+

Code	Number of spools
	1
02, 2	2
03, 3	3

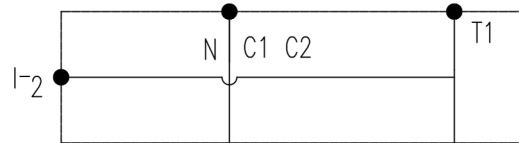
Code	Way of distribution
1	parallel
2	tanden (series parallel)

Code	Spool type	Code	Spool type	Code	Spool type
A		G		Q	
B		H		R	
C		M		S	
D		N		T	
E		O		K	
F		P		L	

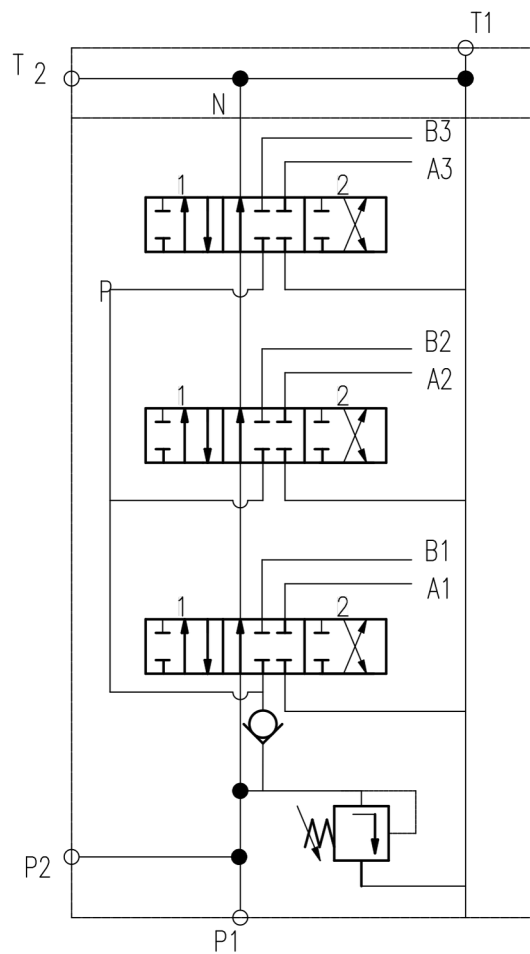
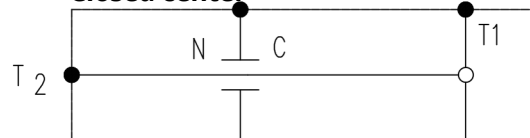
Element size model selection (ordering code)



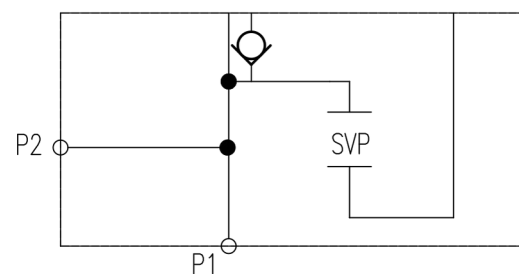
Standard 3P40 1A1A1A1 Power beyond High pressure carry over



Closed center



Without relief valve

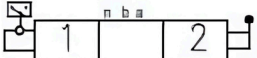


Element size model selection (ordering code)

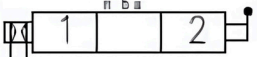
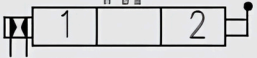
• Table 6

Code	Spool control
1	<div><div>102</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div>0</div><div>2</div></div></div>
2	<div><div>102</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div>0</div><div>2</div></div></div>
3	<div><div>102</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div>0</div><div>2</div></div></div>
4	<div><div>02</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>0</div><div>2</div></div></div>
5	<div><div>10</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div>0</div></div></div>
6	<div><div>12</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div></div><div>2</div></div></div>
7	<div><div>12</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div></div><div>2</div></div></div>
8	<div><div>102</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div>0</div><div>2</div></div></div>
9	<div><div>10</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div>0</div></div></div>
10	<div><div>02</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>0</div><div>2</div></div></div>
11	<div><div>02</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div></div><div>2</div></div></div>
13*	<div><div>3102</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>3</div><div>1</div><div>0</div><div>2</div></div></div>
16*	<div><div>3102</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>3</div><div>1</div><div>0</div><div>2</div></div></div>
13R**	<div><div>1023</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div>0</div><div>2</div><div>3</div></div></div>
12**	<div><div>1023</div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1</div><div>0</div><div>2</div><div>3</div></div></div>

• Table 7

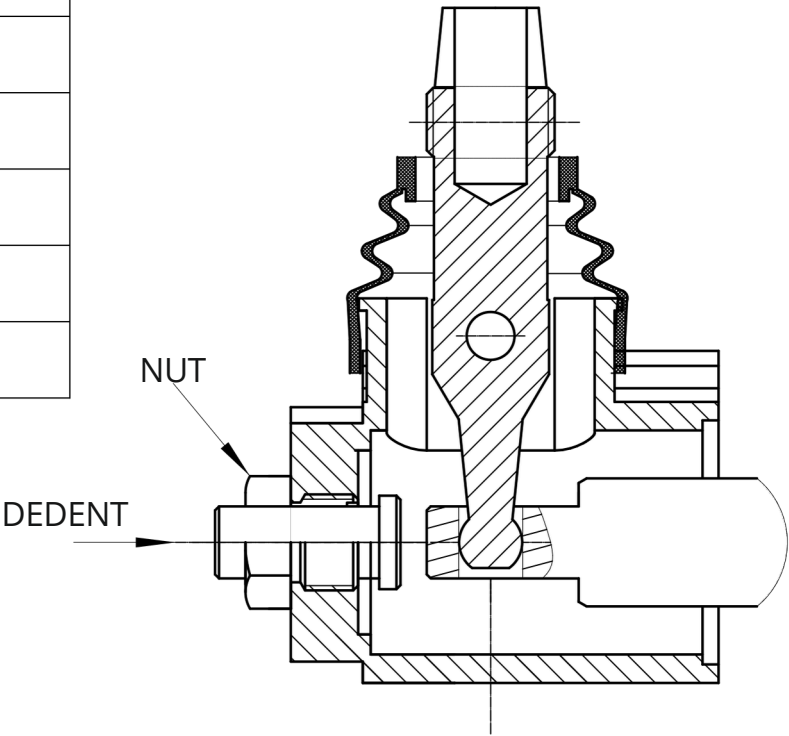
Code	Incorporated microswitch
E	 Microswitch type- Omron-V 165/C5

• Table 8

Code	Operation feature
P	 On-Off pneumatic control; 5-10 bar; parts G1/4
H	 On-Off hydraulic control; 5-20 bar; parts G1/4

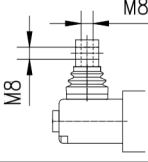
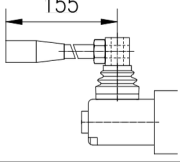
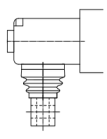
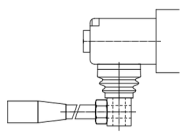
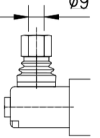
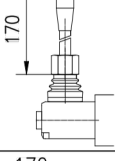
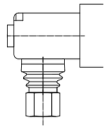
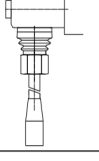
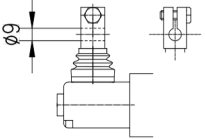
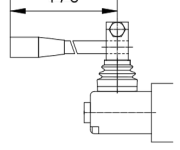
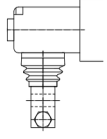
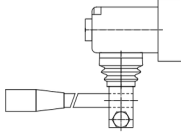
• Table 9

Code	Ports (threads)			
	P	A; B	T	N
M	M22X1.5	M18X1.5	M22X1.5	M22X1.5
G	G1/2	G3/8	G1/2	G1/2
S	7/8-14UNF	3/4-14UNF	7/8-14UNF	7/8-14UNF



Element size model selection (ordering code)

• Table 10

Code	Feature	Code	Feature	Code	Feature	Code	Feature
KZ		KZ1		KZ0		KZ01	
KY		KY1		KY0		KY01	
KL		KL1		KL0		KL01	
-	Without hand control						

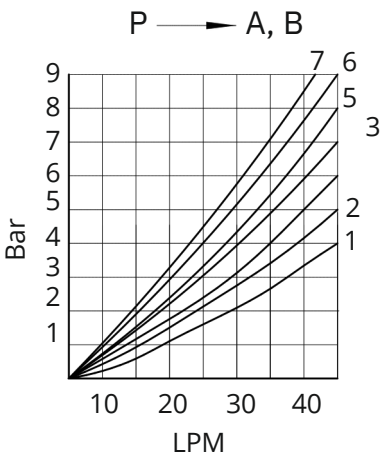
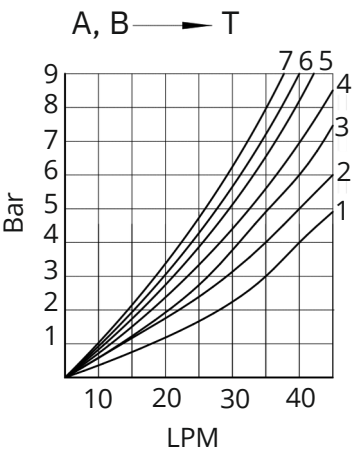
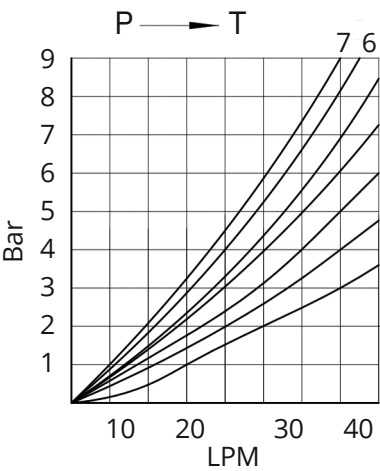
• Table 11

Code	
C	Closed center
C1	Part for power beyond sleeve (carry over) (N : Ø14 M22X1.5)
C2	Part for power beyond sleeve (carry over) (N : G1/2 M22X1.5)
-	Without part for pressure carry over
X	Power beyond ever to tank

• Table 12

Code	Used connection ports
11	P1 ; T1
12	P1 ; T2
21	P2 ; T1
22	P2 ; T2

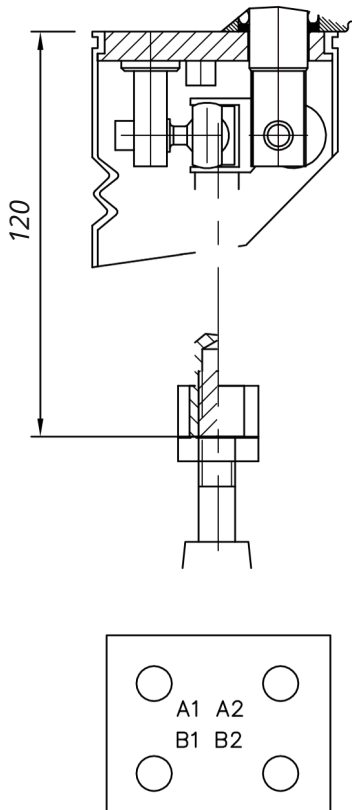
Pressure drop curves



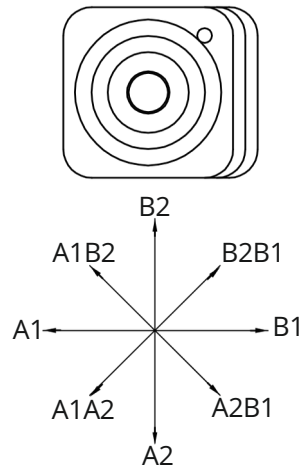
Joystick details

Joystick “+”

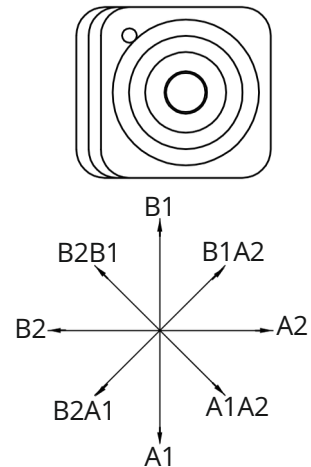
This control gives the possibility to operate, at the same time two spools with a “+” movement.



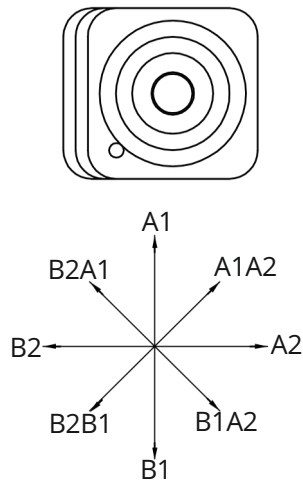
Standard version 1



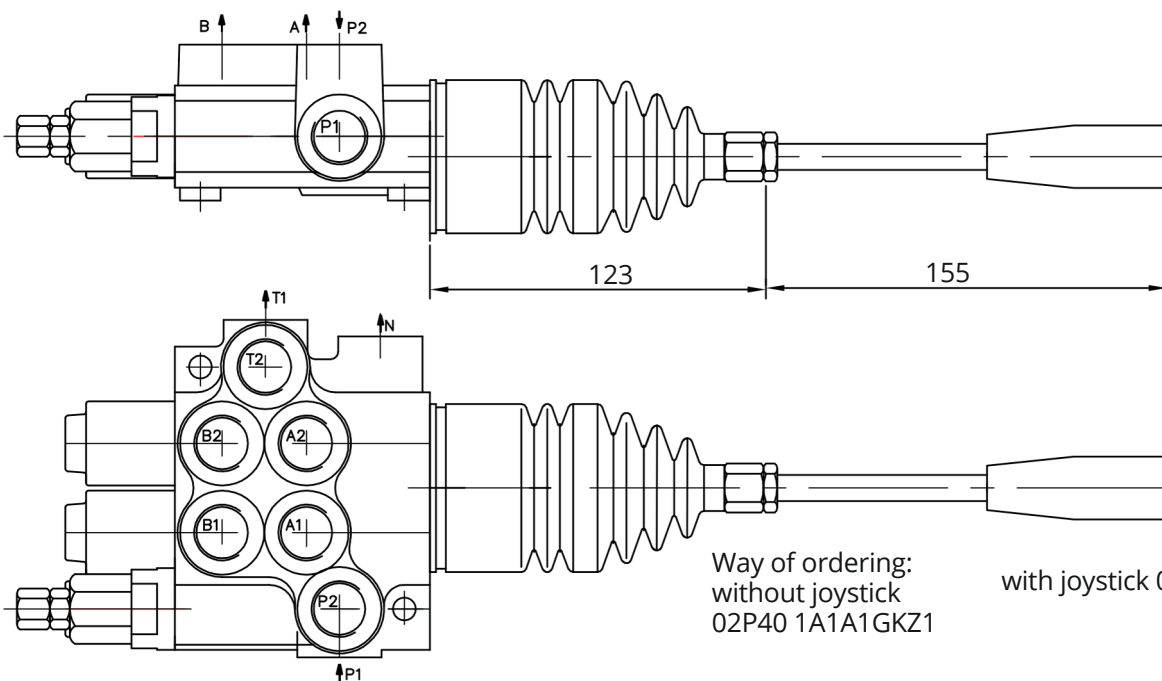
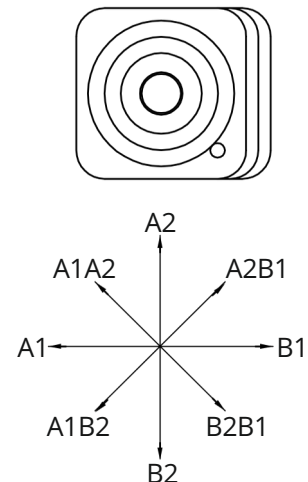
Standard version 2



Standard version 3



Standard version 4



Way of ordering:
without joystick
02P40 1A1A1GKZ1

with joystick 02P40 1(A1A1)(js+3)G