

Multi-Turn Electric Globe Valve **INSTRUCTION MANUAL**



dc DELCO

Specialized Control Valve Manufacturer



Introduction

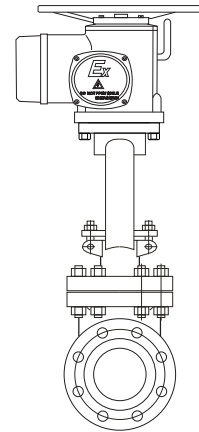
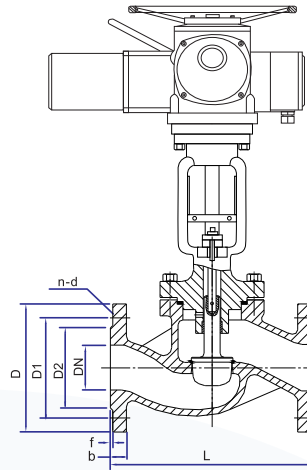
The valve disc of the electric multi turn globe valve moves along the vertical line of the valve seat center, and the multi turn actuator drives the valve stem to rise and fall, adjust the flow rate or completely close. The structure is a "Z" - shaped or angular flow channel with a large pressure drop. Precise adjustment: The clearance between the valve disc and the valve seat can finely control the flow rate. High sealing performance: Forced sealing design, suitable for high-pressure differential working conditions. Anti erosion: The valve disc and seat are welded with hard alloy, which is resistant to particle wear. Application areas: Steam systems, high-pressure feedwater, fine chemical flow regulation.

Standards and Norms

Design and Manufacture	Structure Length	Pressure-temperature rating	Connection fange	Test and Inspection
GB 12235	GB 12221	GB 12224	JB/T 79/82~1994 GB 9113 HG 20592-20635	JB/T 9092-1999 GB 13927
ANSI B16.34 BS1873	ASME B16.10	ASME B16.34	ANSI B16.5	API 598
JS B2073 B2083	JS B2002	JIS B2212 B2214	JIS B2071 B2081	JIS B2003

Main Components Material

Name	Material								
Body/Bonnet	CF8	CF3	CF8M	CF3M	WCB	LCB	WC6	WC9	C5
Wedge	CF8	CF3	CF8M	CF3M	WCB	LCB	WC6	WC9	C5
Stem	F304	F304L	F316	F316L	2CR13	F304	F304	F304	F304
Stem Nut	Aluminium Bronze								
Packing	PTFE					Graphite			
Gasket	PTFE					Graphite			
Gland	CF8	CF3	CF8M	CF3M	WCB	LCB	WC6	WC9	C5
Bolt	Stainless Steel					35CrMoA			
Nut	Stainless Steel					45、35CrMoA			
Handwheel	Stainless Steel								

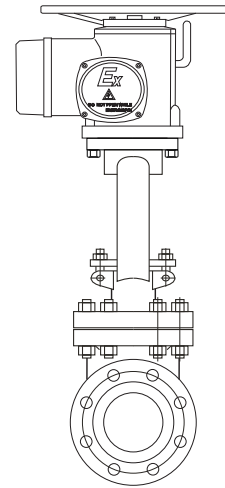
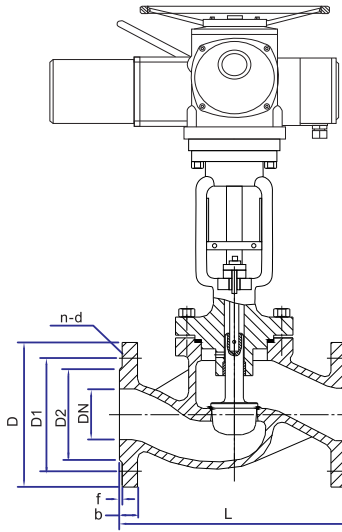


Main Outline and Connecting (GB)

MEDLE		Inch	D	D1	D2	n-d	b	f	L
1.0	DN15	1/2"	95	65	45	4-14	14	2	130
	DN20	3/4"	105	75	55	4-14	16	2	150
	DN25	1"	115	85	65	4-14	16	2	160
	DN32	1-1/4"	140/135	100	78	4-18	18	2	180
	DN40	1-1/2"	150/145	110	85	4-18	18	2	200
	DN50	2"	165/160	125	100	4-18	20	2	230
	DN65	2-1/2"	185/180	145	120	4-18	20	2	290
	DN80	3"	200/195	160	135	8-18	20	2	310
	DN100	4"	200/215	180	155	8-18	22	2	350
	DN125	5"	245	210	185	8-18	22	2	400
	DN150	6"	280	240	210	8-22	24	2	480
	DN200	8"	335	295	265	8-22	24	2	500
	DN250	10"	390	350	320	12-22	26	2	550
	DN300	12"	440	400	368	12-22	26	2	750
	DN350	14"	500	460	428	16-22	26	2	850
	DN400	16"	565	515	482	16-26	26	2	950
DN450	18"	615	656	532	20-26	28	2	1050	
DN500	20"	670	620	585	20-26	28	2	1150	
1.6	DN15	1/2"	95	65	45	4-14	14	2	130
	DN20	3/4"	105	75	55	4-14	14	2	150
	DN25	1"	115	85	65	4-14	14	2	160
	DN32	1-1/4"	140/135	100	78	4-18	16	2	180
	DN40	1-1/2"	150/145	110	85	4-18	16	2	200
	DN50	2"	165/145	125	100	4-18	16	3	230
	DN65	2-1/2"	185/180	145	120	4-18	18	3	290
	DN80	3"	200/195	160	135	8-18	20	3	310
	DN100	4"	220/215	180	155	8-18	20	3	350
	DN125	5"	220/215	210	185	8-18	22	3	400
	DN150	6"	250/245	240	210	8-23	24	3	480
	DN200	8"	285/280	295	265	12-23	26	3	500
	DN250	10"	340/335	355	320	12-25	30	3	550
	DN300	12"	405	410	375	12-25	30	4	750
	DN350	14"	460	470	435	16-30	34	4	850
	DN400	16"	520	525	485	16-30	36	4	950
DN450	18"	580/640	585	545	20-30	40	4	1050	
DN500	20"	715/705	650	608	20-34	44	4	1150	

Main Outline and Connecting (ANSI)

MEDLE		Inch	D	D1	D2	n-d	b	f	L
150 Class	DN15	1/2"	90	60.3	34.9	4-16	11.5	2	108
	DN20	3/4"	100	69.9	42.9	4-16	13	2	117
	DN25	1"	110	79.4	50.8	4-16	14.5	2	127
	DN32	1-1/4"	115	88.9	63.5	4-16	16	2	140
	DN40	1-1/2"	125	98.4	73	4-16	17.5	2	165
	DN50	2"	150	120.7	92.1	4-19	19.5	3	203
	DN65	2-1/2"	180	139.7	104.8	4-19	22.5	3	216
	DN80	3"	190	152.4	127	4-19	24	3	241
	DN100	4"	230	190.5	157.2	8-19	24	3	292
	DN125	5"	255	215.9	185.7	8-22	24	2	356
	DN150	6"	280	241.3	215.9	8-22	25.5	2	406
	DN200	8"	345	298.5	270	8-22	29	2	495
	DN250	10"	405	362	323.8	12-25	30.5	2	622
	DN300	12"	485	431.8	381	12-25	32	2	698
	DN350	14"	535	476.3	412.8	12-29	35	2	787
	DN400	16"	595	539.8	469.9	16-29	37	2	914
300 Class	DN15	1/2"	95	66.7	34.9	4-16	14.5	2	152
	DN20	3/4"	115	82.6	42.9	4-19	16	2	178
	DN25	1"	125	88.9	50.8	4-19	17.5	2	203
	DN32	1-1/4"	135	98.4	63.5	4-19	19.5	2	216
	DN40	1-1/2"	155	114.3	73	4-22	21	2	229
	DN50	2"	165	127	92.1	8-19	22.5	2	267
	DN65	2-1/2"	190	149.2	104.8	8-22	25.5	2	292
	DN80	3"	210	168.3	127	8-22	29	2	318
	DN100	4"	255	200	157.2	8-22	32	2	356
	DN125	5"	280	235	185.7	8-22	35	2	400
	DN150	6"	320	269.9	215.9	12-22	37	2	445
	DN200	8"	380	330.2	269.9	12-25	41.5	2	559
	DN250	10"	445	387.4	323.8	16-29	48	2	622
	DN300	12"	520	450.8	381	16-32	51	2	711
	DN350	14"	585	515.4	412.8	20-32	54	2	838
	DN400	16"	650	571.5	469.9	20-35	57.5	2	864
600 Class	DN15	1/2"	95	66.7	34.9	4-16	21	6.4	165
	DN20	3/4"	115	82.6	42.9	4-19	23	6.4	190
	DN25	1"	125	88.9	50.8	4-19	24	6.4	216
	DN32	1-1/4"	135	98.4	63.5	4-19	27.5	6.4	229
	DN40	1-1/2"	155	114.3	73	4-22	29	6.4	241
	DN50	2"	165	127	92.1	8-19	32	6.4	292
	DN65	2-1/2"	190	149.2	104.8	8-22	35	6.4	330
	DN80	3"	210	168.3	127	8-22	38.5	6.4	356
	DN100	4"	275	215.9	157.2	8-25	45	6.4	432
	DN125	5"	330	266.7	185.7	8-29	51.5	6.4	508
	DN150	6"	355	292.1	215.9	12-29	54.5	6.4	559
	DN200	8"	420	349.2	269.9	12-32	62	6.4	660
	DN250	10"	510	431.8	323.8	16-35	70	6.4	787
	DN300	12"	560	489	381	20-35	73.5	6.4	838
	DN350	14"	605	527	412.8	20-39	76.5	6.4	889



Main Outline and Connecting (JIS)

MEDLE		Inch	D	D1	D2	n-d	b	f	L
10K	DN15	1/2"	95	70	52	4-15	12	1	108
	DN20	3/4"	100	75	58	4-15	14	1	117
	DN25	1"	125	90	70	4-19	14	1	127
	DN32	1-1/4"	135	100	80	4-19	16	2	140
	DN40	1-1/2"	140	105	85	4-19	16	2	165
	DN50	2"	155	120	100	4-19	16	2	203
	DN65	2-1/2"	175	140	120	4-19	18	2	216
	DN80	3"	185	150	130	8-19	18	2	241
	DN100	4"	210	175	155	8-19	18	2	292
	DN125	5"	250	210	185	8-23	20	2	356
	DN150	6"	280	240	215	8-23	22	2	406
	DN200	8"	330	290	265	12-23	22	2	485
	DN250	10"	400	355	325	12-25	24	2	622
	DN300	12"	445	400	370	16-25	24	2	698
	DN350	14"	490	445	415	16-25	26	2	787
DN400	16"	560	510	475	16-25	28	2	914	
20K	DN15	1/2"	95	70	52	4-15	14	1	154
	DN20	3/4"	100	75	58	4-15	16	1	178
	DN25	1"	125	90	70	4-19	16	1	203
	DN32	1-1/4"	135	100	80	4-19	18	2	216
	DN40	1-1/2"	140	105	85	4-19	18	2	229
	DN50	2"	155	120	100	8-19	18	2	267
	DN65	2-1/2"	175	140	120	8-19	20	2	292
	DN80	3"	200	160	135	8-23	22	2	318
	DN100	4"	225	185	160	8-23	24	2	356
	DN125	5"	270	225	195	8-25	26	2	400
	DN150	6"	305	260	230	12-25	28	2	445
	DN200	8"	350	305	275	12-25	30	2	559
	DN250	10"	430	380	345	12-27	34	2	622
DN300	12"	480	430	395	16-27	35	3	711	

Z series actuators, are driving equipment for valves to achieve opening, closing, adjustment and control. This series of actuators have the characteristics of full-featured, reliable performance, advanced control system, small size, light weight, convenient use and maintenance.

Z series actuators are suitable for valves with linear movements, such as gate valves, globe valves, diaphragm valves plunger valves, shut-off valves, water gates, etc., which can be used for bright stem valves and dark stem valves. The valve can be controlled remotely, collectively and automatically. It is widely used in electric power, metallurgy, petroleum, chemical, pharmaceutical, sewage treatment, agricultural irrigation and other industries.

The performance of this series of ordinary products meets the requirements of GB / T24923-2010 "Technical Conditions for Ordinary Valve Electric Devices";

The performance of this series of flameproof products conforms to GB3836.1-2010 "Explosive Environment Part 1: General Requirements", GB3836.2-2010 "Explosive Environment Part 2: Equipment Protected by Flameproof Enclosure" d" and GB / T24922-2010 "Technical Conditions of Flameproof Valve Electric Device".

Product Categories

Divided by control method: Divided by control method: ordinary type, intelligent switch type, intelligent adjustment type (Profibus fieldbus, Modbus Fieldbus, Hart fieldbus, FF fieldbus, Device Net fieldbus);

Divided by protection type: Outdoor and explosion-proof;

Divided by connection method: Torque type and thrust type

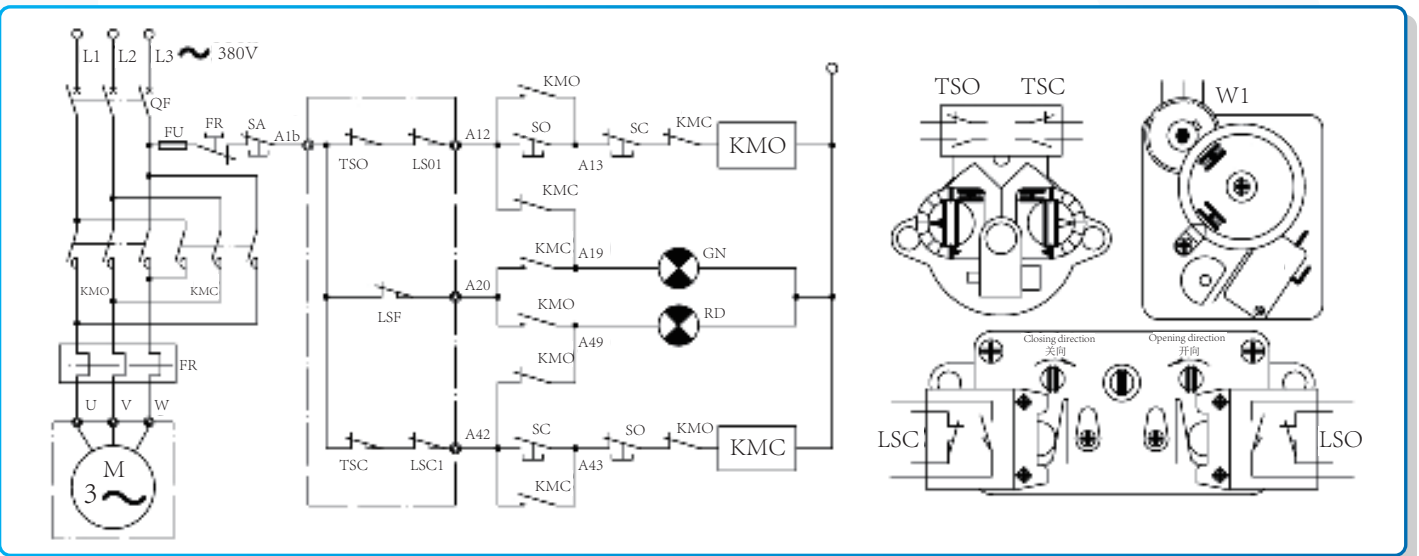
Main Specifications

input signal	4mA~20mA; Passive contact	
Power supply	Conventional	Three phase: AC380V(50Hz)
	Special	Three phase: AC660V、AC440V、AC415V(50Hz、60Hz)
		Simplex: AC220V、AC110V(50Hz、60Hz)
		Direct: DC12V、DC24V、DC48V
Basic error limit	≤1%	
Protection class	IP65、IP68.....	
Explosion-proof grade	Exdll BT4、Exdll CT4;	
Ambient temperature	-30°C~+70°C (Optional: -40°C~+100°C)	
Environment humidity	≤95%(25°C)	
Motor working system	Standard long-term motor, F-class insulation	

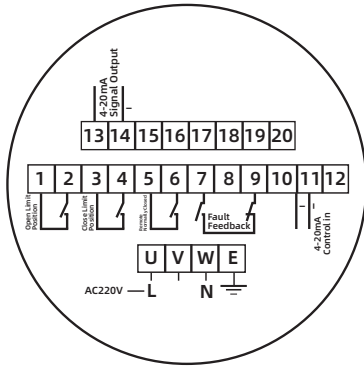
Model and Main Technical Parameters

MEDLE	Output Torque	Output Speed	Manual Speed Ratio	Motor Power	Rated Current	Reference Weight
Z05	50	18/24	1:1	0.12/0.18	0.45/0.6	15.2
Z10	100	18/24	1:1	0.18/0.25	0.6/0.85	15.8
Z15	150	18/24	1:1	0.25/0.37	0.85/1.05	16.2
Z20	200	18/24	1:1	0.37/0.55	1.05/1.3	24.2
	200	36/48	1:1	0.55/0.75	1.3/1.7	24.2
Z30	300	18/24	1:1	0.55/0.75	1.3/1.7	25.8
	300	36/48	1:1	0.75/0.85	1.7/1.85	25.8
Z45	450	18/24	1:1	0.75/0.85	1.7/1.85	63
	450	36/48	1:1	1.1/1.5	2.5/3.2	63.2
Z60	600	18/24	1:1	1.1/1.5	2.5/3.2	65.2
	600	36/48	1:1	1.5/2.2	3.2/4.5	65.2
Z90	900	18/24	1:1	1.5/2.2	3.2/4.5	67.5
	900	36/48	1:1	2.2/3.0	4.5/6.3	68.5
Z120	1200	18/24	1:1	2.2/3.0	4.5/6.3	69.8
	1200	36/48	1:1	3.0/4.0	6.3/8.5	69.8
Z180	1800	18/24	1:21	4	8.5	120
Z250	2500	18/24	1:21	5	10.5	125
Z350/500	3500/5000	8	1:60	5	10.5	200
Z700/1000	7000/10000	4.5	1:107	5.5	11.2	260

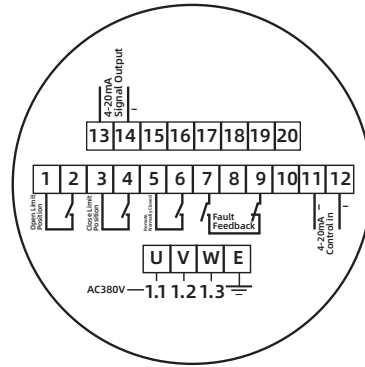
Electrical Control Section



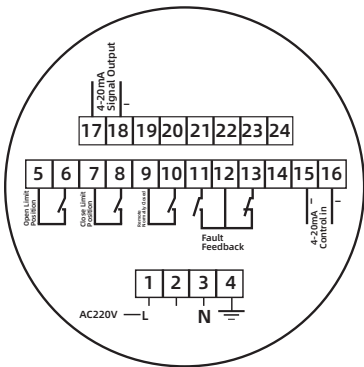
Code Name	Name	Model	Number	Remarks	Code Name	Name	Model	Number	Remarks
FR	Thermal relay		1	User self provided	LSF	Flash switch	V-157	1	
KMOKMC	AC contactor	GJ10	1	User self provided	W1	Potentiometer	WX14-12	1	
SASOSC	Button	LA11-11D	1	User self provided	M	Electric machinery	YDF2-W	1	
TSOTSC	Torque switch	DK3-2A	1		TH	Thermosensitive switch		1	Special order
LSOLSC	Torque switch	HWK-22A	1		RT	Torque switch		1	Special order



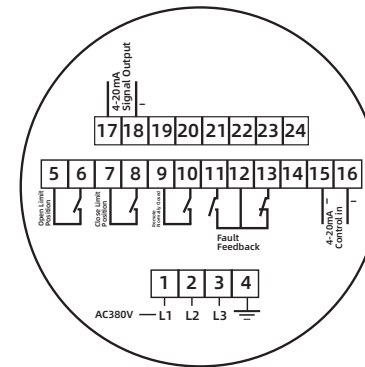
Wiring Diagram of Regulated 220V Terminal



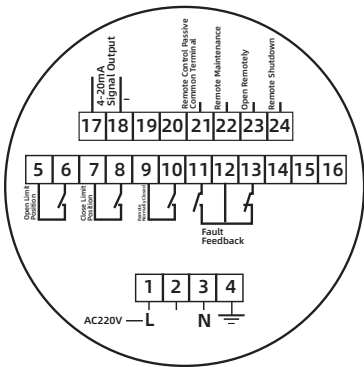
Wiring Diagram of Regulated 380V Terminal



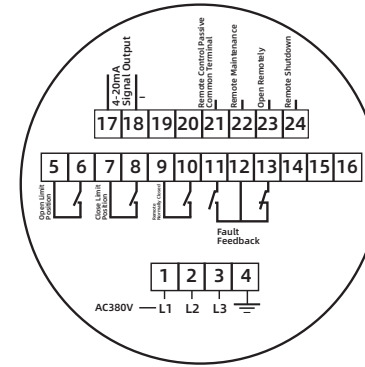
Wiring Diagram of Regulated Explosion-Proof 220V Terminal



Wiring Diagram of Regulated Explosion-Proof 380V Terminal

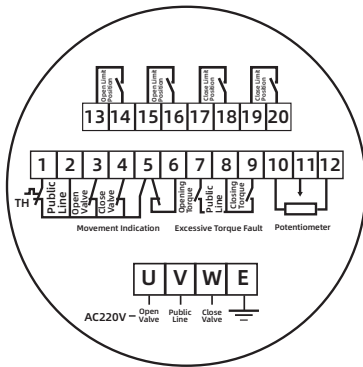


Wiring Diagram of Non-invasive Explosion-Proof Switch Type 220V Terminal

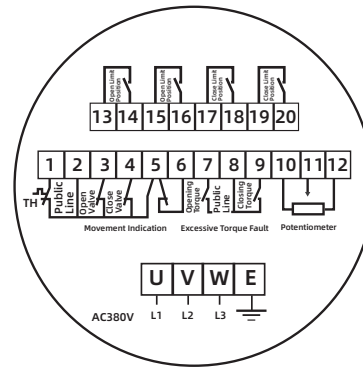


Wiring Diagram of Non-invasive Explosion-Proof Switch Type 380V Terminal

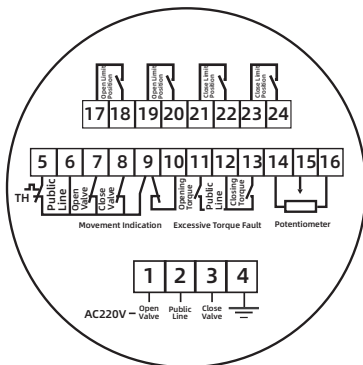
Fault feedback	Valve opening	Limit position	Control input
Signal output	Shut off valve	Common line	
Remote control open	Open torque	Moment of closure	
Remote normal closure	Opening limit	Potentiometer	
Operation instructions	Over torque fault	Remote control shutdown	
Remote control and maintenance		Remote control passive common terminal	



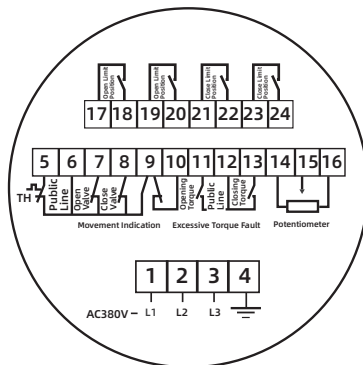
Wiring Diagram of 220V Common Terminal



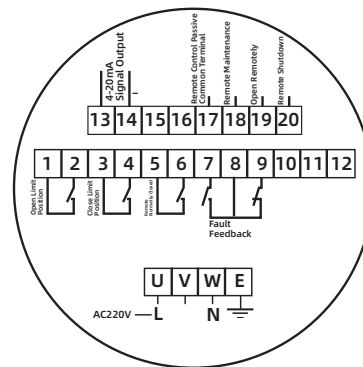
Wiring Diagram of 380V Common Terminal



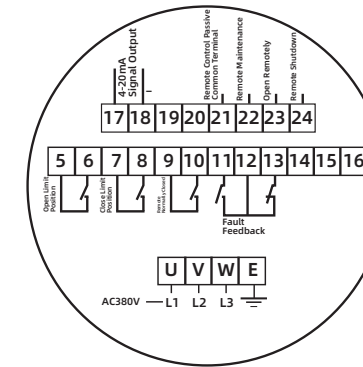
Wiring Diagram of 220V Explosion-Proof Terminal



Wiring Diagram of 380V Explosion-Proof Terminal



Wiring Diagram of Non-invasive Switch Type 220V Terminal



Wiring Diagram of Non-invasive Switch Type 380V Terminal

Fault feedback	Valve opening	Limit position	Control input
Signal output	Shut off valve	Common line	
Remote control open	Open torque	Moment of closure	
Remote normal closure	Opening limit	Potentiometer	
Operation instructions	Over torque fault	Remote control shutdown	
Remote control and maintenance		Remote control passive common terminal	

Seeking For Global Distributors



dc DELCO

Specialized Control Valve Manufacturer



DELCO VALVE CO.LTD

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

