

Explosion-Proof Electric 2-Way Flanged Ball Valve **INSTRUCTION MANUAL**



dc DELCO

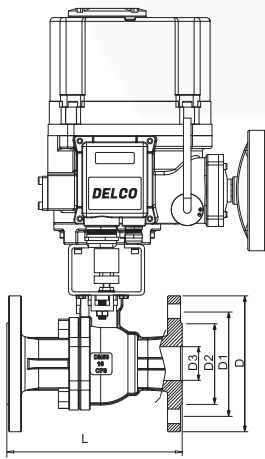
Specialized Control Valve Manufacturer



Introduction

Explosion proof electric two-way flange ball valve is composed of explosion-proof electric actuator and ball valve, suitable for frequent operation, two position cut-off, and adjustment. The connection between the ball valve and the actuator adopts a direct connection method. The electric actuator has a built-in servo system and does not require a separate servo amplifier. It can be controlled by inputting a 4-20mA signal and a 220V AC power supply. It has the advantages of simple connection, compact structure, small size, light weight, low resistance, stable and reliable action. The actuator can be configured with different models of electronic electric actuators according to user requirements.

Actuator Technical Parameters



ON-OFF Type	Feedback: Active Contact Signal, Passive Contact Signal, Resistance, 4-20mA
Regulation Type	Input & Output Signal: DC 4-20mA, DC 0-10V, DC 1-5V
Intelligent ON/OFF Type	The Local, Remote Control ON/OFF Type and MODBUS, PROFUBUS Field Bus
Intelligent Regulation Type	The Local, Remote Control Regulation Type and MODBUS, PROFUBUS Field Bus
Optional Voltage	AC380V AC220V DC24V, Special Voltage Can Be Customized

Technical Parameters

Nominal Size	DN15~DN500
Body Material	Carbon Steel(WCB), Stainless Steel(CF8, CF8M)
Connection Type	Flange
Pressure Rating	PN1.6-PN6.3MPa
Structure Type	Floating Ball Core
Seat Material	PTFE: -30°C~180°C
Core Material	SS304, SS316, SS316L
Stem Material	SS304, SS316, SS316L
Applicable Medium	Water, Liquids, Gas, Oil, Powder, Steam, Acid-Base Corrosive Medium

GB-PN16 Main Outline and Connecting Flange Size

MEDLE	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200
G	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"
D3	15	20	25	30	40	50	65	80	100	125	150	200
D2	45	55	65	78	85	100	120	135	155	185	210	265
D1	65	75	85	100	110	125	145	160	180	210	240	295
D	95	105	115	135	145	160	180	195	215	245	280	335
L	130	130	140	165	165	203	222	241	218	320	360	457
n-φd	4-φ14	4-φ14	4-φ14	4-φ18	4-φ18	4-φ18	4-φ18	8-φ18	8-φ18	8-φ18	8-φ23	12-φ23

GB-PN25 Main Outline and Connecting Flange Size

MEDLE	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200
G	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"
D3	15	20	25	30	40	50	65	80	100	125	150	200
D2	45	55	65	78	85	100	120	135	160	190	220	250
D1	65	75	85	100	110	125	145	160	190	220	250	310
D	95	105	115	140	150	160	180	195	230	270	300	360
L	130	130	140	165	165	203	222	241	280	320	360	457
n-φd	4-φ14	4-φ14	4-φ14	4-φ18	4-φ18	4-φ18	8-φ18	8-φ18	8-φ23	8-φ25	8-φ25	12-φ25

GB-PN40 Main Outline and Connecting Flange Size

MEDLE	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200
G	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"
D3	15	20	25	30	40	50	65	80	100	125	150	200
D2	45	55	65	78	85	100	120	135	160	188	218	282
D1	65	75	85	100	110	125	145	160	190	220	250	320
D	95	105	115	135	145	160	180	195	230	270	300	375
L	140	152	165	178	190	216	241	283	305	381	403	419
n-φd	4-φ14	4-φ14	4-φ14	4-φ18	4-φ18	4-φ18	8-φ18	8-φ18	8-φ23	8-φ25	8-φ25	12-φ30

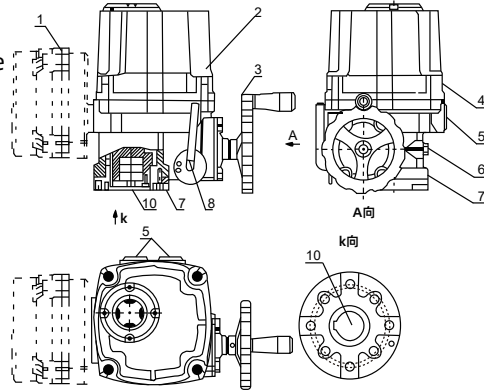
DB-PN63 Main Outline and Connecting Flange Size

MEDLE	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200
G	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"
D3	15	20	25	30	40	50	65	80	100	125	150	200
D2	55	68	78	82	95	105	130	140	168	202	240	300
D1	75	90	100	110	125	135	160	170	200	240	280	345
D	105	125	135	150	165	175	200	210	250	295	340	405
L	140	152	165	178	190	216	241	283	305	381	403	419
n-φd	4-φ14	4-φ18	4-φ18	4-φ23	4-φ23	4-φ23	8-φ23	8-φ23	8-φ25	8-φ30	8-φ34	12-φ34

Structure Composition

The Electric Actuator Mainly Consists of the Following Parts:

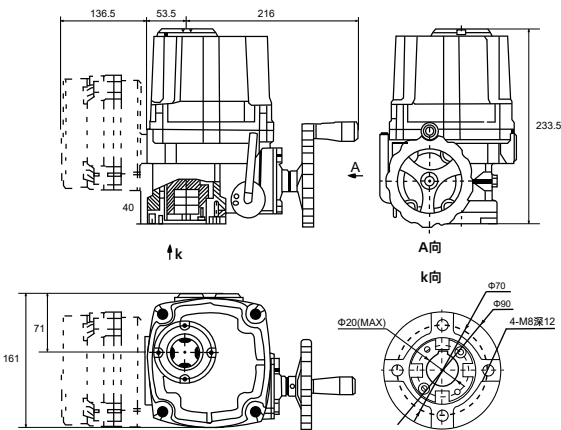
- »Housing part: including housing and base;
- »Driving part: powered by a high- performance fullyenclosed squirrel- cage motor;
- »Transmission mechanism: double worm gear and clutch;
- »Proportional control part: isolated from the mechanical part toimprove reliability;
- »Torque switch and limit switch part; Opening detection and feedback part.



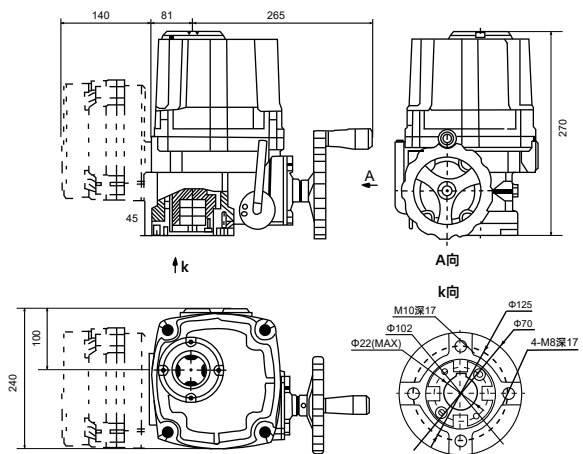
01	Control Room
02	Enclosure
03	Handwheel
04	Housing
05	Cable Connection Plyg
06	Mechanical Limit Screw
07	Connecting Flange
08	Clutch Handle
09	Window
10	Output Shaft

Outline Dimension Drawing Of Actuator

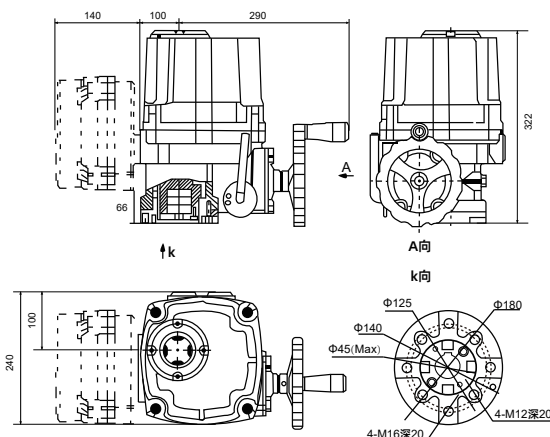
QT-10/15



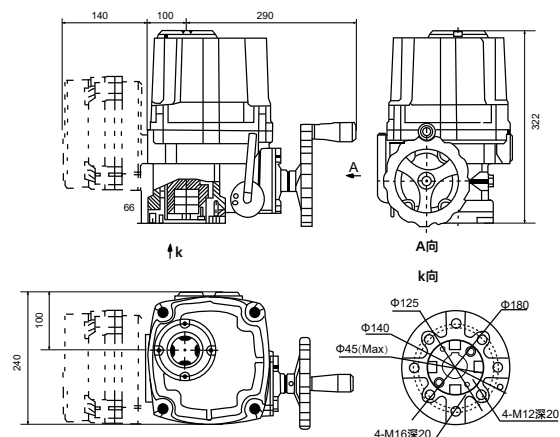
QT-20



QT-50/60

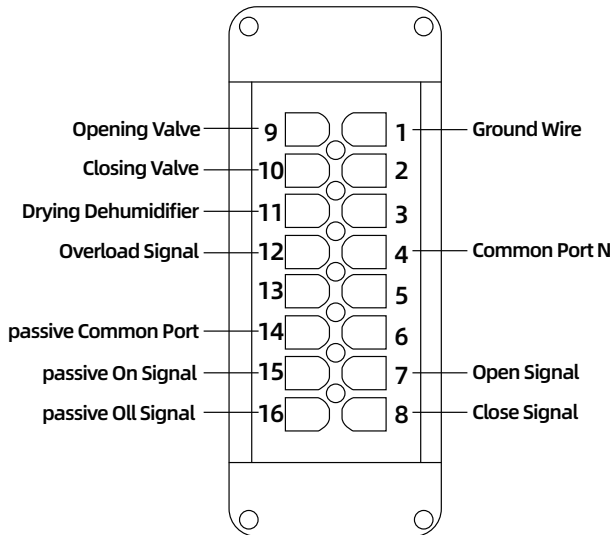


QT-100/200

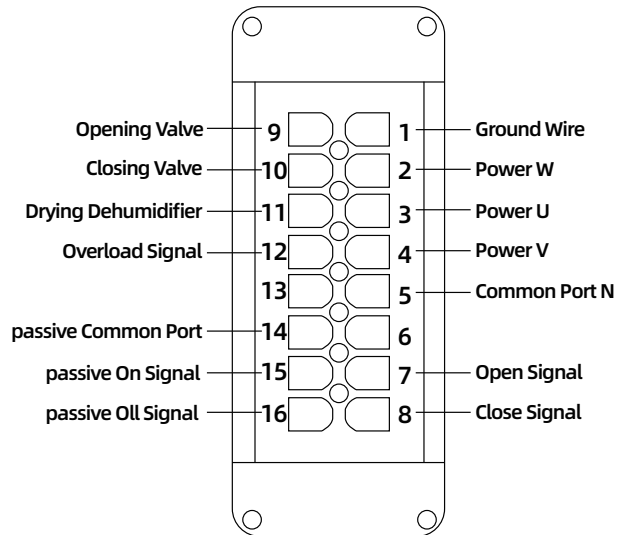


Wiring Diagram

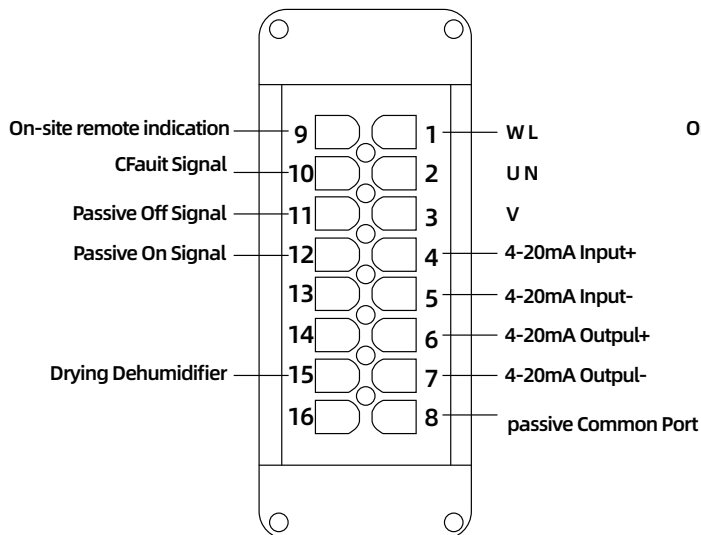
220V Wiring Diagram Of Switch Type



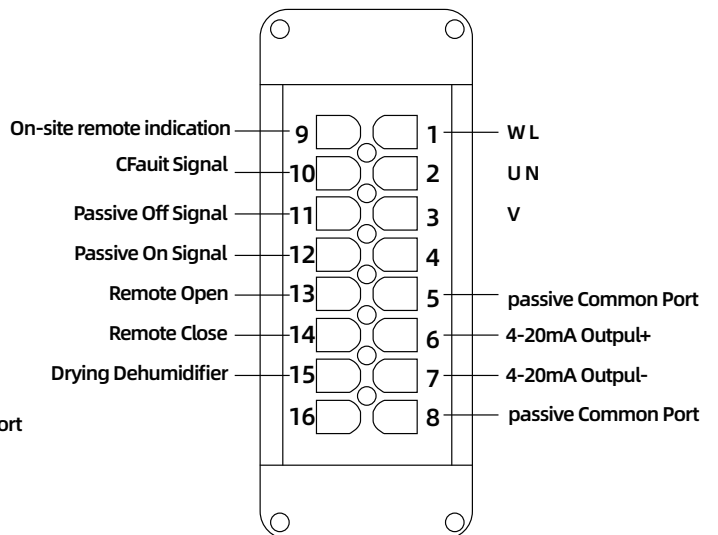
380V Wiring Diagram Of Switch Type



Wiring Diagram Of Intelligent Adjustable Type



Wiring Diagram Of Intelligent Switch Type



Seeking For Global Distributors



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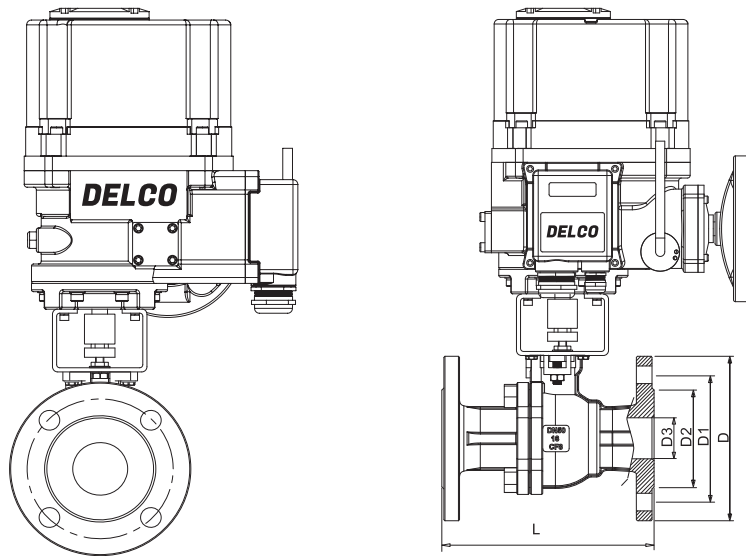
Phone: +86-159 8960 2972

Website: www.delcofluid.com / www.delcovalves.com / www.delcovalve.ru

E-mail: sales@delcofluid.com

Address: Building 8A#, Tiansheng Industrial Park, Wanjiang Street, Dongguan, China





ANSI-150# Main Outline and Connecting Flange Size

MEDLE	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250
G	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"
D3	15	20	25	30	40	50	65	80	100	125	150	200	250
D2	34.9	42.9	50.8	63.5	73	92.1	104.8	127	157.2	185.7	215.9	269.9	323.8
D1	60.3	69.9	79.4	88.9	98.4	120.7	139.7	152.4	190.5	215.9	241.3	298.5	362
D	90	100	110	115	125	150	180	190	230	255	280	345	405
L	108	117	127	140	165	178	190	203	229	356	394	457	533
d	11.5	13	14.5	16	17.5	19.5	22.5	24	24	24	25.5	29	30.5
n-φd	4-φ16	4-φ16	4-φ16	4-φ16	4-φ16	4-φ19	4-φ19	4-φ19	8-φ19	8-φ22	8-φ22	8-φ22	12-φ25

ANSI-300# Main Outline and Connecting Flange Size

MEDLE	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250
G	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"
D3	15	20	25	30	40	50	65	80	100	125	150	200	250
D2	34.9	42.9	50.8	63.5	73	92.1	104.8	127	157.2	185.7	215.9	269.9	323.8
D1	66.7	82.6	88.9	98.4	114.3	127	149.2	168.3	200	235	269.9	330.2	387.4
D	95	115	125	135	155	165	190	210	255	280	320	380	445
L	140	152	165	178	190	216	241	282	305	381	403	502	568
d	14.5	16	17.5	19.5	21	22.5	25.5	29	32	35	37	41.5	48
n-φd	4-φ16	4-φ19	4-φ19	4-φ19	4-φ22	8-φ19	8-φ22	8-φ22	8-φ22	8-φ22	12-φ22	12-φ25	16-φ29

Main Technical Parameters, Specifications

MODEL	QT-10	QT-15	QT-20	QT-30	QT-40	QT-50	QT-60	QT-80	QT-90	QT-100	QT-200
Max Output Torque	100	150	200	300	350	400	500	600	800	1000	2000
90°Action Time	18/22	18/22	21/25	21/25	26/31	26/31	26/31	26/31	31/37	31/37	93/112
Motor Power	25	40	40	60	90	90	120	120	180	200	200
Rated Current	AC220V	0.55	0.9	0.9	1.0	1.2	1.2	1.9	1.9	2.4	2.6
	AC380V	≤0.1	≤0.1	≤0.1	0.3	0.55	0.55	0.6	0.6	1.2	1.4
Handwheel Revolution	10	10	11	11	14	14	14	18	18	18	50

Standard Specification

Housing	Waterproof Level IP67,NEMA 4 and 6	
Voltage Options	Standard:220VAC Single-Phase 50/60Hz,±10% Optional: 380 AC Three-Phase, 50/60Hz, ±10%	
Motor	Squirrel-Cage Asynchronous Motor	
Limit Switch	ON/OFF,Each of the 1 SPDT AC250V/16A	
Auxiliary Limit Switch	ON/OFF,Each of the 1 SPDT AC250V/16A	
Torque Switch	ON/OFF,Each of the 1 SPDT AC250V/16A	QT-010 Excluded
Itineraries	90°±10°	0~270° Optional
Stall Protection/ Operating Temperature	Built-inoverheating Protection, Open 115°C±5°C/Close 97°C±5°C	
Indicator	Continuousposition Indicator Scale	
Manual Operation	Mechanical Clutch Mechanism, With Handwheel Operation	
Self-Locking Device	Wonn Gear, Self-Locking Provided for the Worm Mechanism	
Mechanical Limit	Two External Adjusting Bolts	
Desiccator	25W (110/220VAC)	
Connection Hole	2 PCS PE 3/4"	
Ambient Temperature	-20°C~+70°C	
Lubrication	Aluminium-Base Grease (EP Type)	
Materials	Steel/Aluminum Alloy/Aluminum Bronze/Polycarbonate	
Ambient Humidity	Maximum 90% RHnon-Condensing	
Aseismic Performance	X Y Z 10g, 0.2-34 Hz, Minutes	
External Coating	Dry Powder/Epoxy polyester, With a Superior Anti-Corrosion Function	