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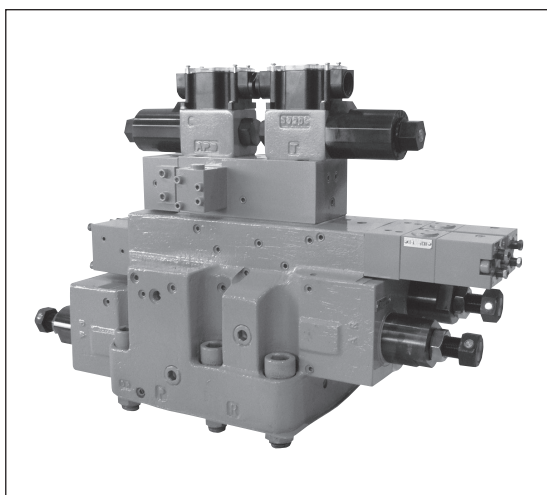
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MULTIFUNCTION VALVE (MF3N)

MULTIFUNCTION VALVE (MF3N)



This multifunction valve supports up to 16 control functions with the applicable pressure range and flow range expanded so that it can be used in a variety of applications.

■ Features

1. The maximum applicable range of the valve is 25 MPa and 800 L/min (with size 10).
 2. The light and compact design of the valve allows simplification of the hydraulic system.
 3. The main valve is of the poppet type and, in comparison with the spool type, is able to reduce valve pressure loss as well as leak across ports drastically.
 4. The poppet type main valve ensures quick switching with less shock.
 5. The circuit can be modified readily by changing a part of the component parts.
 6. The mounting dimensions are compatible with a conventional solenoid valve. This means that the multifunction valve can be used together with stack valves (HY-TEGRA system of TOYOOKI).
- The appropriate tightening torque is: Size 06: 45 to 55 N-m
 - If a subplate is necessary, please order one separately.
 - For the subplate, select HY-TEGRA manifold HMC-1-06-08-T* (page D-67).

■ Specifications

Nominal size	Max. flow (L/min)	Max. operating pressure (MPa)	Permissible back pressure (MPa)	Cracking pressure (MPa)		Counterbalance pressure adjustment range (MPa)	Differential counterbalance pressure adjustment range (MPa)	Pressure control adjustment range (MPa)	Unloading valve pressure adjustment range (MPa)	Pilot valve min. PLT pressure	Pressure relief valve PLT port pressure
				P Port	R Port						
06	320	25	25	0.35	0.2	0.7 to 14	0.7 to 14	2 to 25	0.7 to 14	10% of main pressure	10% of main pressure

■ Solenoid characteristics

For AC

Model	SLH5-025B-R1	SLH5-025B-R2
Rated voltage	AC100 V (50/60 Hz)	AC200 V (50/60 Hz)
Current	0.35 A (50/60 Hz)	0.19 A (50/60 Hz)
Power consumption	31 W	33 W

For DC

Model	SLH5-025B-D2
Rated voltage	DC24 V
Holding current	1.2 A
Power consumption	29 W

■Description of the model designation

MF3N-①②③④⑤⑥⑦-BGFA-①②③④⑤⑥⑦(-C)-06B-**

Multifunction valve
Max. operating pressure
3: 25 Mpa
Neutral position
G: ABR connection
C: Closed center
M: BR connection
N: AR connection
With/without tally valve
No code: Without tally valve
C: With manual tally valve
J: With automatic tally valve

(A-port control functions)
(B-port control functions)

Voltage indication
AC/DC convertible type
WR1: AC100 V
WR2: AC200 V
DC type
WD2: DC24 V
Model number
Nominal size of valve 06

Directional control function		BCFA	BGFA	BMFA	BNFA
Hydraulic circuit symbol	Without tally valve				
	With tally valve				

■Types of A-B port control functions

Circled No. (NOTE 1)	Code	Name	Circled No. (NOTE 1)	Code	Name
① (NOTE 3)	Y	Meter-in throttle	⑦	A	Pressure control
	W	Meter-in 2-speed		T	Solenoid-operated 1 pressure level control (Normally open)
	Z	Differential counterbalance		H	Solenoid-operated 2 pressure level control (Normally open)
②	F	Meter-out throttle		P	Solenoid-operated 1 pressure level control (Normally closed)
③	B	Counterbalance		S	Solenoid-operated 2 pressure level control (Normally closed)
④	K	Pilot check		M	Solenoid-operated pressure relief (Normally open) (NOTE 2)
⑤	R	Safe		L	Solenoid-operated pressure relief (Normally close) (NOTE 2)
⑥	E	Pressure relief	Regular functions		Differential circuit
	Q	Unloading			R-port check
					Vent operation pressure control

NOTE 1: A number in the Circled No. column indicates the circled number of the A-B port control functions.

NOTE 2: To use "M" or "L", use "E" also.

NOTE 3: Simultaneous use of "W" and "Z" (Example: W for A port and Z for B port) is not permitted.

NOTE 4: indicates special specifications.

■Hydraulic circuit symbols

NOTE 1: Circled letters indicate the control function codes for the A and B ports.

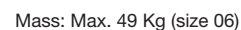
NOTE 2: Concerning functions Y, W and Z, one of these functions is installed for each port. In this drawing, two functions are shown for each port for the purpose of explanation.

NOTE 3: At the position where the S or L function is shown, any of the seven functions indicated below can be installed.

NOTE 4: The flow of the ①, ②, ③, ④, ⑤, ⑥, ⑦, ⑧, ⑨, ⑩, ⑪, ⑫, ⑬, ⑭, ⑮, ⑯, ⑰, ⑱, ⑲, ⑳, ㉑, ㉒, ㉓, ㉔, ㉕, ㉖, ㉗, ㉘, ㉙, ㉚, ㉛, ㉜, ㉝, ㉞, ㉟, ㊱, ㊲, ㊳, ㊴, ㊵, ㊶, ㊷, ㊸, ㊹, ㊺, ㊻, ㊼, ㊽, ㊾, ㊿ functions is regulated by the setting of the ① function installed at the same port.

①		V* DR
②		
③		
④		
⑤		
⑥		
⑦		

MULTIFUNCTION VALVES



Size 06



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