Partnership. With Guarantee.

Three-way ball valves with electric actuator Series BA542 (L-bore) and BA541 (T-port hole)



Design type	3-way ball valve with Electric geared motor with additional manual override, Actuator heater and Torque monitoring, Triple-shell sealing ball, full bore passage
Connection	G1/4"...G4" according to ISO228/1
Materials Standard version	Actuator: Polymer housing PA6 or rather PA66 Ball valve: Housing Stainless steel AISI316L polished, Ball Stainless steel AISI316L, Seals MPTFE/FKM
Application range	Fluids and gases of group 1 and 2 according to PED 2014/68/EU that do not attack the materials used.
Medium temperature	0...+100°C (Medium temperature -20...+160°C on request)
Ambient temperature	-20...+55°C
Operating pressure	0bar up to Operating pressure according to table and pressure-temperature diagram
Mounting type	Installation in rigid piping system
Mounting position	any, except hanging downward

Electrical data:

Voltage type	AC and DC voltage
Standard voltage	see table "Electrical data"
Permissible voltage fluctuation	± 10%
Electrical Connection	via cable gland PG11
End position shut-off	via built-in limit switches
Duty cycle	see table "Electrical data", however max. 100 switching cycles per day
Degree of protection	VB015 IP65 or rather all other sizes IP67 according to EN 60529 with properly installed cable entry (protection against dust ingress and splashing water)
Special version	Battery pack for safety position, Positioner, Position feedback Potentiometer
Ordering note	When ordering the switching mode must be specified (see "switching diagram").
Application note	The pressure and temperature specifications are maximum values for normal conditions, for lubricating or non-degreasing media. Degreasing media in particular reduce the specified values and increase the required torque. For these special cases, we recommend prior consultation.

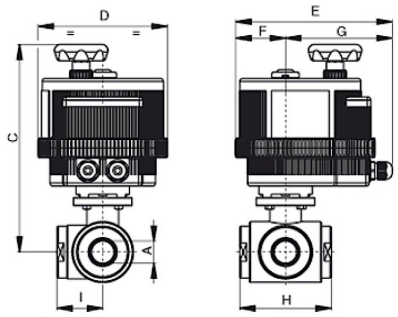
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Type code

	BA541- BA542-	14	-	2	0	H	-	01
	G1/4"	14						
	G3/8"	38						
	G1/2"	12						
	G3/4"	34						
	G1"	10						
	G11/4"	114						
	G11/2"	112						
	G2"	20						
	G21/2"	212						
	G3"	30						
Connection	G4"	40						
	01/05 (Leave blank)							
	02			2				
	03			3				
	04			4				
	06			6				
Switching type	07			7				
	On-off actuator				0			
	On-off actuator-NC (Battery pack for safety position)				P			
Actuation type	On-off actuator-NO (Battery pack for safety position)				Q			
	12VAC/DC					D		
	100-240VAC/DC					H		
Voltage	24VAC/DC					L		
Special version	described in the item text							01

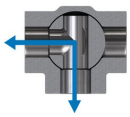
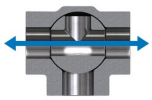
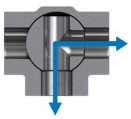
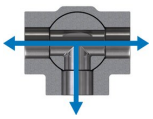
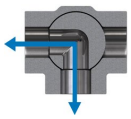
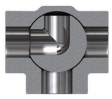
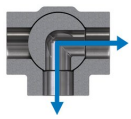
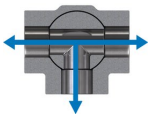
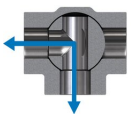
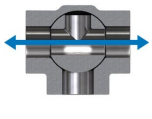
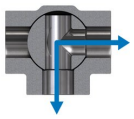
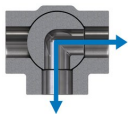
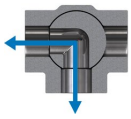
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Dimensions



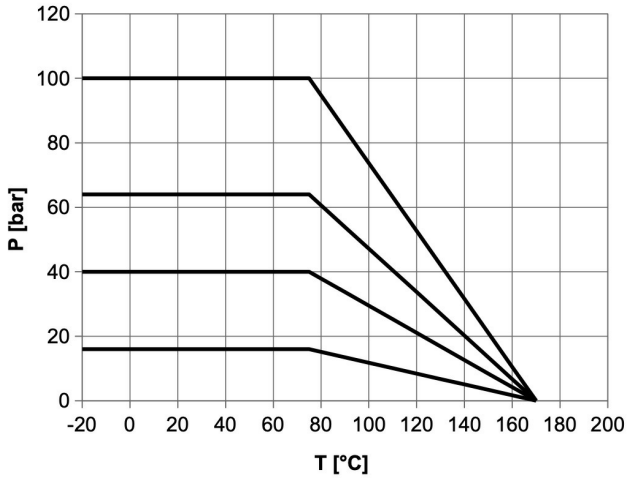
Connection A	Nominal size DN[mm]	max. Operating pressure [bar]	C	D	E	F	G	H	I	Weight [approx. kg]	Actuator type	Type L-bore	Type T-port hole
G1/4"	12	100	211	123	163	42,5	120,5	72	36	2,42	VB015	BA542-14	BA541-14
G3/8"	12	100	211	123	163	42,5	120,5	72	36	2,40	VB015	BA542-38	BA541-38
G1/2"	15	100	217	123	163	42,5	120,5	82	41	2,74	VB015	BA542-12	BA541-12
G3/4"	20	100	275	157	190	60,5	129,5	92	46	4,13	VB030	BA542-34	BA541-34
G1"	25	64	284	157	190	60,5	129,5	102	51	4,84	VB030	BA542-10	BA541-10
G11/4"	32	64	339	185	214	67,5	146,5	118	59	7,8	VB060	BA542-114	BA541-114
G11/2"	40	64	354	185	214	67,5	146,5	134	67	10,1	VB060	BA542-112	BA541-112
G2"	50	40	362	185	214	67,5	146,5	144	72	11,5	VB060	BA542-20	BA541-20
G21/2"	65	40	395	211	237	84	153	160	80	14,9	VB110	BA542-212	BA541-212
G3"	80	40	428	211	237	84	153	200	100	25,0	VB190	BA542-30	BA541-30
G4"	100	16	458	211	237	84	153	240	120	37,4	VB190	BA542-40	BA541-40

Circuit diagram

BA541				BA542		
Switching type 01	Switching type 02	Switching type 03	Switching type 04	Switching type 05	Switching type 06	Switching type 07
Position 1						
						
Position 2						
						

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Pressure-temperature diagram



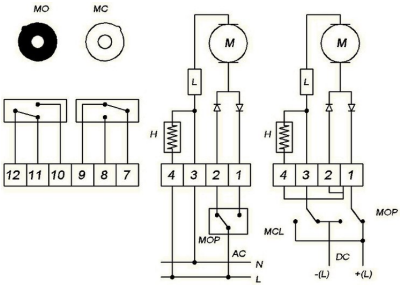
Electrical data

Type	Voltage	Current consumption [A]	Rated torque [Nm]	Duty cycle (S3)	Actuation time [Sek.]
VB015 -L-12	12V/50-60Hz/12VDC	1,2	15	AC 50% / DC 75%	10
VB015-L-24	24V/50-60Hz/24VDC	0,6	15	AC 50% / DC 75%	10
VB015-H	100-240V/50-60Hz	0,3-0,19	15	75%	10
VB030-L-12	12V/50-60Hz/12VDC	AC 2,2 / DC 1,8	30	50%	8
VB030-L	24V/50-60Hz/24VDC	AC 1,0 / DC 0,7	30	75%	8
VB030-H	100-240V/50-60Hz	0,4-0,2	30	75%	8
VB060-L-12	12V/50-60Hz/12VDC	AC 3,8 / DC 2,85	60	50%	9
VB060-L	24V/50-60Hz/24VDC	AC 1,8 / DC 1,2	60	75%	9
VB060-H	100-240V/50-60Hz	0,6-0,3	60	75%	9
VB110-L-12	12V/50-60Hz/12VDC	AC 2,2 / DC 1,8	110	50%	27
VB110-L	24V/50-60Hz/24VDC	AC 1 / DC 0,7	110	75%	27
VB110-H	100-240V/50-60Hz	0,4-0,2	110	75%	27
VB190-L-12	12V/50-60Hz/12VDC	AC 3,8 / DC 2,85	190	50%	27
VB190-L	24V/50-60Hz/24VDC	AC 1,8 / DC 1,2	190	75%	27
VB190-H	100-240V/50-60Hz	0,6-0,3	190	75%	27

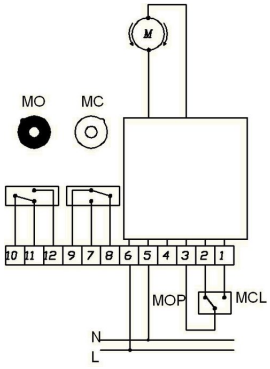
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Electrical connection VB015

Type VB015-L



Type VB015-H

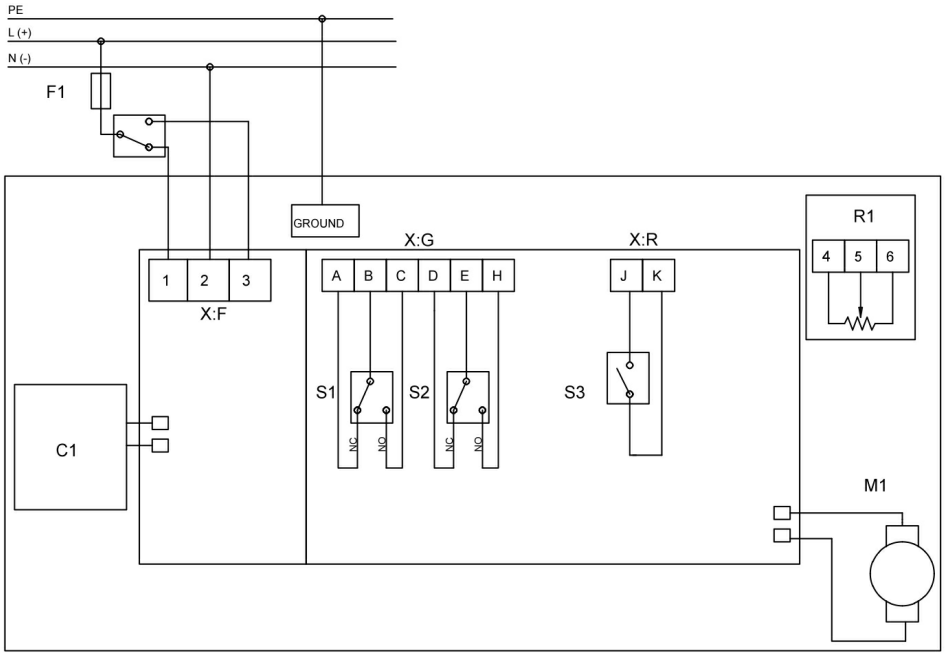


Position	Description	Note
H	Heater	Standard
L	Torque limiter	Standard
MC	End position feedback signals CLOSED	Standard max. 1A/250VAC-1A/30VDC
MO	End position feedback signals ON	Standard max. 1A/250VAC-1A/30VDC
MCL	Actuator CLOSED	
MOP	Actuator OPEN	

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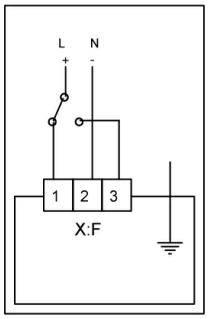
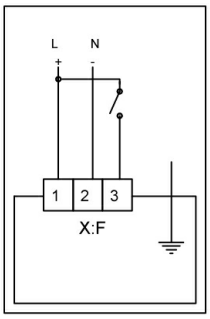
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Electrical connection VB030 - VB190



Position	Description	Note
C1	Battery pack for safety position	optional available
R1	Potentiometer 5 KΩ/1W	optional available
S1	End position feedback signals CLOSED	Standard max. 2A/250VAC-2A/30VDC
S2	End position feedback signals ON	Standard max. 2A/250VAC-2A/30VDC
S3	Fault message	Standard max. 1A/120VAC-2A/24VDC
X:F:1	Connection terminal	Actuator CLOSED
X:F:2	Connection terminal	
X:F:3	Connection terminal	Actuator OPEN

2-Point control or 3-point control by changing the electrical connection VB030-VB190

3-point control	2-point control
	

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