



WENZHOU HELI AUTOMATIC METER
CO.,LTD.

Electric Actuator For Valves

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COMPANY PROFILES



Wenzhou Heli Automatic Meter Co., Ltd was founded in 2003. There are More than 100 employees currently, including engineers and technicians accounted for 25%. We own 26 new utility patents and two invention patents. Our company is a integrated high-tech enterprise which includes the reseach, development, production, and sales. Our main products:electric actuators, explosion-proof electric actuators, pneumatic actuators, damper actuators, manual butterfly valves, manual ball valves, electric butterfly valves, electric ball valves, explosion-proof electric valves, pneumatic butterfly valves, pneumatic ball valves, electric control valves, pneumatic control valves.

Our company always pay attention to the quality of products, insist on innovate the products which all of them have passed the European CE, RoHS, SIL, IP67 and IP68 certificates. Also our LQ series have passed the testings to get explosion-proof certificates issued by the CNEX and EU ATEX, the performance have reached the world advanced level. Our company has international advanced production line, precise CNC machining centers and perfect testing equipment, full implement the ISO9001-2015 (CQC) international quality management system and organize the production to the 6S standard.

Heli always try our best to improve products quality, innovate products functions, offer honesty service.

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CE certification, "CE" mark is a safety certification mark, as a passport to open and enter the European market. CE on behalf of European unification (CONFORMITE EUROPEENNE). Those who posted "CE" mark products in the EURO member states, do not need to meet the requirements of each member country, in order to achieve free movement of goods within the EURO member states range.

European conformity certification require mostly from the European Economic Area (EEA) product print on the CE mark, on behalf of the product manufacturer or service provider has to ensure compliance with relevant EURO directives, and the corresponding assessment procedures have been completed.

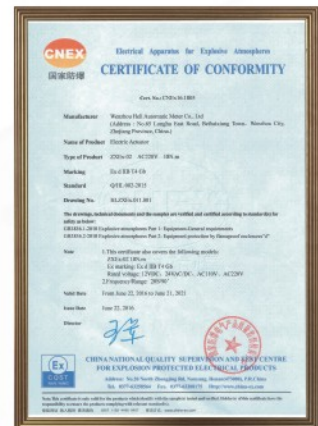


SIL certificate



ATEX certificate



EXPLOSION-
PROOF
CERTIFICATE

Product description

1. Due to working characteristic of valve, the actuator is required to have high-start-up torque, So the actuator is capable to start up with full load whenever the valve is at the opening、 closing or any other intermediate positions. At the same time, the smaller rotation inertia is required for the motor due to the adjustment of the flow. The motor for HL series electric actuator is designed for such special requirement and also the over-hot protection adopted.
2. The uniting design of worm wheel output avoid the gap between the keys. The worm wheel is made of alloy steel, featuring the high strength, good wear resistance.
3. High quality microswitch imported make the ON-OFF more sensitive, more safer.
4. Each set of HL product is attached with a handle before shipment. When it is necessary to have manual operation, insert the handle directly to the manual operation hole to drive valve.
5. The high performance numerical control device make sure the consistency of processing precision and avoid the influence of man-made factor.
6. The continuous 72hours over-load testing guarantee the product`s stability.
7. All kinds of the high precision testing equipment make the actuator abrasion less, more precise, more perfect.

Charges evaluation factors for electric actuator

● Actual using charges

By using difference brands, customers will find some hidden charges in long time using process, excluding charges for buying electric actuator.

● Electric actuator actual using charges

Purchasing charges+management and maintenance charges(including stop working charges) +several times renewal charges=long term using charges.

● Evaluation conclusion

For customers, best investments, highest reliability, Longest working life which can win largest economics benefits.

- Please compare HL electric actuator with other brands, then you will know that the HL actuators have the top quality as the unique design, perfect seal performance, good operation performance, anti-corrosion, wear resistance, reliability and beautiful appearance.

PRODUCTION MANAGEMENT



We have used a variety of advanced medium-sized or large equipment to meet production needs; all employees must be trained to ensure that parts and finished products assembled in the stability of quality. We carry out "6S" management in the workshop, the effect is significant, well received by customers praise!



Quality is the core concept which will be integrated into every aspects of our company, seek to develop long-term space, always keep in mind of human compassion ,to become worthy of trust brands.

CONTENTS

Electric actuator (HL type)

Selection table	01
Wiring drawing	02
Configuration and function	03
ZXEx explosion-proof electric actuator	04
EX motorized threaded ball valve	06
Explosion proof electric sanitary butterfly valve	07
Explosion proof electric sanitary ball valve	08
EX Wafer motorized butterfly valve with soft seat	09
Motorized flange ball valve with explosion proof	10
ZX series performance parameters	11
HL-ZX with butterfly valves series dimensions and performance parameters	12
HL-ZX with ball valves series dimensions and performance parameters	13
HL-05 series performance parameters	14
HL-10 series performance parameters	15
HL-20 series performance parameters	16
HL-50 series performance parameters	17
HL-100 series performance parameters	18
HL-200 series performance parameters	19
HL-400/600 series performance parameters	20
Appearance and performance parameters for HL series electric actuator with a swinging arm	21
HL waterproof series appearance and performance parameters(IP68)	22
Modulating type performance parameters	23
Performance of HL series electric actuator with local control	24

Electric valve (HL type)

Electric butterfly valve (HL type)	
Electric wafer butterfly valve	25
Electric flanged soft seal butterfly valve	26
Electric triple offset metal-seal butterfly valve	27
Electric flanged triple offset metal seal butterfly valve	28
Electric sanitary butterfly valve with tri clamp	29
PVC electric butterfly valve	30
Electric aeration butterfly valve	31
Electric Lined Fluorine butterfly valve	32
Electric ball valve (HL type)	
Electric flanged ball valve	33
Wafer type flanged Ultra thin Italian ball valve	34
Electric flanged three-way ball valve	35
Motorized three way ball valve with threaded	36
Electric threaded ball valve	37
Electric sanitary ball valve	38
Electric PVC ball valve	39
Electric PVC 3 way ball valve	40
Electric wafer V-pattern ball valve	41
Electric flanged V-type ball valve	42
Electric lined Fluorine ball valve	43
Dynamic balance electric control valve (HL type)	
Electric Dynamic balance valve	44

Explosion proof electric actuator (LQ type)

LQ series explosion-proof electric actuator	45
LQ0 main technical parameters	47
LQ1 main technical parameters	48
LQ2 main technical parameters	49
LQ3 main technical parameters	50
LQ4 main technical parameters	51
LQ4JS-200/250 main technical parameters	52
LQ4JS-400/600 main technical parameters	53
Wiring drawing of LQ1 ON-OFF type	54
Wiring drawing of LQ2~4 ON-OFF type	55
Wiring drawing for with remote position controller	56
Wiring drawing for with local controller	58
Wiring drawing for with local controller+LED	59
Appearance and performance for Intelligent Part-turn actuators with LCD display	60
Differences features for Intelligent Actuators	61
Appearance and performance for intelligent with profibus and LCD	64
LQ series of electric actuators with the large-capacity lithium battery	65
LQ series time, output torque parameters	66
LQ series(continuous working) torque parameters (Power:AC220V)	66
LQ/4P series four positions valve actuators	67

Electric valve(LQ type)

Electric butterfly valve (LQ type)

Electric wafer butterfly valve	69
Electric wafer metal seal butterfly valve	70
Electric soft seal butterfly valve flanged	71
Electric metal seal butterfly valve flange	72
Electric PVC butterfly valve	73
Electric sanitary butterfly valve	74
Electric Lined Fluorine butterfly valve	75

Electric ball valve (LQ type)

Electric flanged ball valve	76
Electric three-way ball valve flanged	77
Electric threaded ball valve	78
Electric PVC ball valve	79
Electric sanitary ball valve	80
Electric wafer V-pattern ball valve	81
Electric flanged V-type ball valve	82
Electric lined Fluorine ball valve	83

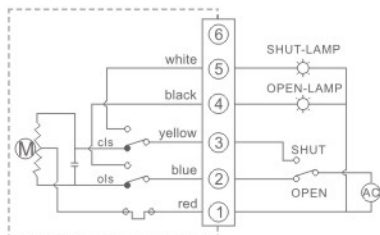
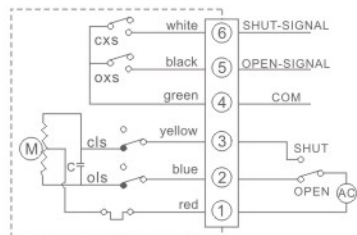
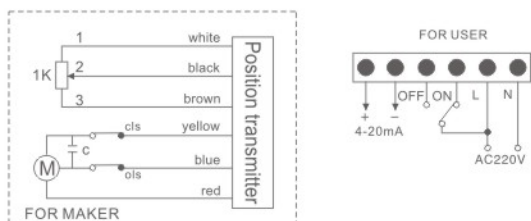
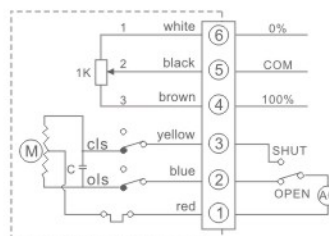
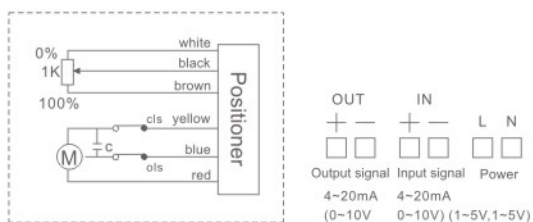
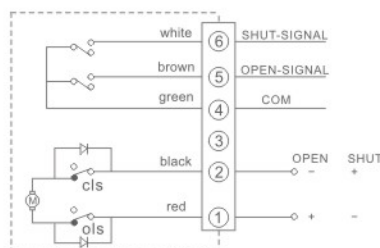
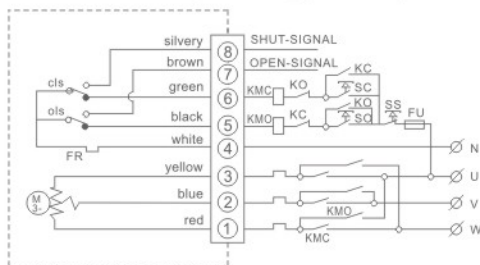
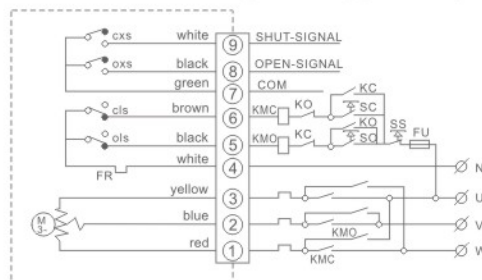
Damper actuator

Summary、Characteristics、Ordering information	84
Damper actuator	85
HLF24(-S),HLF230(-S)Damper Actuator with spring return 4Nm	93
HLFC electric actuators with capacitance	94
Motorized two way ball valve	95
Motorized three way ball valve	96
Electric regulating ball valve	97
Electric 2 way valve	98

Product highlights	100
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ITEM	OUTPUT TORQUE	ACTION TIME (0~90°)	POWER SUPPLY	METAL SEAL BUTTERFLY VALVE	SOFT SEAL BUTTERFLY VALVE	BALL VALVE	AERATION BUTTERFLY VALVE
				≤PN1.6MPa			≤0.1MPa
HL-ZX	6N·m	7S	AC85 ~ 260V、 50/60Hz、 AC/DC24V，DC12V	/	DN25 ~ DN40	≤DN20	/
	8.5N·m	9S			DN25 ~ DN40	≤DN25	
	12N·m	13S					
HL-05	15N·m	10S	AC24V、110V、 220 ~ 240V、 380 ~ 420V； 50/60Hz； DC24V、 DC12V、 DC220V	/	DN25 ~ DN50	≤DN25	/
	30N·m	20S			DN25 ~ DN65	≤DN32	≤DN50
	50N·m	30S			≤DN80	≤DN32	≤DN80
HL-10	50N·m	13S	AC24V、110V、 220 ~ 240V、 380 ~ 420V； 50/60Hz； DC24V、 DC12V、 DC220V	/	≤DN80	≤DN32	≤DN80
		15S					
	60N·m	20S			≤DN80	≤DN40	≤DN80
	100N·m	30S			DN40 ~ DN65	DN80 ~ DN125	DN40 ~ DN50
HL-20	80N·m	9S	AC24V、110V、 220 ~ 240V、 380 ~ 420V； 50/60Hz； DC24V、 DC220V	DN40 ~ DN65	DN80 ~ DN125	DN40 ~ DN50	DN100 ~ DN200
	100N·m	15S					
	150N·m	20S		DN80	DN80 ~ DN125	DN40 ~ DN65	DN100 ~ DN200
	200N·m	30S		DN80 ~ DN125	DN150 ~ DN200	DN65 ~ DN80	DN250 ~ DN300
		60S					
HL-50	150N·m	9S	AC24V、110V、 220 ~ 240V、 380 ~ 420V； 50/60Hz； DC24V、 DC220V	DN80	DN80 ~ DN125	DN40 ~ DN65	DN100 ~ DN200
	250N·m	15S		DN80 ~ DN125	DN150 ~ DN200	DN65 ~ DN80	DN250 ~ DN300
	300N·m	20S					
	500N·m	30S		DN150 ~ DN200	DN250	DN100 ~ DN125	DN350 ~ DN500
		60S					
HL-100	300N·m	15S	AC24V、110V、 220 ~ 240V、 380 ~ 420V； 50/60Hz	DN80 ~ DN125	DN150 ~ DN200	DN65 ~ DN80	DN250 ~ DN300
	800N·m	30S		DN250	DN300 ~ DN350	DN150	DN600
	1000N·m	50S		DN250	DN300 ~ DN350	DN150 ~ DN200	DN600 ~ DN800
HL-200	2000N·m	100S		DN300 ~ DN400	DN400 ~ DN500	DN200 ~ DN250	DN800 ~ DN1000
HL-400	4000N·m	100S		DN400 ~ DN500	DN500 ~ DN600	DN300 ~ DN400	DN1000 ~ DN1200
HL-600	6000N·m	150S		DN500 ~ DN600	DN600 ~ DN700	DN400 ~ DN500	DN1400 ~ DN1600

The working torque of valve will be 60% to 80% the rated output torque.

**B:ON-OFF wiring drawing(220VAC)****S:With 4×SPDT wiring drawing(220VAC)****K:Input signal:ON-OFF,
Output signal:4~20mA or 1-5V,0~10V(220VAC)****R:With potentiometer(220VAC)****A:Input signal:4~20mA(1-5V,0~10V)
Output signal:4~20mA(1-5V,0~10V)(220VAC)****D:DC wiring drawing****H:ON-OFF wiring drawing(380VAC)****T:With 4×SPDT wiring drawing(380VAC)**

1. Inside of frame is for actuator's wiring, outside of frame is for customer's wiring.
2. Two or more electric actuators can not be connected in parallel. Can not use the same joint to control several electric actuators, otherwise it will cause actuator uncontrolled and motor overheating.
3. Please contact with factory any special requirements.

Electric actuator (HL type)

Electric valve (HL type)

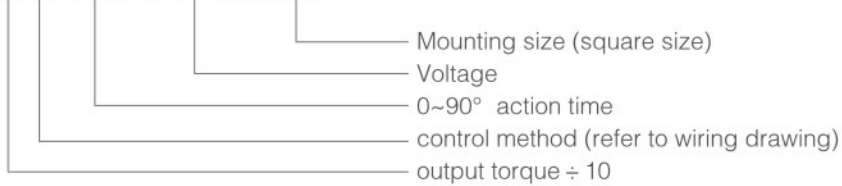
Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator

Item meaning

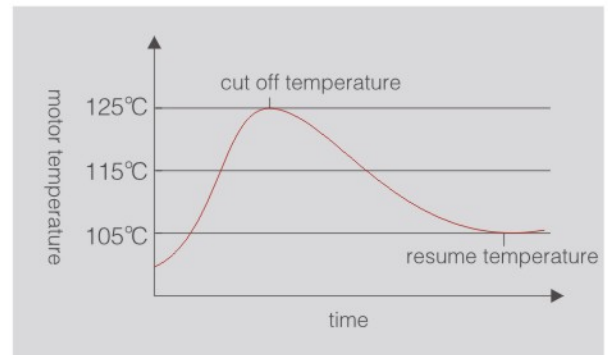
HL-10 A / 30S / AC220V / M11



Motor

Electric actuators required has starting capability in the state of full load at close, open or any intermediate positions due to valve characteristics, that's why the motor also requires a high starting torque, meanwhile, due to the adjustment of flowrate, motor must also have a small moment of inertia, So HL type motor response to these requests with a special design.

In case of the actuator stalled, the motor temperature will rise rapidly, built in PTC thermal protector will cut off the circuit to protect the motor and control system once the motor temperature rises to 125 °C, the circuit will turn on when the motor temperature drops to 90~105°C .

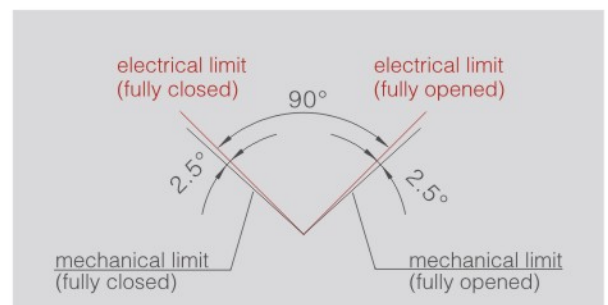


Electrical limit and mechanical limit

Electrical limit function: The built-in electrical limit switch will cut off the circuit to protect the actuator once the actuator reaches at fully opened/fully closed or the middle position preset.

Mechanical limit function: Output shaft will be locked by mechanical limit to protect the valve from damage once electrical stroke limit fails.

Electrical limit and mechanical limit shown as right chart.



Heater Space (optional)

Heater space can be configured for the applications with a large temperature difference between day and night or relatively humid places to prevent actuators damage from the condensation. The heater space works continuously with power on state even if the actuator doesn't work.

Optional



Long distance vision



Flat cover



With handwheel

**The smallest
EX electric
actuator in the world**

Patent No: 201510994845.1

Patent No: 201521102117.7

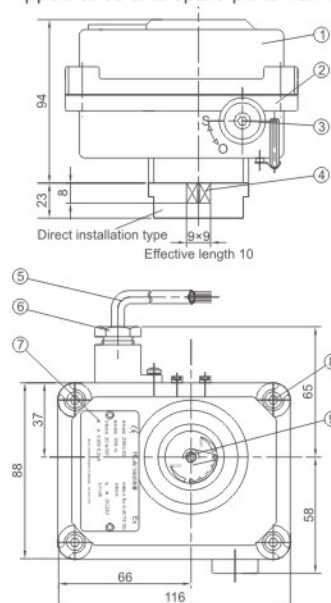


CAUTION:
This series of products have two patents,
Any copies will assume legal responsibility.

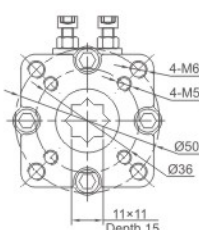
Product description

ZXEx explosion-proof electric actuators is our latest developed ultra-compact device, controlling the valve's open and close like butterfly valves, ball valves, plug valves and other valves with 90° rotation. Widely used in production, transportation and storage where the places have explosion gas in coal, petroleum, metallurgy, chemical industry, food processing, military and other industrial production.

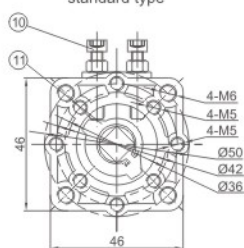
Appearance and spare parts name



Flange connection of
direct installation type



Flange connection of
standard type



NO.	Name	Materials/Specifications
1	Top cover	ADC12
2	Housing	ADC12
3	Handle lever hole	Hexagonal hole, across flats: 4mm
4	worm-wheel shaft	303
5	Cable	0.3 × 7 core cable with 1m
6	Cable entry	45#
7	Nameplate	Stainless steel
8	Hex socket screws	M5 × 18
9	Indicator	0-90°
10	Mechanical limit screw	M5 × 25
11	Mechanical stopper	Alloy

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

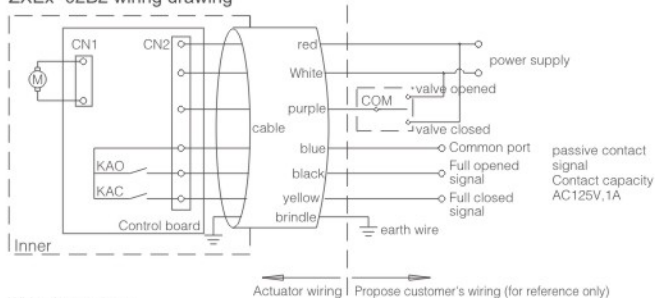
Electric valve (LQ type)

Damper actuator

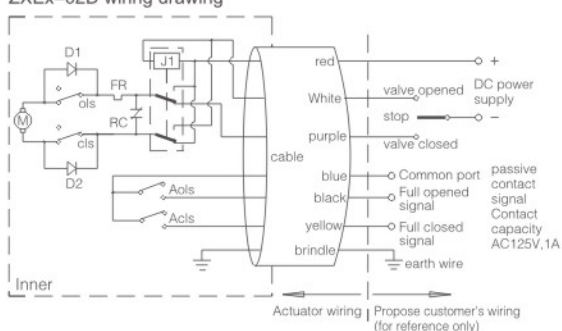


specification		ZXEx-02D	ZXEx-02S ZXEx-02B2	ZXEx-02A
Item	parameter	DC12V; DC24V	AC24V; AC100~240V	DC24V; AC100~240V
Output torque		18N · m		24N · m
Working time		20 seconds		20 seconds
Motor Power		4.6W		6.8W
Rated current	18N·m	0.25A(24VDC/AC); 0.45A(DC12V); 0.08A(AC100~240V)		
	24N·m	0.42A(24VDC/AC); 0.79A(DC12V); 0.11A(AC100~240V)		
Quiescent Current		—	≤20mA	≤25mA
Rotary angle		0~90°		
Control method		Fully open. Fully closed	Fully open. Fully closed	4~20mA/0~10VDC
Feedback signal		Fully open passive contact signal. Fully closed passive contact signal	Fully open passive contact signal. Fully closed passive contact signal	4~20mA/0~10VDC
Indicator		with arrow	with arrow FULL OPEN RED LED FULL CLOSE GREEN LED	with arrow
Enclosure protection		IP65		
Basic error		1%		
Insulated resistance		≥100MΩ		
Insulated strength		500VAC/1min(12V、24V) 1500VAC/1min(100~240V)		
Wiring		7 × 0.3mm ² 1 m cable		
Protection device		Open and close mechanical limit stopper		
Installation angle		360° omni-directional		
Power off operation		With handle lever		
Weight		≈0.8kg		
Product color		black, milk white (other colors customized)		
Body material		ADC12		

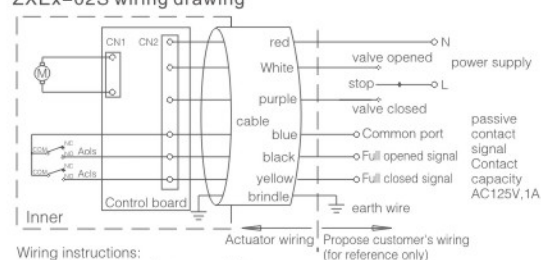
ZXEx-02B2 wiring drawing



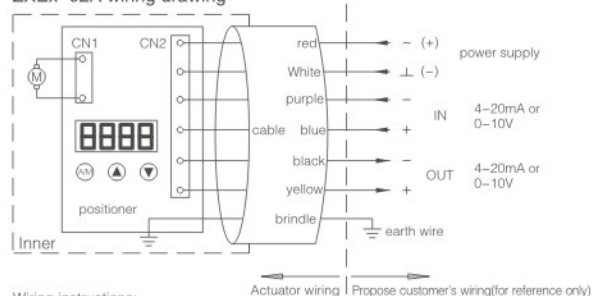
ZXEx-02D wiring drawing



ZXEx-02S wiring drawing



ZXEx-02A wiring drawing

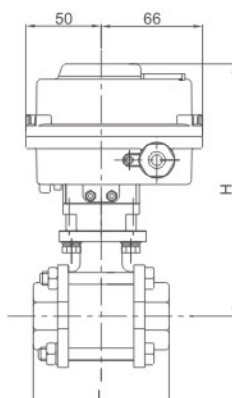
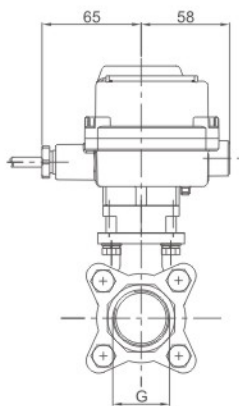




Nominal diameter DN(mm)		DN15~DN32					
Nominal pressure		PN1.6/2.5/6.4MPa					
End connection		thread			Butt welded		
Main Parts	Valve body, valve cap	WCB	CF8(304)	CF8M(316)	WCB	CF8(304)	CF8M(316)
	Valve ball, valve stem	2Cr13	304	316	2Cr13	304	316
	O-ring, Packing	RPTFE, PPL					
Applicable Operating Condition	Applicable medium	Water, steam, oils	Nitric acid and other corrosive medium	Nitric acid and other corrosive medium	Water, steam, oils	Nitric acid and other corrosive medium	Nitric acid and other corrosive medium
	Suitable temperature	-29°C~180°C (RPTFE), -29°C~300°C(PPL)					

Product description

Electric threaded ball valve with integrated structure can be driven by input (4~20mA DC, 0~10VDC or 1~5 VDC) signals or single-phase power supply, with the characters of small volume, high flow capacity, high regulation precision, good sealing, and light weight, etc. The valve is widely used in food, environmental protection, light industry, petroleum, paper, chemicals, teaching and research equipment, and electric power industries of industrial automation control systems.



Product features

Thread and butt welded connection ball valve can be divided into 1-piece, 2-piece, 3-piece. Body casting adopt the advanced technology from Taiwan, with reasonable structure and beautiful shape. The elastic sealing structure make the seat reliable and easy to close and open. valve stem adopt the lower structure with inverted seal, It is impossible to rush out the valve stem when the temperature of valve chest increase, There is butt weld(BW), socket welding(SW) connection of the 2-piece, 3-piece ball valve with locking devices in compliance with international standard ISO platform.

EX motorized threaded ball valve external dimension

SIZE		Item	H	L
mm	in(G)			
15	1/2"	ZXEx-02	159	80
20	3/4"		169	85
25	1"		178	90
32	1 1/4"		183	112

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



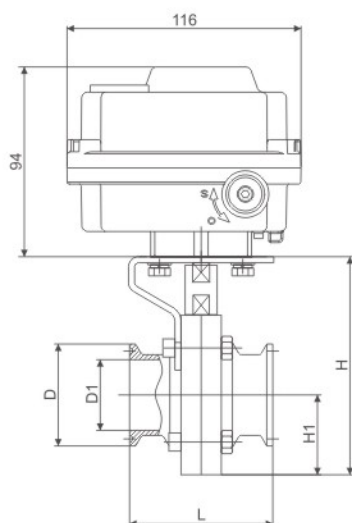
Nominal diameter (mm)	DN15~DN150
Nominal Pressure	1.0MPa
Suitable temperature	-10℃~150℃
Application medium	Liquid ,gas, oil, Various corrosion chemistry mediums
valve body	304、316、316L
valve bore	304、316、316L
valve seat	silicon rubber, EPDM,FPM

Product description

Sanitary butterfly valve are used in applications with high sanitary requirements, such as food, beverage, pharmaceutical, dairy, beer and chemicals.

Product features

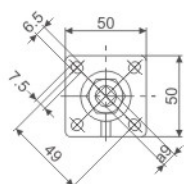
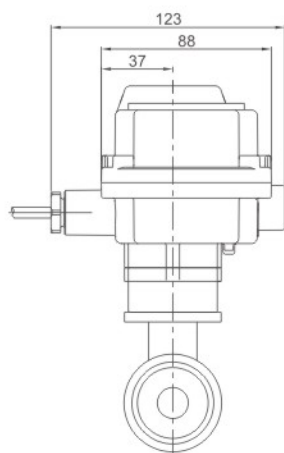
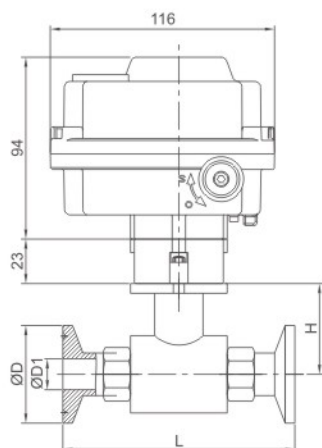
- Valve body and valve bore touched with medium are 304,316 or 316L
- Removable valve body, simple structure, easy maintenance.
- Design beautiful, surface smooth, without burrs.
- End connection: weld, clamp, thread
- Product Quality: polishing treatment to meet surface accuracy requirements.
- Product accuracy: In compliance with 3A,DIN,SMS,BS standard.



Explosion Proof Electric Sanitary Butterfly Valve Dimension

SIZE	Item	D	D1	L	H1	H
Ø19	ZXEx-02	50.5	16.5	66	38.5	106
Ø25	ZXEx-02	50.5	22	66	38.5	106
Ø32	ZXEx-02	50.5	29	66	38.5	106
Ø38	ZXEx-02	50.5	35	70.5	39.5	108
Ø45	ZXEx-02	64	40	70.5	44	116
Ø51	ZXEx-02	64	48	70.5	47	122
Ø63	ZXEx-02	77.5	59	76.5	55.5	148

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



Item	Q981F-10P
Nominal diameter	DN15-DN150、1"-6"□Φ12.7-Φ152.4
End connection	Clamp, weld, thread, flange
Actuator	Electric actuator
Material	304,304L,316,316L adopted
Main performance	Big Temperature difference withstand; normal pressure 16MPa; strong corrosion resistance; precision
Quality	polishing treatment to meet surface accuracy requirements
Seal ring	EPDM、NBR、PTFE
Working pressure	1.0Mpa
Working temperature	-10℃+150℃
Application	Food, beverage, pharmaceutical, dairy, beer and chemicals
Suitable medium	Gas, liquid, Steam

Product features

- Small flow resistance: with the smallest flow resistance either the reduced bore ball valve or full bore ball valve.
- Good seal performance: Valve seat with a good sealing performance by adopting PTFE as the seal ring.
- Service life long: PTFE's self-lubrication features can reduce the friction to make the service life long.
- High reliability: without scratches between valve body and valve seat, wear resistance valve stem, with fireproof and anti-static functions
- Wide application range: used in viscous fluids, slurries and solid particles, including general medium.
- Small size: any positions installation, convenient installation, easy transportation and store.

Explosion Proof Electric Sanitary Ball Valve Dimension

SIZE	Item	D	D1	L	H
Ø19	ZXEx-02	50.5	16	99	45
Ø25	ZXEx-02	50.5	22	115	50
Ø32	ZXEx-02	50.5	29	124	51
Ø38	ZXEx-02	50.5	35	140	64

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



Main Parts	Material	Specifications	Major Parts	Material	Specifications
Valve Body	Ductile Iron	25mm~65mm	Valve Stem	Stainless Steel	25mm~65mm
	Cast Iron				
	WCB				
	Stainless Steel				
Valve Disc	304(CF8)	25mm~65mm	Valve Seat	EPDM	25mm~65mm
	316(CF8M)			NBR	
	D.I.Plated Nickel			PTFE	
	D.I.Coated Nylon			Viton	
	Alum-bronze			SEP	

Product description

Integrated structure wafer center line butterfly valve can be matched and worked with HL electric actuator with input (4~20mADC, 0~10VDC or 1~5 VDC) signals or single-phase power supply. With the characteristics of small volume, large flow capacity, high regulation precision, good sealing, and light weight, etc. The valves are widely used in food, environmental protection, light industry, petroleum, paper making, chemicals, teaching and research equipment, and electric power industries of industrial automation control systems.

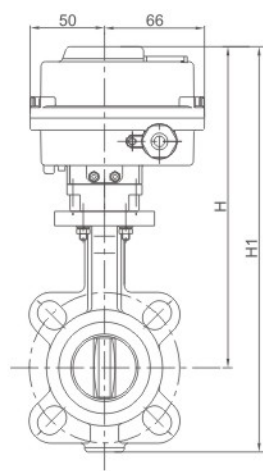
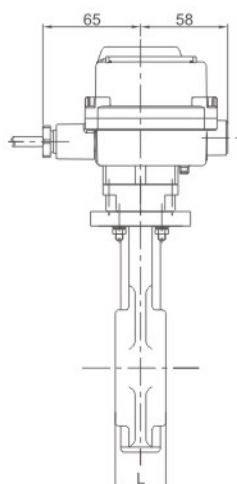
Technical parameters

Nominal diameter: DN25~DN65

Nominal Pressure: PN1.0, 1.6MPa

Suitable Temperature: -20℃~150℃

Suitable medium: water, sea water, food, natural gas, alcohols, salts, acids, alkalis, oil, steam, air, etc.



External dimension of EX Wafer motorized butterfly valve with soft seat

SIZE		Item	H	H1	L
mm	in(G)				
25	1"	ZXEx-02	206	261	35
32	1 1/4"		206	261	35
40	1 1/2"		248	310	42
50	2"		248	310	42
65	2 1/2"		280	348	45

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



Nominal diameter DN(mm)	DN10~DN25
Nominal pressure	PN1.0/1.6/2.5/4.0/6.4MPa
Applicable medium	Water、Petroleum、Nitric Acids、Acetic Acids、Slurries、Viscosity fluid and so on
Suitable temperature	-40℃~+80℃(PTFE/PPL Sealing) -40℃~+350℃(Metal Sealing)
Leakage	Fit for the standard of ANSI B16.104
Rotary angle	90°
Body material	WCB,304,316
Seat materials	PTFE(Normal Temp.), Special PPL(High Temp.), Metal Sealing(High Temp.)
Product color	milk white (other colors customized)

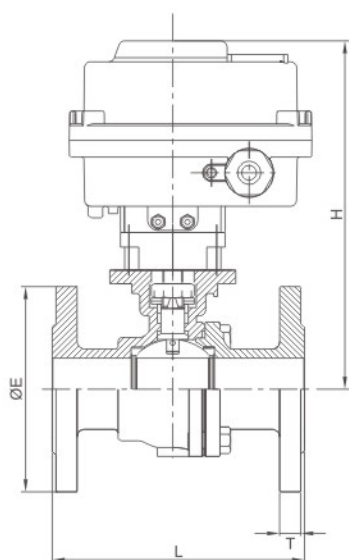
Product description

Electric Ball Valve is a kind of valve for 90° rotation,with the characteristics of fine sealing performance,large flow capability,small flow resistant coefficient,simple structure and long service life.The valve passage is equal to the connecting pipe,and the medium can nearly flow through it without the loss.

By connecting with electric actuator,the valve is widely applicable for the working fields such as petroleum,chemical industry,metallurgy,paper making,power station etc.It can control not only the medium like the air,liquid and steam ,but also the medium containing the fibers.

Product characteristics

- 1.Small flow resistance,the ball valve has smallest flow resistance among all valves.The flow resistance is very small even the reduced bore ball valve.
- 2.Thrust shaft bearing can reduce the fricative torque of vale shaft in order to make the shaft operation balance.
- 3.Valve seat with a good sealing performance by adopting PTFE as the seal ring. And the sealing performance can be better with the increase of pressure.
- 4.The packing sealing is not easy to destroy due to the rotary movement of valve stem, sealing performance will be increased with the increased medium's pressure.
- 5.PTFE's self-lubrication features can reduce the fricative to make the service life long.



Appearance size of EX motorized flange ball valve

SIZE		Item	L	ØE	H	T
mm	in(G)					
15	1/2"	ZXEx-02	130	95	212	14
20	3/4"		130	105	228	14
25	1"		140	115	242	16

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

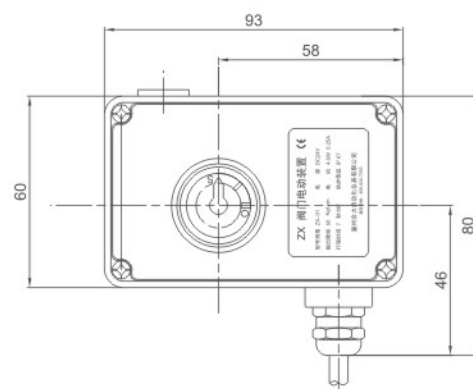
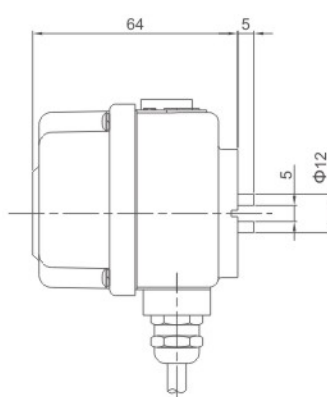
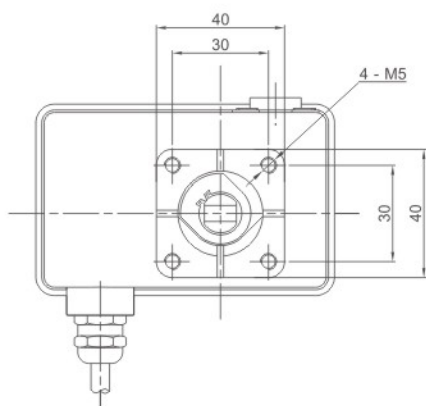
Electric valve (LQ type)

Damper actuator

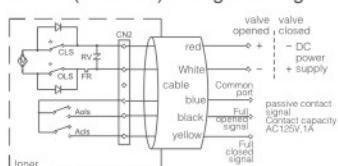


The size of HL-ZX and cigarette box compared

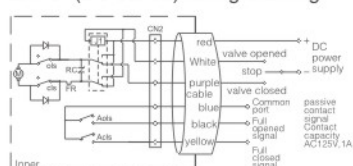
Item	HL-ZX-01			
Performance				
Power	AC85-260V	AC24V	DC24V	DC12V
Standard time/torque	7S/6Nm; 9S/8.5Nm; 12Nm/13S			
Rated current	0.2A	0.25A	0.25A	0.4A
Rotary angle	0~90°			
Weight	0.5kg			
Insulated resistance	100MΩ			
Installation angle	Any angle			
Case Material	Aluminium alloy die-casting			
Position-limiting	When electrical-operated:fully closed/fully opened electrical limit; When manually operated:mechanical limit.			
Enclosure protection	IP67			
Surrounding temperature	-25℃~60℃			
Product color	milk white (other colors customized)			



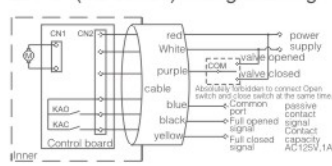
ZX-01(D series)Wiring drawing



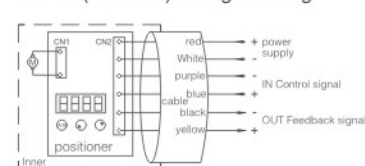
ZX-01(DS series)Wiring drawing



ZX-01(B2 series)Wiring drawing

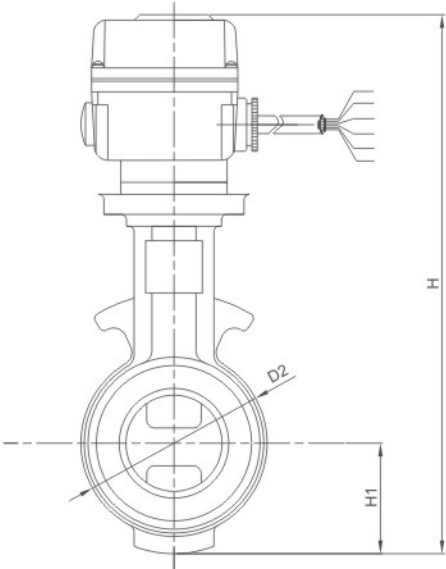
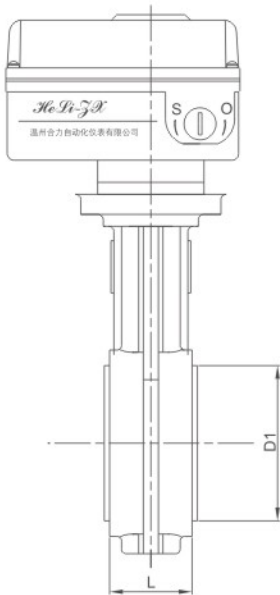


ZX-01(A series)Wiring drawing



Product summary

Integrated structure wafer center line butterfly valve can be matched and worked with HL electric actuator with input (4–20mADC,0–10VDC or 1–5 VDC) signals or single-phase power supply. With the characteristics of small volume, large flow capacity, high regulation precision, good sealing, and light weight, etc. The valves are widely used in food, environmental protection, light industry, petroleum, paper making, chemicals, teaching and research equipment, and electric power industries of industrial automation control systems.



SIZE		Item	D1		D2	H	H1	L
mm	inch		1.0MPa	1.6MPa				
25	1"	HL-ZX	85		70	193	41	32.7
32	1 1/4"		100					
40	1 1/2"							

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

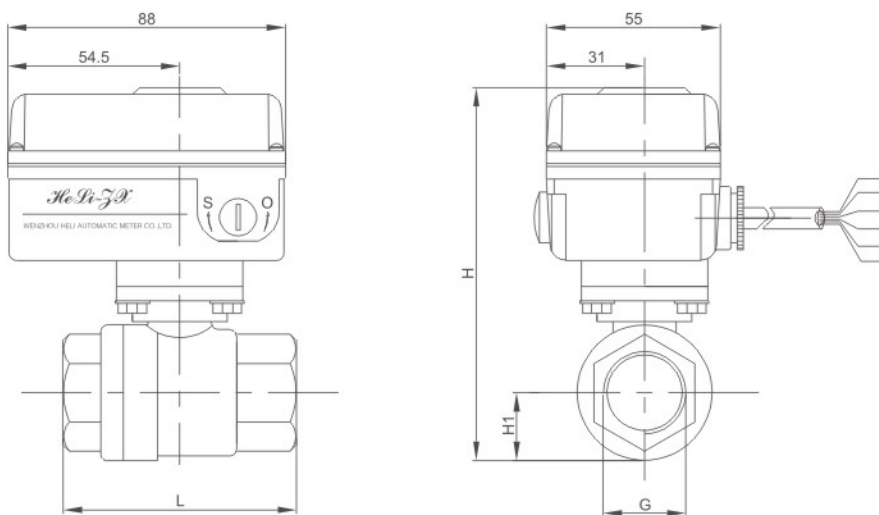
Damper actuator



Product summary

Electric threaded ball valve with integrated structure can be driven by input (4–20mA DC, 0–10VDC or 1–5 VDC) signals or single-phase power supply, with the characters of small volume, high flow capacity, high regulation precision, good sealing, and light weight, etc. The valve is widely used in food, environmental protection, light industry, petroleum, paper, chemicals, teaching and research equipment, and electric power industries of industrial automation control systems.

External dimension:



SIZE	G	H	H1	L
DN10	3/8"	110	15	54
DN15	1/2"	113	18	62
DN20	3/4"	118	22	73
DN25	1"	129	25	81

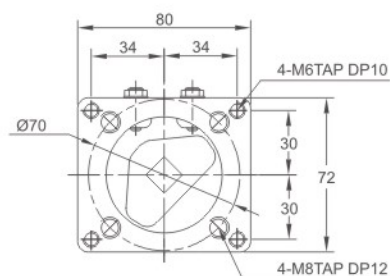
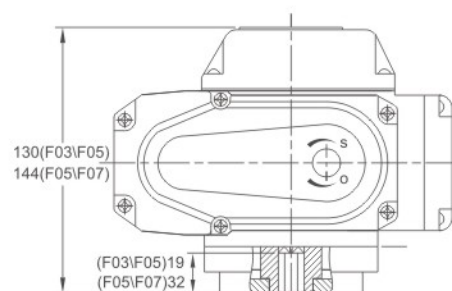
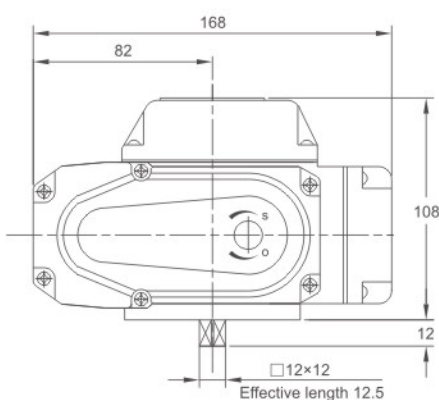
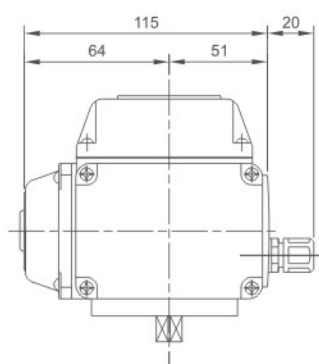


Standard

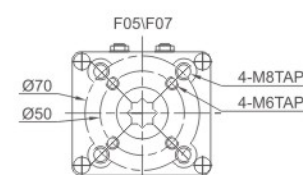
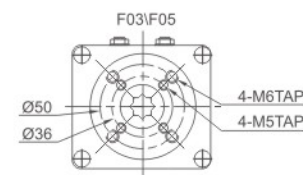


Direct Installation

Item	HL-05							
Performance Power	DC12V	DC24V	DC220V	AC24V	AC110V	AC220V	AC380V	AC415V
Motor power	20W			10W				
Rated current	3.8A	2A	0.21A	2.2A	0.48A	0.24A	0.15A	0.17A
Standard time/torque	10S/50Nm			30S/50Nm				
Optional time/torque	2S/10Nm, 6S/30Nm			6S/10Nm, 10S/15Nm, 20S/30Nm				
Wiring	B、S、R、H、A、K、D、T、Z、TM							
Rotary angle	0~90°							
Weight	2.2kg(Standard type)							
Voltage--withstandingvalue	500VAC/1minute (DC24V/AC24V)			1500VAC/1minute (AC110V/AC220V)		2000VAC/1minute (AC380V)		
Insulated resistance	20MΩ/500VDC (DC24V/AC24V)			100MΩ/500VDC (AC110V/AC220V/AC380V)				
Enclosure protection	IP-67 (IP-68 optional)							
Surrounding temperature	-25℃~60℃(The other temperatures can be customized)							
Installation angle	Any angle							
Case material	Aluminium alloy die-casting							
Optional function	Heater space, overheating protection, Handwheel							
Product color	milk white (other colors customized)							



Direct Installation Data		
Square size	□9×9 □11×11 □14×14	
Flanged	F03 F05	F05 F07
Stem	Height ≤ 19mm	Height ≤ 32mm



Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator

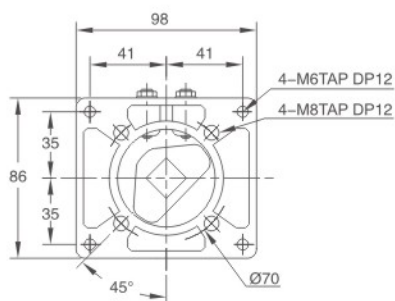
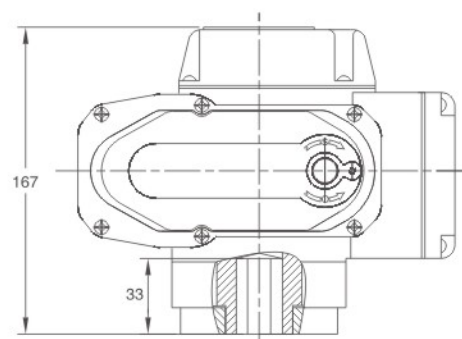
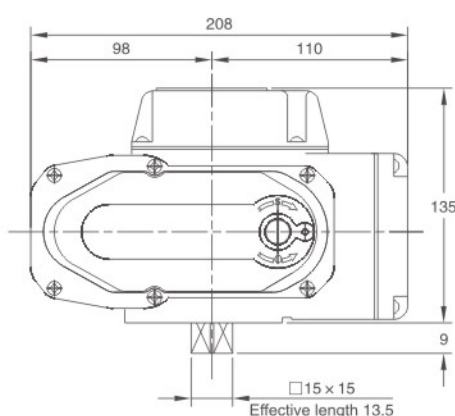
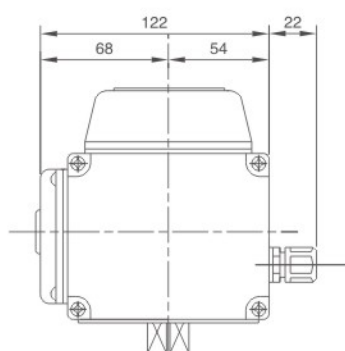


Standard

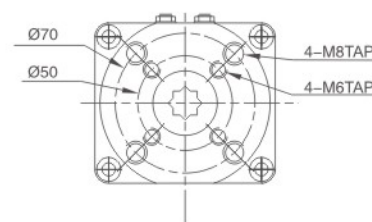


Direct Installation

	Item	HL-10							
Performance	Power	DC12V	DC24V	DC220V	AC24V	AC110V	AC220V	AC380V	AC415V
Motor power		40W			23W				
Rated current		4.8A	2.4A	0.32A	3A	0.64A	0.32A	0.19A	0.21A
Standard time/torque		10S/100Nm			30S/100Nm				
Optional time/torque		5S/50Nm			13S/50Nm, 15S/50Nm, 20S/60Nm				
Wiring		B、S、R、H、A、K、D、T、Z、TM							
Rotary angle		0~90°							
Weight		4kg(Standard type)							
Voltage--withstandingvalue		500VAC/1minute (DC24V/AC24V)			1500VAC/1minute (AC110V/AC220V)		2000VAC/1minute (AC380V)		
Insulated resistance		20MΩ/500VDC (DC24V/AC24V)			100MΩ/500VDC (AC110V/AC220V/AC380V)				
Enclosure protection		IP-67(IP-68 optional)							
Surrounding temperature		-25℃~60℃(The other temperatures can be customized)							
Installation angle		Any angle							
Case material		Aluminium alloy die-casting							
Optional function		Overtorque protection,Heater space,overheating protection,Handwheel							
Product color		milk white (other colors customized)							



Direct Installation Data	
Square size	□11×11 □14×14 □17×17
Flanged	F05 F07
Stem	Height ≤32mm



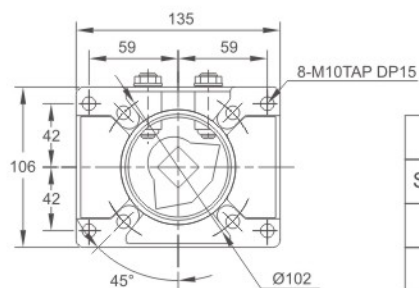
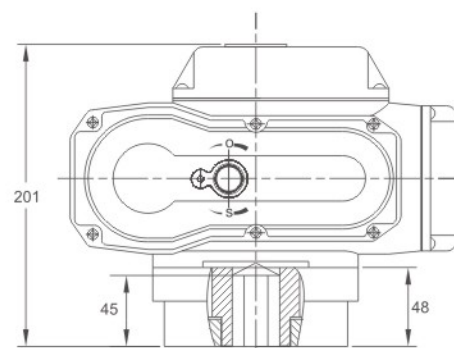
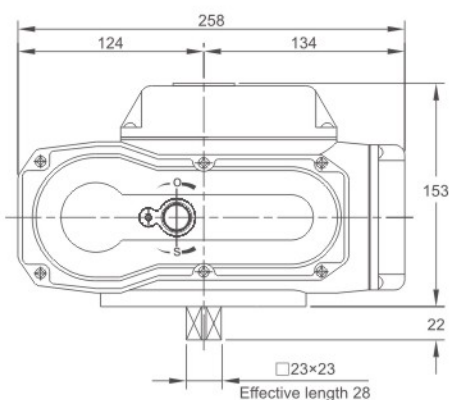
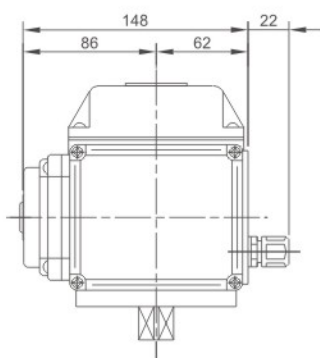


Standard

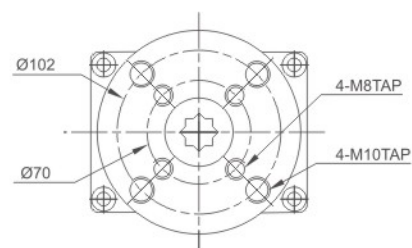


Direct Installation

Item	HL-20						
Performance Power	DC24V	DC220V	AC24V	AC110V	AC220V	AC380V	AC415V
Motor power	40W						
Rated current	3.8A	0.5A	5A	0.9A	0.48A	0.25A	0.28A
Standard time/torque	15S/200Nm		30S/200Nm				
Optional time/torque	5S/100Nm		9S/80Nm, 15S/100Nm, 20S/150Nm, 60S/200Nm				
Wiring	B、S、R、H、A、K、D、T、Z、TM						
Rotary angle	0~90°						
Weight	7kg(Standard type)						
Voltage--withstandingvalue	500VAC/1minute (DC24V/AC24V)		1500VAC/1minute (AC110V/AC220V)		2000VAC/1minute (AC380V)		
Insulated resistance	20MΩ/500VDC (DC24V/AC24V)		100MΩ/500VDC (AC110V/AC220V/AC380V)				
Enclosure protection	IP-67(IP-68 optional)						
Surrounding temperature	-25℃~60℃(The other temperatures can be customized)						
Installation angle	Any angle						
Case material	Aluminium alloy die-casting						
Optional function	Overtorque protection,Heater space,overheating protection,Handwheel						
Product color	milk white (other colors customized)						



Direct Installation Data	
Square size	□14×14 □17×17 □22×22 □27×27
Flanged	F07 F10
Stem	Height ≤ 44mm



Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator

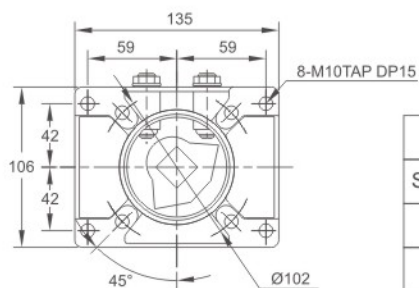
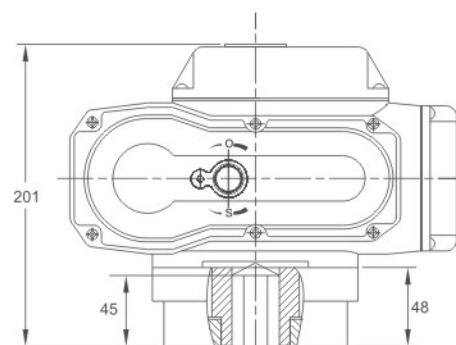
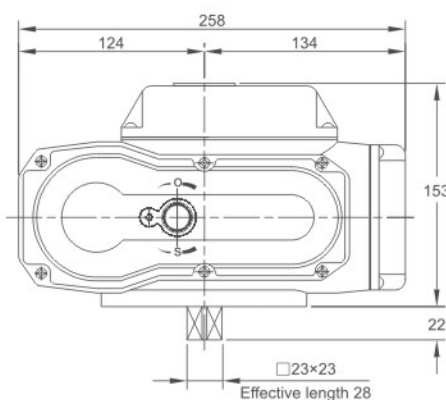
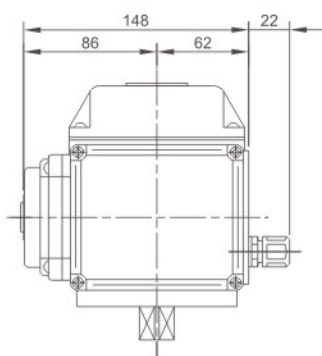


Standard

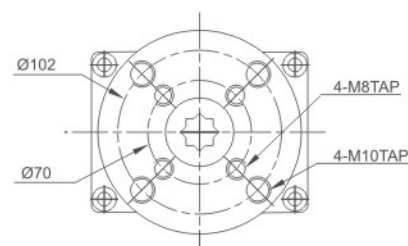


Direct Installation

Item		HL-50						
Performance	Power	DC24V	DC220V	AC24V	AC110V	AC220V	AC380V	AC415V
Motor power		90W						
Rated current		8A	1.35A	8A	2A	0.92A	0.45A	0.51A
Standard time/torque		15S/500Nm		30S/500Nm				
Optional time/torque		/		9S/150Nm, 15S/250Nm, 20S/300Nm, 60S/500Nm				
Wiring		B、S、R、H、A、K、D、T、Z、TM						
Rotary angle		0~90°						
Weight		7.8kg(Standard type)						
Voltage--withstandingvalue		500VAC/1minute (DC24V/AC24V)		1500VAC/1minute (AC110V/AC220V)		2000VAC/1minute (AC380V)		
Insulated resistance		20MΩ/500VDC (DC24V/AC24V)		100MΩ/500VDC (AC110V/AC220V/AC380V)				
Enclosure protection		IP-67(IP-68 optional)						
Surrounding temperature		-25℃~60℃(The other temperatures can be customized)						
Installation angle		Any angle						
Case material		Aluminium alloy die-casting						
Optional function		Overtorque protection,Heater space,overheating protection,Handwheel						
Product color		milk white (other colors customized)						



Direct Installation Data	
Square size	□14×14 □17×17 □22×22 □27×27
Flanged	F07 F10
Stem	Height ≤ 44mm



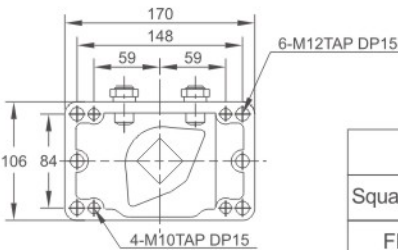
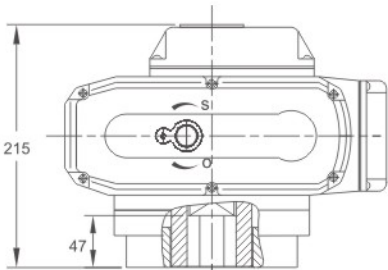
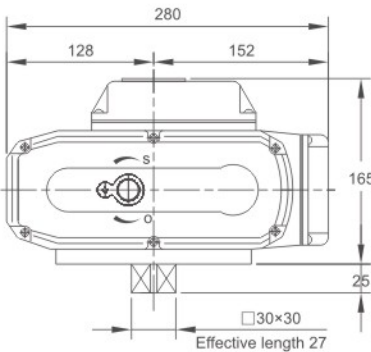
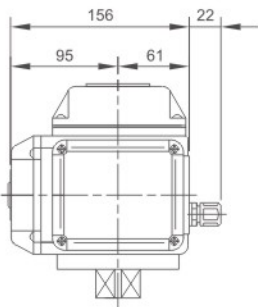


Standard

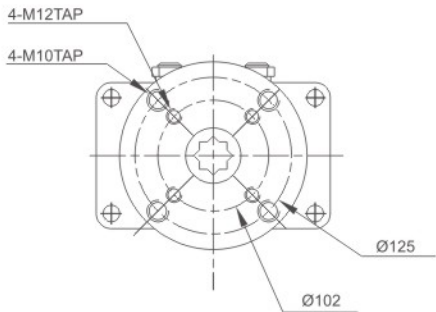


Direct Installation

Item		HL-100						
Performance	Power	DC24V	DC220V	AC24V	AC110V	AC220V	AC380V	AC415V
Motor power		100W						
Rated current		9A	1.5A	9A	2.2A	1A	0.48A	0.53A
Standard time/torque		25S/1000Nm		50S/1000Nm			30S/1000Nm	
Optional time/torque		/		15S/300Nm, 30S/800Nm			15S/500Nm	
Wiring		B、S、R、H、A、K、D、T、Z、TM						
Rotary angle		0~90°						
Weight		11.2kg(Standard type)						
Voltage–withstandingvalue		500VAC/1minute (DC24V/AC24V)		1500VAC/1minute (AC110V/AC220V)		2000VAC/1minute (AC380V)		
Insulated resistance		20MΩ/500VDC (DC24V/AC24V)		100MΩ/500VDC (AC110V/AC220V/AC380V)				
Enclosure protection		IP-67(IP-68 optional)						
Surrounding temperature		-25℃~60℃(The other temperatures can be customized)						
Installation angle		Any angle						
Case material		Aluminium alloy die-casting						
Optional function		Heater space, overheating protection, Handwheel						
Product color		milk white (other colors customized)						



Direct Installation Data	
Square size	□22×22 □27×27 □36×36
Flanged	F10 F12
Stem	Height≤46mm



Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator

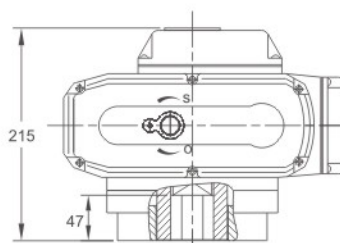
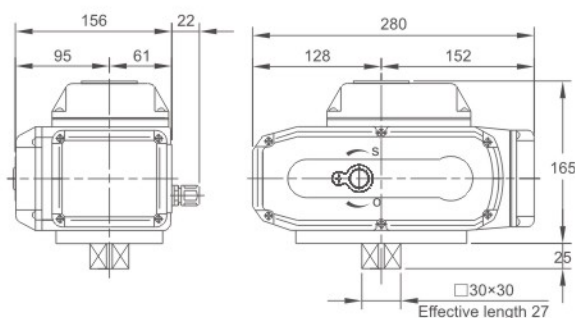


Standard

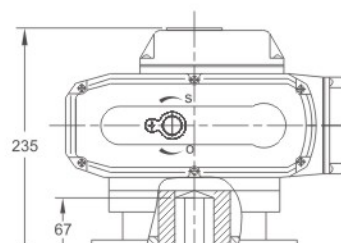


Direct Installation

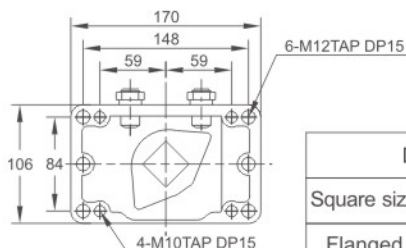
	Item	HL-200				
Performance	Power	AC24V	AC110V	AC220V	AC380V	AC415V
Motor power		100W				
Rated current		9A	2.2A	1.2A	0.48A	0.53A
Standard time/torque		100S/2000Nm			50S/2000Nm	
Optional time/torque		/			/	
Wiring		B、S、R、H、A、K、D、T、Z、TM				
Rotary angle		0~90°				
Weight		11.8kg(Standard type)				
Voltage—withstandingvalue		500VAC/1minute (DC24V/AC24V)		1500VAC/1minute (AC110V/AC220V)		2000VAC/1minute (AC380V)
Insulated resistance		20MΩ/500VDC (DC24V/AC24V)		100MΩ/500VDC (AC110V/AC220V/AC380V)		
Enclosure protection		IP-67(IP-68 optional)				
Surrounding temperature		-25℃~60℃(The other temperatures can be customized)				
Installation angle		Any angle				
Case material		Aluminium alloy die-casting				
Optional function		Heater space, overheating protection, Handwheel				
Product color		milk white (other colors customized)				



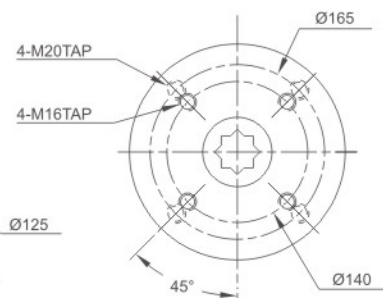
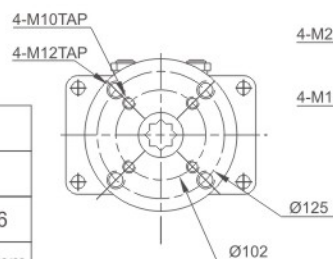
F10\F12



F14 or F16



Direct Installation Data		
Square size	□22×22 □27×27 □36×36	
Flanged	F10 F12	F14 or F16
Stem	Height≤46mm	Height≤66mm



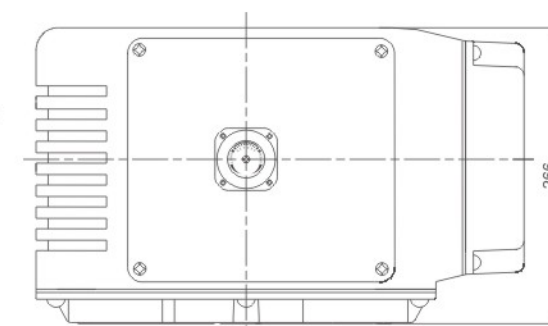
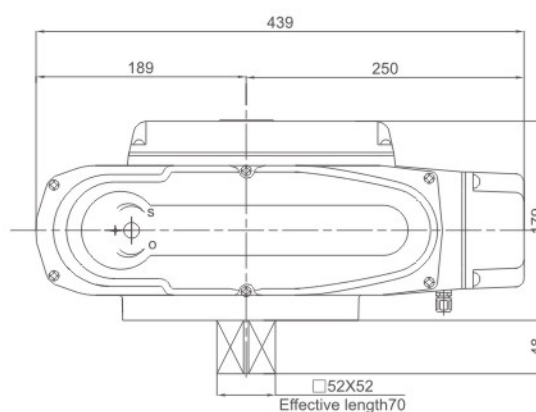
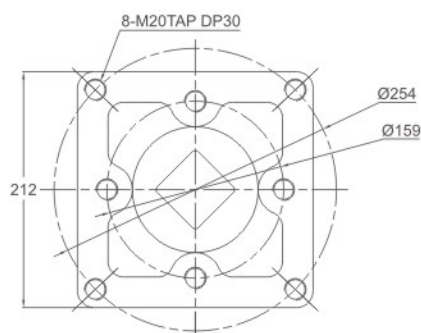
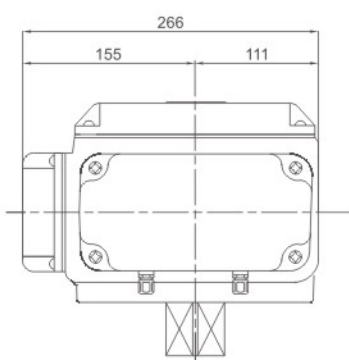


Standard



Standard

Item	HL-400				HL-600				
	AC110V	AC220V	AC380V	AC415V	AC110V	AC220V	AC380V	AC415V	
Performance Power									
Motor power	200W				200W				
Rated current	4.1A	2.1A	0.9A	1.08A	4.1A	2.1A	0.9A	1.08A	
Standard time/torque	100S/4000Nm、50S/3000Nm				150S/6000Nm				
Wiring	B、S、R、H、A、K、D、T、Z								
Rotary angle	0~90°								
Weight	31kg(Standard type)								
Voltage-withstandingvalue	500VAC/1minute (DC24V/AC24V)		1500VAC/1minute (AC110V/AC220V)		2000VAC/1minute (AC380V)				
Insulated resistance	20MΩ/500VDC (DC24V/AC24V)		100MΩ/500VDC (AC110V/AC220V/AC380V)						
Enclosure protection	IP-67								
Surrounding temperature	-25℃~60℃(The other temperatures can be customized)								
Installation angle	Any angle								
Case material	Aluminium alloy die-casting								
Optional function	Heater space, overheating protection, Handwheel								
Product color	milk white (other colors customized)								



Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



Application

Electric actuator with a swinging arm can be matched with butterfly valves, ball valves, plug valves and other valves which have 90° rotation, controlling the valve's open and close. Use Imported electronic component and aluminum alloy die-cast shell. It has the advantages of compact, weight, maintenance-free, corrosion resistance, etc., can be installed in narrow place. It's widely used in the automation control of building automation, watery, paper making, power, chemical industry, etc.

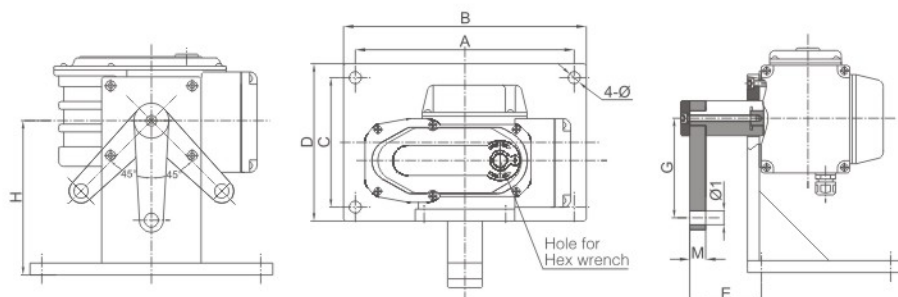
Installation

- Outdoor or Indoor
- Non-explosion proof. Please don't install in flammable and explosive place.
- Please installing protection cover to protect whole machine in order to avoid rain or sunshine;
- Please reserve space for cable enter and manual operation
- Surrounding temperature range -25°C~60°C.

Feature

- 1.Compact:The overall volume and weight are only 1/3 of the traditional products. Large torque with low power.Convenient to installation and transportation.
- 2.Motors designed according to the working characteristics of valves,with low start current,large start torque and small rotary inertia. Built-in over-heat protector(Automatic Recovery Type) will stop the actuator when the valve got stuck by accident.
- 3.Precision gears consist of precise tangential multi-gears and shafts,made of heat treated alloy steel with high quality,with long service life.Molybdenum-based lubricating grease is added into gear mechanism,maintenance-free.
- 4.Stainless steel mechanical stroke limit bolts and stop blocks accurate adjust stroke to required angle.The limit bolt placed out of the actuator for convenient,lock the required position with stainless steel nuts after each adjustment.

Appearance dimensions of with a swinging arm



Size Item	A	C	G	Φ1xM	B	D	4-Φ	H	E
HL-05	180 ± 0.5	100 ± 0.5	70 ± 0.2	Φ10X12	216	136	4-Φ12	120	50
HL-10	220 ± 0.5	130 ± 0.5	100 ± 0.2	Φ14X16	244	158	4-Φ12	155	72
HL-20	260 ± 0.5	100 ± 0.5	120 ± 0.2	Φ16X21	300	130	4-Φ13	165	90
HL-50									
HL-100	320 ± 0.5	130 ± 0.5	150 ± 0.2	Φ20X25	360	162	4-Φ14	200	111
HL-200									
HL-400	510 ± 0.5	270 ± 0.5	215 ± 0.2	Φ30X34	560	320	4-Φ22	274	139
HL-600									



Standard



Direct Installation

Item	HL-05、HL-10、HL-20、HL-50、HL-100、HL-200
Power	DC24, AC24, AC110, AC220, AC380, etc.
Action time	6S, 10S, 20S, 30S, 60S, etc.
Wiring	B、S、R、H、A、K、D、T、Z
Rotary angle	0-90°
Waterproof performance	72 hours continuously operation underwater with 10 meters
Surrounding temperature	-25℃~60℃
Installation angle	Any angle
Case material	Aluminium alloy die-casting components
Electrical Protection	With a motor overheating protection performance,automatically reset overtorque protection
End connection	Standard type (for medium temperature higher than 60℃), Direct installation type (for medium temperature below 60℃)
Product color	black(other colors customized)
Enclosure protection	IP68

HL series electric actuator with IP68 instruction

HL series electric valve actuators with IP68 is our specially developed new products for the outdoor ,it's not only resistant to the big temperature difference of outdoor, but also anti-moisture and anti-flooding, work continuously 72 hours at 10 meters underwater. In order to more effectively to prevent water entering the inside through cable entries to damage the internal parts of the actuator, we made a special double sealing with a patent.



Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator

Item	HL-05A	HL-10A	HL-20A	HL-50A	HL-100A	HL-200A	HL-400A	HL-600A
Performance Power	DC24V、DC220V、AC24V、AC110V、AC220V、AC380V； 50/60Hz							
Motor power	10W	23W	40W	90W	100W	100W	200W	200W
Rated current	0.24A (AC220V)	0.32A (AC220V)	0.48A (AC220V)	0.92A (AC220V)	1.0A (AC220V)	1.2A (AC220V)	2.1A (AC220V)	2.1A (AC220V)
Output torque	50Nm	100Nm	200Nm	500Nm	1000Nm	2000Nm	4000Nm	6000Nm
Action time	30S	30S	30S	30S	50S	100S	100S	150S
Rotary angle	0~300°	0~90° Max.0~105°						
Input signal	4~20mADC、1~5VDC、0~10VDC(Others would be set before sale)							
Output signal	4~20mADC(Others would be set before sale)							
Accuracy class	1%							
Weight	2.2kg	4.0kg	7.0kg	7.8kg	11.2kg	11.8kg	32kg	32.5kg
Voltage-withstandingvalue	500VAC/1minute(DC24V/AC24V) 1500VAC/1minute(AC110V/AC220V) 2000VAC/1minute(AC380V)							
Insulated resistance	100MΩ/300VDC(DC24V/AC24V) 100MΩ /500VDC(AC110V/AC220V/AC380V)							
Enclosure protection	IP-67							
Surrounding temperature	-25℃~60℃(The other temperatures can be customized)							
Installation angle	Any angle							
Case material	Aluminium alloy die-casting							
Optional function	Overtorque protection、Heater space、Overheat protection							
Product color	milk white (other colors customized)							

High-performance modulating positioner

ZXQ series intelligent positioner is the intelligent signal collecting control system based on core of industrial chip, which can be installed inside of electric actuator as small size or in the way of DIN fixed outside, direct receive industrial instrumentation or computers 4~20mA DC output signal(the other input signal can be customized at the factory), with potentiometer feedback matched for precise positioning operation of valves or actuators, with free-calibration for electric actuator's movement, and output 4~20mA DC feedback signal for the movement at the same time to set the precise upper limit and lower limit value, 3 buttons operation adopted, 9 LED lights can display the positioner's mode, 4 number LED display the actual valve opening, the setting valve opening, the inside temperature of the positioner, easy to operate.



Item	HL-05ZA	HL-10ZA	HL-20ZA	HL-50ZA	HL-100ZA	HL-200ZA	HL-400ZA	HL-600ZA
Performance Power	AC110V、AC220V、AC380V							
Motor power	10W	23W	40W	90W	100W	100W	200W	200W
Rated current	0.24A (AC220V)	0.32A (AC220V)	0.48A (AC220V)	0.92A (AC220V)	1.0A (AC220V)	1.2A (AC220V)	2.1A (AC220V)	2.1A (AC220V)
Output torque	50Nm	100Nm	200Nm	500Nm	1000Nm	2000Nm	4000Nm	6000Nm
Action time	30S	30S	30S	30S	50S	100S	100S	150S
Rotary angle	0~90°							
Input signal	4~20mADC、1~5VDC、0~10VDC(Others would be set before sale)							
Output signal	4~20mADC(Others would be set before sale)							
Voltage-withstandingvalue	DC12V、DC/AC24V：500VAC/1minute				1500VAC/1minute			
Insulated resistance	DC12V、DC/AC24V：100MΩ/300VDC				100MΩ/500VDC			
Enclosure protection	IP-67							
Surrounding temperature	-25℃~60℃(The other temperatures can be customized)							
Installation angle	Any angle							
Case material	Aluminium alloy die-casting							
Optional function	Overload protection function、Heater space、Overheat protection							
Product color	milk white (other colors customized)							

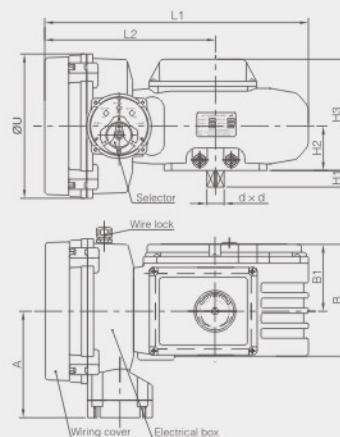


Electrical characteristics

1. Three-phase power supply, with automatic identification of phase sequence and phase lost.
2. Exchanged freely between modulating control and ON-OFF control.
3. A variety of wiring methods for ON-OFF control, convenient and flexible;
4. Impenetrable design to improve the sealing of actuator for local button box;
5. Multi contacts output indicate the working situation of actuators, conveniently monitor for DCS system.
6. Setting monitoring relay, supplying comprehensive fault signal for DCS system.
7. The basic error: 2.5%
8. Selector can be padlocked according to requirements to prevent the false operation.

Item	HL-				
	05	10	20/50	100/200	400/600
L1	270	303	351	371	513
L2	188	205	227	244	325
d	12	15	23	30	52
H1	12	9	22	25	48
H2	39	49	59	64	81
H3	103	124	148	159	179
B	115	122	148	156	266
B1	64	68	86	95	155
A	141				
U	192				

Dimensions



Electric wafer butterfly valve



Main Parts	Material	Specifications	Major Parts	Material	Specifications
Valve Body	Ductile Iron	50mm~800mm	Valve Stem	Stainless Steel	50mm~800mm
	Cast Iron				
	WCB				
	Stainless Steel				
Valve Disc	304(CF8)	50mm~800mm	Valve Seat	EPDM	50mm~800mm
	316(CF8M)			NBR	
	D.I.Plated Nickel			PTFE	
	D.I.Coated Nylon			Viton	
	Alum-bronze			SEP	

Product description

Integrated structure wafer center line butterfly valve can be matched and worked with HL electric actuator with input (4~20mADC, 0~10VDC or 1~5 VDC) signals or single-phase power supply. With the characteristics of small volume, large flow capacity, high regulation precision, good sealing, and light weight, etc. The valves are widely used in food, environmental protection, light industry, petroleum, paper making, chemicals, teaching and research equipment, and electric power industries of industrial automation control systems.

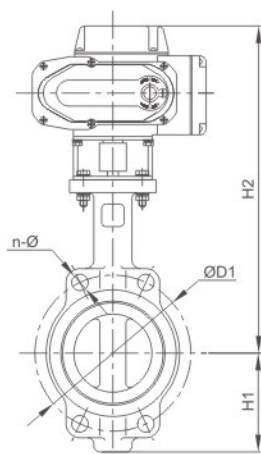
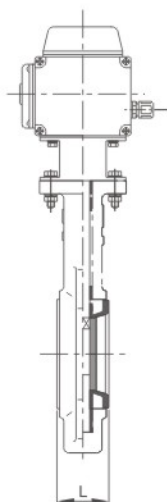
Technical parameters

Nominal diameter: DN50~DN800

Nominal Pressure: PN1.0, 1.6MPa

Suitable Temperature: -20°C~150°C

Suitable medium: water, sea water, food, natural gas, alcohols, salts, acids, alkalis, oil, steam, air, etc.



Electric butterfly valve with soft seal connecting dimension:

SIZE		Item	ØD1		L	H2	H1	n-Ø	
mm	inch		1.0MPa	1.6MPa				1.0MPa	1.6MPa
DN50	2"	HL-05	125		43	313	76	4-Ø18	
DN65	2 1/2"		145		46	326	89	4-Ø18	
DN80	3"		160		46	332	94	4-Ø18	8-Ø18
DN100	4"	HL-10	180		52	374	114	8-Ø18	
DN125	5"		210		56	387	127	8-Ø18	
DN150	6"	HL-20	240		56	433	140	8-Ø23	
DN200	8"		295		60	468	176	8-Ø23	12-Ø23
DN250	10"	HL-50	350	355	68	518	207	12-Ø23	12-Ø25
DN300	12"	HL-100	400	410	78	594	240	12-Ø23	12-Ø25
DN350	14"		460	470	78	625	273	16-Ø23	16-Ø25
DN400	16"	HL-200	515	525	102	657	322	16-Ø25	16-Ø30
DN450	18"		565	585	114	679	340	20-Ø25	20-Ø30
DN500	20"		620	650	127	737	380	20-Ø28	20-Ø34
DN600	24"	HL-400	725	770	154	881	467	20-Ø31	20-Ø37

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



Electric flanged soft seal butterfly valve



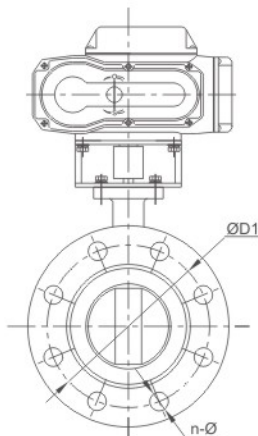
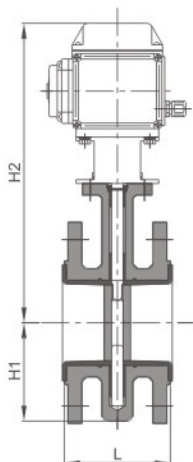
Nominal diameter DN(mm)		DN50~DN500	
Nominal pressure		PN1.0MPa	PN1.6MPa
Nominal pressure	Strength test	PN1.5MPa	PN2.4MPa
	Seal test	PN1.1MPa	PN1.76MPa
Main Parts	Valve Body	Ductile Iron, WCB, Stainless Steel	
	Valve Disc	Ductile iron, cast iron, WCB and special materials	
	Valve Stem	Carbon steel, Stainless Steel	
	O-ring	Rubber, PTFE, EPDM	
	Packing	PTFE, flexible graphite	
Applicable Operating Condition	Applicable medium	Water, air, oils, etc.	
	Suitable temperature	≤ 120℃	

Product description

Electric flanged soft seal butterfly valve is suitable for temperature ≤ 120℃, nominal pressure ≤ 1.6MPa of food industry, pharmaceutical, chemical industry, oil, electricity power, textile, paper making and other liquid/gas regulation.

Features

1. Design reasonable, unique structure, light weight, open and close quickly.
2. Operation torque small, easy operation.
3. Mounted in any position, and easy maintenance.
4. The seal parts can be replaced, zero leakage of reliable seal performance.
5. The seal material is anti-aging, corrosion resistance with long life and other characteristics.

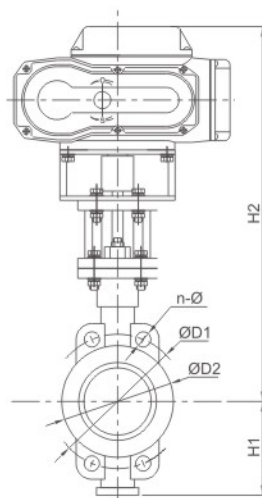
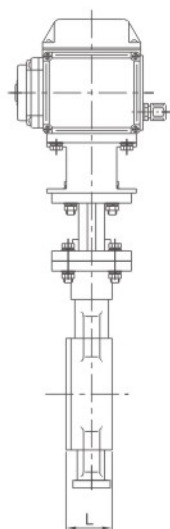


Electric flanged soft seal butterfly valve (standard type) Dimensions

SIZE		Item	ØD1		L	H2	H1	n-Ø	
mm	inch		1.0MPa	1.6MPa				1.0MPa	1.6MPa
DN50	2"	HL-05	125		108	261	70	4-Ø18	
DN65	2 1/2"		145		112	285	78	4-Ø18	
DN80	3"	HL-10	160		114	282	87	4-Ø18	8-Ø18
DN100	4"		180		127	324	105	8-Ø18	
DN125	5"	HL-20	210		140	344	120	8-Ø18	
DN150	6"		240		140	388	134	8-Ø22	
DN200	8"	HL-50	295		152	418	163	8-Ø22	12-Ø22
DN250	10"		350	355	165	471	202	12-Ø22	12-Ø26
DN300	12"	HL-100	400	410	178	535	230	12-Ø22	12-Ø26
DN350	14"		460	470	190	583	245	16-Ø22	16-Ø26
DN400	16"	HL-200	515	525	216	632	305	16-Ø28	16-Ø31
DN450	18"		565	585	222	655	345	20-Ø28	20-Ø31
DN500	20"		620	650	229	687	375	20-Ø28	20-Ø34

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.

Electric triple offset metal-seal butterfly valve



Nominal diameter DN(mm)		DN50~DN600		
Nominal pressure		PN1.0MPa		PN1.6MPa
Nominal pressure	Strength test	PN1.5MPa		PN2.4MPa
	Seal test	PN1.1MPa		PN1.76MPa
Materials/ code name		C	P	R
Main Parts	Valve Body	WCB	304	316
	Valve Disc			
	Valve Stem	Carbon steel,Stainless Steel		
	O—ring	PTFE、stainless steel		
	Packing	PTFE、flexible graphite		
Applicable Operating Condition	Applicable medium	Water,steam,oils	nitrose	acetic acid
	Suitable temperature	Carbon steel: -29℃~425℃ Stainless steel: -40~600℃		

Product description

Flexibility with precision U-ring and triple offset metal hard sealing multi-level structure, which is widely used in medium temperature $\leq 425^{\circ}\text{C}$ of metallurgical, power, petrochemical, and municipal construction, drainage and industrial pipe, for regulation traffic and fluid truncated. The valve adopt triple offset structure. The sealing face of the valve seat and disc is made of the steel and stainless steel with good corrosion resistance, long service life. With the two-way sealing function, all the products up to the valve pressure test standard of national GB/T 13927-92.

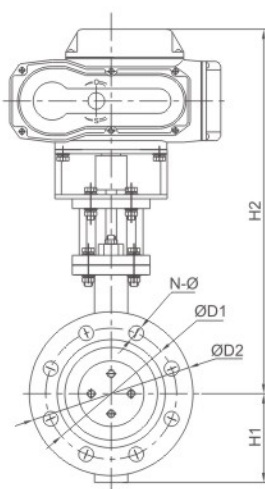
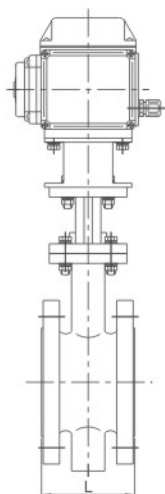
Features

- 1.The valve adopt triple offset structure. Almost no wear between the valve seat and valve disc. With more and more tightly sealing function.
- 2.The sealing ring is made of stainless steel, with dual advantages for metal seal and elastomeric seal,both in the case of low and high temperatures with excellent sealing performance,corrosion resistance,long life and other characteristics.
- 3.The sealing surface of the disc is welded of cobalt-based alloy,with the advantage of wear resistance and long service life.
- 4.There is a two-way sealing function of the valve.No limitation from the media flows and spatial location,which can be installed in any direction.

Electric triple offset metal-seal butterfly valve with metal seal:

SIZE		Item	ØD1		ØD2		H2	H1	L	n-Ø	
mm	inch		1.0MPa	1.6MPa	1.0MPa	1.6MPa				1.0MPa	1.6MPa
50	2"	HL-10	125		102		323	90	43	4-18	
65	2.5"		145		122		367	110	46	4-18	
80	3"	HL-20	160		133		413	115	49	4-18	8-18
100	4"		180		158		423	130	56	8-18	
125	5"	HL-50	210		185		473	150	64	8-18	
150	6"		240		216		511	165	70	8-22	
200	8"		295		272		597	210	71	8-22	12-22
250	10"	HL-100	350	355	320	320	627	245	76	12-22	12-26
300	12"	HL-200	400	410	372	372	677	280	83	12-22	12-26
350	14"		460	470	420	430	742	315	92	16-22	16-26
400	16"	HL-400	515	525	480	480	819	345	102	16-26	16-30
450	18"		565	585	535	545	884	380	114	20-26	20-30
500	20"	HL-600	620	650	585	610	909	415	127	20-26	20-33
600	24"		725	770	685	720	924	460	154	20-30	20-36

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



Electric flanged triple offset metal seal butterfly valve

Nominal diameter DN(mm)		DN40~DN600	
Nominal pressure		0~1.6MPa	
Nominal pressure	Strength test	PN1.5MPa	PN1.6MPa
	Seal test	PN1.1MPa	PN1.76MPa
Main Parts	Valve Body	Ductile Iron、WCB、Stainless Steel	
	Valve Disc	Ductile iron, cast iron, WCB, Stainless steel and special materials	
	Valve Stem	Carbon steel,Stainless Steel	
	O-ring	Rubber, PTFE, EPDM	
	Packing	PTFE、flexible graphite	
Applicable Operating Condition	Applicable medium	Water、steam、oils、nitrose、acetic acid,etc.	
	Suitable temperature	Carbon steel: -29℃~425℃ Stainless steel: -40℃~650℃	

Product description

Electric flanged metal seal butterfly valve use J-shaped elastic seal ring and triple offset metal seal structure, which is widely used in medium temperature $\leq 425^{\circ}\text{C}$ of electricity power, petrochemical industry, as well as drainage and other industries of the pipeline for regulating the flow.

Features

- 1.The valve adopt triple offset structure, almost no wear between the valve seat and valve plate. With more and more tightly sealing function.
- 2.The sealing ring is made of stainless steel, with dual advantages for metal seal and elastomeric seal, both in the case of low and high temperatures with excellent sealing performance, corrosion resistance, long life and other characteristics.
- 3.The sealing surface of the disc is welded of cobalt-based alloy, with the advantage of wear resistance and long service life.
- 4.There is a two-way sealing function of the valve. No limitation from the media flows and spatial location, which can be installed in any direction.

Electric flanged triple offset metal seal butterfly valve (standard type) dimensions

SIZE	Item	ØD1		ØD2		H2	H1	L	n-Ø	
		1.0MPa	1.6MPa	1.0MPa	1.6MPa				1.0MPa	1.6MPa
40	1 3/4"	HL-10	110	150		323	90	108	4-18	
50	2"		125	165		323	90	108	4-18	
65	2.5"		145	185		367	105	112	4-18	
80	3"	HL-20	160	200		413	120	114	4-18	8-18
100	4"		180	220		423	130	127	8-18	
125	5"		210	250		473	164	140	8-18	
150	6"	HL-50	240	285		511	175	140	8-22	
200	8"		295	340		597	200	152	8-22	12-22
250	10"	HL-100	350	355	395	405	627	243	165	12-22
300	12"	HL-200	400	410	445	460	677	250	178	12-22
350	14"		460	470	505	520	742	280	190	16-22
400	16"	HL-400	515	525	565	580	819	305	216	16-26
450	18"		565	585	615	640	884	350	222	20-26
500	20"	HL-600	620	650	670	715	909	380	229	20-33
600	24"		725	770	780	840	924	445	267	20-36

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



Electric sanitary butterfly valve with tri clamp

Nominal diameter DN(mm)	DN15~DN150
Nominal pressure	1.0MPa
Suitable temperature	-5℃~95℃
Applicable medium	Dairy、beer、food、beverage、pharmacy、biotechnology etc.
Body material	304、316、316L
Spool material	304、316、316L
Seal material	Silicon rubber、EPDM、FPM

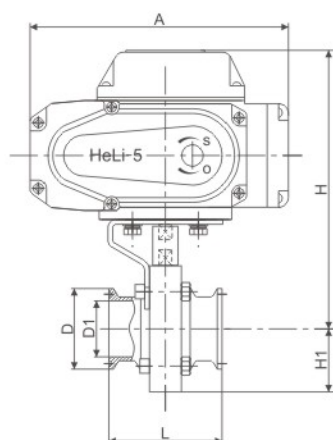
Product description

Sanitary butterfly valve are used in applications with high sanitary requirements, such as food, beverage, pharmaceutical, dairy, beer and chemicals.

Features

- Valve body and valve bore touched with medium are 304,316 or 316L
- Removable valve body, simple structure, easy maintenance.
- Design beautiful, surface smooth, without burrs.
- End connection: weld, clamp, thread
- Product Quality: polishing treatment to meet surface precision requirements.
- Product accuracy: In compliance with 3A,DIN,SMS,BS standard.

HL series sanitary butterfly valve with tri clamp dimension



SIZE mm	Item	D1	D	H	H1	L	A
Ø19	HL-05	16.5	50.5	173	38.5	66	162
Ø25		22	50.5	173	38.5	66	162
Ø32		29	50.5	173	38.5	66	162
Ø38		35	50.5	175	39.5	70.5	162
Ø45		40	64	178	44	70.5	162
Ø51		48	64	181	47	70.5	162
Ø63		59	77.5	188	55.5	76.5	162
Ø76		72	91	194	61.5	76.5	162
Ø89	HL-10	85	106	208	69.5	81	162
Ø102		99	119	225	77.5	87	208
Ø133		125	145	240	93	99.5	208
Ø159		151	183	256	107	110	208

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



PVC electric butterfly valve

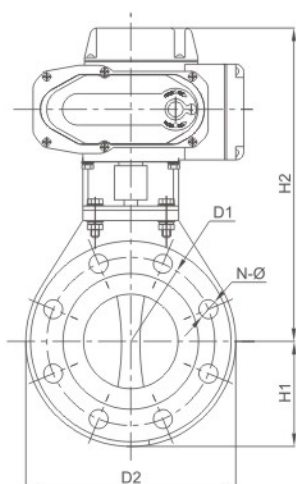
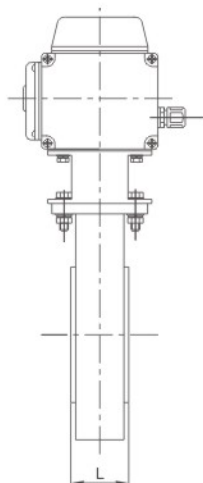
Nominal diameter DN(mm)	DN50~DN300
End connection	Wafer
Body material	UPVC(-10℃~+70℃)、CPVC(-40℃~+95℃)、RPP(-14℃~+100℃)、PVDF(-40℃~+140℃)
Disc material	UPVC(-10℃~+70℃)、CPVC(-40℃~+95℃)、RPP(-14℃~+100℃)、PVDF(-40℃~+140℃)
Sealing material	PTFE、EPDM、NBR
Applicable medium	PVC chemical solvent compatible food industry

Product description

PVC electric butterfly valve ,light weight, corrosion resistance, which is used in many fields, such as general water and raw water piping systems, pH and chemical solution system and other industries. The quality is approved by the majority of users.

Features

- 1.Suitable temperature range:-40℃~+95℃
- 2.With excellent strength and toughness.
- 3.With excellent chemical resistance capabilities
- 4.Retardant properties is the self-extinguishing
- 5.Low thermal conductivity,about 1/200 of the steel
- 6.The content of heavy ion in the medium up to the ultrapure water standards.
- 7.Health indicators in line with national health standards
- 8.Clean and smooth of the tube wall,which can generate a smaller friction and adhesion when transferring fluid.
- 9.Light weight,the equivalent of 1/5 of steel,1/6 of brass.
- 10.Easy to install.
- 11.Excellent anti-aging and UV resistance,so that there is a great extension of the normal service life than other piping systems.



PVC electric butterfly valve connecting dimension(standard type):

SIZE mm	Item	D1 1.0MPa	D2 1.0MPa	H2	H1	L	n-Ø 1.0MPa
DN50	HL-5	125	165	263	82	40	4-19
DN65		145	185	274	92	46	4-19
DN80	HL-10	160	200	318	100	46	8-19
DN100		180	220	334	110	54	8-19
DN125	HL-20	210	249	369	124	70	8-23
DN150		240	283	406	142	74	8-23
DN200		295	340	452	170	87	8-23
DN250	HL-50	350	395	503	198	114	12-25
DN300	HL-100	410	460	557	230	114	12-25

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator

Electric aeration butterfly valve



Nominal diameter DN(mm)		DN50~DN1600
Nominal pressure		PN0.1/0.25/0.6MPa
Disc corner		0~70°
Acting type		Electrical open or electrical close
Flow characteristic		Approximately equal percentage
Permissible differential pressure(MPa)		0.6
Performance index		basic error: +2.5%; hysteresis ≤ +2.0%; dead space +3.0%
Power supply		AC220V、AC380V、DC24 V
Modulating type	Signal range	4~20mA、0~10V、1~5V
On-off type	Electrical signal	AC220V、AC380V、DC24V; Feedback signal; Active contact signal or Passive contact signal

Product description

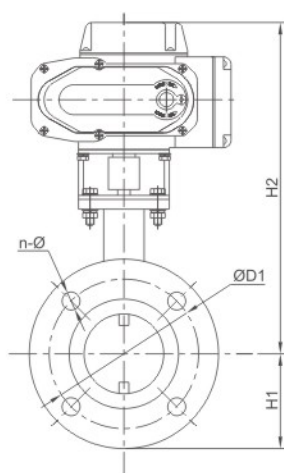
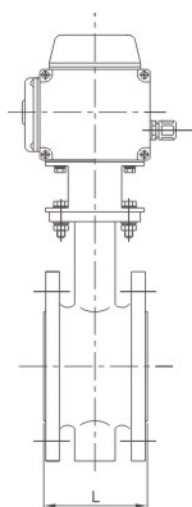
Electric aeration butterfly valve is composed of part-turn electric actuator and butterfly valve, this kind of aeration butterfly valve can be matched with HL electric actuator, which have the function of: Built-in positioner, Opening Position Signal Feedback, Position indication, Manual operation, etc. Supplied with AC220V/AC380V, and can be run with input(4~20mADC or 0~10VDC) current and voltage signals to achieve the purpose of flowrate control by modulating control and on-off control.

Its main features: nominal pressure < 0.6 Mpa, the leakage rate control is less than 2%, used in industry, metallurgy, environmental protection and other piping for adjusting the flow of the medium. With the characteristics of simple structure, light weight, low operating torque, opening and closing fast, flexible movement, huge flow capacity. Suitable for smoke, dust, air or slurry fluid regulation and control.

Electric aeration butterfly valve connecting dimension

SIZE		Item	D1	H2	H1	L	n-Ø
mm	inch		0.25MPa				0.25MPa
50	2"	HL-5	110	216	70	108	4-14
65	2 1/2"		130	217	80	112	
80	3"		150	225	95	114	
100	4"	HL-10	170	245	105	127	4-18
125	5"		200	244	120	140	
150	6"		225	267	132	140	
200	8"	HL-20	280	360	160	152	8-18
250	10"		335	443	187	165	
300	12"		395	480	220	178	
350	14"	HL-50	445	555	245	190	12-22
400	16"		495	593	270	216	
450	18"		550	621	297	222	
500	20"	HL-100	600	678	322	229	16-22
600	24"		705	723	377	267	
700	28"		810	803	430	292	
800	32"	HL-200	920	857	487	318	24-30
900	36"		1020	1013	537	330	
1000	40"		1120	1073	587	410	
1200	48"	HL-400	1320	1188	702	470	28-30
1400	56"		1520	1888	782	530	
1600	64"		1370	1915	895	600	

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.





Electric Lined Fluorine butterfly valve

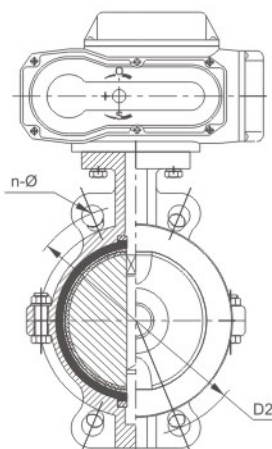
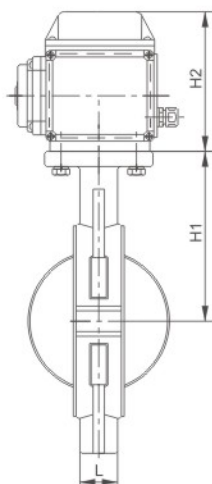
Product description

D971F46/D941F46 electric lined Fluorine butterfly valve has two kinds of control methods: ON-OFF and Modulating control. Electric actuator can work when the control signal (4–20mA DC or 1–5 VDC) and single-phase power supply to be input, this kind of butterfly valve has a strong function with small size, reliable performance, high flow capacity. Valve body, valve disc and valve stem all lined with Fluorine, with excellent corrosion resistance, suitable for any concentrations of liquid such as acid, alkali, salt and oxidants, and used at chemical, petroleum, pharmaceutical, food, iron and steel smelting, paper making, water treatment and other systems like gas, liquid. The products can be widely used in some areas to Instead of the gate valve, globe valve and other types of shut-off or control valves.

Product characteristics

Lined with F4, F3, F46 butterfly valve with corrosion-resistant, no leakage, long life and other advantages. This type of butterfly valve is suitable for the treatment of concentrated sulfuric acid, hydrochloric acid, nitric acid, hydrofluoric acid, aqua regia, organic acid, strong acid, oxidizing medium or high temperature sulfuric acid, high temperature acetic acid and other highly corrosive fluids.

1. Small and lightweight, easy disassembly and maintenance, and can be installed in any location.
2. The structure is simple and compact, open and close quickly
3. Operating torque is small, easy to operate.
4. Flow characteristics tend to be straight line, good in regulation
5. Valve seat with anti-aging, corrosion resistance.



Dimension of motorized lined fluorine butterfly valve

SIZE		Item	ØD2	L	H1	H2	n-Ø
mm	inch						
DN50	2"	HL-10	125	43	114	124	4-Ø18
DN65	2 1/2"		145	46	126		4-Ø18
DN80	3"	HL-20	160	46	135	148	8-Ø18
DN100	4"		180	52	148		8-Ø18
DN125	5"	HL-50	210	56	168	148	8-Ø18
DN150	6"		240	56	180		8-Ø23
DN200	8"	HL-100	295	60	229	148	8-Ø23
DN250	10"		350	68	280		12-Ø23
DN300	12"	HL-200	400	78	298	159	12-Ø23
DN350	14"		460	78	340		16-Ø23
DN400	16"	HL-400	515	102	370	179	16-Ø25
DN450	18"		565	114	390		20-Ø25
DN500	20"		620	127	440		20-Ø25

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



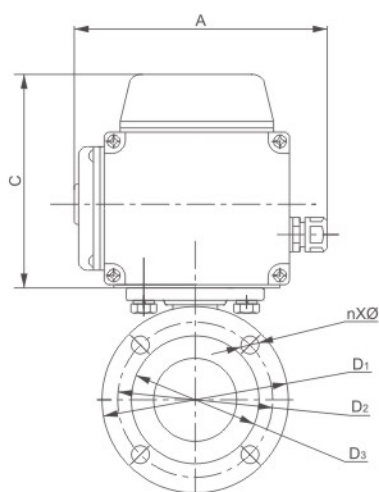
Electric flanged ball valve

Nominal diameter DN(mm)	DN15~DN250
Nominal pressure	PN1.0/1.6/2.5/4.0/6.4MPa
Applicable medium	Water、Petroleum、Nitric Acids、Acetic Acids、Slurries、Viscosity fluid and so on
Suitable temperature	-40℃~+80℃(PTFE/PPL Sealing) -40℃~+350℃(Metal Sealing)
Leakage	Fit for the standard of ANSI B16.104
Rotary angle	90°
Body material	WCB,304,316
Seat materials	PTFE(Normal Temp.), Special PPL(High Temp.), Metal Sealing(High Temp.)

Product description

Electric Ball Valve is a kind of valve for 90° rotation, with the characteristics of fine sealing performance, large flow capability, small flow resistant coefficient, simple structure and long service life. The valve passage is equal to the connecting pipe, and the medium can nearly flow through it without the loss.

By connected with electric actuator, the valve is widely applicable for the working fields such as petroleum, chemical industry, metallurgy, paper making, power station etc. It can control not only the medium like the air, liquid and steam, but also the medium containing the fibers.



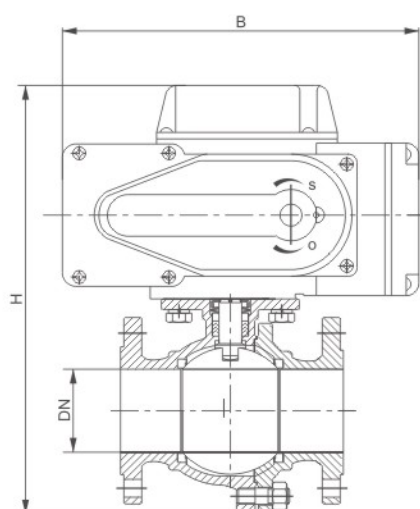
Product characteristics

1. Small flow resistance. The ball valve has smallest flow resistance among all valves. The flow resistance is very small even the reduced bore ball valve.
2. Thrust shaft bearing can reduce the fricative torque of valve shaft in order to make the shaft operation balance.
3. Valve seat with a good sealing performance by adopting PTFE as the seal ring. And the sealing performance can be better with the increase of pressure.
4. The packing sealing is not easy to destroy due to the rotary movement of valve stem, sealing performance will be increased with the increased medium's pressure.
5. PTFE's self-lubrication features can reduce the fricative to make the service life long.

Electric flanged ball valve connecting dimension

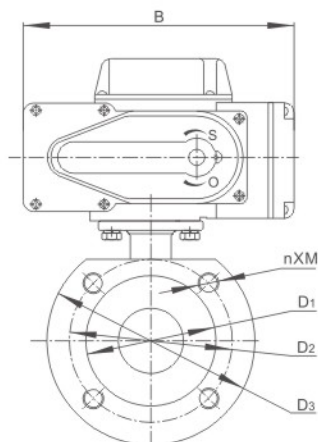
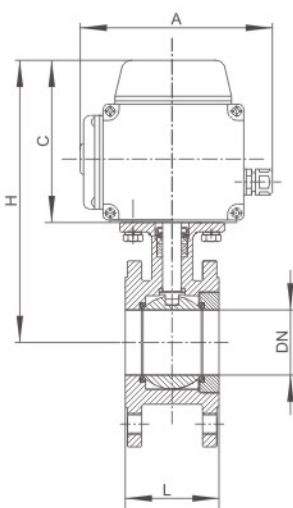
SIZE	Item	Nominal pressure	A	B	C	H	L	D ₁	D ₂	D ₃	nXØ
DN15	HL-05	1.6MPa	137	160	103	203	130	95	65	45	4X14
DN20	HL-05		137	160	103	209	140	105	75	55	4X14
DN25	HL-05		137	160	103	223	150	115	85	65	4X14
DN32	HL-05		137	160	103	243	165	135	100	78	4X18
DN40	HL-10		145	208	124	276	180	145	110	85	4X18
DN50	HL-10		145	208	124	289	200	160	125	100	4X18
DN65	HL-20		170	258	148	332	220	180	145	120	4X18
DN80	HL-20		170	258	148	356	250	195	160	135	8X18
DN100	HL-50		170	258	148	383	280	215	180	155	8X18
DN125	HL-100		184	280	159	467	320	245	210	185	8X18
DN150	HL-100		184	280	159	511	360	280	240	210	8X23
DN200	HL-200		184	280	159	609	400	355	295	265	12X23

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.





Wafer type flanged Ultra thin Italian ball valve



The type of valve	Power	End connection	Structure shape	Valve seat	Nominal pressure (MPa)	Valve body
Ball valve	9– electromotion	Wafer	two way with floating ball	F–PTFE H–Alloy steel PPL	1.6 2.5 4.0 6.4	as below material code
Nominal diameter DN(mm)		15–200				
Materials/code name		C		P		R
Main Parts	Valve Body	WCB		ZG1Cr18Ni9Ti		ZG0Cr18Ni12Mo2T
	Valve Disc	2Cr13		ZG1Cr18Ni9Ti		ZG0Cr18Ni12Mo2T
	Valve Stem	2Cr13		1Cr18Ni9Ti		0Cr18Ni12Mo2Ti
	O–ring	RPTFE, Alloy steel				
	Packing	PTFE, flexible graphite				
Applicable Operating Condition	Applicable medium	Water,steam,oils		nitrose		acetic acid
	Suitable temperature	–28℃~300℃				
Control method		On–off type / Modulating type				
Action type		Shut–off / regulation				
Electric actuator	Item	HL series				
	Power supply	DC24V、AC24V、AC110V、AC220V、AC380V				

Product description

Wafer flanged Ultra-thin ball valve with short length, light weight, easy installation, saving material and other significant advantages. In addition, valve seat's seal is reliable and easy to open and close by adopting elastic seal structure. Possible to operate reliably as the fire-resistant structure with good sealing in case of fire accident. Anti-static structure supplied according to user needs. The 90° positioning plate with hole can be used for lock according to customer's needs to avoid incorrect operation.

Application

Wafer flanged Ultra-thin ball valve are used to disconnect or connect the inside medium of the pipeline, which are suitable for the pipes of Class 150, PN1.0-2.5MPa, operating temperature 29-180°C (RPTFE valve seat) or 29-300°C (PPL valve seat), different materials chosen can be applied for water, steam, oil, nitric acid, acetic acid, oxidizing media, urea and other mediums.

Appearance size of wafer type flanged Ultra thin Italian ball valve

SIZE	Item	Nominal pressure	A	B	C	H	L	D ₁	D ₂	D ₃	nXM
DN20	HL-05	1.6MPa	137	160	103	162	38	55	75	105	4XM12
DN25	HL-05		137	160	103	167	42	65	85	115	4XM12
DN32	HL-05		137	160	103	180	50	78	100	135	4XM16
DN40	HL-05		137	160	103	187	62	85	110	145	4XM16
DN50	HL-10		145	208	124	216	72	100	125	160	4XM16
DN65	HL-20		170	258	148	248	95	120	145	180	4XM16
DN80	HL-20		170	258	148	267	118	135	160	195	8XM16
DN100	HL-50		170	258	148	280	140	155	180	215	8XM16
DN125	HL-50		148	258	148	305	195	185	210	245	8XM16
	HL-100		184	280	159	316	195	185	210	245	8XM16
DN150	HL-100		148	208	159	375	225	210	240	280	8XM20

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator

Electric flanged three-way ball valve



Nominal diameter DN(mm)	DN15~200mm
Nominal pressure	PN1.6、2.5、4.0、6.4MPa
End connection	Flange type, Threaded type
Valve body material	WCB、CF8、CF8M、CF3M
Valve ball	2Cr13、304、316
Seal Packing	PTFE、flexible graphite
Rotate angle	0~90°
Enclosure protection	IP-67
Environmental humidity	≤95%
Suitable temperature	-25~70℃

Product description

Electric flanged three-way ball valve is compact, light, and convenient to maintenance. The valve is powered by 220V single-phase AC and receives the signals of the control system. Reversible single-phase gear reducer can be driven by switching single-phase power to switch the pipeline according to the requirement. L pattern three-way valve can achieve flow direction switched in the pipeline, also can make two perpendicular ports connected or disconnected. T-pattern three-way valve not only can achieve flow direction switched, but also mix the mediums of three ways with each other. Possible to disconnect any one way so that the other two ways can be connected to flexible control the flow direction of medium, which are suitable for the pipeline of water supply, petrochemical industry, metallurgy, mining, textile, energy, paper making, food, steel piping system.

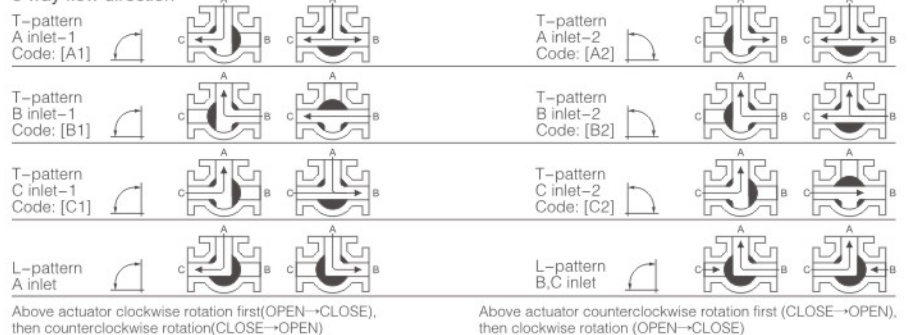
Features

1. Compact, open and close rapidly, running smooth
2. Good seal performance: PTFE valve seat all around with elastic deformation to achieve zero leakage,
3. Multi-function: any one way can be used as an inlet without leakage, L-pattern or T-pattern are available.
4. Easy maintenance: After removing pressure, no need to remove the entire valve body for inspection and maintenance

Control method

Electric three-way ball valve includes L-pattern and T-pattern, flow direction shown as below. L-pattern can connect the perpendicular two ways to switch the flow direction, but T-pattern can connect three ways or two ways to mix the mediums or switch the flow direction both. Normally L pattern adopted, but T pattern optional according to customers requested.

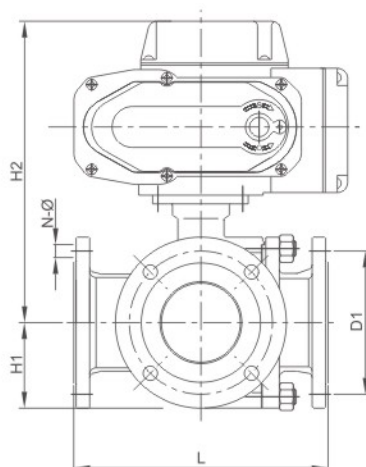
3 way flow direction



Three way high platform dimensions:

SIZE		Item	ØD1	L	H2	H1	n-Ø
mm	inch		1.6MPa				1.6MPa
DN15	1/2"	HL-05	65	140	128	47	4-Ø14
DN20	3/4"		75	160	155	52	
DN25	1"		85	180	176	57	
DN32	1 1/4"	HL-10	100	200	201	67	4-Ø18
DN40	1 1/2"		110	220	212	77	
DN50	2"		125	240	234	80	
DN65	2 1/2"	HL-20	145	260	253	90	8-Ø18
DN80	3"		160	280	266	97	
DN100	4"		180	320	291	107	
DN125	5"	HL-50	210	380	292	122	8-Ø18
DN150	6"		240	440	320	140	
DN200	8"		295	550	357	167	

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.





Motorized three way ball valve with threaded

Nominal diameter DN(mm)	DN15~DN100
Nominal pressure	PN1.6、2.5、4.0、6.4MPa
End connection	thread end connection, weld end connection
Valve body material	WCB、CF8、CF8M、CF3M
Valve ball	2Cr13、304、316
Seal Packing	PTFE、flexible graphite
Rotate angle	0~90°
Enclosure protection	IP-67
Environmental humidity	≤95%
Suitable temperature	-25~70℃

Product description

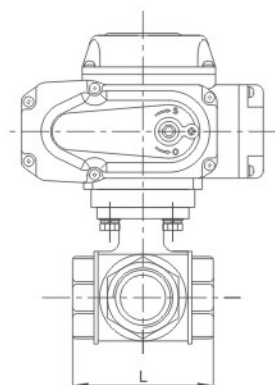
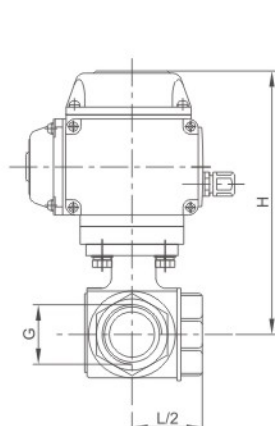
Electric thread three-way ball valve is compact, light, and convenient to maintenance. The valve is powered by 220V single-phase AC and receives the signals of the control system. Reversible single-phase gear reducer can be driven by switching single-phase power to switch the pipeline according to the requirement. L pattern three-way valve can achieve flow direction switched in the pipeline, also can make two perpendicular ports connected or disconnected. T-pattern three-way valve not only can achieve flow direction switched, but also mix the mediums of three ways with each other. Possible to disconnect any one way so that the other two ways can be connected to flexible control the flow direction of medium, which are suitable for the pipeline of water supply, petrochemical industry, metallurgy, mining, textile, energy, paper making, food, steel piping system.

Features

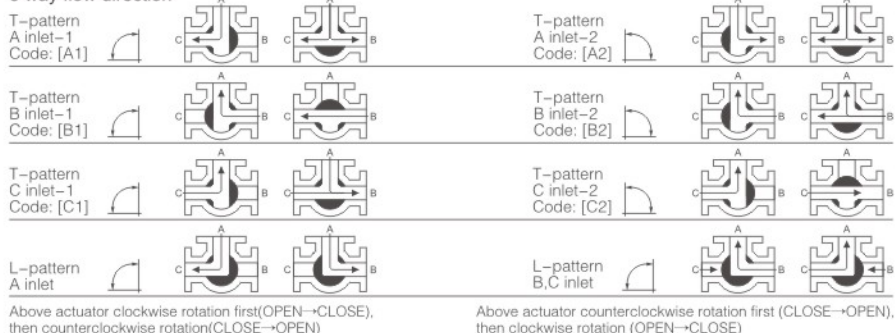
1. Compact, open and close rapidly, running smooth
2. Good seal performance: PTFE valve seat all around with elastic deformation to achieve zero leakage,
3. Multi-function: any one way can be used as an inlet without leakage, L-pattern or T-pattern are available.
4. Easy maintenance: After removing pressure, no need to remove the entire valve body for inspection and maintenance

Control method

Electric three-way ball valve includes L-pattern and T-pattern, flow direction shown as below. L-pattern can connect the perpendicular two ways to switch the flow direction, but T pattern can connect three ways or two ways to mix the mediums or switch the flow direction both. Normally L pattern adopted, but T pattern optional according to customers requested.



3 way flow direction



Appearance size of motorized three way ball valve with threaded

SIZE		Item	H	L
mm	inch			
15	1/2"	HL-5	193	72
20	3/4"	HL-5	184	84
25	1"	HL-5	193	91
32	1 1/4"	HL-5	198	116
40	1 1/2"	HL-5	206	135
50	2"	HL-10	234	146
65	2 1/2"	HL-20	266	199
80	3"	HL-20	304	237

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



Electric threaded ball valve

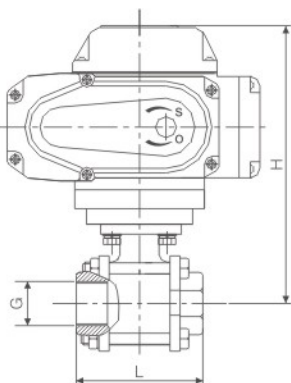
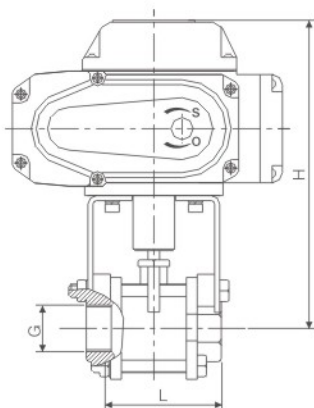
Nominal diameter DN(mm)		DN10~DN100					
Nominal pressure		PN1.6/2.5/6.4MPa					
End connection		thread			Butt welded		
Main Parts	Valve body, valve cap	WCB	CF8(304)	CF8M(316)	WCB	CF8(304)	CF8M(316)
	Valve ball, valve stem	2Cr13	304	316	2Cr13	304	316
	O-ring, Packing	RPTFE, PPL					
Applicable Operating Condition	Applicable medium	Water, steam, oils	Nitric acid and other corrosive medium	Nitric acid and other corrosive medium	Water, steam, oils	Nitric acid and other corrosive medium	Nitric acid and other corrosive medium
	Suitable temperature	-29℃~180℃ (RPTFE)、-29℃~300℃(PPL)					

Product description

Electric threaded ball valve with integrated structure can be driven by input (4~20mA DC, 0~10VDC or 1~5 VDC) signals or single-phase power supply, with the characters of small volume, high flow capacity, high regulation precision, good sealing, and light weight, etc. The valve is widely used in food, environmental protection, light industry, petroleum, paper, chemicals, teaching and research equipment, and electric power industries of industrial automation control systems.

Product features

Thread and butt welded connection ball valve can be divided into 1-piece, 2-piece, 3-piece. Body casting adopt the advanced technology from Taiwan, with reasonable structure and beautiful shape. The elastic sealing structure make the seat reliable and easy to close and open. valve stem adopt the lower structure with inverted seal, It is impossible to rush out the valve stem when the temperature of valve chest increase, There is butt weld(BW), socket welding(SW) connection of the 2-piece, 3-piece ball valve with locking devices in compliance with international standard ISO platform.



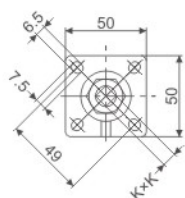
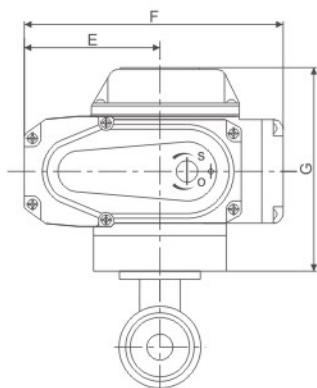
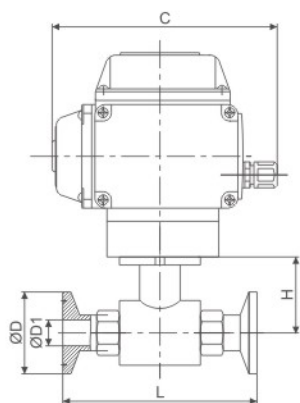
Electric threaded ball valve (standard type) dimensions

SIZE		Item	H	L
mm	inch(G)			
20	3/4"	HL-5	196	85
25	1"		200	90
32	1 1/4"		210	112
40	1 1/2"	HL-10	258	120
50	2"		252	145
65	2 1/2"	HL-20	279	170
80	3"		332	200
100	4"	HL-50	387	263

Electric threaded ball valve (direct installation type) dimensions

SIZE		Item	H	L
mm	inch(G)			
20	3/4"	HL-5	184	85
25	1"		193	90
32	1 1/4"		198	112
40	1 1/2"	HL-10	233	120
50	2"		234	145
65	2 1/2"	HL-20	274	170
80	3"		304	200

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



Electric sanitary ball valve

Item	Q981F-10P
Nominal diameter	DN15-DN150、1"-6"□Φ12.7-Φ152.4
End connection	Clamp, weld, thread, flange
Actuator	Electric actuator
Material	304,304L,316,316L adopted
Main performance	Big Temperature difference withstand; normal pressure 16MPa; strong corrosion resistance; precision;
Quality	polishing treatment to meet surface precision requirements
Seal ring	EPDM、NBR、PTFE
Working pressure	1.0Mpa
Working temperature	-10℃+150℃
Applications	Food, beverage, pharmaceutical, dairy, beer and chemicals
Suitable medium	Gas, liquid, Steam

Features

- Small flow resistance: with the smallest flow resistance either the reduced bore ball valve or full bore ball valve.
- Good seal performance: Valve seat with a good sealing performance by adopting PTFE as the seal ring.
- Service life long: PTFE's self-lubrication features can reduce the fricative to make the service life long.
- High reliability: without scratches between valve body and valve seat, wear resistance valve stem, with fireproof and anti-static functions
- Wide application range: used in viscous fluids, slurries and solid particles, including general medium.
- Small size: any positions installation, convenient installation, easy transportation and store.

Electric sanitary ball valve parameters

SIZE	Item	D	D1	L	H	K	C	E	F	G
Ø19	HL-05	50.5	16	99	45	9	137	84	164	125
Ø25	HL-05	50.5	22	115	50	9	137	84	164	125
Ø32	HL-05	50.5	29	124	51	9	137	84	164	125
Ø38	HL-05	50.5	35	140	64	9	137	84	164	125
Ø45	HL-05	64	41	148	67	9	137	84	164	125
Ø51	HL-10	64	48	164	70	11	145	98	208	156
Ø57	HL-10	77.5	52	169	74	11	145	98	208	156
Ø63	HL-10	77.5	59	175	80	11	145	98	208	156
Ø76	HL-10	91	72	200	100	14	145	98	208	156
Ø89	HL-20	106	84	235	107	14	170	124	258	196
Ø102	HL-20	119	98	315	122	14	170	124	258	196

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator

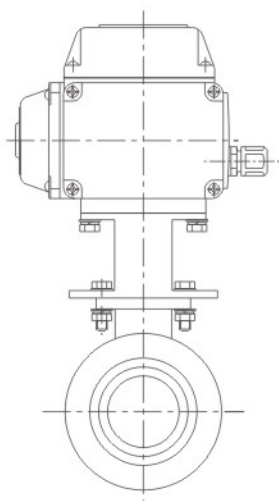


Electric PVC ball valve

Nominal diameter DN(mm)	DN15~DN100
End connection	Double Union, Flange
Valve body material	UPVC(−10℃~+70℃)、CPVC(−40℃~+95℃)、RPP(−14℃~+100℃)、PVDF(−40℃~+140℃)
Bore material	UPVC(−10℃~+70℃)、CPVC(−40℃~+95℃)、RPP(−14℃~+100℃)、PVDF(−40℃~+140℃)
Sealing material	PTFE、EPDM、NBR
Applicable medium	PVC chemical solvent compatible food industry

Product description

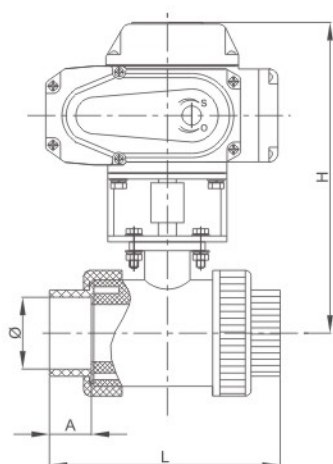
PVC Electric Ball valve adopt the double union and flange connection, which can be installed easily without special tools. With the advantages of compact structure, Anti-abrasion, quick detachable, easy repair and maintenance, etc. Body Material Health and non-toxic, corrosion resistance, light weight, wide application. Such as water and raw water piping systems, drainage and sewage piping systems, salt water and sea water piping systems, acid and chemical solution systems and other industries.



Features

1. Operation temperature range: −40℃~+95℃
2. With excellent strength and toughness.
3. With excellent chemical resistance capabilities
4. Retardant properties is the self-extinguishing
5. Low thermal conductivity, about 1/200 of the steel
6. The content of heavy ion in the medium up to the ultra-pure water standards.
7. Health indicators in line with national health standards
8. Clean and smooth of the tube wall, with smaller friction and adhesion when transferring fluid.
9. Light weight, the equivalent of 1/5 of steel, 1/6 of brass.
10. Easy to install, flange and double union end connection etc.
11. Excellent anti-aging and UV resistance performance, so that there is a great extension of the normal service life than other piping systems.

Electric PVC ball valve connecting dimension(standard type)



SIZE mm	Item	Ø	A	L	H
DN25	HL-5	32	21.5	121	207
DN32		40	26.5	137	211
DN40		50	31	161	242
DN50		63	37.5	195	268
DN65	HL-10	75	43.5	226	296
DN80		90	51	289	320
DN100		110	61	342	352

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.

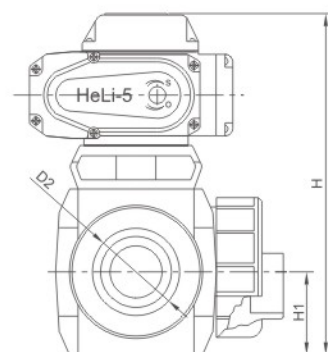
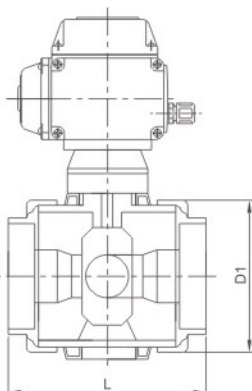


Electric PVC 3 way ball valve

Nominal diameter DN(mm)	DN15–DN50
Nominal pressure	PN1.0MPa
End connection	Double union
Valve body material	PVC
Valve seat	PTFE
Valve Ball	UPVC、CPVC、PP
Structure pattern	3 way L–pattern , 3 way T–pattern
Applicable medium	PVC chemical solvent compatible food industry
Suitable temperature	–15 ~ +135℃

Features

1. There are two connection styles: True union and threaded. True union connection can meet GB standard, DIN standard, ANSI standard, B.S standard, JIS standard and other standards, and threaded connection can be designed as NPT or BSPT standards. Easy to install, convenient to operate. All products are in full compliance with export standards.
2. Suitable for the frequent operation, open and close quickly, light weight.
3. Full bore design, high flow capacity, small fluid resistance.
4. Small size, light weight, and low cost
5. Good seal performance.
6. No vibration, low noise.



Electric PVC 3 way ball valve dimensions

SIZE mm	Item	D1	D2	H	H1	L
DN15	HL-5	53	20	207	33	142
DN20		63	25	227	43	162
DN25		70	32	227	43	175
DN32		85	40	263	56	233
DN40		101	50	263	56	244
DN50		121.5	63	279	64	283

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



Electric wafer V-pattern ball valve

Nominal diameter DN(mm)		DN25–DN250		
Nominal pressure		PN1.6~6.4MPa		
Nominal pressure	Strength test	PN2.4~9.6MPa		
	Seal test	PN1.76~7.0MPa		
Materials/ code name		C	P	R
Main Parts	Valve Body	WCB	304	316
	Valve Ball			
	Valve Stem	Stainless Steel		
	O–ring	PTFE、stainless steel、cemented carbide		
	Packing	PTFE, flexible graphite		
Applicable Operating Condition	Applicable medium	Water,steam,oils	nitrose	acetic acid
	Suitable temperature	–28~400℃	–28~500℃	
End connection		wafer type meet JB79–59 standard		

Product description

Electric V–type adjustable ball valve can be driven to realize the regulation of pressure, flow, temperature, liquid level and other parameters by input (4–20mA DC, 0–10VDC or 1–5VDC) signals and single–phase power without addition servo drives. The shearing force is generated by the reverse rotation of metal seal and V–cut on the valve spool which can cut off the fibers to avoid stuck accident, with the characters of large flow capacity, high regulation precision, good sealing, and light weight, etc. The best choice to replace the import products except for the applications of the small diameter, angular and triangle, particularly suitable for the medium of the slurries and fibers, and the regulation of small suspended solids. Widely used in paper manufacturing, sugar, petroleum, chemical, metallurgical and other industrial automation control systems.

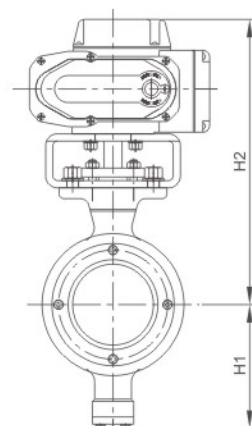
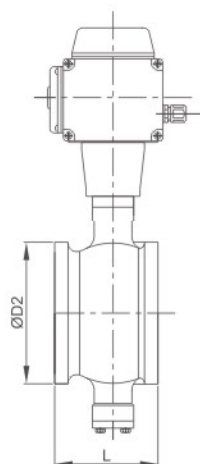
Product features

1. Simple design structure with German technology, light weight, low material cost, more cheaper than the linear control valve with the same flow capacity.
2. Integrated valve body has no effects for pressure, pipe and bolts as without any joints.
3. The durable valve seat lined the stainless steel core or “O” ring at the outer diameter which is made of tungsten carbide cobalt, the seal structure strengthened by a alloy waveform spring.
4. The V– type valve body can ensure the accuracy of control even in case of low flow or high viscosity medium within the full range. The shearing force created between the V–cut and valve seat have self–cleaning function to prevent the stuck, particularly suitable for frozen pipes, the fluids containing fibers, slurry type fluids, including polymers, particles, crystals and other flow control situations when the valve is closed.

Electric wafer V-pattern ball valve dimensions

SIZE		Item	D2	H2	H1	L
mm	inch					
25	1"	HL–5	68	313	81	50
32	1 1/4"		76	316	86	60
40	1 1/2"	HL–10	84	341	90	60
50	2"		100	353	93	75
65	2.5"	HL–20	118	390	108	100
80	3"		132	411	123	100
100	4"	HL–50	158	421	138	115
125	5"	HL–100	184	454	148	129
150	6"		216	503	170	160
200	8"	HL–200	268	534	200	200
250	10"		326	596	240	240

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.





Electric flanged V-type ball valve



Valve Body form	casting Straight ball valve
Nominal pressure	DN25~DN250mm
Valve body material	WCB、CF8、CF8M、CF3M
V-pattern valve ball	WCB, CF8, CF8M, CF3M (hardened treatment)
Valve stem material	2Cr13、304、316、316L
Valve seat	V-type PTFE packing, asbestos packing, graphite packing
Valve bore form	With a V-shape ball
Nominal pressure	PN1.6/2.5/4.0/6.4MPa
End connection	Flanged
Flowrate characteristics	Approximate equal percentage
Suitable temperature	-28℃~400℃

Product description

Electric V-type adjustable ball valve can be driven to realize the regulation of pressure, flow, temperature, liquid level and other parameters by input(4~20mADC, 0~10VDC or 1~5VDC) signals and single-phase power without addition servo drives. The shearing force is generated by the reverse rotation of metal seal and V-cut on the valve spool which can cut off the fibers to avoid stuck accident., with the characters of large flow capacity, high regulation precision, good sealing, and light weight, etc. The best choice to replace the import products except for the applications of the small diameter, angular and triangle, particularly suitable for the medium of the slurries and fibers, and the regulation of small suspended solids. Widely used in paper manufacturing, sugar, petroleum, chemical, metallurgical and other industrial automation control systems.

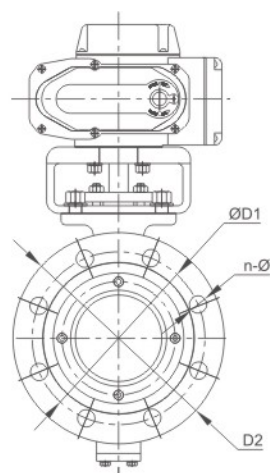
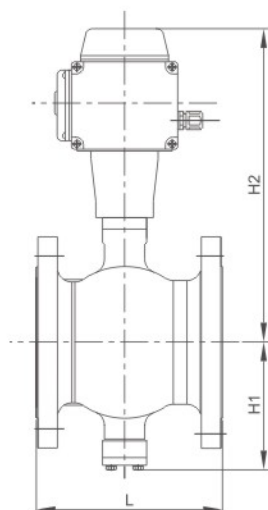
Product features

- 1.Compact structure ,small size,vertical horizontal installation
- 2.Excellent regulation characteristics: V-type ball valve can provide precise control within wide range as approximately equal percentage flowrate characteristics and up to 300:1 adjustability.
- 3.The maximum flow volume: The high maximum volume and small friction characters are better to choose more smaller and economical valve due to the streamline design and full quarter-turn control.
- 4.Double bearing structure with high mechanical performance and small start torque to ensure the excellent sensitivity.
- 5.High performance metal seal:V-type ball valve adopt metal seal valve seat with perfect performance and long service life.

Electric flanged V-type ball valve dimensions

SIZE		Item	D2	D1	H2	H1	L	n-Ø
mm	inch		1.6MPa	1.6MPa				1.6MPa
25	1"	HL-5	115	85	394	81	102	4-Ø14
32	1 1/4"		140	100	402	86	102	
40	1 1/2"	HL-10	150	110	431	90	114	4-Ø18
50	2"		165	125	446	93	124	
65	2.5"	HL-20	185	145	498	108	145	8-Ø18
80	3"		200	160	534	123	165	
100	4"	HL-50	220	180	559	138	194	8-Ø18
125	5"	HL-100	250	210	602	148	194	
150	6"		285	240	673	170	229	8-Ø23
200	8"	HL-200	340	295	734	200	243	
250	10"		405	355	836	240	297	12-Ø25

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



Electric lined Fluorine ball valve

Product description

Q941F46 series electric lined fluorine ball valve is designed for various corrosive mediums of automatic control, widely used in petroleum, chemical industry, dyeing, pesticide, acid making and other industries, the best choices of anti-corrosion valve equipment.

Q941F46 series electric ball valve with fluorine lined, the high strength and smooth appearance valve body made by Investment casting, All parts contacting with the liquid are fluorine, so it can be used in any concentration corrosive liquid that temperature in the range of $-50\sim+180^{\circ}\text{C}$ for a long time.



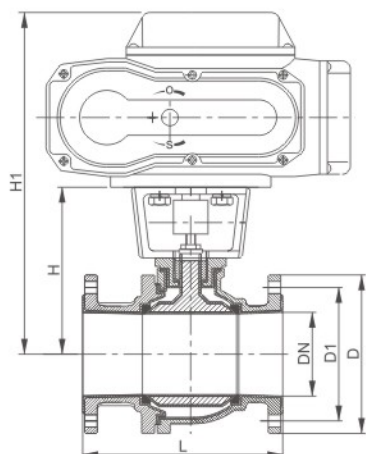
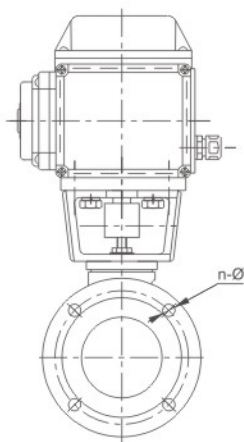
Performance parameters

Applicable medium: sulfuric acid, hydrofluoric acid, phosphoric acid, chlorine, alkali, aqua regia and any other highly corrosive mediums.

Design specifications: apply for standards of GB12233, GB12235, ANSI B 16.34.

Features

1. Corrosion resistance: valve chest and valve body lined with F46 about 2.5mm-3mm thickness, with a strong corrosion resistance
2. With perfect soft seal performance for valve seat.
3. Small size, light weight, simple structure, easy installation and maintenance.
4. Small flow resistance



Appearance size of electric lined fluorine ball valve

SIZE		Item	D1	D	H1	L	n-Ø
mm	inch						
15	1/2"	HL-05	65	95	208	140	4-Ø14
20	3/4"		75	105	210	140	4-Ø14
25	1"		85	115	220	150	4-Ø14
32	1 1/4"		100	140	225	165	4-Ø18
40	1 1/2"	HL-10	110	150	278	180	4-Ø18
50	2"		125	165	289	200	4-Ø18
65	2 1/2"	HL-20	145	185	333	220	4-Ø18
80	3"		160	200	351	250	8-Ø18
100	4"	HL-50	180	220	369	280	8-Ø18
125	5"	HL-100	210	250	423	320	8-Ø18
150	6"		240	285	449	360	8-Ø23
200	8"	HL-200	295	340	487	400	12-Ø23

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.

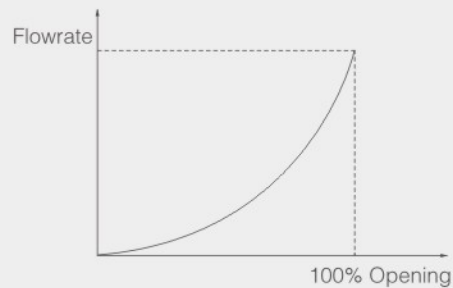


Electric Dynamic balance valve

Product description

Our dynamic balance valve is a new generation of product which is different from traditional electric control valve, which is the integration of dynamic balance and the electric control. As shown below, the different pressure (P_1-P_3) at both ends of the dynamic balance valve will be changed in the flow systems with big load fluctuations when the system pressure changed.

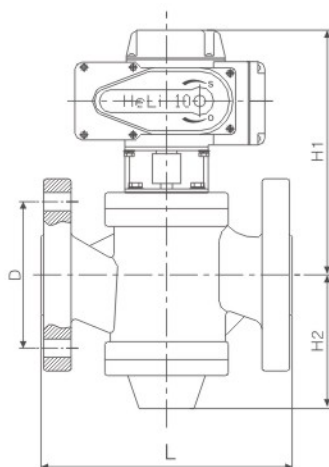
When the inlet pressure P_1 rises, (P_1-P_2) increase, then the valve spool upward move to decrease the opening between P_1 and P_2 , the pressure of valve spool goes down; When the inlet pressure P_1 goes down, (P_1-P_2) decrease, then the valve spool downward move to increase the opening between P_1 and P_2 , the pressure of valve spool rises; therefore, no matter how the pressure changes in the system, the pressure difference of P_2, P_3 will always keep the same by adjusting of valve spool. So, this kind of valve with the strong anti-interference ability and dynamic balance function.



Flow characteristic curve



Differential pressure curve



Electric Dynamic balance valve connecting dimension

SIZE mm	Item	L	H1	H2	D(Φ) Flanged	G Thread
DN32	HL-05	160	220	70	100	—
DN40		200	235	110	110	—
DN50		215	230	115	125	—
DN65		230	238	120	145	—
DN80		275	275	146	160	—
DN100	HL-10	290	295	165	180	—
DN125		315	307	208	210	—
DN150		350	326	205	240	—

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator

Summary

- LQ valve actuators are the new generation of our company and can be used for driving and controlling the butterfly valves, ball valves and plug valves (part-turn valves with 90° movement). With the functions of local control and remote control both.
- They are widely used in the fields such as oil, chemistry, power generation, water treatment, paper making, etc.
- The enclosure protection is IP67, and the explosion proof class is d II CT6 (LQ1, LQ2) and d II BT6 (LQ3, LQ4, LQ4JS).

Characteristics

1. Housing: Hard anodized Aluminum casting and external epoxy power coated against severe industrial environment.
2. Gearing: Precisely machined double worm gear C/W minimum backlash, low noise, high output torque.
3. Self-locking: Provided double worm gearing to keep position of valve unchanged against reverse torque from valve.
4. Motor: Specially designed and induction motor to generate high starting torque and high efficiency equipped with thermal protector to prevent damage from over heating. Insulation class F.
5. External mechanical stopper: Prevents over run of travel angle when limit switch fails.
6. Torque switches: Protect actuator from damage caused by overload from the driven valve over the whole travel, 1 each for open/close.
7. Limit switches: Directly engaged with driving shaft to set accurate position of valve, supplying a dry contact signal.
8. Terminal: Spring loaded push type terminal for tight wiring connection under severe vibration.
9. Space heater: Anti-condensation.
10. Manual override: Auto/Manual switchable lever and handwheel engagement for emergency manual operation. Drive force automatically resorted by motor start, unless lever padlocked to prevent this occurring.
11. Handwheel: Manual operated, turn on-off valve directly when power off.

Electrical characteristics

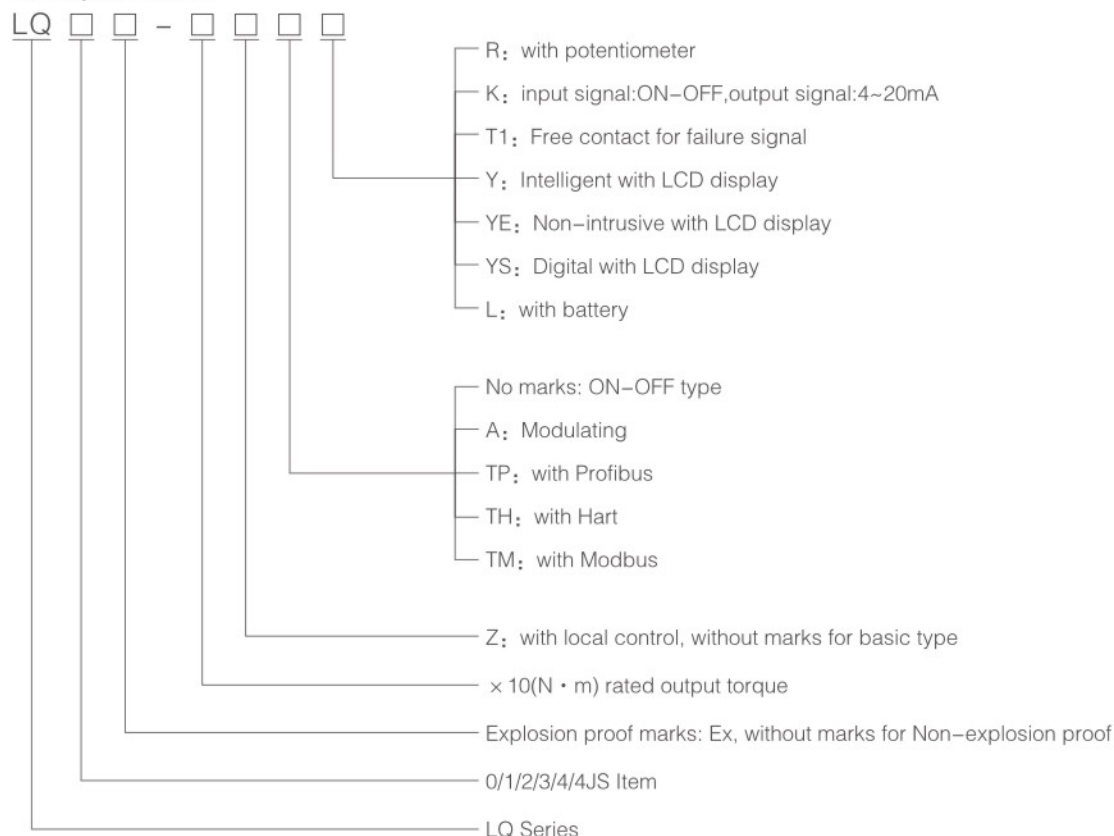
1. Automatic identify Phase sequence, phase failure protection.
2. DC24V Voltage Class for remote control.
3. Convenient and flexible wiring method.
4. Selector with impenetrable design to improve the sealing of actuator.
5. Working situation indicated by five dry contact signals to convenient monitor the DCS system.
6. Monitoring relay supply comprehensive fault signal for DCS system.
7. Selector padlocked according to requirements to prevent the failure operation.

Ordering information

- The following details need to be supplied by user when ordering.
 - Torque required (N.m), rotate speed (r/min)
 - Application environment
 - Power supply
 - Mounting base with valve
 - Electrical control required
 - Other special requirements.



Item specification



LQ Selection table

Item	Output torque	Action time (0-90℃)	Power supply	Metal seal butterfly valve	Soft seal butterfly valve	Ball valve	Aeration butterfly valve
LQ0-05	50N·m	21S	DC24V, AC110V, AC220V, AC380V, AC440V	/	≤DN80	≤DN32	≤DN80
LQ1-06	60N·m	26S		/	≤DN80	≤DN32	≤DN80
LQ1-10	100N·m	26S		DN40-DN65	DN100-DN125	DN40-DN50	DN100-DN200
LQ2-16	160N·m	28S		DN80-DN100	DN150	DN65	DN200
LQ2-20	200N·m	28S		DN80-DN125	DN150-DN200	DN65-DN80	DN250-DN300
LQ2-24	240N·m	28S		DN100-DN125	DN150-DN200	DN65-DN80	DN300
LQ3-35	350N·m	32S		DN125	DN200	DN80	DN350
LQ3-50	500N·m	32S		DN150-DN200	DN250	DN100-DN125	DN350-DN500
LQ4-80	800N·m	36S		DN250	DN300	DN150	DN500-DN600
LQ4-110	1100N·m	36S		DN250	DN350	DN150	DN600-DN800
LQ4JS-200	2000N·m	110S/55S		DN300-DN400	DN400-DN500	DN200-DN250	DN800-DN1000
LQ4JS-250	2500N·m	110S/55S		DN450	DN500-DN600	DN250	DN1000-DN1200
LQ4JS-400	4000N·m	180S/90S		DN600	DN700	DN300	DN1200
LQ4JS-600	6000N·m	180S/90S		DN600	DN800-DN900	DN350-DN400	DN1500-DN1800

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



Item	Output torque (N.m)	90° action time (S)	Motor Power (W)	Rated Current (A)	Motor rating	Circle number of handwheel	Weight (Kg)	Power supply
LQ0-5	50	10	10	2.2	with brush	10	2	DC12V
		1.2		DC24V				
		21		0.25	E			AC110V
				0.15				AC220V
				0.09				AC380V
				0.11				AC415V
				0.13				AC440V

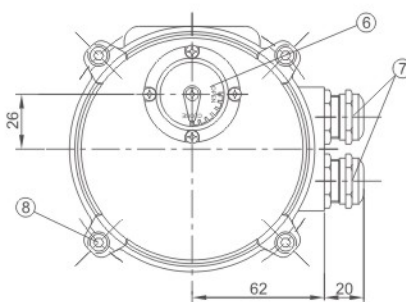
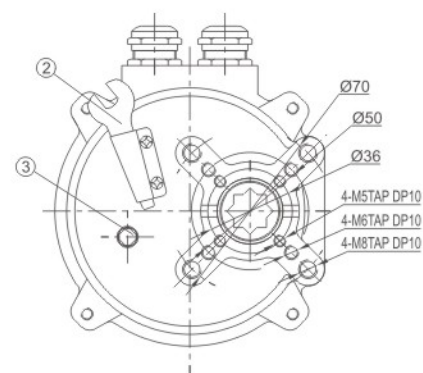
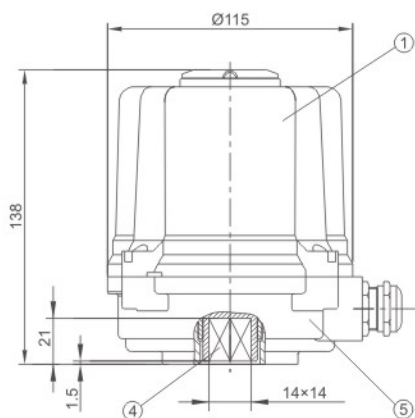
Note: Cable entries: M20X1.5

General description

- LQ valve actuators are the new generation product of our company and can be used for driving and controlling the butterfly valves, ball valves and plug valves. (part-turn valves with 90° movement). They are widely used in the fields such as oil, chemistry, power generation, water treatment, paper making, etc.
- The enclosure protection is IP 65 for outdoor.
- This operation instruction is applied for basic type with ON-OFF control, additional instruction will be provided for special functions.

- Comply with JB/T8219-1999
- Enclosure protection: IP65
- Surrounding temperature: -20-60°C.
- Height above sea level: 1000m
- Humidity: 90%(25°C)
- No strong corrosion media at working environment.
- Non explosion-proof products, forbidden to be used in mixed explosive gas environment.
- Short time work: 30 min.
- No strong vibration.

Appearance and Parts Name



Number	Name	Materials / Specifications
1	Top cover	ZL102
2	Handle level	6.7 × 6.7
3	Manual shaft	6.5 × 6.5
4	Output shaft	14 × 14
5	Body	ZL102
6	Indicator	0-90°
7	PG13.5 cable entry	M20 × 1.5
8	Hex socket screws	M5 × 22



Basic

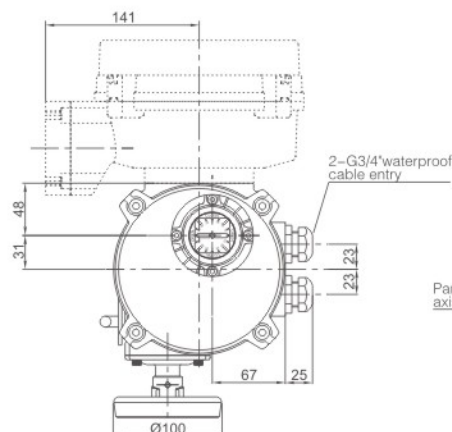
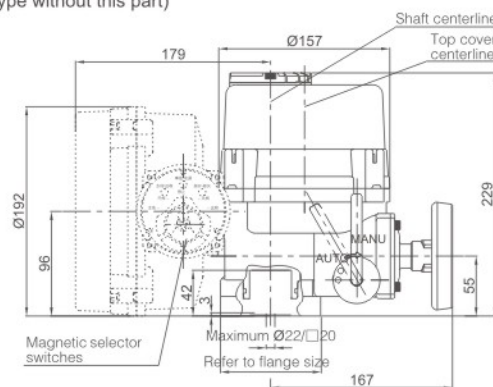
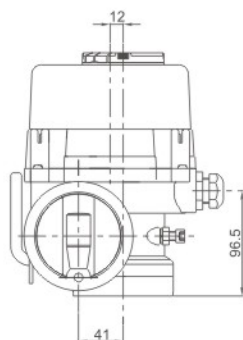

With Local controller with
Non-Explosion proof

With Local controller with
Explosion proof

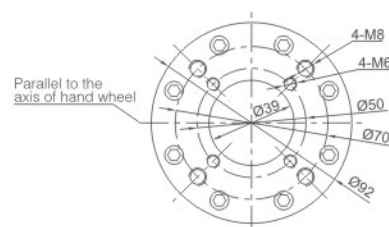
Performance Item	Output torque (N.m)	90° running time (S)	Motor Power (W)	Motor current(A) Rated	Circle number of handwheel	Weight (Kg)	Power supply
LQ1-06	60	26	20	0.45	10	8	AC220V
				1			AC110V
				0.22			AC380V
				0.26			AC440V
LQ1-10	100	26	20	0.5	10	8	AC220V
				1			AC110V
				0.22			AC380V
				0.26			AC440V
			25	1.7			DC24V
Case material	Aluminium alloy die-casting						
Position limiting	Mechanical limit 、 travel switch limit						
Enclosure protection	IP-67 (IP-68 optional)						
Surrounding temperature	-20℃~60℃						
Ambient humidity	Relative Humidity > 90%(25%)						
Insulted resistance	≥100MΩ						
Insulted strength	1500V/1Min(AC220V) 2000V/1Min(AC380V)						
Optional function	Explosion proof / Precision Potentiometer、 overhear protection						
Time/torque optional	10S/60N.m 5S/40N.m						
Product color	blue(other colors customized))						

Note: All range actuators are dispatched with explosion proof plugs 2-NPT3/4 fitted into the cable entries, it is the responsibility of the installer to ensure the appropriate cable adapters and packings with explosion proof.

(Part of Dotted line is for local controller, basic type without this part)



Flange dimensions



Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



Basic

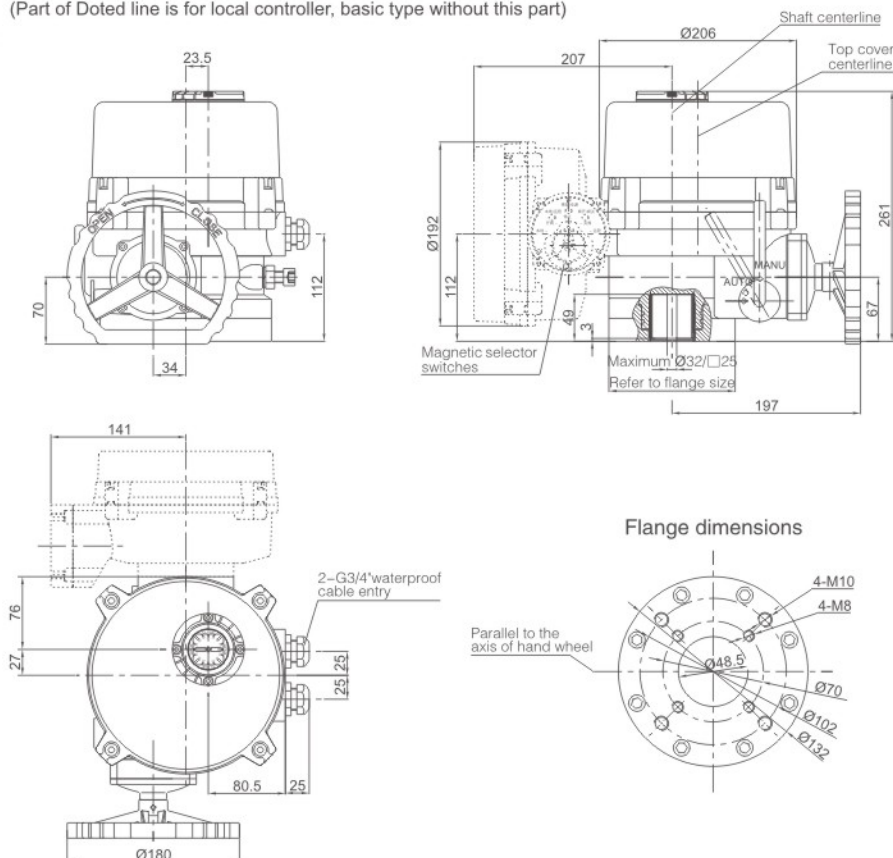

With Local controller with
Non-Explosion proof

With Local controller with
Explosion proof

Performance Item	Output torque (N.m)	90° running time (S)	Motor Power (W)	Motor current(A) Rated	Circle number of handwheel	Weight (Kg)	Power supply
LQ2-16	160	28	40	0.6	12	14	AC220V
				1.45			AC110V
				0.25			AC380V
				0.3			AC440V
				2.0			DC24V
LQ2-20	200	28	40	0.6	12	14	AC220V
				1.5			AC110V
				0.3			AC380V
				0.35			AC440V
				2.2			DC24V
LQ2-24	240	28	45	0.7	12	14	AC220V
				1.6			AC110V
				0.35			AC380V
				0.39			AC440V
				2.8			DC24V
Case material	Aluminium alloy die-casting						
Position limiting	mechanical limit、overtorque protection						
Enclosure protection	IP-67 (IP-68 optional)						
Surrounding temperature	-20℃~60℃						
Ambient humidity	Relative Humidity > 90%(25%)						
Insulted resistance	≥100MΩ						
Insulted strength	1500V/1Min(AC220V) 2000V/1Min(AC380V)						
Optional function	Explosion proof/Precision Potentiometer, overtorque protection, overheat protection						
Time/torque optional	15S/200N.m 10S/150N.m 5S/80N.m						
Product color	blue(other colors customized))						

Note: All range actuators are dispatched with explosion proof plugs 2-NPT3/4 fitted into the cable entries, it is the responsibility of the installer to ensure the appropriate cable adapters and packings with explosion proof.

(Part of Doted line is for local controller, basic type without this part)





Basic

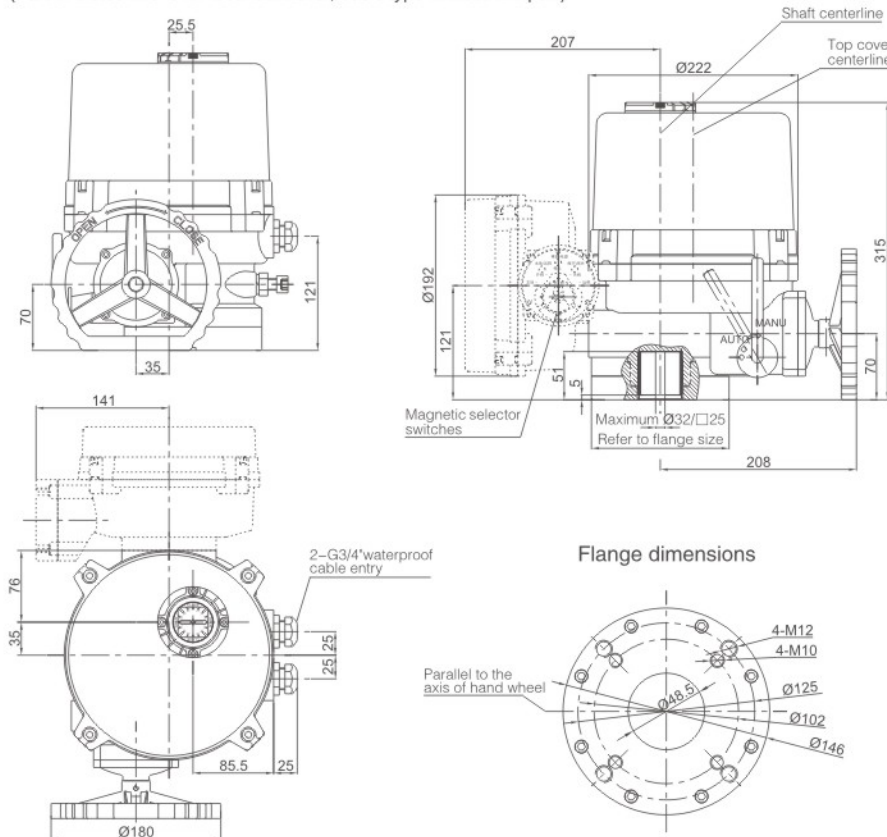

With Local controller with
Non-Explosion proof

With Local controller with
Explosion proof

Performance Item	Output torque (N.m)	90° running time (S)	Motor Power (W)	Motor current(A) Rated	Circle number of handwheel	Weight (Kg)	Power supply
LQ3-35	350	32	60	0.9	13	18	AC220V
				1.8			AC110V
				0.38			AC380V
				0.42			AC440V
				4.0			DC24V
LQ3-50	500	32	90	1.3	13	19	AC220V
				3.2			AC110V
				0.8			AC380V
				0.86			AC440V
				6.9			DC24V
Case material	Aluminium alloy die-casting						
Position limiting	mechanical limit、overtorque protection						
Enclosure protection	IP-67 (IP-68 optional)						
Surrounding temperature	-20℃~60℃						
Ambient humidity	Relative Humidity > 90%(25%)						
Insulted resistance	≥100MΩ						
Insulted strength	1500V/1Min(AC220V) 2000V/1Min(AC380V)						
Optional function	Explosion proof/Precision Potentiometer, overtorque protection, overheat protection						
Time/torque optional	15S/400N.m 10S/350N.m 5S/150N.m						
Product color	blue(other colors customized))						

Note: All range actuators are dispatched with explosion proof plugs 2-NPT3/4 fitted into the cable entries, it is the responsibility of the installer to ensure the appropriate cable adapters and packings with explosion proof.

(Part of Doted line is for local controller, basic type without this part)



Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



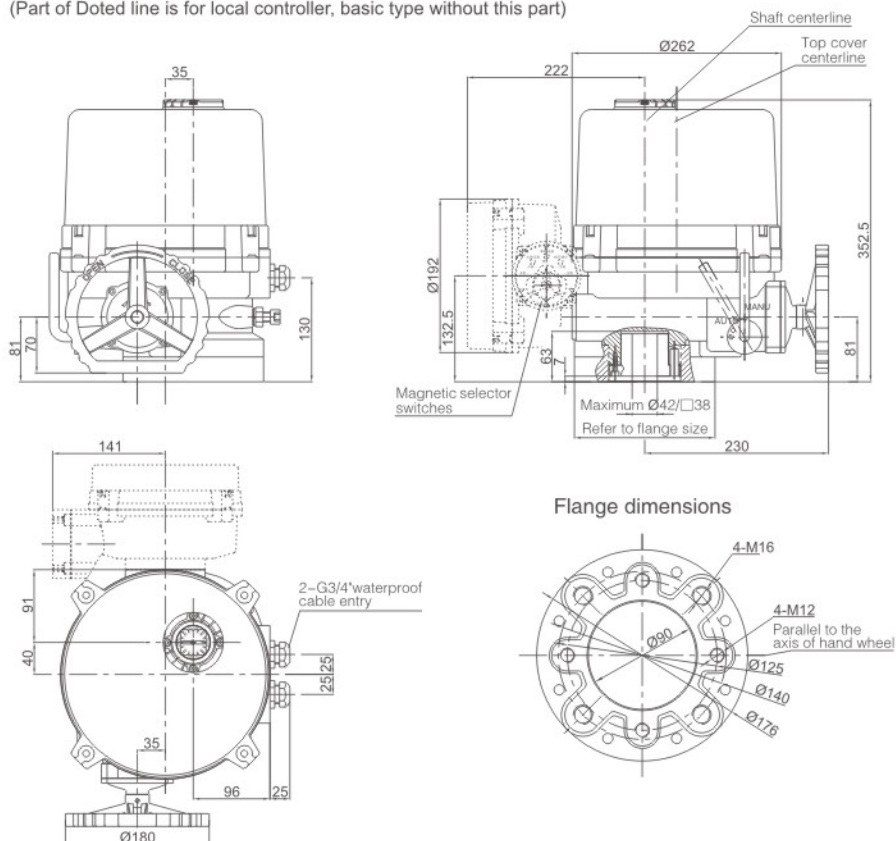
Basic


With Local controller with
Non-Explosion proof

With Local controller with
Explosion proof

Performance Item	Output torque (N.m)	90° running time (S)	Motor Power (W)	Motor current(A) Rated	Circle number of handwheel	Weight (Kg)	Power supply
LQ4-80	800	36	120	1.5	14.5	24	AC220V
				3.9			AC110V
				1.1			AC380V
				1.2			AC440V
				9.8			DC24V
LQ4-110	1100	36	180	2.2	14.5	26	AC220V
				4.2			AC110V
				1.5			AC380V
				1.6	46		AC440V
				12.5			DC24V
Case material	Aluminium alloy die-casting						
Position limiting	mechanical limit、 overtorque protection						
Enclosure protection	IP-67 (IP-68 optional)						
Surrounding temperature	-20℃~60℃						
Ambient humidity	Relative Humidity > 90%(25%)						
Insulted resistance	≥100MΩ						
Insulted strength	1500V/1Min(AC220V) 2000V/1Min(AC380V)						
Optional function	Explosion proof/Precision Potentiometer, overtorque protection, overheat protection						
Time/torque optional	18S/800N.m 12S/600N.m 5S/300N.m						
Product color	blue(other colors customized))						

Note: All range actuators are dispatched with explosion proof plugs 2-NPT3/4 fitted into the cable entries, it is the responsibility of the installer to ensure the appropriate cable adapters and packings with explosion proof. (Part of Dotted line is for local controller, basic type without this part)





Basic

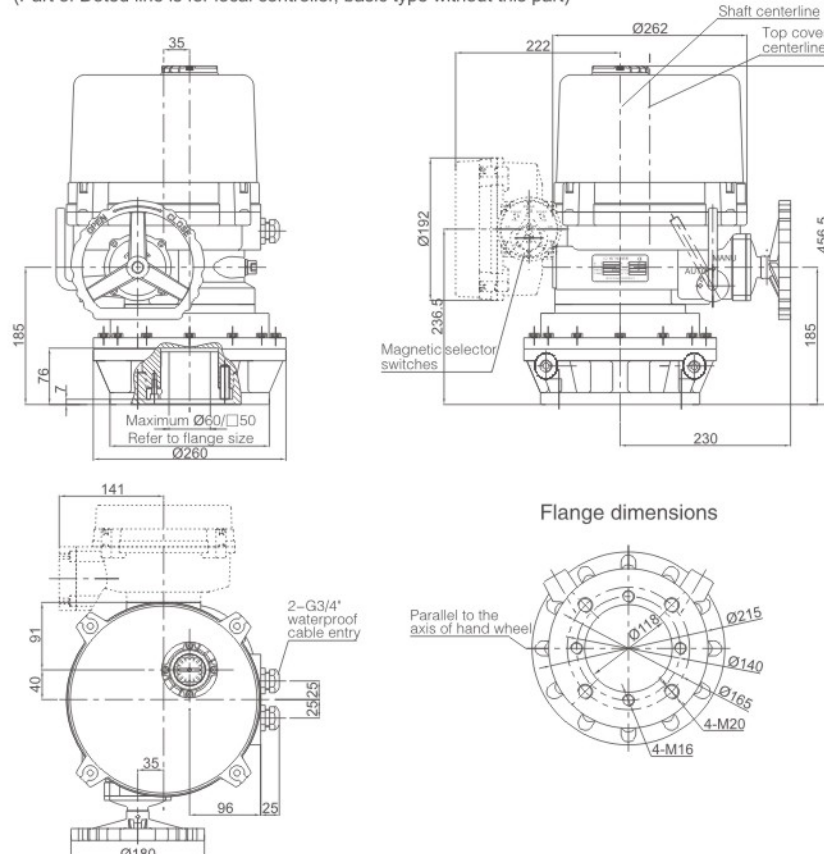

With Local controller with
Non-Explosion proof

With Local controller with
Explosion proof

Performance Item	Output torque (N.m)	90° running time (S)	Motor Power (W)	Motor current(A) Rated	Circle number of handwheel	Weight (Kg)	Power supply
LQ4JS-200	2000	110	120	1.5	46	50	AC220V
				3.9			AC110V
				1.1			AC380V
				1.2			AC440V
				9.8			DC24V
LQ4JS-250	2500	110	180	2.2	46	52	AC220V
				4.2			AC110V
				1.5			AC380V
				1.6			AC440V
				12.5			DC24V
Case material	Aluminium alloy die-casting						
Position limiting	mechanical limit、overtorque protection						
Enclosure protection	IP-67 (IP-68 optional)						
Surrounding temperature	-20℃~60℃						
Ambient humidity	Relative Humidity > 90%(25%)						
Insulted resistance	≥100MΩ						
Insulted strength	1500V/1Min(AC220V) 2000V/1Min(AC380V)						
Optional function	Explosion proof / Precision Potentiometer						
Time/torque optional	55S/2000N.m						
Product color	blue(other colors customized))						

Note: All range actuators are dispatched with explosion proof plugs 2-NPT3/4 fitted into the cable entries, it is the responsibility of the installer to ensure the appropriate cable adapters and packings with explosion proof.

(Part of Dotted line is for local controller, basic type without this part)



Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

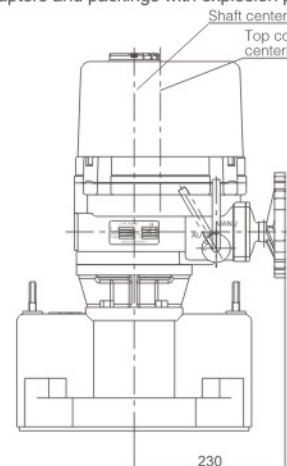
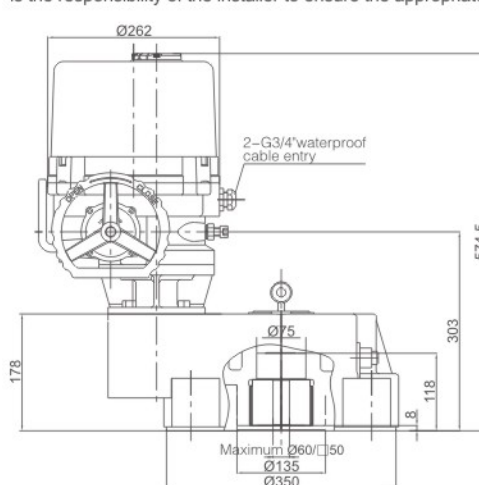
Electric valve (LQ type)

Damper actuator

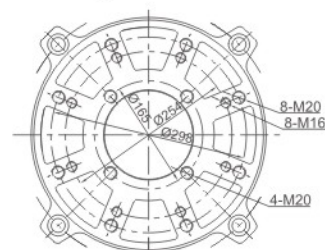
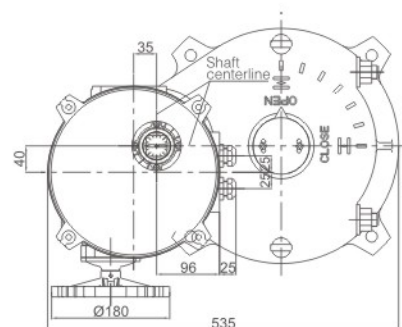


Performance Item	Output torque (N.m)	90° running time (S)	Motor Power (W)	Motor current(A) Rated	Circle number of handwheel	Weight (Kg)	Power supply
LQ4JS-400	4000	180	120	1.5	73	104	AC220V
				3.9			AC110V
				1.1			AC380V
				1.2			AC440V
				9.8			DC24V
LQ4JS-600	6000	180	180	2.2	73	106	AC220V
				4.2			AC110V
				1.5			AC380V
				1.6			AC440V
				12.5			DC24V
Case material	Aluminium alloy die-casting						
Position limiting	mechanical limit、 overtorque protection						
Enclosure protection	IP-67 (IP-68 optional)						
Surrounding temperature	-20℃~60℃						
Ambient humidity	Relative Humidity > 90%(25%)						
Insulted resistance	≥100MΩ						
Insulted strength	1500V/1Min(AC220V) 2000V/1Min(AC380V)						
Optional function	Explosion proof / Precision Potentiometer						
Time/torque optional	90S/5000N.m						
Product color	blue(other colors customized))						

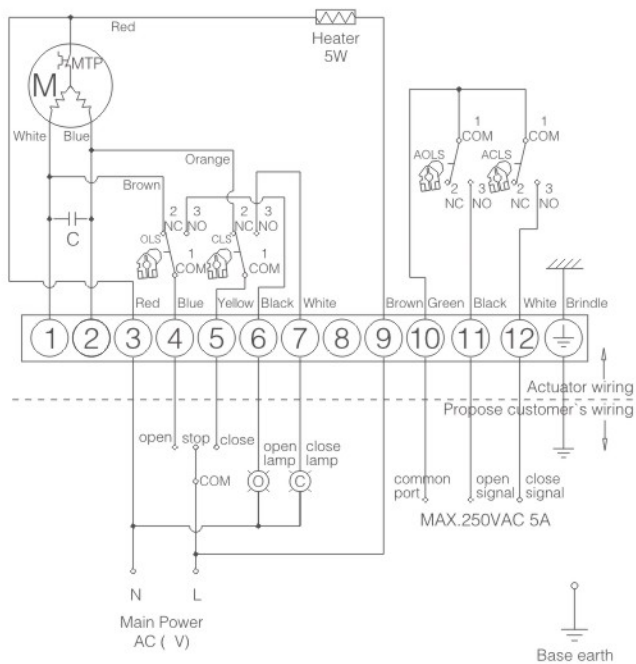
Note: All range actuators are dispatched with explosion proof plugs 2-NPT3/4 fitted into the cable entries, it is the responsibility of the installer to ensure the appropriate cable adapters and packings with explosion proof.



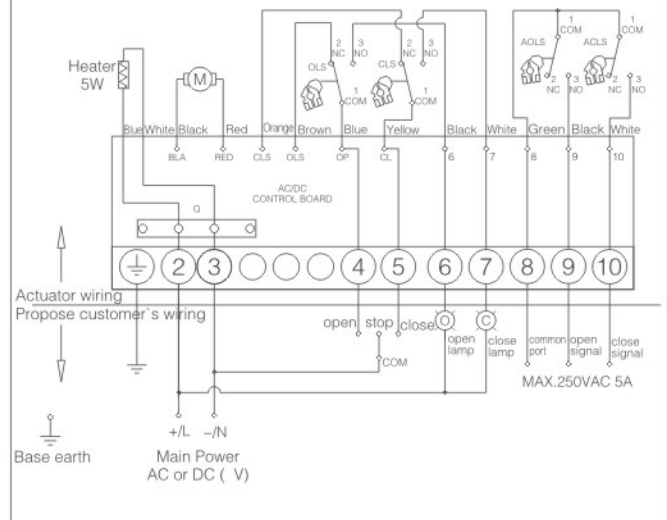
Flange dimensions



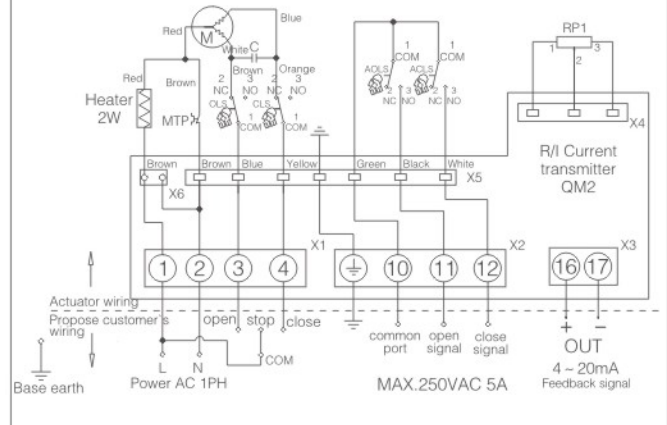
LQ1 ON-OFF(1PH AC110V/220V)



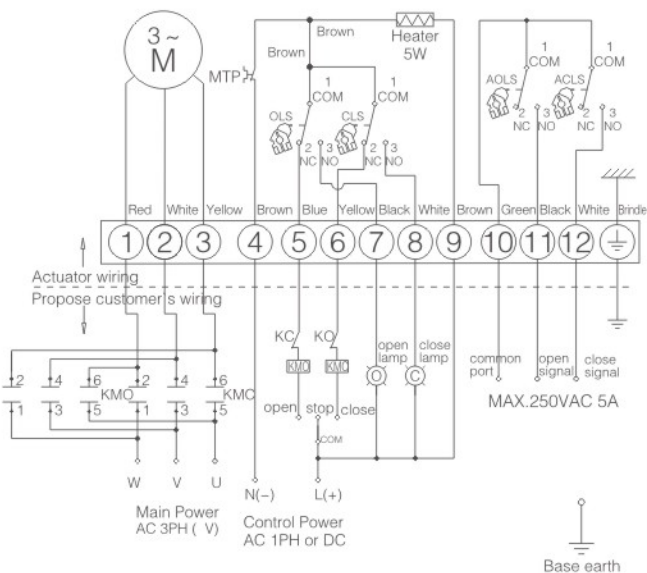
LQ1 ON-OFF(24VDC/AC)



LQ1 With Position Signal (K type)



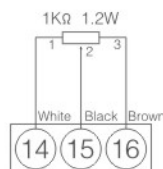
LQ1 ON-OFF(3PH AC380V/415V/440V)



The working state of the limit switch

Switch	Full Close	Intermediate	Full Open
CLS 1-2			
CLS 1-3			
OLS 1-2			
OLS 1-3			
ACLS 1-3			
AOLS 1-3			

R type:
(with precision potentiometer)



AOLS: Aux.Open Limit Switch
 ACLS: Aux.Close Limit Switch
 O: Open lamp
 C: Close lamp
 CLS: Closing limit switch
 OLS: Opening limit switch
 KMC: Closing contactor coils
 KMO: Opening contactor coils
 MTP: Motor Thermal Protector
 M: Motor

Electric actuator (HL type)

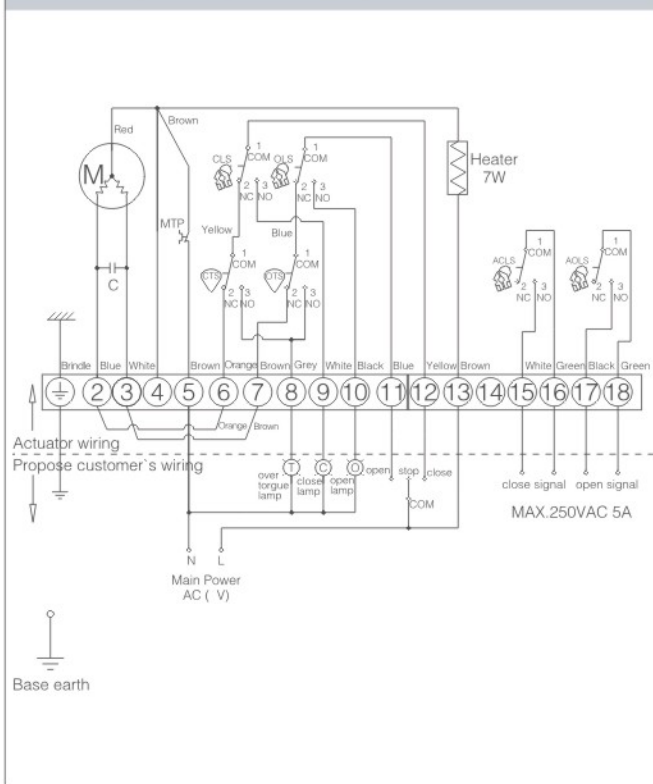
Electric valve (HL type)

Explosion proof electric actuator (LQ type)

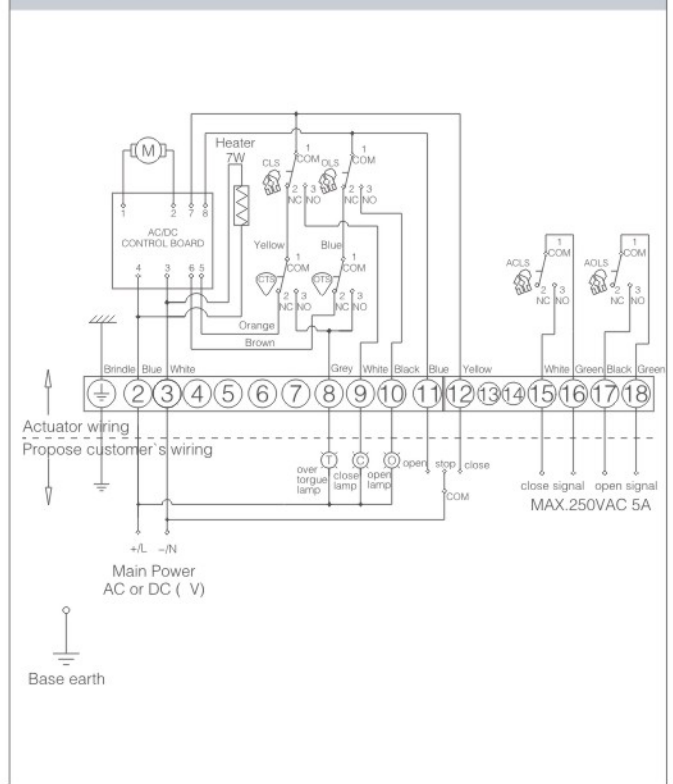
Electric valve (LQ type)

Damper actuator

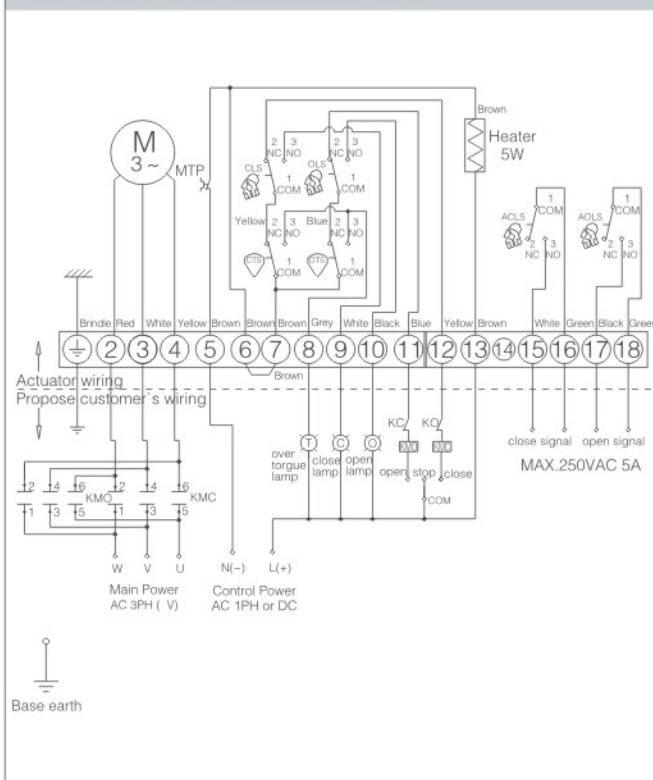
LQ2~4 ON-OFF(1PH AC110V/220V)



LQ2~4 ON-OFF(24VDC/AC)



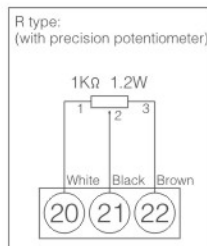
LQ2-4 ON-OFF(3PH AC380V/415V/440V)



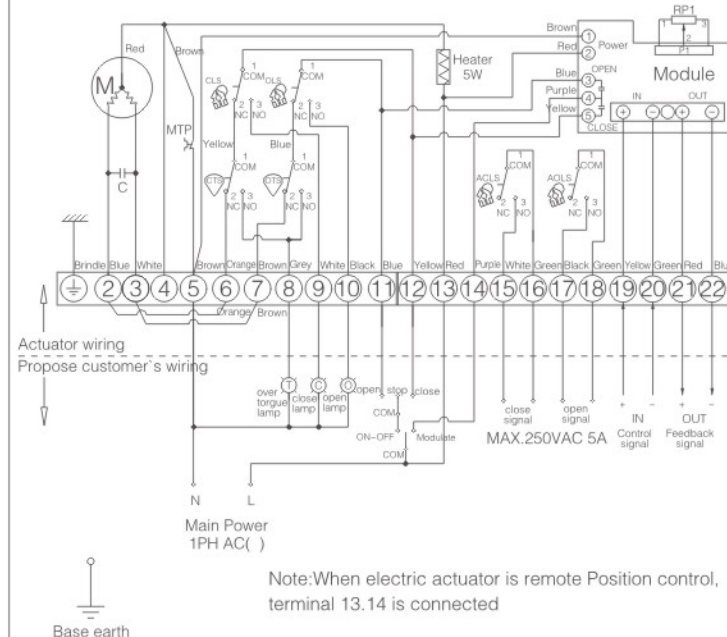
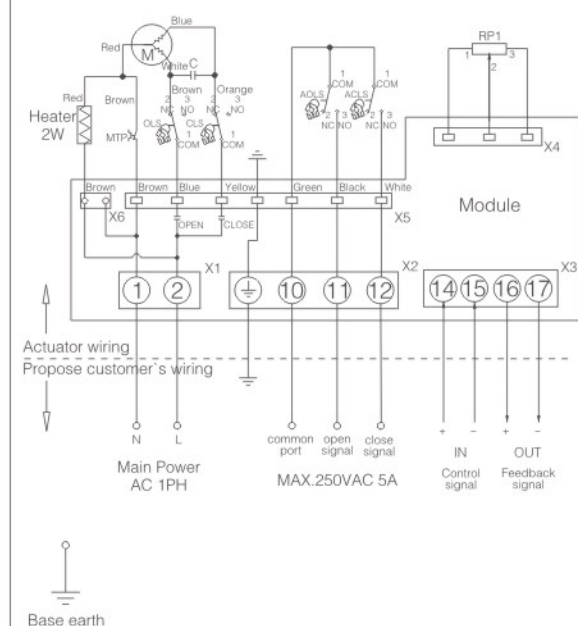
The working state of the limit switch and torque switch

Switch	Full Close	Intermediate	Full Open
CLS 1-2			
CLS 1-3			
OLS 1-2			
OLS 1-3			
ACLS 1-2			
ACLS 1-3			
AOLS 1-2			
AOLS 1-3			
CTS 1-3	Closing torque switch interrupts control when mechanical overload occurs during closing cycle		
OTS 1-3	Opening torque switch interrupts control when mechanical overload occurs during opening cycle		

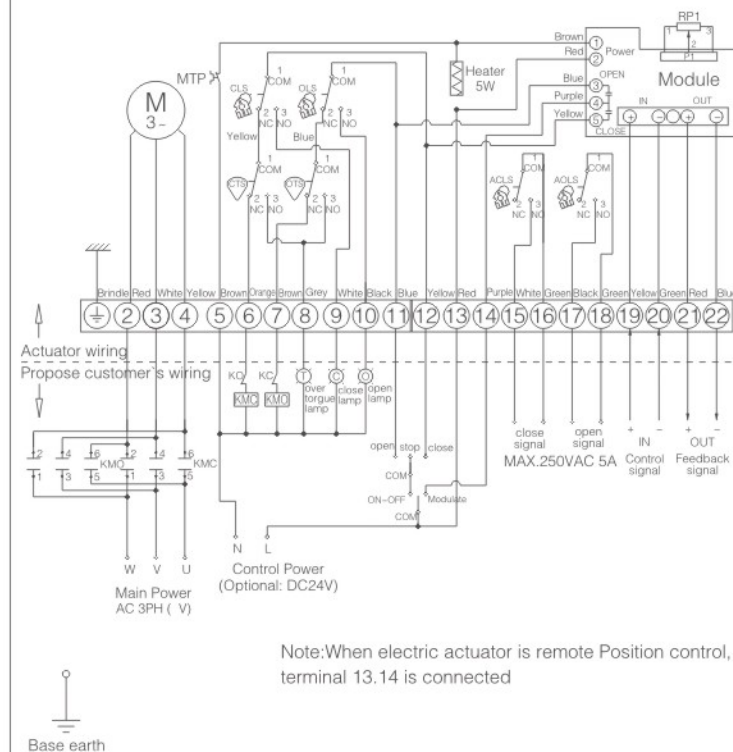
AOLS: Aux.Open Limit Switch
 ACLS: Aux.Close Limit Switch
 O: Open lamp
 C: Close lamp
 T: Over torque lamp
 CLS: Closing limit switch
 OLS: Opening limit switch
 CTS: closing torque switch
 OTS: opening torque switch
 KMC: Closing contactor coils
 KMO: Opening contactor coils
 MTP: Motor Thermal Protector
 M: Motor



LQ2~4 With Remote Position Controller (1PH AC110V/220V)



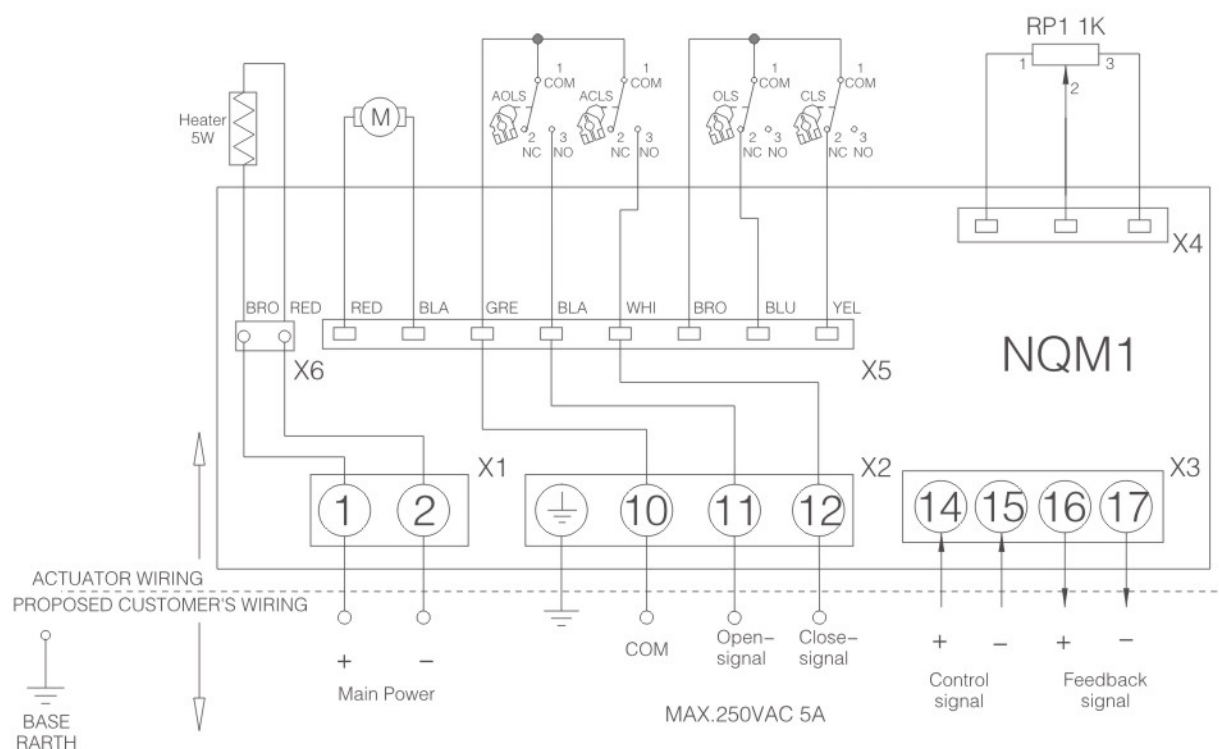
The working state of the limit switch and torque switch



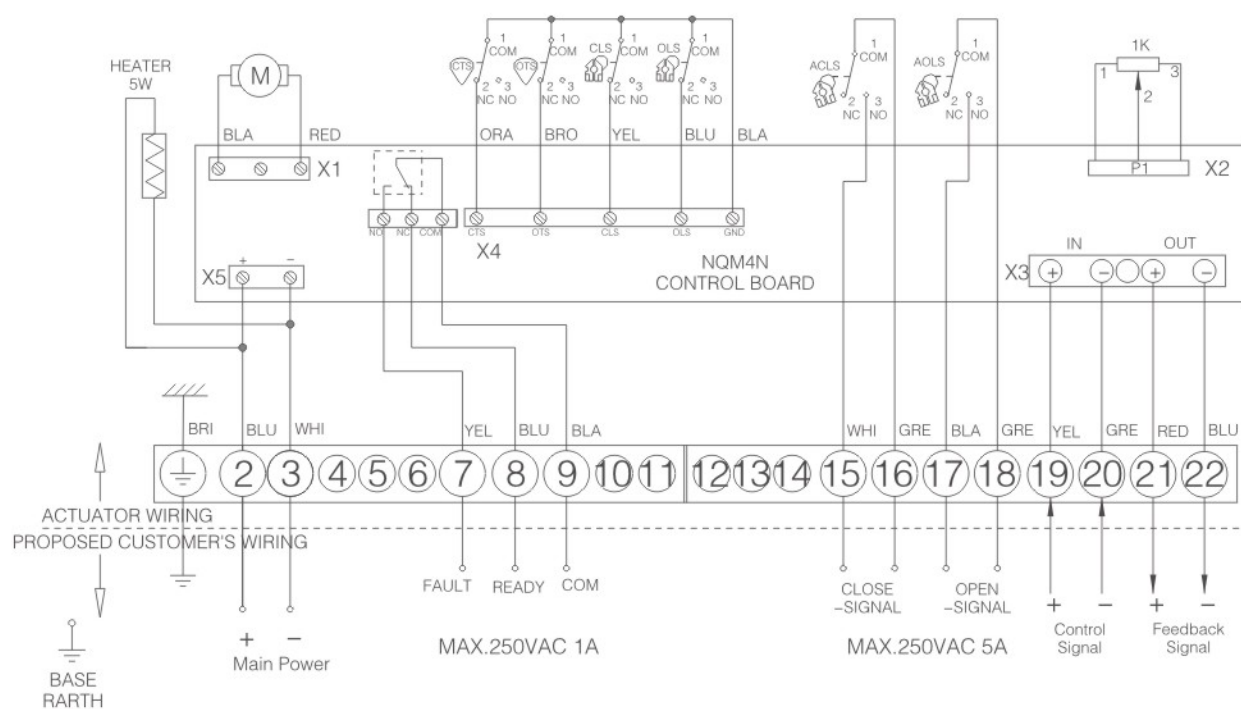
Switch	Full Close 	Intermediate 	Full Open 
CLS 1-2			
CLS 1-3			
OLS 1-2			
OLS 1-3			
ACLS 1-2			
ACLS 1-3			
AOLS 1-2			
AOLS 1-3			
CTS 1-3	Closing torque switch interrupts control when mechanical overload occurs during closing cycle		
OTS 1-3	Opening torque switch interrupts control when mechanical overload occurs during opening cycle		

AOLS: Aux.Open Limit Switch
 ACLS: Aux.Close Limit Switch
 O: Open lamp
 C: Close lamp
 T: Over torque lamp
 CLS: Closing limit switch
 OLS: Opening limit switch
 CTS: closing torque switch
 OTS: opening torque switch
 RP1: potentiometer feedback, 1K Ω
 KMC: Closing contactor coils
 KMO: Opening contactor coils
 MTP: Motor Thermal Protector
 M: Motor

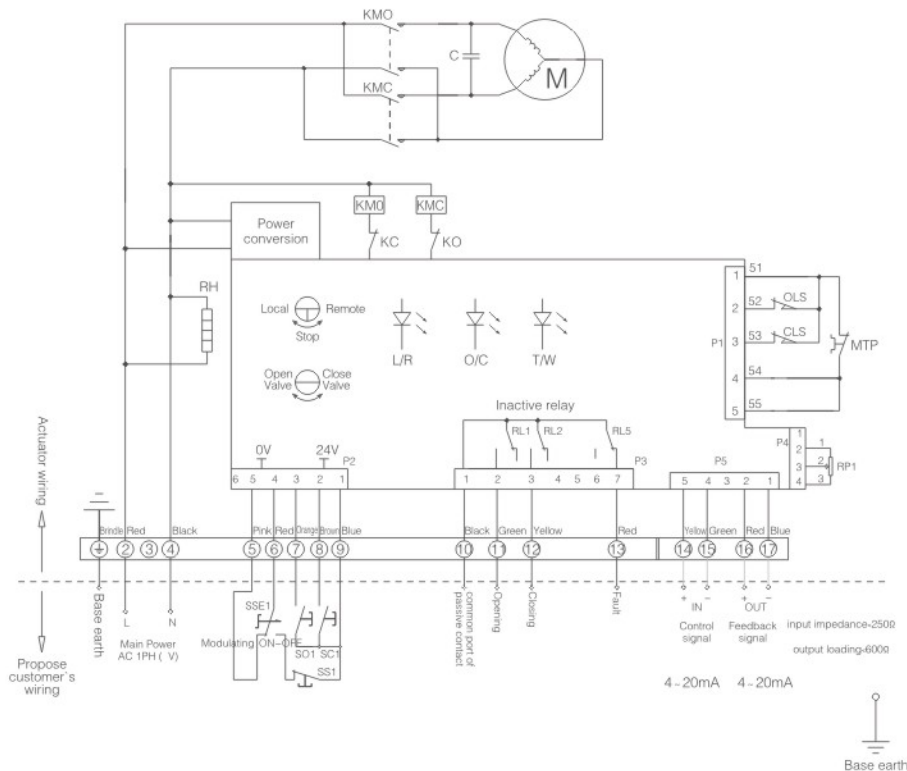
LQ1 With Remote Position Controller(24VDC/AC)



LQ2 With Remote Position Controller(24VDC/AC)



LQ1 With Local Controller (1PH AC110V/220V)



The working state of the limit switch

Switch	Full Close	Intermediate	Full Open
OLS			
CLS			

Illustration:

1、 This chart means the electric actuator is in middle position.

2、 Actuator's element;

L/R: Local/Remote working lamp.

O/C: Valve open/valve close lamp.

T/W: Failure/Power lamp.

RP1: potentiometer feedback、 1K Ω

RH: Heater

OLS: Opening limit switch

CLS: Closing limit switch

KMC: Closing contactor coils

KMO: Opening contactor coils

M: Motor

MTP: Motor Thermal Protector

3、 Customer's element;

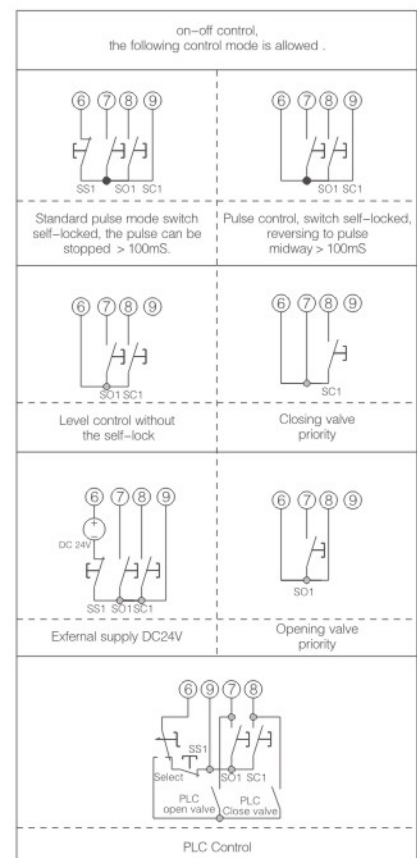
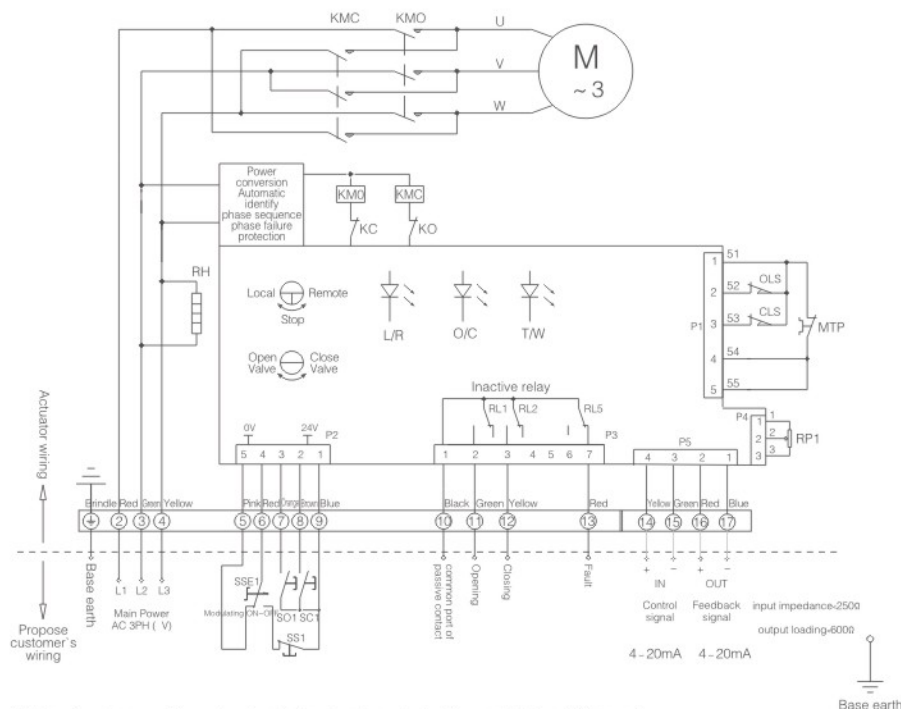
SSE1: Selector

SO1: valve open

SC1: valve close

SS1: stop

LQ1 With Local Controller (3PH AC380V/415V/440V)



Notice: 1、 above wiring drawing is for local control with modulating(ZA type)

2、 When the actuator is for local control with on-off(Z type),there is without modulating function; also without potentiometer feedback and analogue signals

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator

[illegible]

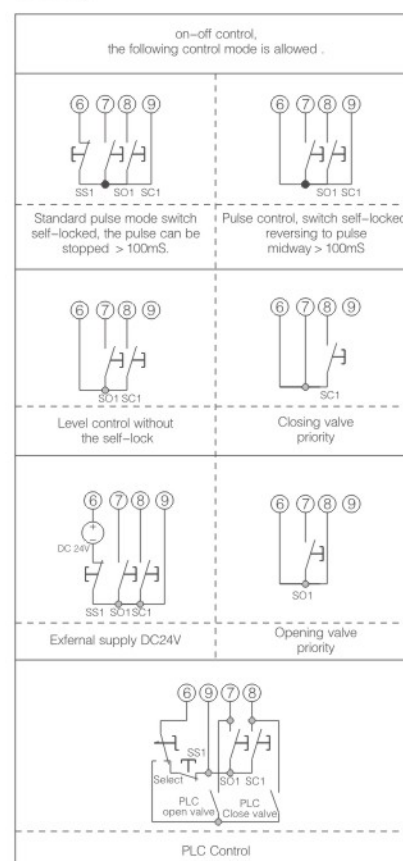
Switch	Full Close	Intermediate	Full Open
OLS			
CLS			
AOLS			
ACLS			
CTS	Closing torque switch interrupts control when mechanical overload occurs during closing cycle		
OTS	Opening torque switch interrupts control when mechanical overload occurs during opening cycle		

2. Actuator's element:
L/R: Local/Remote working lamp.
O/C: Valve open/valve close lamp.
T/W: Failure/Power lamp.
RP1: potentiometer feedback, 1KΩ
RH: Heater
OLS: Opening limit switch
CLS: Closing limit switch
CTS: closing torque switch
OTS: opening torque switch
AOLS: Aux.Open Limit Switch
ACLS: Aux.Close Limit Switch
KMC: Closing contactor coils
KMO: Opening contactor coils
M: Motor
MTP: Motor Thermal Protector

3、Customer's element:
SSE1: Selector
SO1: valve open
SC1: valve close
SS1: stop

[illegible]

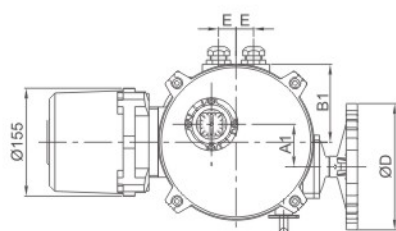
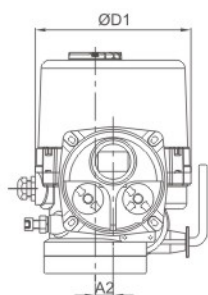
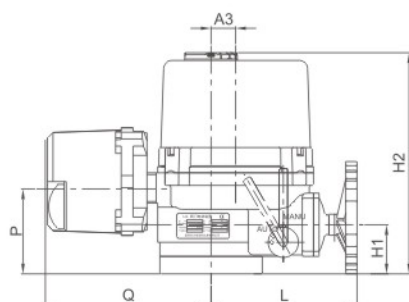
Notice: 1、above wiring drawing is for local control with modulating(ZA type)
2、When the actuator is for local control with on-off(Z type),there is without modulating function;
also without potentiometer feedback and analogue signals





Item parameters	LQ1		LQ2			LQ3		LQ4		LQ4JS			
	-6	-10	-16	-20	-24	-35	-50	-80	-110	-200	-250	-400	-600
Output torque(N.m)	60	100	160	200	240	350	500	800	1100	2000	2500	4000	6000
Running time(S)	26	26	28	28	28	32	32	36	36	110	110	180	180
Motor Power (W)	20	20	40	40	45	60	90	120	180	120	180	120	180
Rated current (A)													
AC220V	0.45	0.5	0.6	0.6	0.7	0.9	1.3	1.5	2.2	1.5	2.2	1.5	2.2
AC110V	-	1.0	1.45	1.5	1.6	1.8	3.2	3.9	4.2	3.9	4.2	3.9	4.2
AC440V	-	0.26	0.30	0.35	0.39	0.42	0.86	1.2	1.6	1.2	1.6	1.2	1.6
AC415V	-	0.24	0.28	0.32	0.37	0.40	0.81	1.15	1.55	1.15	1.55	1.15	1.55
AC380V	-	0.22	0.25	0.3	0.35	0.38	0.8	1.1	1.5	1.1	1.5	1.1	1.5
AC/DC 24V	-	1.7	2.0	2.2	2.8	4.0	6.9	9.8	12.5	9.8	12.5	9.8	12.5
Circle number of handwheel	10		12			13		14.5		46		73	
Weight (Kg)	12		18			22	23	28	30	54	56	108	110

Note: All range actuators are dispatched with explosion proof plugs 2-NPT3/4 fitted into the cable entries, it is the responsibility of the installer to ensure the appropriate cable adapters and packings with explosion proof.



General description

- The advanced display allows large segment character position display while the matrix display provides detailed setting, status and diagnostic multilingual screens.
- Reliable valve position sensing is critical. Using the latest technology, LQ absolute encoder has redundancy and self checking functions.
- Non-intrusive design, functions and datas setting by remote controller and local selector, no cover removal required.
- Automatic identify phase sequence, phase failure protection, overheating and overtorque protection, ESD emergency operation.
- 5 programmable relays can set-up configuration of feedback signals.

Item	A1	A2	A3	B1	D	D1	E	H1	H2	L	P	Q
LQ1	41	12	31	67	100	157	23	55	229	167	96	210
LQ2	57.5	23.5	27	80.5		206		67	261	197	112	238
LQ3	60.5	25.5	35	85.5		222		70	315	208	121	238
LQ4					180		25	81	352	230	132	253
LQ4JS-200/250	70	35	40	96		262		185	456	230	236	253
LQ4JS-400/600								303	574	230	354	253

- ★ Actuators with local control based on the basic type.
- ★ LQ4JS actuators based on the LQ4 with reducer wormgear.

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

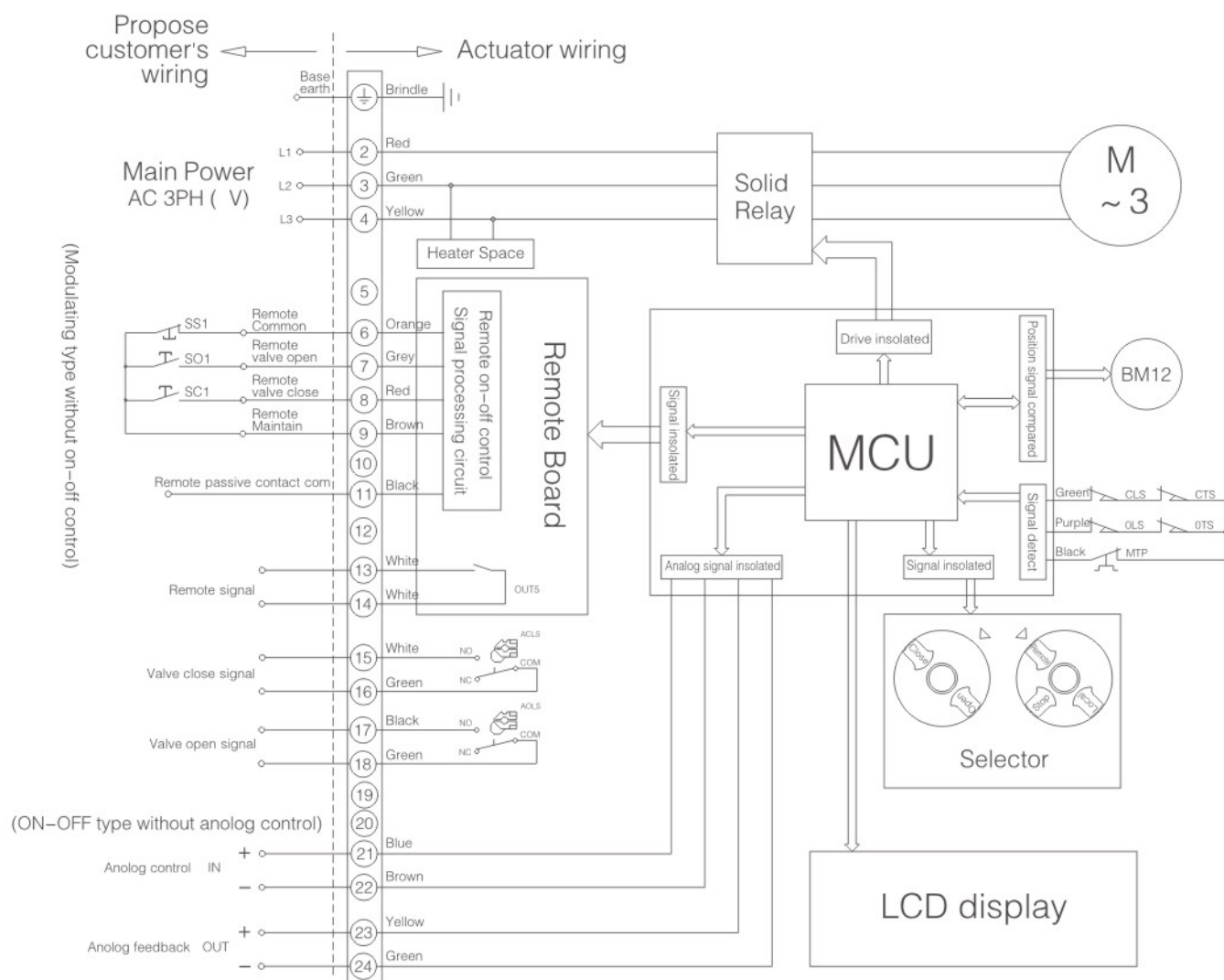
Electric valve (LQ type)

Damper actuator

Digital control Products (YS series) Characteristics

- Built-in MCU controller, display working data, status and failure alarms by LCD display
- Non-intrusive selector operation to achieve local, remote, open, close, stop control, and remote controller optional.
- Various position collection, potentiometer, single loop 12 bit encoder, multi loop 18 bit encoder optional to meet different requirements of position monitoring.
- Working data setting over selector, more stable than the DIP switch.
- On-key calibrate the travel after adjusting the rotation direction and travel limit.
- On-off normal pulse control and two-wires control over selector setting on site.
- Modulating type with dead zone self-study, no need to adjust the dead zone again on site.
- Modulating type with the calibration function on site, when there is deviation between the local input and factory calibration, re-calibration on site can eliminate the error.
- Providing one set of normal closed contact signal when there is remote control, one set of failure open contract signal optional.
- Providing one set of analogue signal for feedback, normally 4~20Ma.(special signals requested)

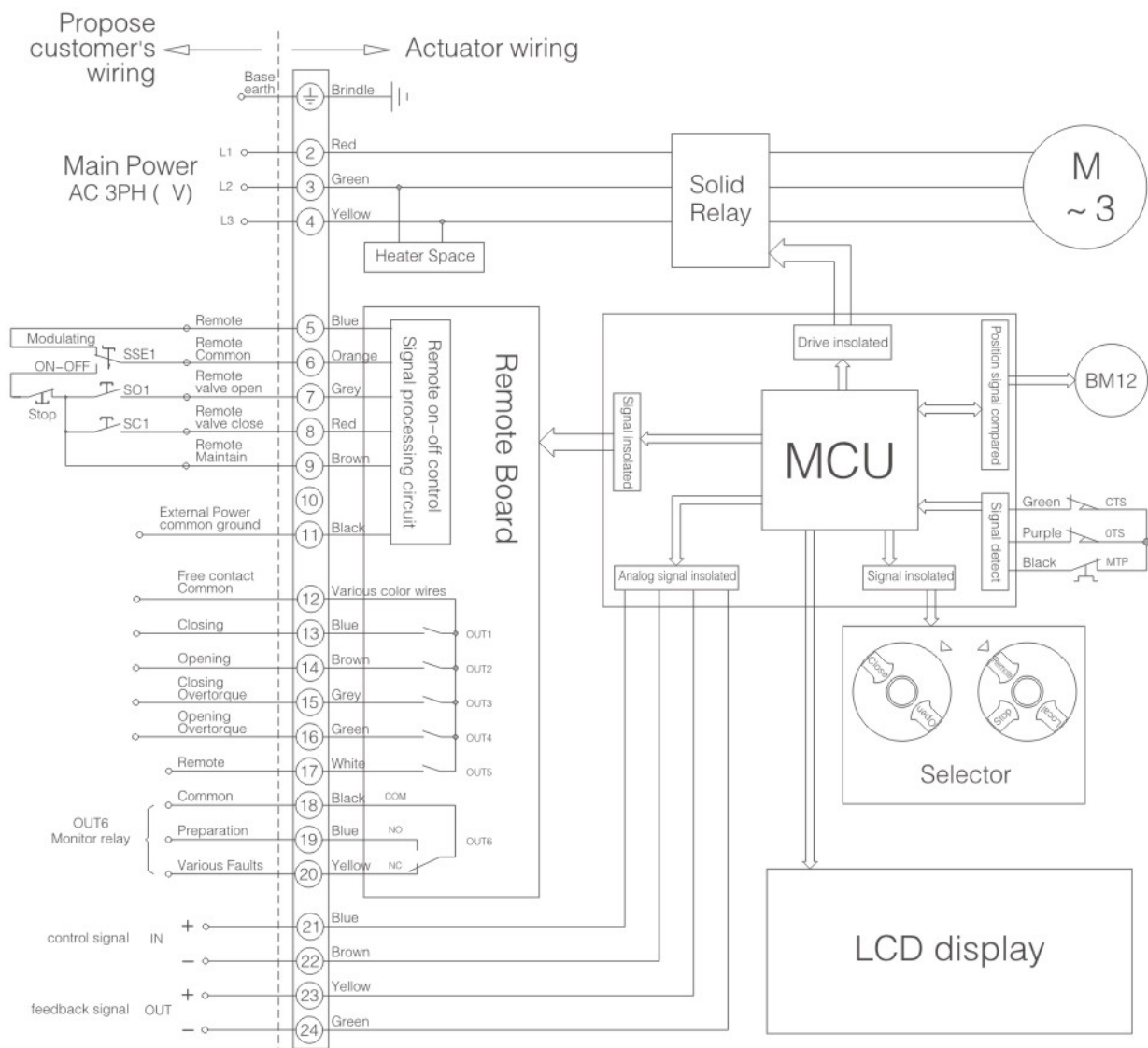
LQ2-4 Wiring Drawing(3PH)



Non-intrusive products(YE series) characteristics

- Built-in MCU controller, display working data, status and failure alarms by LCD display.
- Non-intrusive selector or remote controller to calibrate the travel.
- Non-intrusive selector operation to achieve local, remote, open, close, stop control, and remote controller optional.
- Various position collection, potentiometer, single loop 12 bit encoder, multi loop 18 bit encoder optional to meet different requirements of position monitoring.
- Working data setting over selector, more stable than the DIP switch.
- On-off normal pulse control and two-wires control over selector setting on site.
- Modulating type with dead zone self-study, no need to adjust the dead zone again on site.
- Modulating type with the calibration function on site, when there is deviation between the local input and factory calibration, re-calibration on site can eliminate the error.
- 6 sets of relays without configuration for closing, opening, overtorque, remote, also providing one set of relay for ESD failure alarm.
- Providing one set of analogue signal for feedback, normally 4~20Ma.(special signals requested)

LQ2-4 Wiring Drawing(3PH)



Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

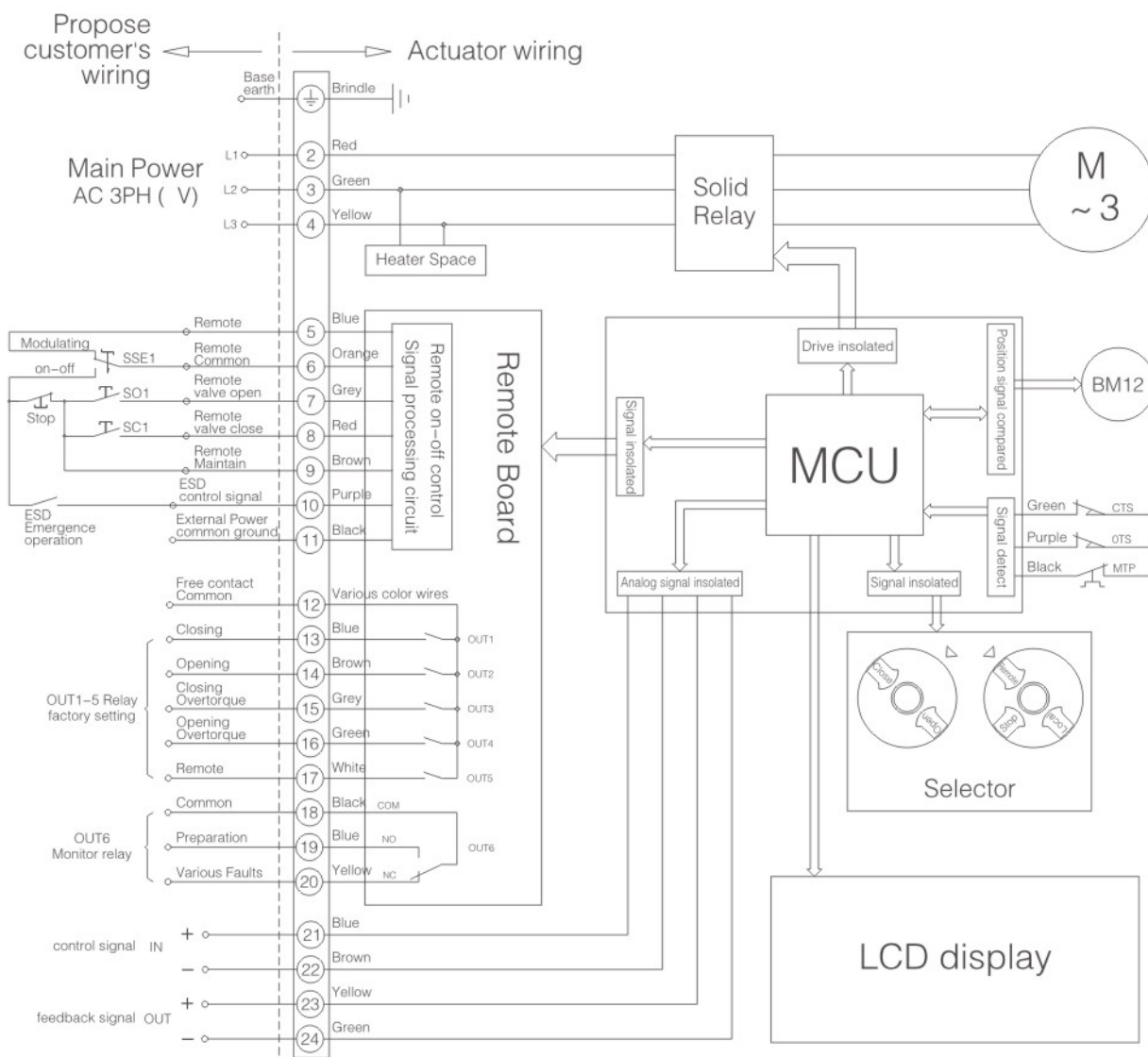
Electric valve (LQ type)

Damper actuator

Intelligent products (Y series) characteristics

- Built-in MCU controller, display working data, statuses and failure alarms by LCD display.
- All working datas setting over Selector and remote controller, convenient, quick and simple.
- Non-intrusive selector operation to achieve local, remote, open, close, stop control, and remote controller optional.
- Various position collection, potentiometer, single loop 12 bit encoder, multi loop 18 bit encoder optional to meet different requirements of position monitoring.
- Modulating type with dead zone self-study, no need to adjust the dead zone again on site.
- Modulating type with the calibration function on site, when there is deviation between the local input and factory calibration, re-calibration on site can eliminate the error.
- 6 sets of relays with configuration, also providing one set of relay for ESD fault alarm.
- Possible 4 sets of relays optional.
- Providing one set of analogue signal for feedback, normally 4~20Ma. (special signals requested)
- With surge protection in case of thunder and lightning accident.

LQ2-4 Wiring Drawing(3PH)





Item	LQ1		LQ2			LQ3		LQ4		LQ4JS			
parameters	-6	-10	-16	-20	-24	-35	-50	-80	-110	-200	-250	-400	-600
Output torque(N.m)	60	100	160	200	240	350	500	800	1100	2000	2500	4000	6000
Running time(S)	26	26	28	28	28	32	32	36	36	110	110	180	180
Motor Power (W)	20	20	40	40	45	60	90	120	180	120	180	120	180
Rated current (A)													
AC220V	0.45	0.5	0.6	0.6	0.7	0.9	1.3	1.5	2.2	1.5	2.2	1.5	2.2
AC110V	-	1.0	1.45	1.5	1.6	1.8	3.2	3.9	4.2	3.9	4.2	3.9	4.2
AC440V	-	0.26	0.30	0.35	0.39	0.42	0.86	1.2	1.6	1.2	1.6	1.2	1.6
AC415V	-	0.24	0.28	0.32	0.37	0.40	0.81	1.15	1.55	1.15	1.55	1.15	1.55
AC380V	-	0.22	0.25	0.3	0.35	0.38	0.8	1.1	1.5	1.1	1.5	1.1	1.5
AC/DC 24V	-	1.7	2.0	2.2	2.8	4.0	6.9	9.8	12.5	9.8	12.5	9.8	12.5
Circle number of handwheel	10		12			13		14.5		46		73	
Weight (Kg)	12		18			22	23	28	30	54	56	108	110

Note: All range actuators are dispatched with explosion proof plugs 2-NPT3/4 fitted into the cable entries, it is the responsibility of the installer to ensure the appropriate cable adapters and packings with explosion proof.

Summary

- The advanced display allows large segment character position display while the matrix display provides detailed setting, status and diagnostic multilingual screens.
- Reliable valve position sensing is critical. Using the latest technology, LQ absolute encoder has redundancy and self checking functions.
- Non-intrusive design, functions and datas setting by remote controller and local selector, no cover removal required.
- On-off, modulating, fieldbus switched arbitrarily, various wiring for remote on-off control, passive contact control, two wires control, external power input control adopted.
- Automatic identify phase sequence, phase failure protection, overheating and overtorque protection, ESD emergency operation.
- 3 programmable relays can set-up configuration of feedback signals.

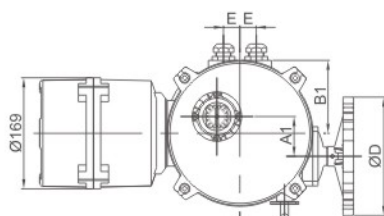
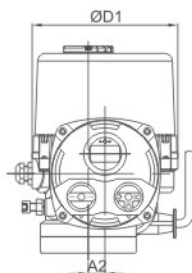
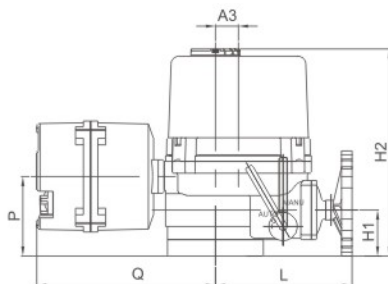
Features

- Built-in MCU controller, display working datas, statues and failure alarms by LCD display.
- All working datas setting over Selector and remote controller, convenient, quick and simple.
- Non-intrusive selector operation to achieve local, remote, open, close, stop control, and remote controller optional.
- Various position collection, potentiometer, single loop 12 bit encoder, multi loop 18 bit encoder optional to meet different requirements of position monitoring.
- Remote On-off, analogue, fieldbus switched arbitrarily
- with dead zone self-study, no need to adjust the dead zone again on site.
- with the calibration function on site, when there is deviation between the local input and factory calibration, re-calibration on site can eliminate the error.
- 3 sets of relays with configuration, also providing one set of relay for ESD fault alarm.
- Providing one set of analogue signal for feedback, normally 4~20Ma.(special signals requested)

Item	A1	A2	A3	B1	D	D1	E	H1	H2	L	P	Q
LQ1	41	12	31	67	100	157	23	55	229	167	96	242
LQ2	57.5	23.5	27	80.5		206		67	261	197	112	260
LQ3	60.5	25.5	35	85.5		222		70	315	208	121	270
LQ4					180		25	81	352	230	132	285
LQ4JS-200/250	70	35	40	96		262		185	456	230	236	285
LQ4JS-400/600								303	574	230	354	285

★ Actuators with local control based on the basic type.

★ LQ4JS actuators based on the LQ4 with reducer wormgear.



Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



Item	LQ1		LQ2			LQ3		LQ4		LQ4JS			
parameters	-6	-10	-16	-20	-24	-35	-50	-80	-110	-200	-250	-400	-600
Output torque(N.m)	60	100	160	200	240	350	500	800	1100	2000	2500	4000	6000
Running time(S)	26	26	28	28	28	32	32	36	36	110	110	180	180
Motor Power (W)	20	30	40	40	45	60	90	120	180	120	180	120	180
Rated current (A)													
AC220V	0.8	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0
AC110V	—	1.6	1.6	1.6	1.6	1.8	1.8	2.0	2.0	2.0	2.0	2.0	2.0
DC24V	—	5	6	6	6	6.5	6.5	7	7	7	7	7	7
Circle number of handwheel	10		12			13		14.5		46		73	
Weight (Kg)	13		19			23	24	29	31	55	57	109	111

Summary

Basic Features:

- 1:Inside of this type of product are installed with the large-capacity lithium battery and the corresponding control circuit. When external power failure or cable disconnection due to an accident, the valve can not only go to the preset position, but also continue to operate the actuators more than five times to avoid accidents.
- 2:External power failure: at least 5 times to be operated at the control cabinet without any exchanges, also with at least 5 times to operate the actuator over selector on site.
- 3:External power failure and control circuit interrupted at the same time due to Cable disconnection: ON-OFF type can be operated at least 5 times by the simple way of connecting the two wires of control lines of the cable interrupted, you also can connect all wires of control lines of the cable interrupted if there is not with torque signal output for the ON-OFF type.
- 4:Either the external power failure or power cable disconnected, there is no body harm and trip caused by fire accident or other hazards, because the actuators and cables only exist DC24V , and the current no exceed 200mA.
- 5.The lithium battery can be automatically recharged by an external power supply, high reliability and long service life.
- 6:Actuators with lithium battery includes basic items and waterproof items.

Working environment

- 1.Power supply(optional)
AC:AC110V-AC240V; $\pm 10\%$ 50/60 Hz;
DC:DC24V($\pm 10\%$)
Basic error : 1.5%
- 2.Outdoor Enclosure protection:IP67,IP68
- 3.Environment temperature:-20~45°C
- 4.Humidity $\leq 90\%$ (25°C)
- 5.No strong corrosion media at working environment.
- 6.Be customized based on requested

Control methods: ON-OFF control, modulating control

LQ series time, output torque parameters



H-力 合力®

Item specification Performance	LQ1			LQ2				LQ3				LQ4				LQ4JS-250		LQJS-600	
Time	26S (Standard)	10S	5S	28S (Standard)	15S	10S	3-5S	32S (Standard)	15S	10S	3-5S	36S (Standard)	18S	12S	3-5S	110S (Standard)	55S	180S (Standard)	90S
Torque	100 N.m	60 N.m	40 N.m	240 N.m	200 N.m	150 N.m	80 N.m	500 N.m	400 N.m	350 N.m	150 N.m	1100 N.m	800 N.m	600 N.m	300 N.m	2500 N.m	2000 N.m	6000 N.m	5000 N.m
Motor	20W			45W				90W				180W							

Note: There is without self-locking function when the time is less than 5S. And the overtorque switch doesn't work.

Features

- Housing: Hard anodized Aluminum casting and external epoxy power coated against severe industrial environment.
- Gearing: Precisely machined double worm gear C/W minimum black-lash, low noise, high output torque.
- Self-locking: Provided double worm gearing to keep position of valve unchanged against reverse torque from valve.
- Motor: Specially designed and induction motor to generate high starting torque and high efficiency equipped with thermal protector to prevent damage from over heating. Insulation class F.
- External mechanical stopper: Prevents over run of travel angle when limit switch fails.
- Torque switches: Protect actuator from damage caused by overload from the driven valve over the whole travel, 1 each for open/close.

LQ series(continuous working) torque parameters (Power:AC220V)



H-力 合力®

Item	Torque	Time	Rated current	Power
LQ1-03 (Original item LQ1-10)	30N.m	26S	0.3A	15W
LQ2-12 (Original item LQ2-24)	120N.m	28S	0.42A	28W
LQ3-25 (Original item LQ3-50)	250N.m	32S	0.63A	48W
LQ4-50 (Original item LQ4-110)	500N.m	36S	1.37A	100W
LQ4JS-100 (Original item LQ4JS-250)	1000N.m	55S	1.40A	100W
LQ4JS-150 (Original item LQ4JS-600)	1500N.m	90S	1.46A	100W

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



Item	LQ1		LQ2			LQ3		LQ4		LQ4JS			
parameters	-6	-10	-16	-20	-24	-35	-50	-80	-110	-200	-250	-400	-600
Output torque(N.m)	60	100	160	200	240	350	500	800	1100	2000	2500	4000	6000
Running time(S)	26	26	28	28	28	32	32	36	36	110	110	180	180
Motor Power(W)	20	20	40	40	45	60	90	120	180	120	180	120	180
Rated current(A)													
AC220V	0.45	0.5	0.6	0.6	0.7	0.9	1.3	1.5	2.2	1.5	2.2	1.5	2.2
AC110V	-	1.0	1.45	1.5	1.6	1.8	3.2	3.9	4.2	3.9	4.2	3.9	4.2
AC/DC 24V	-	1.7	2.0	2.2	2.8	4.0	6.9	9.8	12.5	9.8	12.5	9.8	12.5
Circle number of handwheel	10		12			13		14.5		46		73	
Weight(Kg)	8		14			18		24		50		104	

Note: All range actuators are dispatched with explosion proof plugs 2-NPT3/4 fitted into the cable entries, it is the responsibility of the installer to ensure the appropriate cable adapters and packings with explosion proof.

Summary

LQ/4P series four positions valve actuators is our newly developed products for the three-way or four-way valve.

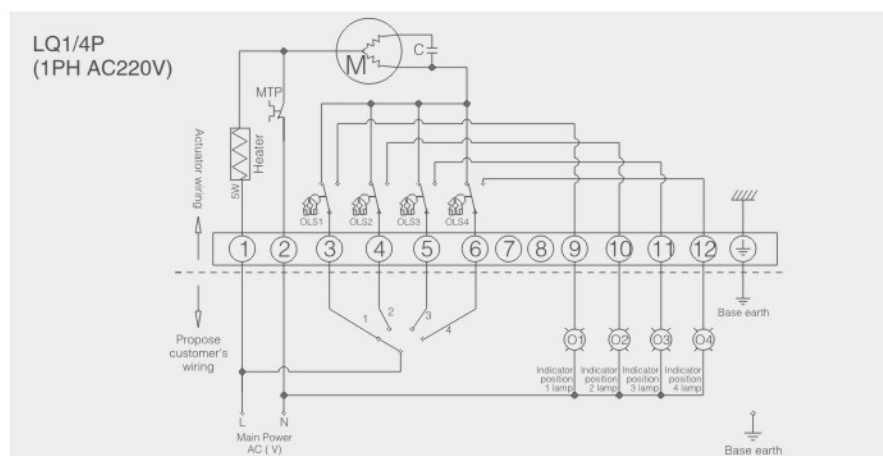
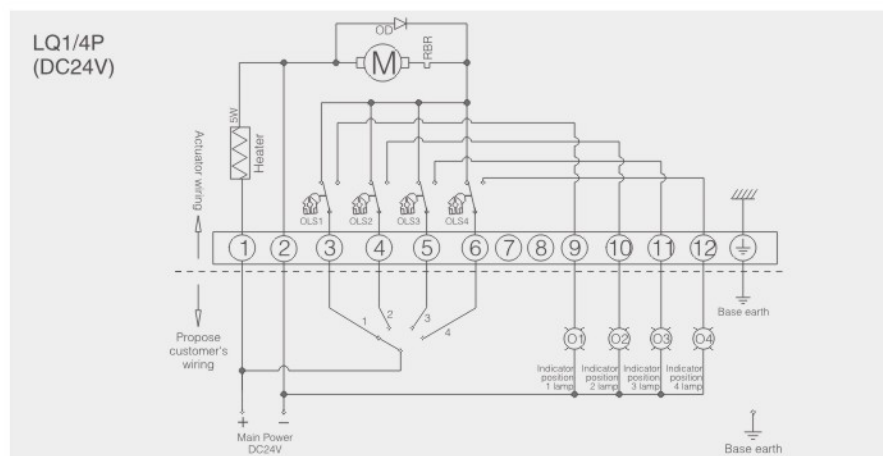
The biggest feature of this kind of actuator have the ability to position the four positions to meet the special requirements of the three-way or four-way valve.

Widely used in electricity power, metallurgy industry, petroleum industry, chemical industry, food making, textile, paper making, pharmaceuticals, water and sewage treatment and other industries.

Waterproof products with IP67,
Explosion proof products with d II BT6
or d II CT6.

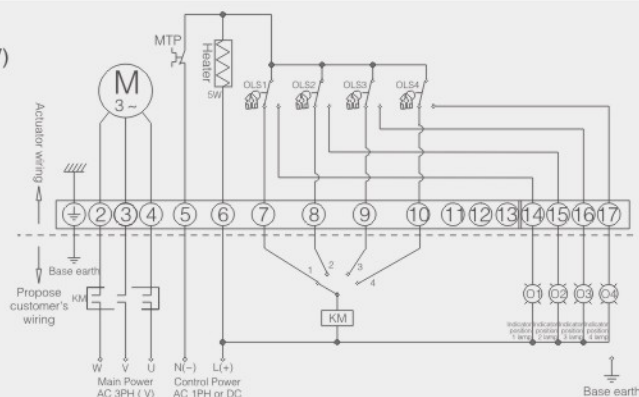
Based on production standard: JB/T 8219-2016 《industrial process measurement and control systems valve actuator》

This instruction is applicable to waterproof products. Please ask the corresponding “additional instructions” for special functions requested.

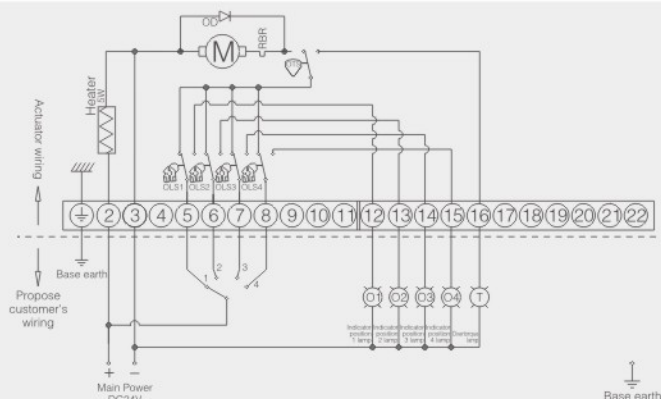




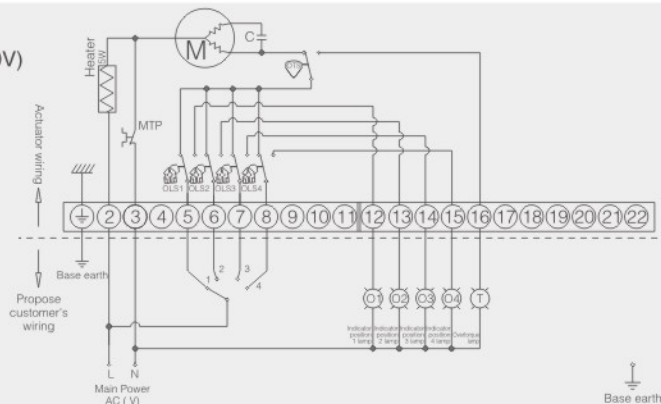
LQ1/4P
(3PH AC380V)



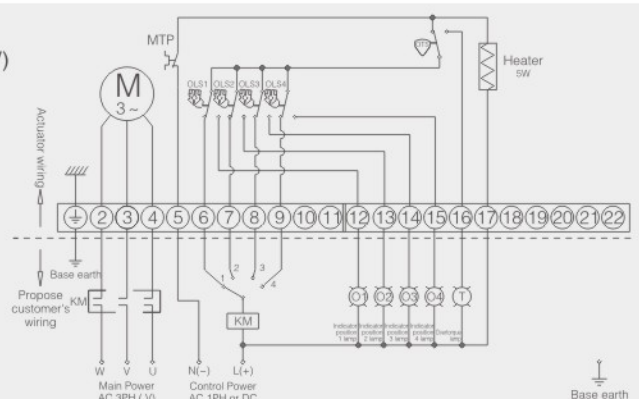
LQ2-4/4P
(DC24V)



LQ2-4/4P
(1PH AC220V)



LQ2-4/4P
(3PH AC380V)



Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator

Electric wafer butterfly valve



Main Parts	Material	Specifications	Main Parts	Material	Specifications
Valve Body	Ductile Iron	50mm~800mm	Valve Stem	Stainless Steel	50mm~800mm
	Cast Iron				
	WCB				
	Stainless Steel				
Valve Disc	304(CF8)	50mm~800mm	Valve Seat	EPDM	50mm~800mm
	316(CF8M)			NBR	
	D.I.Plated Nickel			PTFE	
	D.I.Coated Nylon			Viton	
	Alum-bronze			SEP	

Product description

Integrated structure wafer center line butterfly valve can be matched and worked with HL electric actuator with input (4~20mADC, 0~10VDC or 1~5 VDC) signals or single-phase power supply. With the characteristics of small volume, large flow capacity, high regulation precision, good sealing, and light weight, etc. The valves are widely used in food, environmental protection, light industry, petroleum, paper making, chemicals, teaching and research equipment, and electric power industries of industrial automation control systems.

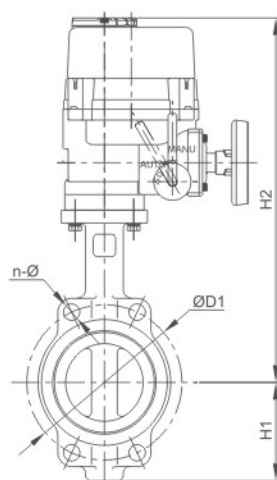
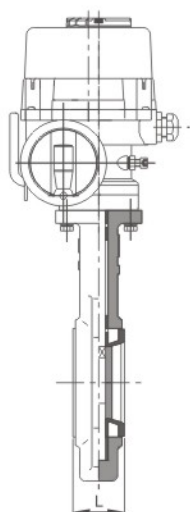
Technical parameters

Nominal diameter: DN50~DN800

Nominal pressure: PN1.0, 1.6MPa

Suitable temperature: -20°C~150°C

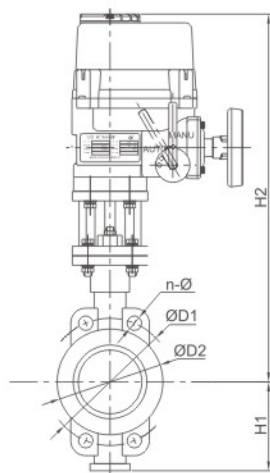
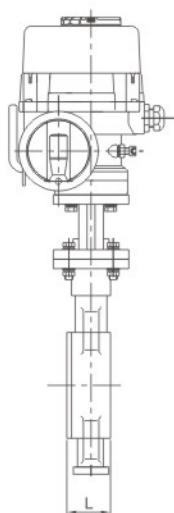
Suitable medium: water, sea water, food, natural gas, alcohols, salts, acids, alkalis, oil, steam, air, etc.



Electric butterfly valve with soft seal connecting dimension

SIZE		Item	ØD1		L	H2	H1	n-Ø	
mm	inch		1.0MPa	1.6MPa				1.0MPa	1.6MPa
DN50	2"	LQ1-6	125		43	363	76	4-Ø18	
DN65	2 1/2"		145		46	386	89	4-Ø18	
DN80	3"		160		46	382	94	4-Ø18	8-Ø18
DN100	4"	LQ1-10	180		52	424	114	8-Ø18	
DN125	5"		210		56	457	127	8-Ø18	
DN150	6"	LQ2-20	240		56	493	140	8-Ø23	
DN200	8"	LQ2-24	295		60	528	176	8-Ø23	12-Ø23
DN250	10"	LQ3-50	350	355	68	618	207	12-Ø23	12-Ø25
DN300	12"	LQ4-110	400	410	78	714	240	12-Ø23	12-Ø25
DN350	14"		460	470	78	745	273	16-Ø23	16-Ø25
DN400	16"	LQ4JS-200	515	525	102	877	322	16-Ø25	16-Ø30
DN450	18"	LQ4JS-250	565	585	114	899	340	20-Ø25	20-Ø30
DN500	20"		620	650	127	957	380	20-Ø28	20-Ø34
DN600	24"	LQ4JS-400	725	770	154	1201	467	20-Ø31	20-Ø37

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



Electric wafer metal seal butterfly valve

Nominal diameter DN(mm)		DN50~DN600		
Nominal pressure		PN1.0MPa		PN1.6MPa
Nominal pressure	Strength test	PN1.5MPa		PN2.4MPa
	Seal test	PN1.1MPa		PN1.76MPa
Materials/ code name		C	P	R
Main Parts	Valve Body	WCB	304	316
	Valve Disc			
	Valve Stem	Carbon steel,Stainless Steel		
	O—ring	PTFE、stainless steel		
	Packing	PTFE、flexible graphite		
Applicable Operating Condition	Applicable medium	Water,steam,oils	nitrose	acetic acid
	Suitable temperature	WCB: -29℃~425℃ Stainless steel: -40~600℃		

Product description

Flexibility with precision U-ring and triple offset metal hard sealing multi-level structure, which is widely used in medium temperature $\leq 425^{\circ}\text{C}$ of metallurgical, power, petrochemical, and municipal construction, drainage and industrial pipe, for regulation traffic and fluid truncated. The valve adopt triple offset structure. The sealing face of the valve seat and disc is made of the steel and stainless steel with good corrosion resistance, long service life. With the two-way sealing function, all the products up to the valve pressure test standard of national GB/T 13927-92.

Features

- 1.The valve adopt triple offset structure. Almost no wear between the valve seat and valve plate. With more and more tightly sealing function.
- 2.The sealing ring is made of stainless steel, with dual advantages for metal seal and elastomeric seal, both in the case of low and high temperatures with excellent sealing performance, corrosion resistance, long life and other characteristics.
- 3.The sealing surface of the disc is welded of cobalt-based alloy, with the advantage of wear resistance and long service life.
- 4.There is a two-way sealing function of the valve. No limitation from the media flows and spatial location, which can be installed in any direction.

Electric wafer metal seal butterfly (standard) dimensions

SIZE		Item	ØD1		ØD2		H2	H1	L	n-Ø	
mm	inch		1.0MPa	1.6MPa	1.0MPa	1.6MPa				1.0MPa	1.6MPa
50	2"	LQ1-10	125		102		443	90	43	4-18	
65	2.5"		145		122		487	110	46	4-18	
80	3"	LQ2-16	160		133		523	115	49	4-18	8-18
100	4"	LQ2-20	180		158		533	130	56	8-18	
125	5"	LQ2-24	210		185		583	150	64	8-18	
150	6"	LQ3-35	240		216		671	165	70	8-22	
200	8"	LQ3-50	295		272		757	210	71	8-22	12-22
250	10"	LQ4-110	350	355	320	320	817	245	76	12-22	12-26
300	12"	LQ4JS-200	400	410	372	372	967	280	83	12-22	12-26
350	14"	LQ4JS-250	460	470	420	430	1032	315	92	16-22	16-26
400	16"	LQ4JS-400	515	525	480	480	1209	345	102	16-26	16-30
450	18"		565	585	535	545	1274	380	114	20-26	20-30
500	20"	LQ4JS-600	620	650	585	610	1299	415	127	20-26	20-33
600	24"		725	770	685	720	1314	460	154	20-30	20-36

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



Electric soft seal butterfly valve flanged

Nominal diameter DN(mm)		DN50~DN700	
Nominal pressure		PN1.0MPa	PN1.6MPa
Nominal pressure	Strength test	PN1.5MPa	PN1.6MPa
	Seal test	PN1.1MPa	PN1.76MPa
Main Parts	Valve Body	Ductile iron、WCB、 Stainless Steel	
	Valve Disc	Ductile iron, cast iron, WCB, Stainless steel and special materials	
	Valve Stem	Carbon steel,Stainless Steel	
	O-ring	Rubber, PTFE, EPDM	
	Packing	PTFE、 flexible graphite	
Applicable Operating Condition	Applicable medium	Water、 air、 oils,etc.	
	Suitable temperature	≤120℃	

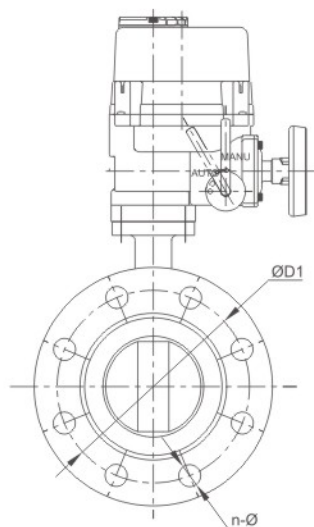
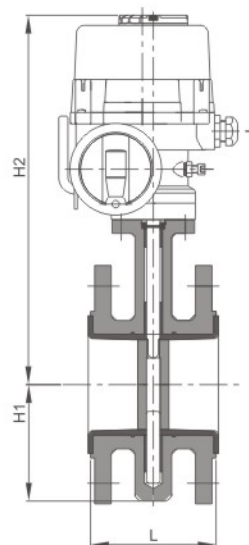
Product description

Electric flanged soft seal butterfly valve is suitable for temperature $\leq 120^{\circ}\text{C}$, nominal pressure $\leq 1.6\text{MPa}$ of food industry, pharmaceutical, chemical industry, oil, electricity power, textile, paper making and other liquid/gas regulation.

Features

- 1.Design reasonable,unique structure,light weight,open and close quickly.
- 2.Operation torque small,easy operation.
- 3.Mounted in any position,and easy maintenance.
- 4.The seal parts can be replaced,zero leakage of reliable seal performance.

The seal material is anti-aging,corrosion resistance with long life and other characteristics.



Electric soft seal butterfly valve flanged (LQ type) dimensions

SIZE		Item	ØD1		L	H2	H1	n-Ø	
mm	inch		1.0MPa	1.6MPa				1.0MPa	1.6MPa
DN50	2"	LQ1-6	125		108	331	70	4-Ø18	
DN65	2 1/2"		145		112	355	78	4-Ø18	
DN80	3"	LQ1-10	160		114	372	87	4-Ø18	8-Ø18
DN100	4"		180		127	394	105	8-Ø18	
DN125	5"	LQ2-20	210		140	414	120	8-Ø18	
DN150	6"		240		140	478	134	8-Ø22	
DN200	8"	LQ2-24	295		152	508	163	8-Ø22	12-Ø22
DN250	10"	LQ3-50	350	355	165	571	202	12-Ø22	12-Ø26
DN300	12"	LQ4-110	400	410	178	735	230	12-Ø22	12-Ø26
DN350	14"		460	470	190	783	245	16-Ø22	16-Ø26
DN400	16"	LQ4JS-200	515	525	216	852	305	16-Ø28	16-Ø31
DN450	18"	LQ4JS-250	565	585	222	875	345	20-Ø28	20-Ø31
DN500	20"		620	650	229	907	375	20-Ø28	20-Ø34

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



Electric metal seal butterfly valve flange

Nominal diameter DN(mm)		DN40~DN600	
Nominal pressure		0~1.6MPa	
Nominal pressure	Strength test	PN1.5MPa	PN1.6MPa
	Seal test	PN1.1MPa	PN1.76MPa
Main Parts	Valve Body	Ductile iron, WCB, Stainless Steel	
	Valve Disc	Ductile iron, cast iron, WCB, Stainless steel and special materials	
	Valve Stem	Carbon steel, Stainless Steel	
	O-ring	Rubber, PTFE, EPDM	
	Packing	PTFE, flexible graphite	
Applicable Operating Condition	Applicable medium	Water, steam, oils, nitrore, acetic acid, etc.	
	Suitable temperature	Carbon steel: -29°C~425°C Stainless steel: -40°C~650°C	

Product description

Electric flanged metal seal butterfly valve use J-shaped elastic seal ring and triple offset metal seal structure, which is widely used in medium temperature $\leq 425^{\circ}\text{C}$ of electricity power, petrochemical industry, as well as drainage and other industries of the pipeline for regulating the flow.

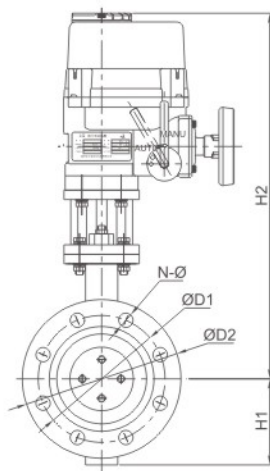
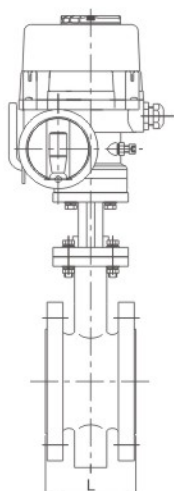
Features

1. The valve adopt triple offset structure. Almost no wear between the valve seat and valve plate. With more and more tightly sealing function.
2. The sealing ring is made of stainless steel, with dual advantages for metal seal and elastomeric seal, both in the case of low and high temperatures with excellent sealing performance, corrosion resistance, long life and other characteristics.
3. The sealing surface of the disc is welded of cobalt-based alloy, with the advantage of wear resistance and long service life.
4. There is a two-way sealing function of the valve. No limitation from the media flows and spatial location, which can be installed in any direction.

Electric metal seal butterfly valve flange (LQ type) dimensions

SIZE		Item	$\varnothing D1$		$\varnothing D2$		H2	H1	L	n- $\varnothing$	
mm	inch		1.0MPa	1.6MPa	1.0MPa	1.6MPa				1.0MPa	1.6MPa
40	1 3/4"	LQ1-10	110		150		443	90	108	4-18	
50	2"		125		165		443	90	108	4-18	
65	2.5"		145		185		487	105	112	4-18	
80	3"	LQ2-16	160		200		523	120	114	4-18	8-18
100	4"	LQ2-20	180		220		533	130	127	8-18	
125	5"	LQ2-24	210		250		583	164	140	8-18	
150	6"	LQ3-35	240		285		671	175	140	8-22	
200	8"	LQ3-50	295		340		757	200	152	8-22	12-22
250	10"	LQ4-110	350	355	395	405	817	243	165	12-22	12-26
300	12"	LQ4JS-200	400	410	445	460	967	250	178	12-22	12-26
350	14"	LQ4JS-250	460	470	505	520	1032	280	190	16-22	16-26
400	16"	LQ4JS-400	515	525	565	580	1209	305	216	16-26	16-30
450	18"		565	585	615	640	1274	350	222	20-26	20-30
500	20"	LQ4JS-600	620	650	670	715	1299	380	229	20-26	20-33
600	24"		725	770	780	840	1314	445	267	20-30	20-36

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



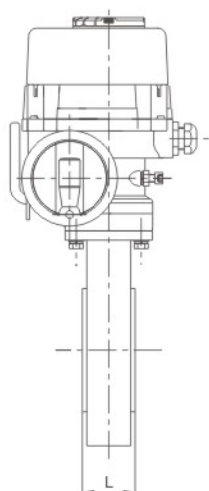
Electric PVC butterfly valve



Nominal diameter DN(mm)	DN50~DN300
End connection	Wafer
Valve body material	UPVC(−10℃~+70℃)、CPVC(−40℃~+95℃)、RPP(−14℃~+100℃)、PVDF(−40℃~+140℃)
Disc material	UPVC(−10℃~+70℃)、CPVC(−40℃~+95℃)、RPP(−14℃~+100℃)、PVDF(−40℃~+140℃)
Sealing material	PTFE、EPDM、NBR
Applicable medium	PVC chemical solvent compatible food industry

Product description

PVC electric butterfly valve, light weight, corrosion resistance, which is used in many fields, such as general water and raw water piping systems, drainage and sewage piping systems, salt water and sea water piping systems, pH and chemical solution system and other industries. The quality is approved by the majority of users.



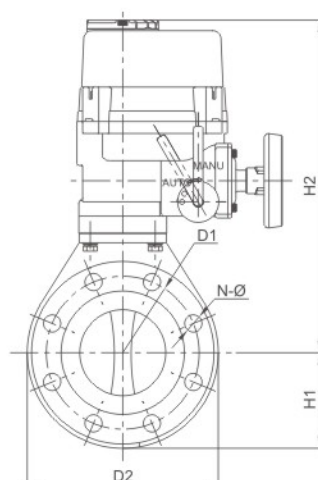
Features

1. Operating temperature range: −40℃~+95℃
2. With excellent strength and toughness.
3. With excellent chemical resistance capabilities.
4. Retardant properties is the self-extinguishing
5. Low thermal conductivity, about 1/200 of the steel
6. The content of heavy ion in the medium up to the ultrapure water standards.
7. Health indicators in line with national health standards
8. Clean and smooth of the Tube wall, which can generate a smaller friction and adhesion when transferring fluid
9. Light weight, the equivalent of 1/5 of steel, 1/6 of Brass.
10. Easy to install.
11. Excellent anti-aging and UV resistance, so that there is a great extension of the normal service life than other piping systems.

Electric PVC butterfly valve connecting dimension

SIZE mm	Item	D1 1.0MPa	D2 1.0MPa	H2	H1	L	n-Ø 1.0MPa
DN50	LQ1-6	125	165	333	82	40	4-19
DN65		145	185	344	92	46	4-19
DN80	LQ1-10	160	200	388	100	46	8-19
DN100		180	220	404	110	54	8-19
DN125		210	249	439	124	70	8-23
DN150	LQ2-20	240	283	486	142	74	8-23
DN200	LQ2-24	295	340	532	170	87	8-23
DN250	LQ3-50	350	395	603	198	114	12-25
DN300	LQ4-80	410	460	817	230	114	12-25

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.





Electric sanitary butterfly valve

Nominal diameter DN(mm)	DN15~DN150
Nominal pressure	1.0MPa
Suitable temperature	-10℃~150℃
Suitable medium	Liquid ,gas, oil, Various corrosion chemistry mediums
Valve body material	304、316、316L
Valve bore material	304、316、316L
Seal material	Silicon rubber,EPDM,FPM

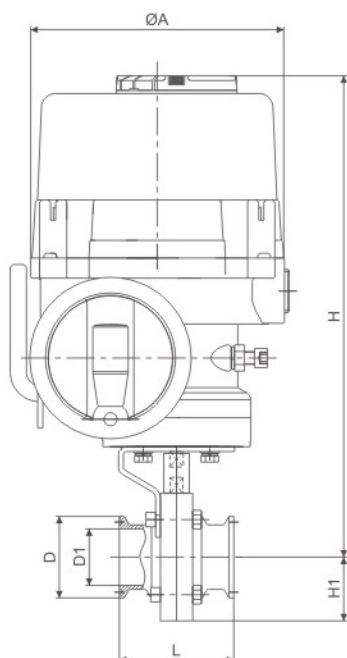
Product description

Sanitary butterfly valve are used in applications with high sanitary requirements, such as food, beverage, pharmaceutical, dairy, beer and chemicals.

Features

- Valve body and valve bore touched with medium are 304,316 or 316L
- Removable valve body, simple structure, easy maintenance.
- Design beautiful, surface smooth, without burrs.
- End connection: weld, clamp, thread
- Product Quality: polishing treatment to meet surface accuracy requirements.
- Product accuracy: In compliance with 3A,DIN,SMS,BS standard.

Electric sanitary butterfly valve dimension



SIZE mm	Item	D1	D	H	H1	L	A
Ø19	LQ1-10	16.5	50.5	298	38.5	66	189
Ø25		22	50.5	298	38.5	66	189
Ø32		29	50.5	298	38.5	66	189
Ø38		35	50.5	300	39.5	70.5	189
Ø45		40	64	302	44	70.5	189
Ø51		48	64	305	47	70.5	189
Ø63		59	77.5	312	55.5	76.5	189
Ø76		72	91	318	61.5	76.5	189
Ø89		85	106	322	69.5	81	189
Ø102		99	119	349	77.5	87	189
Ø133		125	145	164	93	99.5	189
Ø159		151	183	380	107	110	189

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



Electric Lined Fluorine butterfly valve

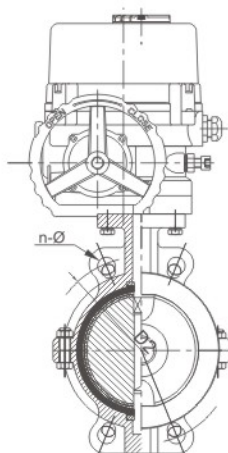
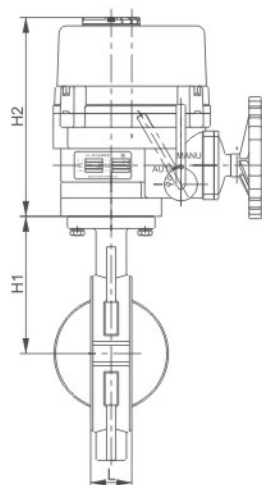
Product description

D971F46/D941F46 electric lined Fluorine butterfly valve has two kinds of control methods: ON-OFF and Modulating control. Electric actuator can work when the control signal (4–20mA DC or 1–5 VDC) and single-phase power supply to be input, this kind of butterfly valve has a strong function with small size, reliable performance, high flow capacity. Valve body, valve disc and valve stem all lined with Fluorine, with excellent corrosion resistance, suitable for any concentrations of liquid such as acid, alkali, salt and oxidants, and used at chemical, petroleum, pharmaceutical, food, iron and steel smelting, paper making, water treatment and other systems like gas, liquid. The products can be widely used in some areas to instead of the gate valve, globe valve and other types of shut-off or control valves.

Product characteristics

Lined with F4, F3, F46 butterfly valve with corrosion-resistant, no leakage, long life and other advantages. This type of butterfly valve is suitable for the treatment of concentrated sulfuric acid, hydrochloric acid, nitric acid, hydrofluoric acid, aqua regia, organic acid, strong acid, oxidizing medium or high temperature sulfuric acid, high temperature acetic acid and other highly corrosive fluids.

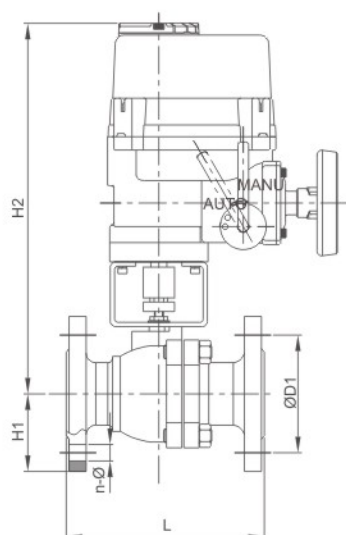
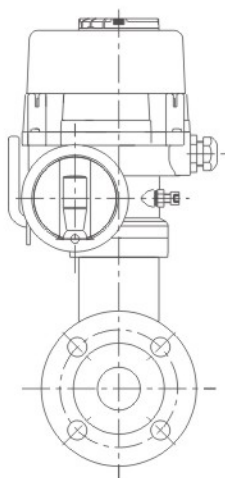
1. Small and lightweight, easy disassembly and maintenance, and can be installed in any location.
2. The structure is simple and compact, open and close quickly
3. Operating torque is small, easy to operate.
4. Flow characteristics tend to be straight line, good in regulation
5. Valve seat with anti-aging, corrosion resistance.



Dimension of electric lined fluorine butterfly valve

SIZE		Item	ØD2	L	H1	H2	n-Ø
mm	inch						
DN50	2"	LQ1-10	125	43	114	223	4-Ø18
DN65	2 1/2"		145	46	126		4-Ø18
DN80	3"	LQ2-20	160	46	135	261	8-Ø18
DN100	4"		180	52	148		8-Ø18
DN125	5"	LQ3-50	210	56	168	315	8-Ø18
DN150	6"		240	56	180		8-Ø23
DN200	8"	LQ4JS-250	295	60	229	457	8-Ø23
DN250	10"		350	68	280		12-Ø23
DN300	12"	LQ4JS-250	400	78	298	457	12-Ø23
DN350	14"		460	78	340		16-Ø23
DN400	16"	LQ4JS-400	515	102	370	575	16-Ø25
DN450	18"		565	114	390		20-Ø25
DN500	20"		620	127	440		20-Ø25

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



Electric flanged ball valve

Nominal diameter DN(mm)	DN15~DN250
Nominal pressure	PN1.0/1.6/2.5/4.0/6.4MPa
Applicable medium	Water、Petroleum、Nitric Acids、Acetic Acids、Slurries、Viscosity fluid and so on
Suitable temperature	-40℃~+80℃(PTFE/PPL Sealing) -40℃~+350℃(Metal Sealing)
Leakage	meet the standard of ANSI B16.104
Rotary angle	90°
Body material	WCB,304,316
Seat materials	PTFE(Normal Temp.), Special PPL(High Temp.), Metal Sealing(High Temp.)

Product description

Electric Ball Valve is a kind of valve for 90° rotation, with the characteristics of fine sealing performance, large flow capability, small flow resistant coefficient, simple structure and long service life. The valve passage is equal to the connecting pipe, and the medium can nearly flow through it without the loss.

By connected with electric actuator, the valve is widely applicable for the working fields such as petroleum, chemical industry, metallurgy, paper making, power station etc. It can control not only the medium like the air, liquid and steam, but also the medium containing the fibers.

Product characteristics

1. Small flow resistance. The ball valve has smallest flow resistance among all valves. The flow resistance is very small even the reduced bore ball valve.
2. Thrust shaft bearing can reduce the fricative torque of valve shaft in order to make the shaft operation balance.
3. Valve seat with a good sealing performance by adopting PTFE as the seal ring. And the sealing performance can be better with the increase of pressure.
4. The packing sealing is not easy to destroy due to the rotary movement of valve stem, sealing performance will be increased with the increased medium's pressure.
5. PTFE's self-lubrication features can reduce the fricative to make the service life long.

Electric flanged ball valve (1.6MPa) connecting dimension

SIZE		Item	D1	H2	H1	L	n-Ø
mm	inch		1.6MPa				1.6MPa
15	1/2"	LQ1-6	65	297	48	130	4-Ø14
20	3/4"		75	303	53	140	
25	1"		85	331	57	150	
32	1 1/4"		100	351	67	165	
40	1 1/2"	LQ1-10	110	396	77	180	4-Ø18
50	2"		125	443	80	200	
65	2 1/2"		145	505	90	220	
80	3"	LQ2-24	160	527	98	250	8-Ø18
100	4"	LQ3-50	180	583	107	280	
125	5"	LQ3-50	210	708	122	320	
150	6"	LQ4-110	240	697	140	360	
200	8"	LQ4JS-200	295	850	177	400	12-Ø23
250	10"	LQ4JS-250	355	866	212	450	12-Ø25

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



Electric three-way ball valve flanged

Nominal diameter DN(mm)	DN15~200mm
Nominal pressure	PN1.6、2.5、4.0、6.4MPa
End connection	Flange type, Threaded type
Body material	WCB、CF8、CF8M、CF3M
Valve ball	2Cr13、304、316
Seal Packing	PTFE、flexible graphite
Rotate angle	0~360°
Enclosure protection	IP-67
Environmental humidity	≤95%
Suitable temperature	-25~70℃

Product description

Electric flanged three-way ball valve is compact, light, and convenient to maintenance. The valve is powered by 220V single-phase AC and receives the signals of the control system. Reversible single-phase gear reducer can be driven by switching single-phase power to switch the pipeline according to the requirement. L pattern three-way valve can achieve flow direction switched in the pipeline, also can make two perpendicular ports connected or disconnected. T-pattern three-way valve not only can achieve flow direction switched, but also mix the mediums of three ways with each other. Possible to disconnect any one way so that the other two ways can be connected to flexible control the flow direction of medium, which are suitable for the pipeline of water supply, petrochemical industry, metallurgy, mining, textile, energy, paper making, food, steel piping system.

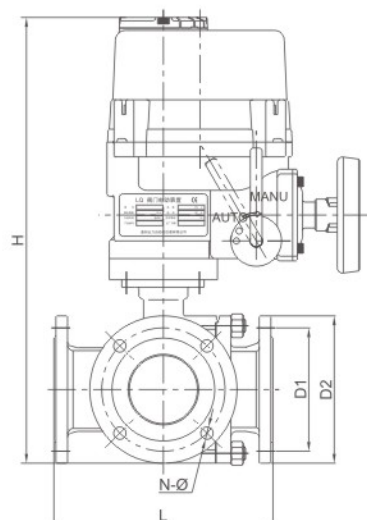
Features

1. Compact, open and close rapidly, running smooth
2. Good seal performance: PTFE valve seat all around with elastic deformation to achieve zero leakage,
3. Multi-function: any one way can be used as an inlet without leakage, L-pattern or T-pattern are available.
4. Easy maintenance: After removing pressure, no need to remove the entire valve body for inspection and maintenance.

Control method

Electric three-way ball valve includes L-pattern and T-pattern, L-pattern can connect the perpendicular two ways to switch the flow direction, but T pattern can connect three ways or two ways to mix the mediums or switch the flow direction both, Normally L pattern adopted, but T pattern optional according to customers requested.

Electric three-way ball valve flanged dimensions



SIZE		Item	D1	D2	H	L	n-Ø
mm	inch		1.6MPa				1.6MPa
15	1/2"	LQ1-6	65	95	280	140	4-14
20	3/4"	LQ1-6	75	105	300	160	4-14
25	1"	LQ1-6	85	115	311	180	4-14
32	1 1/4"	LQ1-6	100	135	341	200	4-18
40	1 1/2"	LQ1-10	110	145	377	220	4-18
50	2"	LQ1-10	125	160	402	240	4-18
65	2 1/2"	LQ2-20	145	180	448	260	4-18
80	3"	LQ2-24	160	195	468	280	8-18
100	4"	LQ3-50	180	215	517	320	8-18
125	5"	LQ4-110	210	245	557	380	8-18
150	6"	LQ4JS-200	240	280	661	440	8-23
200	8"	LQ4JS-250	295	335	697	550	12-23

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



Electric threaded ball valve

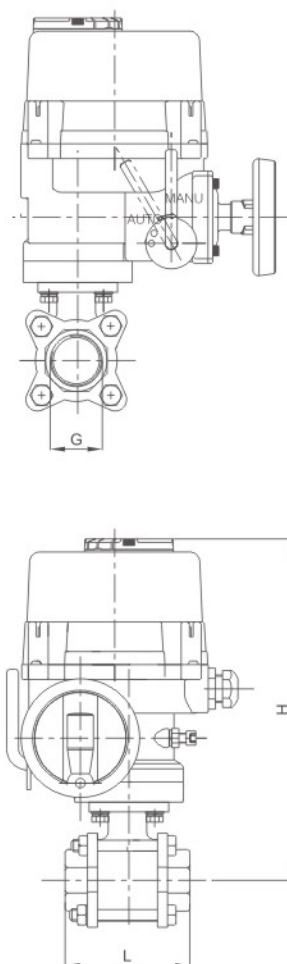
Nominal diameter DN(mm)		DN10~DN100					
Nominal pressure		PN1.6/2.5/6.4MPa					
End connection		thread			Butt welded		
Main Parts	Valve body, valve cap	WCB	CF8(304)	CF8M(316)	WCB	CF8(304)	CF8M(316)
	Valve ball, valve stem	2Cr13	304	316	2Cr13	304	316
	O-ring, Packing	RPTFE、PPL					
Applicable Operating Condition	Applicable medium	Water, steam, oils	Nitric acid and other corrosive medium	Nitric acid and other corrosive medium	Water, steam, oils	Nitric acid and other corrosive medium	Nitric acid and other corrosive medium
	Suitable temperature	-29°C~180°C (RPTFE)、-29°C~300°C(PPL)					

Product description

Electric threaded ball valve with integrated structure can be driven by input (4~20mA DC, 0~10VDC or 1~5 VDC) signals or single-phase power supply, with the characters of small volume, high flow capacity, high regulation precision, good sealing, and light weight, etc. The valve is widely used in food, environmental protection, light industry, petroleum, paper, chemicals, teaching and research equipment, and electric power industries of industrial automation control systems.

Product features

Thread and butt welded connection ball valve can be divided into 1-piece, 2-piece, 3-piece. Body casting adopt the advanced technology from Taiwan, with reasonable structure and beautiful shape. The elastic sealing structure make the seat reliable and easy to close and open. valve stem adopt the lower structure with inverted seal, It is impossible to rush out the valve stem when the temperature of valve chest increase, There is butt weld(BW), socket welding(SW) connection of the 2-piece, 3-piece ball valve with locking devices in compliance with international standard ISO platform.



Electric threaded ball valve (standard type) dimensions

SIZE		Item	H	L
mm	inch(G)			
20	3/4"	LQ1-6	316	85
25	1"		320	90
32	1 1/4"		330	112
40	1 1/2"		351	120
50	2"	LQ1-10	362	145
65	2 1/2"	LQ2-16	401	170
80	3"	LQ2-24	472	200
100	4"	LQ3-50	547	263

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



Electric PVC ball valve

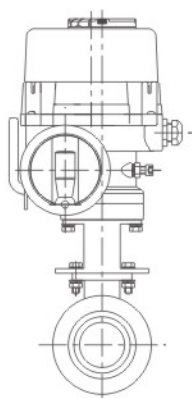
Nominal diameter DN(mm)	DN15~DN100
End connection	Double Union, Flange
Valve body material	UPVC(−10℃~+70℃)、CPVC(−40℃~+95℃)、RPP(−14℃~+100℃)、PVDF(−40℃~+140℃)
Bore material	UPVC(−10℃~+70℃)、CPVC(−40℃~+95℃)、RPP(−14℃~+100℃)、PVDF(−40℃~+140℃)
Sealing material	PTFE、EPDM、NBR
Applicable medium	PVC chemical solvent compatible food industry

Product description

PVC Electric Ball valve adopt the double union and flange connection, which can be installed easily without special tools. With the advantages of compact structure, Anti-abrasion, quick detachable, easy repair and maintenance, etc. Body Material Health and non-toxic, corrosion resistance, light weight, wide application. Such as water and raw water piping systems, drainage and sewage piping systems, salt water and sea water piping systems, acid and chemical solution systems and other industries.

Features

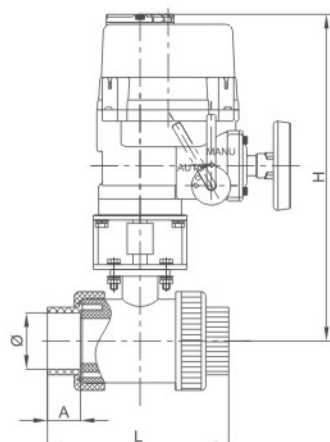
1. Operation temperature range: −40℃~+95℃
2. With excellent strength and toughness.
3. With excellent chemical resistance capabilities
4. Retardant properties is the self-extinguishing
5. Low thermal conductivity, about 1/200 of the steel
6. The content of heavy ion in the medium up to the ultra-pure water standards.
7. Health indicators in line with national health standards
8. Clean and smooth of the Tube wall, with smaller friction and adhesion when transferring fluid.
9. Light weight, the equivalent of 1/5 of steel, 1/6 of brass.
10. Easy to install, flange and double union end connection etc.
11. Excellent anti-aging and UV resistance performance, so that there is a great extension of the normal service life than other piping systems.

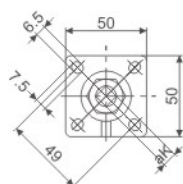
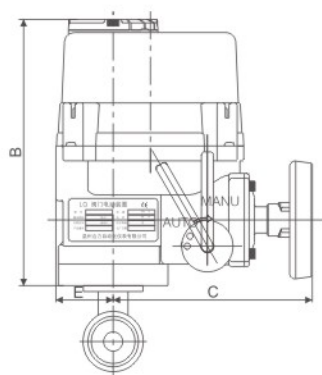
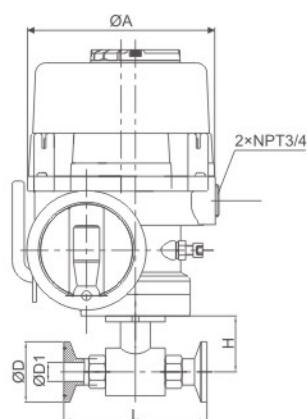


Electric PVC ball valve connecting dimension(standard type)

SIZE mm	Item	Ø	A	L	H
DN25	LQ1-6	32	21.5	121	327
DN32		40	26.5	137	331
DN40		50	31	161	362
DN50		63	37.5	195	388
DN65	LQ1-10	75	43.5	226	414
DN80		90	51	289	457
DN100		110	61	342	489

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.





Electric sanitary ball valve

Item	Q981F-10P
Size	DN15-DN150、1"-6"□Φ12.7-Φ152.4
End connection	Clamp, weld, thread, flange
Actuator	Electric actuator
material	304,304L,316,316L adopted
Main performance	Big Temperature difference withstand; normal pressure 16MPa; strong corrosion resistance; precision
quality	polishing treatment to meet surface precision requirements
seal ring	EPDM、NBR、PTFE
working pressure	1.0Mpa
working temperature	-10°C+150°C
Application	Food, beverage, pharmaceutical, dairy, beer and chemicals
Suitable medium	Gas, liquid, Steam

Features

- Small flow resistance: with the smallest flow resistance either the reduced bore ball valve or full bore ball valve.
- Good seal performance: Valve seat with a good sealing performance by adopting PTFE as the seal ring.
- Service life long: PTFE's self-lubrication features can reduce the fricative to make the service life long,
- High reliability: without scratches between valve body and valve seat, wear resistance valve stem, with fireproof and anti-static functions
- Wide application range: used in viscous fluids, slurries and solid particles, including general medium.
- Small size: any positions installation, convenient installation, easy transportation and store.

Electric sanitary ball valve dimention

SIZE	Item	D	D1	L	H	K	A	B	C	E
Ø19	LQ1-10	50.5	16	99	45	9	157	223	167	48
Ø25	LQ1-10	50.5	22	115	50	9	157	223	167	48
Ø32	LQ1-10	50.5	29	124	51	9	157	223	167	48
Ø38	LQ1-10	50.5	35	140	64	9	157	223	167	48
Ø45	LQ1-10	64	41	148	67	9	157	223	167	48
Ø51	LQ1-10	64	48	164	70	11	157	223	167	48
Ø57	LQ1-10	77.5	52	169	74	11	157	223	167	48
Ø63	LQ2-24	77.5	59	175	80	11	206	250	197	76
Ø76	LQ2-24	91	72	200	100	14	206	250	197	76
Ø89	LQ2-24	106	84	235	107	14	206	250	197	76
Ø102	LQ3-35	119	98	315	122	14	222	315	208	76

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



Electric wafer V-pattern ball valve

Nominal diameter DN(mm)		DN25~DN250		
Nominal pressure		PN1.6~6.4MPa		
Nominal pressure	Strength test	PN2.4~9.6MPa		
	Seal test	PN1.76~7.0MPa		
Materials/ code name		C	P	R
Main Parts	Valve Body	WCB	304	316
	Valve Ball			
	Valve Stem	Stainless Steel		
	O-ring	PTFE、stainless steel、cemented carbide		
	Packing	PTFE, flexible graphite		
Applicable Operating Condition	Applicable medium	Water,steam,oils	nitrose	acetic acid
	Suitable temperature	-28~400℃	-28~500℃	
End connection		wafer type meet JB79-59 standard		

Product description

Electric V-type adjustable ball valve can be driven to realize the regulation of pressure, flow, temperature, liquid level and other parameters by input(4-20mA DC, 0-10VDC or 1-5VDC) signals and single-phase power without addition servo drives. The shearing force is generated by the reverse rotation of metal seal and V-cut on the valve spool which can cut off the fibers to avoid stuck accident, with the characters of large flow capacity, high regulation precision, good sealing, and light weight, etc. The best choice to replace the import products except for the applications of the small diameter, angular and triangle, particularly suitable for the medium of the slurries and fibers, and the regulation of small suspended solids. Widely used in paper manufacturing, sugar, petroleum, chemical, metallurgical and other industrial automation control systems.

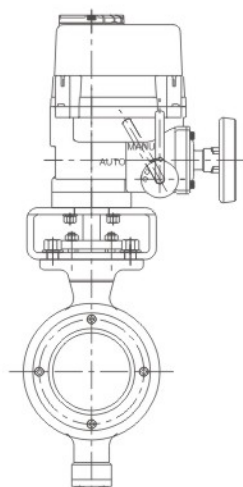
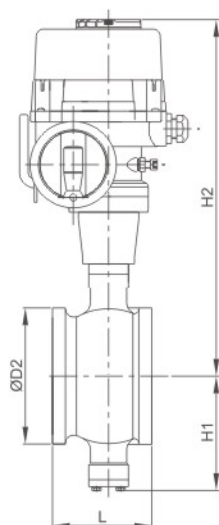
Product features

1. Simple design structure with German technology, light weight, low material cost, more cheaper than the linear control valve with the same flow capacity.
2. Integrated valve body has no effects for pressure, pipe and bolts as without any joints.
3. The durable valve seat lined the stainless steel core or "O" ring at the outer diameter which is made of tungsten carbide cobalt, the seal structure strengthened by a alloy waveform spring.
4. The V-type valve body can ensure the accuracy of control even in case of low flow or high viscosity medium within the full range. The shearing force created between the V-cut and valve seat have self-cleaning function to prevent the stuck, particularly suitable for frozen pipes, the fluids containing fibers, slurry type fluids, including polymers, particles, crystals and other flow control situations when the valve is closed.

Electric wafer V-pattern ball valve dimensions

SIZE		Item	D2	H2	H1	L
mm	inch					
25	1"	LQ1-6	68	514	81	50
32	1 1/4"		76	522	86	60
40	1 1/2"	LQ1-10	84	551	90	60
50	2"		100	566	93	75
65	2.5"	LQ2-20	118	628	108	100
80	3"	LQ3-35	132	694	123	100
100	4"	LQ3-50	158	719	138	115
125	5"	LQ4-80	184	792	148	129
150	6"	LQ4-110	216	863	170	160
200	8"	LQ4JS-200	268	1024	200	200
250	10"	LQ4JS-250	326	1126	240	240

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.





Electric flanged V-type ball valve

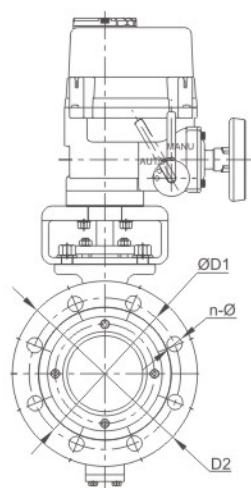
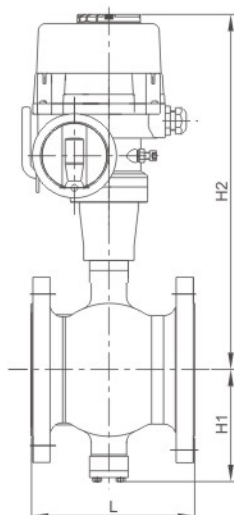
Valve Body form	casting Straight ball valve
Nominal diameter	DN25~DN250mm
Valve body material	WCB、CF8、CF8M、CF3M
V-pattern valve ball	WCB, CF8, CF8M, CF3M (hardened treatment)
Valve Stem material	2Cr13、304、316、316L
Valve seat	V-type PTFE packing, asbestos packing, graphite packing
Valve bore form	With a V-type ball
Nominal pressure	PN1.6/2.5/4.0/6.4MPa
End connection	Flanged
Flowrate characteristics	Approximate equal percentage
Suitable temperature	-28℃~400℃

Product description

Electric V-type adjustable ball valve can be driven to realize the regulation of pressure, flow, temperature, liquid level and other parameters by input (4~20mADC, 0~10VDC or 1~5VDC) signals and single-phase power without addition servo drives. The shearing force is generated by the reverse rotation of metal seal and V-cut on the valve spool which can cut off the fibers to avoid stuck accident, with the characters of large flow capacity, high regulation precision, good sealing, and light weight, etc. The best choice to replace the import products except for the applications of the small diameter, angular and triangle, particularly suitable for the medium of the slurries and fibers, and the regulation of small suspended solids. Widely used in paper manufacturing, sugar, petroleum, chemical, metallurgical and other industrial automation control systems.

Product features

- 1.Compact structure, small size,vertical horizontal installation
- 2.Excellent regulation characteristics: V-type ball valve can provide precise control within wide range as approximately equal percentage flowrate characteristics and up to 300:1 adjustability.
- 3.The maximum flow volume:The high maximum volume and small friction characters are better to choose more smaller and economical valve due to the streamline design and full quarter-turn control,
- 4.Double bearing structure with high mechanical performance and small start torque to ensure the excellent sensitivity,
- 5.High performance metal seal: V-type ball valve adopt metal seal valve seat with perfect performance and long service life.



Electric flanged V-type ball valve (LQ type) dimensions

SIZE		Item	D2	D1	H2	H1	L	n-Ø
mm	inch		1.6MPa	1.6MPa				1.6MPa
25	1"	LQ1-6	115	85	514	81	102	4-Ø14
32	1 1/4"		140	100	522	86	102	
40	1 1/2"	LQ1-10	150	110	551	90	114	4-Ø18
50	2"		165	125	566	93	124	
65	2.5"	LQ2-20	185	145	628	108	145	
80	3"	LQ3-35	200	160	694	123	165	
100	4"	LQ3-50	220	180	719	138	194	8-Ø18
125	5"	LQ4-80	250	210	792	148	194	
150	6"	LQ4-110	285	240	863	170	229	8-Ø23
200	8"	LQ4JS-200	340	295	1024	200	243	12-Ø23
250	10"	LQ4JS-250	405	355	1126	240	297	12-Ø25

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



Electric lined Fluorine ball valve

Product description

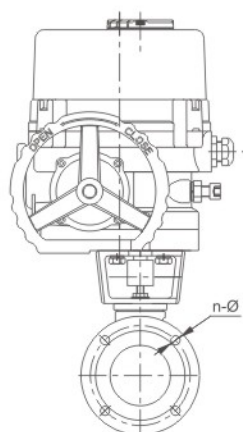
Q941F46 series electric lined fluorine ball valve is designed for various corrosive mediums of automatic control, widely used in petroleum, chemical industry, dyeing, pesticide, acid making and other industries, the best choices of anti-corrosion valve equipment.

Q941F46 series electric ball valve with fluorine lined, the high strength and smooth appearance valve body made by Investment casting. All parts contacting with the liquid are fluorine, so it can be used in any concentration corrosive liquid that temperature in the range of $-50\sim+180^{\circ}\text{C}$ for a long time.

Performance parameters

Applicable medium: sulfuric acid, hydrofluoric acid, phosphoric acid, chlorine, alkali, aqua regia and any other highly corrosive mediums.

Design specifications: apply for standards of GB12233, GB12235, ANSI B 16.34.



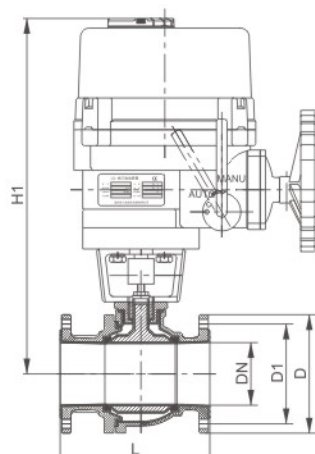
Features

1. Corrosion resistance: valve chest and valve body lined with F46 about 2.5mm-3mm thickness, with a strong corrosion resistance.
2. With perfect soft seal performance for valve seat.
3. Small size, light weight, simple structure, easy installation and maintenance.
4. Small flow resistance.

Appearance size of Electric lined Fluorine ball valve

SIZE		Item	D1	D	H1	L	n-Ø
mm	inch						
15	1/2"	LQ1-10	65	95	328	140	4-Ø14
20	3/4"		75	105	330	140	4-Ø14
25	1"		85	115	340	150	4-Ø14
32	1 1/4"		100	140	345	165	4-Ø18
40	1 1/2"		110	150	377	180	4-Ø18
50	2"	LQ2-20	125	165	388	200	4-Ø18
65	2 1/2"		145	185	446	220	4-Ø18
80	3"	LQ3-50	160	200	464	250	8-Ø18
100	4"		180	220	536	280	8-Ø18
125	5"	LQ4-110	210	250	628	320	8-Ø18
150	6"		240	285	643	360	8-Ø23
200	8"	LQ4JS-200	295	340	785	400	12-Ø23

Note: Above dimension is not with accessories, there may be some changes in the data due to product innovation and improved technology, the specific details please consult salesman.



Summary

HLF02 series actuators are widely used in the building automatic control system of heating, ventilating, air-conditioning and cooling to adjust the air damper.

HLF02 series air damper actuators provide torques from 4 to 32N.m. Each torque have two kinds of wiring controls to be chosen:

- Digital input(ON-OFF)
- 0(2)–10V AND 0(4)–20mA analogue input

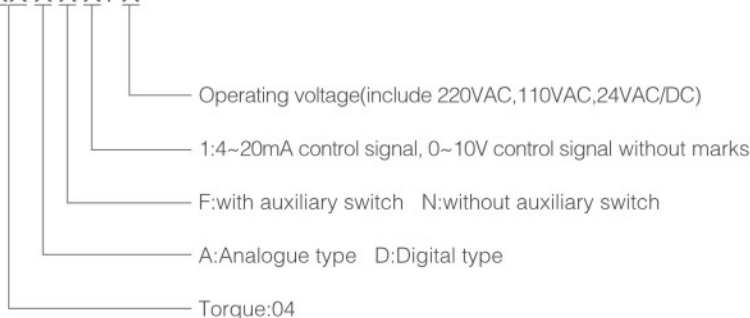
Characteristics

- Direct installation, no adaptor needs, save installation time and costs.
- Control board with a current limit function, without limit switches, reduce the power consumption and improve the drive's reliability.
- Manual switch operation in emergency situations.
- Universal Spindle clamp for direct mounting
- Easy to see position indicator.

Ordering information

04N.m air damper actuator

HLF02-XX XX X / X



Notice: A (analogue)type with 24VAC/DC only, and without auxiliary switches.

08、16、24、32N.m air damper actuator

HLF02-XX XX X / X



Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

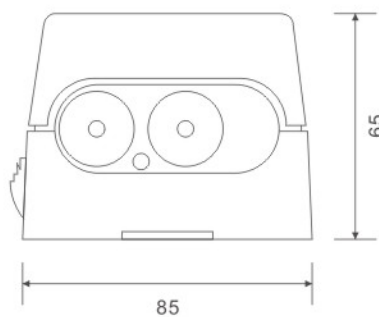
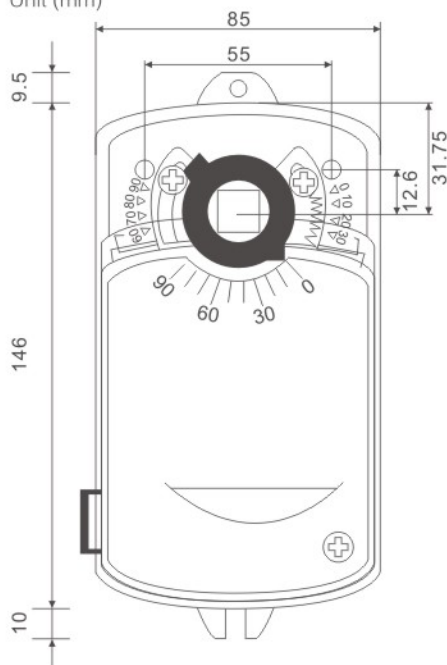
Damper actuator



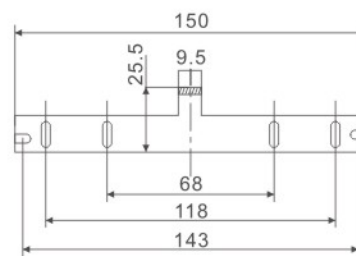
Item		HLF02-04A	HLF02-04D
Torque		4Nm	
Damper area		1m ²	
Operating time		35S	
Power Supply		24VAC/DC	24VAC/DC、220VAC、110VAC
Frequency		50/60Hz	
Operating power consumption		2.5W	4.0W
Stoping power consumption		0.85W	3.0W
Wiring size		4.1VA	5.0VA
Weight		0.9Kg	1.0Kg
Control signal		0~10VDC	2 points and 3 points
Position signal		Potentiometer	
Rotary angle	Working range	90° (Max93°)	
	Limit range	0~90°	
Usage Life		60, 000 Cycles	
Noise level		45dB(A)	
Protection class		II	
IP class		IP44	
Ambient temperature		-20~+50℃	
Ambient humidity		5-95%RH	
Certificate		CE	
Product color		red(other colors customized))	

Shape and setting dimensions:

Unit (mm)

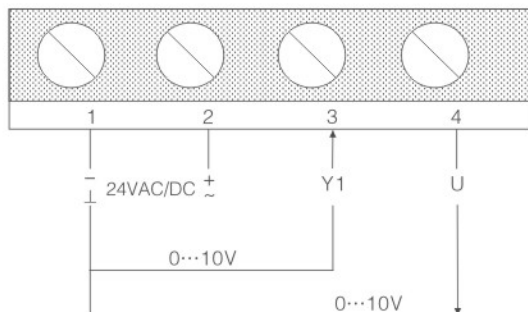


setting plate size(mm)

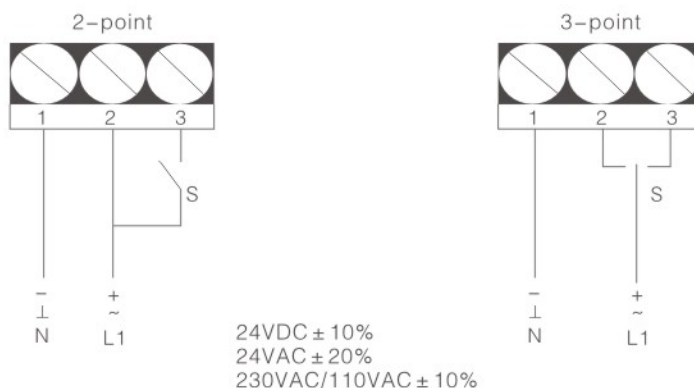


Wiring and Setting:

Analogue type damper actuator can be operated under 0~10V control signal. Wiring diagram as follows.



ON/OFF type damper actuator can be operated under 2-points and 3-points(floating point) , wiring diagram as follows:



With 2×SPDT switch explanation:

4N · m series actuators have two auxiliary switches that can be set for any angle between 0 and 90° (factory set a for 10° and b for 80°).They are used to output on-off signals when the actuator rotates to the setting angle.

Wiring diagram of auxiliary switch

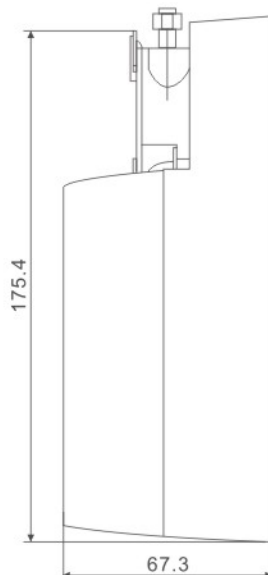
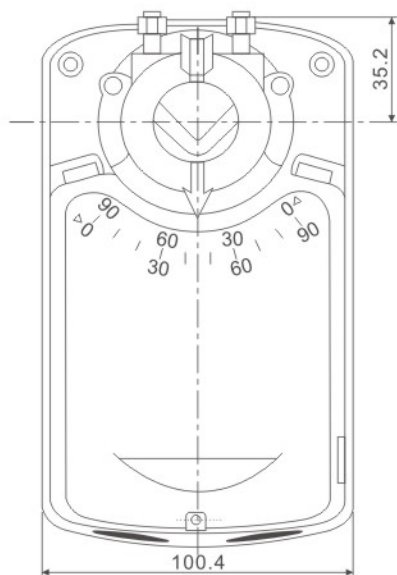


3(1.5)Amp 230VAC
Actuator locate on 0° position

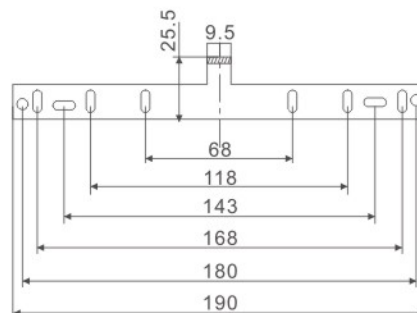


Item	HLF02-08D	HLF02-16D	HLF02-24D	HLF02-08A	HLF02-16A	HLF02-24A
Torque	8Nm	16Nm	24Nm	8Nm	16Nm	24Nm
Damper area	2m ²	4m ²	6m ²	2m ²	4m ²	6m ²
Operating time	30S	80S	125S	30S	80S	125S
Power Supply	AC24V、DC24V、AC220V/230V、AC110V					
Frequency	50/60Hz					
Operating power consumption	3.9W(24V); 4.8W(220V/230V)			4.0W(24V); 4.8W(220V/230V)		
Stoping power consumption	0.4W(24V); 1.2W(220V/230V)			0.7W(24V); 1.0W(220V/230V)		
Wiring size	6.5VA			6.5VA, 7.5(230V)		
Weight	1.1Kg			1.1Kg		
Control signal	2 points and 3 points			0(4)···20mA 0(2)···10V		
Position signal	/			Potentiometer		
Rotary angle	0~90°					
Limit angle	5~85° (5° Per step)					
Auxillary switch rating	3(1.5)Amp 230V					
Usage Life	60, 000 Cycles					
Noise level	45dB(A)					
Protection class	II					
IP class	IP44					
Ambient temperature	-20~-+50℃					
Ambient humidity	5~95%RH					
Storage	-40~-+70℃					
Certificate	CE					
Product color	red(other colors customized))					

Shape and setting dimensions:

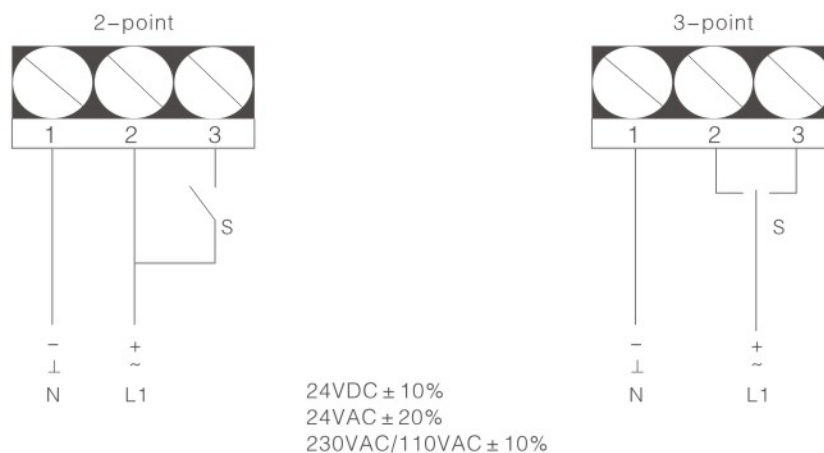


setting plate size(mm)



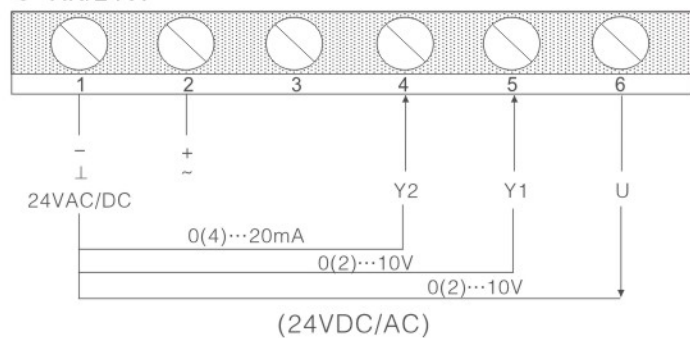
Wiring and Setting:

This kind of damper actuator can be operated under 2-points and 3-points(floating point)control,wiring diagram as follows:

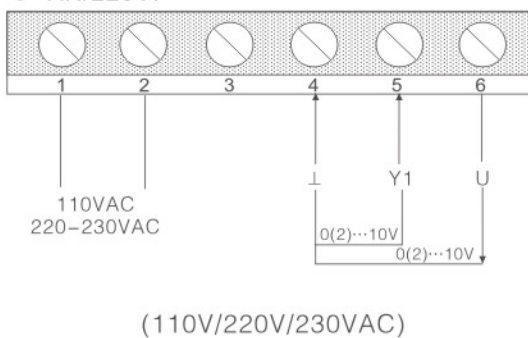


Damper actuator can be operated under 0(4)...20mA、0(2)...10V.

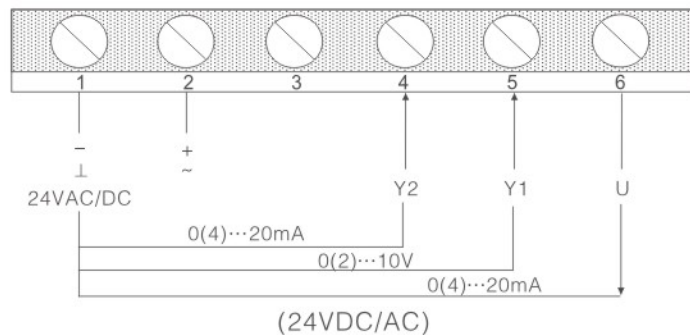
●-AN/24V:



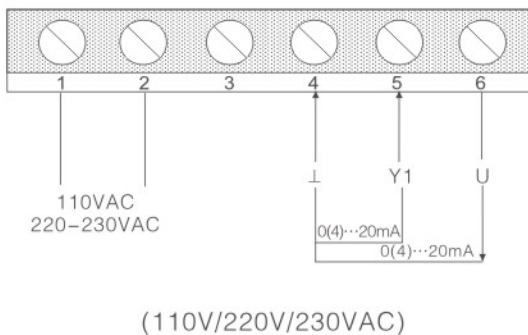
●-AN/220V:



●-AN1/24V:



●-AN1/220V:



Electric actuator (HL type)

Electric valve (HL type)

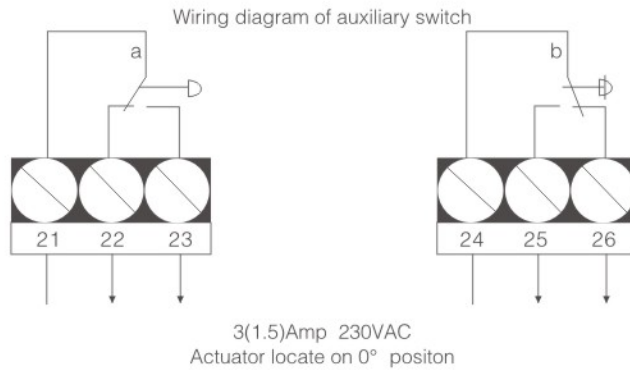
Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

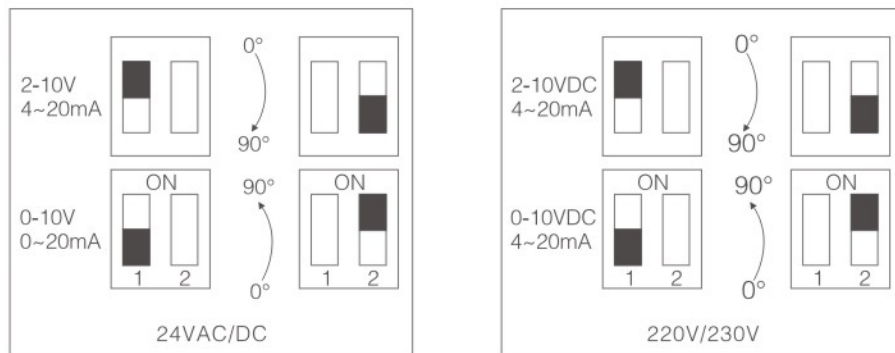
Damper actuator

Auxiliary switch explanation:

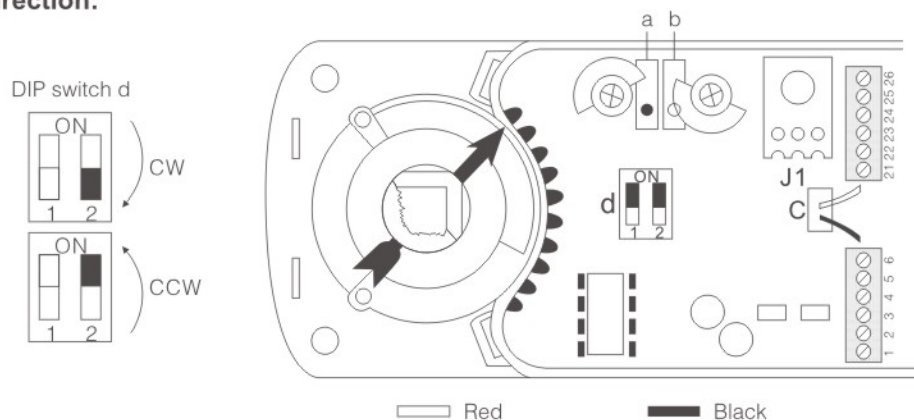
This kind of damper actuators have two auxiliary switches that can be set for any angle between 0 and 90° (factory set a for 10° and b for 80°).They are used to output on-off signal when the actuator rotates to the setting angle.



Choice for control signal and rotary direction:



Setting rotary direction:





Item	HLF02-32DN(F)	HLF02-32AN(F)
Torque	32Nm	
Damper area	6m ²	
Operating time	140S	200S
Power Supply	AC24V; DC24V	
Frequency	50/60Hz	
Operating power consumption	4.0W	2.5W
Stopping power consumption	0.5W	0.3W
Wiring size	3.0VA	4.5VA
Weight	1.1Kg	1.1Kg
Control signal	2 points and 3 points	0(4)···20mA 0(2)···10V
Rotary angle	0~90°	
Limit angle	5~85° (5° Perstep)	
Auxillary switch rating	3(1.5)A、230VAC	
Usage Life	60, 000 Cycles	
Noise level	45dB(A)	
Protection class	II	
IP class	IP44	
Ambient temperature	-20~+50°C	
Ambient humidity	5-95%RH	
Storage	-40~+70°C	
Certificate	CE	
Product color	red(other colors customized))	

Electric actuator (HL type)

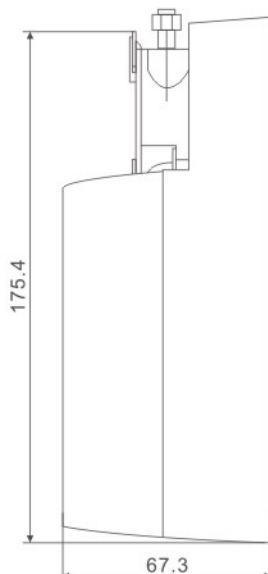
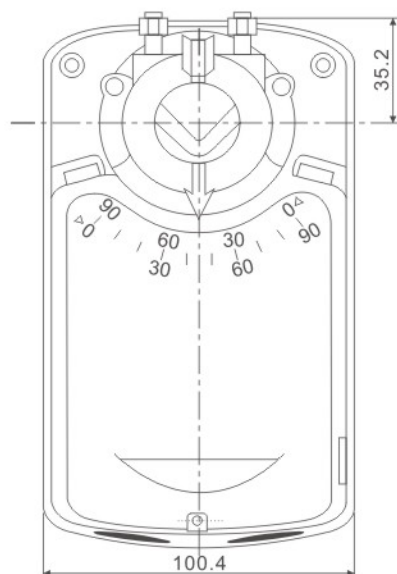
Electric valve (HL type)

Explosion proof electric actuator (LQ type)

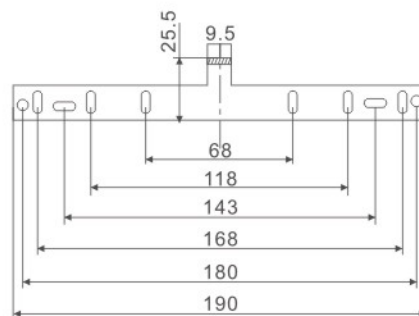
Electric valve (LQ type)

Damper actuator

Shape and setting dimensions:

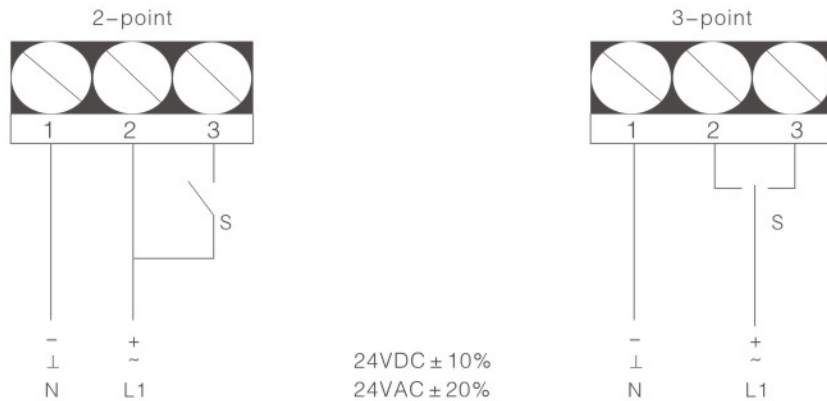


setting plate size(mm)

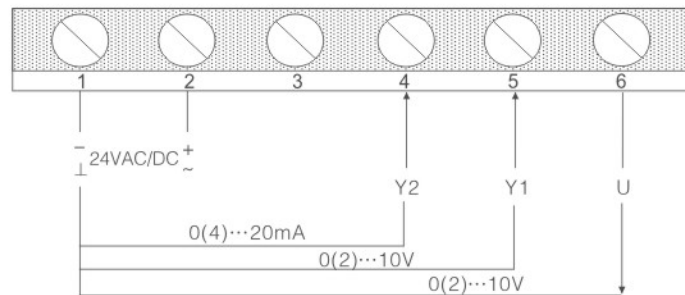


wiring drawing of ON-OFF signal:

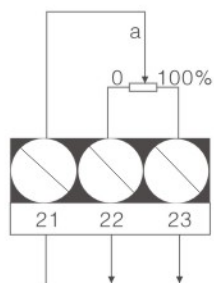
HLF02-32D damper actuator can be operated under 2-points and 3-points(floating point)control,wiring diagram as follows:



HLF02-32A damper actuator can be operated under 0(4)...20mA、0(2)...10V.

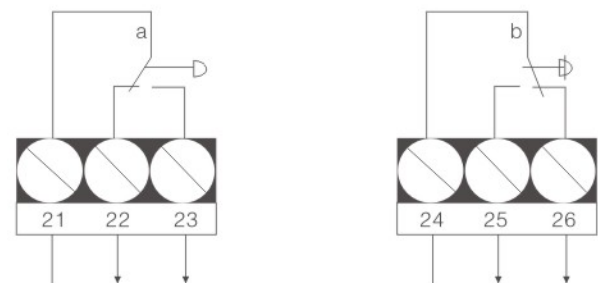


wiring drawing of resistance feedback



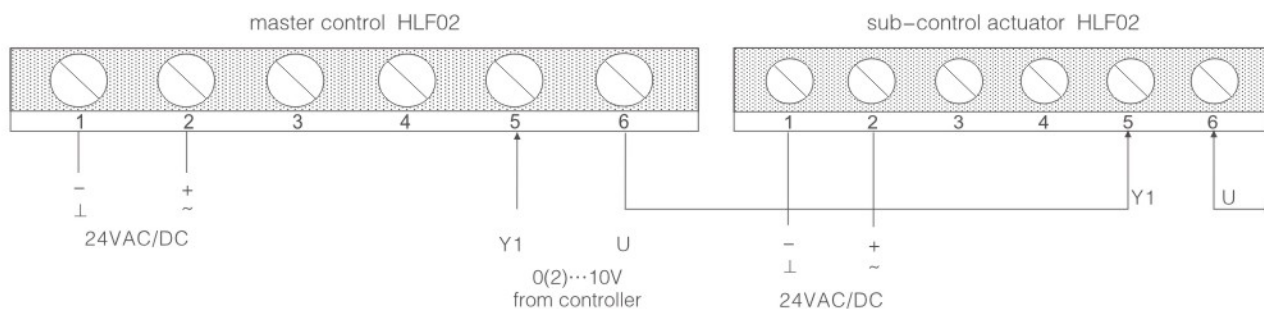
P=20k/0.5w/ $\pm 100\%$

Wiring diagram of auxiliary switch



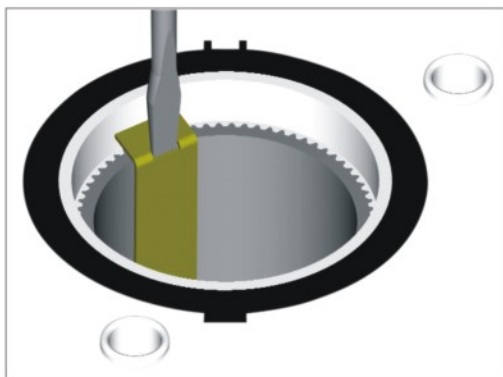
3(1.5)Amp AC24V
Actuator locate on 0° position

Master control/sub-control actuator:



Limit of rotary angle

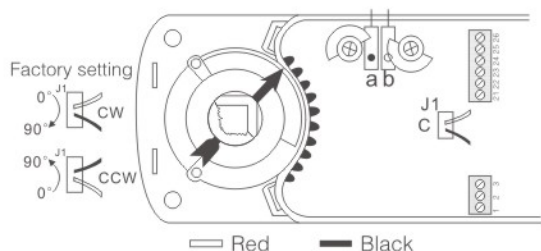
The rotary angle or operation scope of actuator can mechanical limit through adjusting connector each 5°. Push the unlock button, and the connector will loose.



Choice for HLF02-32D control signal and rotary direction

Setting rotary direction

Changes of rotary direction depends on pointer's direction.

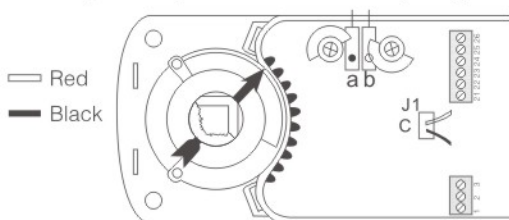


Auxiliary Switch Adjustment

Auxiliary switch "a" stops at 10°

Auxiliary switch "b" stops at 80°

Auxiliary switch position can be changed by Manual



Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



Technical data		HLF24(–S)	HLF230(–S)
Rated voltage		AC24V 50/60Hz, DC24V	AC230V 50/60Hz
Power consumption	-Running	5W	5W
	-Stop	2.5W	3W
Electrical Class		⚡(Safe low voltage)	II (Fully Insulated)
Weight		1400g	1550g
Torque	–Motor		Minimum 4Nm (rated voltage)
	–Spring		Minimum 4Nm
Rotary angle		Maximum 95° (through a built-in mechanical stopper adjusted from 37...100% range)	
Operating time		Motor 40 ... 75S (0 ... 4Nm)	
		–Spring ≈ 20S@–20...50°C/max.60S@–30°C	
IP class		IP54	
Ambient temperature		–30...50°C	
Humidity Testing		According to EN 60335–1	

Product summary

HLF...spring return damper actuators are designed to provide fail safe function of damper , widely used in applications like anti-freezing, smoke prevention and cleaning, etc.

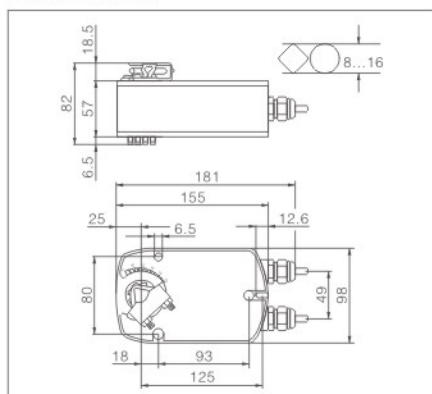
Working mode

HLF...actuator will drive damper to its normal working position and tighten the spring at the same time. The spring will drive the damper back to its safe position in case of power supply interrupted.

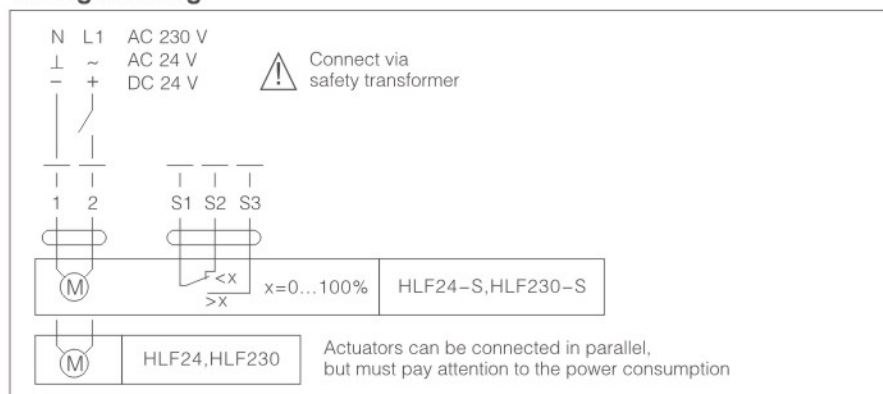
Features

- Safe and simple
The Anti-rotation plate supplied with actuator together is used to prevent actuators from rotating by fixed on the shaft of actuator.
- Mechanical limit
Built-in adjustable mechanical limit
- High reliability
With overload protection ,without limit switch, stop at the travel ends by itself.
- Flexible signal
Auxiliary switches can be adjusted within the range 0~100%.(only-S actuators)

Dimensions



Wiring drawing





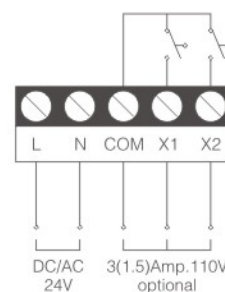
Item	HLFC-08D/24V	HLFC-16D/24V	HLFC-24D/24V	HLFC-32D/24V
Nominal output torque	8Nm	16Nm	24Nm	32Nm
Damper area	2m ²	4m ²	6m ²	6m ²
Operating time	30S	80S	125S	140S
Power Supply	AC24V ± 3; DC24V ± 3			
Frequency	50/60Hz			
Apparent power	6.5VA			
Active power	5W			
Weight	1.1kg			
Control signal	Power on, Power off			
Rotary angle	0~90°			
Limit angle	5~85° (5° each step)			
Auxillary switch rating	3(1.5) Amp 110V(optional)			
Life time	over 60000 times			
Noise level	45dB			
Ambient temperature	-20~+50℃			
Ambient humidity	5~95%RH			
Storage	-40~+70℃			
Certificate	CE			
Product color	red(other colors customized))			

Summary

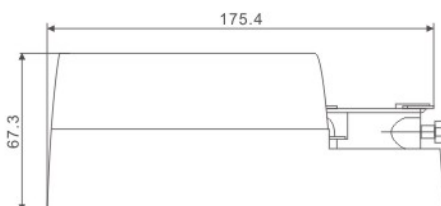
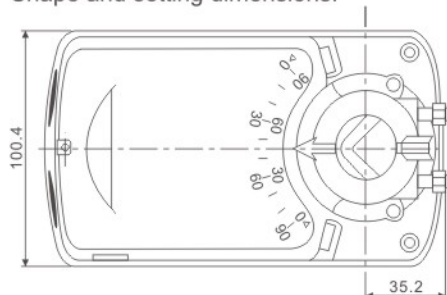
HLFC series of electric damper actuator with capacitors is the latest development of replacement products. The valve can be opened or closed automatically when the power supply is off. Compared with spring return products, this series have the advantage of small size, long service life, reliable performance, wide voltage range, constant torque, wide range of application.

Characteristic and Wiring

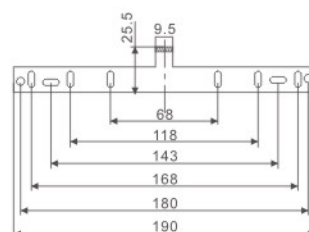
- Control input adopt 2-point control, without the differences for positive or negative and DC or AC, as long as the voltage within the specified range.
- N, L are both of power input terminal and control terminal. When power is on, actuator rotate in the clockwise direction, but the actuator rotate in the counterclockwise direction when power is off. (The rotation direction can be converted by the motor wire to reach the user needs to turn on or turn off power purposes)
- Power supply can be DC or AC between 20V and 28 V, the maximum voltage must not exceed 28 V absolutely, if the voltage is below 20V, the action of actuator will be delayed significantly. And the actuator may be at stop state if the voltage is less than 17V.
- COM, X1, X2 are feedback signals of full closed and full open, COM is COMMON signal, X1 is connected in the way of contact when it is at 90° position with anti-clockwise rotation, X2 is connected in the way of contact when it is at 0° position with clockwise rotation. Also can be changed according to the customer needs at the factory.
- Contact maximum capacity of feedback signal is 3(1.5)Amp 110V for full closed and full open (optional)



Shape and setting dimensions:



setting plate size(mm)



Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



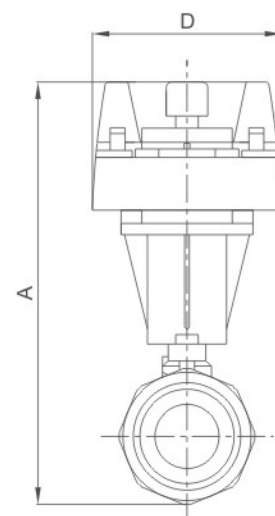
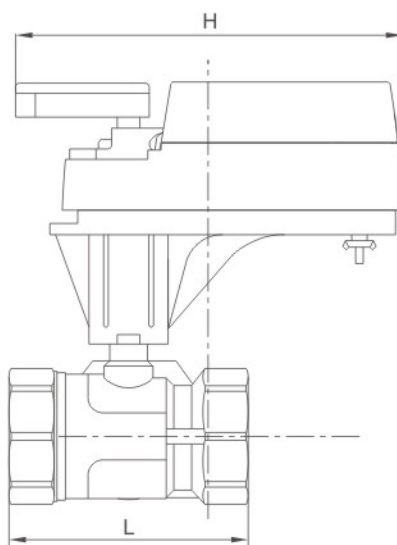
Summary

HLF02-04~32 series can be used in air conditioning system. With high adjustable flow ratio, high reliability, long service life. PTFE graphite adopted for valve body to improve seal performance, EPDM double seal ring for valve stem. Equal percentage flow characteristic. Rated working pressure Pn25. Maximum working pressure difference 0.35Mpa. With a manual button. -5 to121℃ working temperature. Suitable for water, steam, or 50% of the ethylene glycol water.

Characteristics and performance

HLF02-04~32 series PID control valve adopt stainless steel valve ball and valve stem for all HVAC applications:

- Suitable for working temperature -5~121 ℃;
- Applied to 50% ethylene glycol solution.
- Applied to 100 Kpa saturated steam.
- Applied to the water system with rust.



SIZE mm	ITEM	H	D	L	A
DN15	HLF02-04	174.2	85	60	184
DN20				73	184
DN25				89	191
DN32				102.5	199
DN40	HLF02-08	205.6	100.4	113	210
DN50				127.5	224

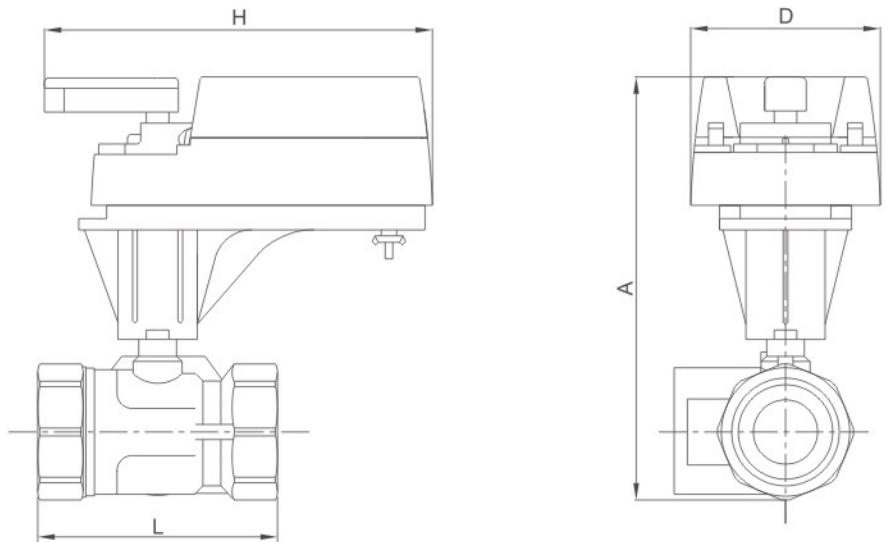


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Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator



Summary

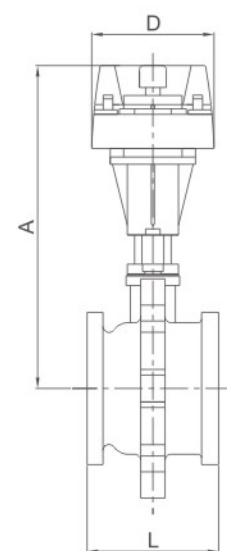
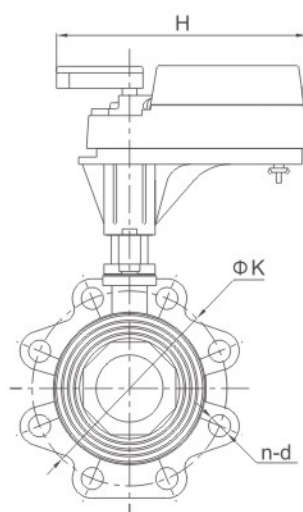
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Equal percentage flow characteristic. Rated working pressure Pn25. Maximum working pressure difference 0.35Mpa. With a manual button. -5 to 121°C working temperature. Suitable for water, steam, or 50% of the ethylene glycol water.

Characteristics and performance

HLF02-04~32 series PID regulating valve adopt stainless steel valve ball and valve stem for all HVAC applications:

- Suitable for working temperature -5~121 °C;
- Applied to 50% ethylene glycol solution.
- Applied to 100 Kpa saturated steam.
- Applied to the water system with rust.



SIZE mm	ITEM	H	D	L	A	ΦK	n-d	
DN65	HLF02-16	205.6	100.4	97	256	145	4-18	
DN80				108	266	160	8-18	
DN100	HLF02-24			120	236	175		
DN125				145	250	200		
DN150	HLF02-32			165	265	230		



Power supply	AC220V 50/60HZ or AC24V 50/60HZ
power consumption	6W(Valve close, valve open only)
Rotation way	90° rotation, 360° installation.
Working time	15S
wiring method	Total 3 wires includes 2 control wires
Torque	4NM
Closing pressure difference	0.3MPa~0.6MPa
Cable length	15cm
Enclosure protection	IP65
Working environment	2°C~60°C
Application	Cold/hot water and 60% Ethylene glycol
Medium temperature	2°C~95°C
valve size	DN15/DN20/DN25(2 way)
nominal pressure	1.6MPa
valve body material	forged brass
Thread standard	in compliance with thread ISO228 standard

Product description

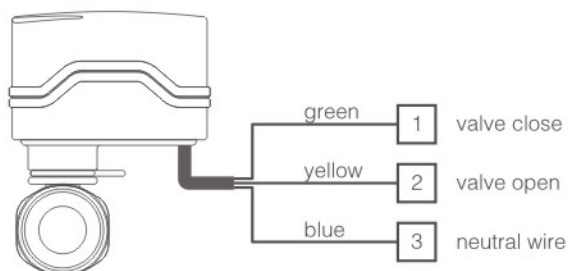
HLF04 electric 2 way ball valve is suitable for terminal control of air conditioning: the actuator which the thermostat control can drive the valve to open or close, so that the medium in the pipeline can be connected or disconnected, and the air is blown through the fan coil to finally reach the indoor temperature control.

HLF04 electric 2 way ball valve is suitable for on-off control of various equipments. The actuator drives the ball valve with 90° movement, synchronous motor and Built in limit contacts can make the power off when the valve is fully open or fully closed stably.

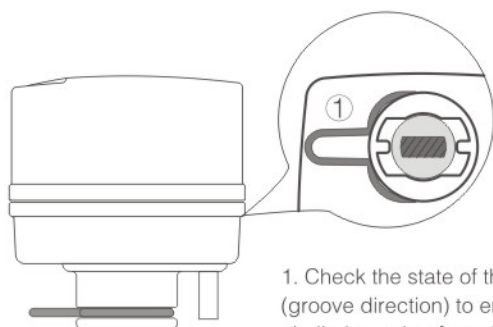
Features

- Nice waterproof (IP65)
- Easy disassemble and installation, installation efficiency improved.
- Small size to save installation space
- 3Wiring safe, no damage as incorrect wiring
- Actuator eccentric structure, close to the wall to install
- The motor does not bear any force and power consumption after the valve is in correct position, motor life is more longer and energy-saving.
- Valve body integrated structure, avoiding breakage and leakage during installation

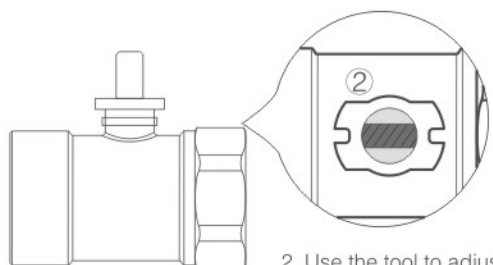
Wiring drawing



Product installation

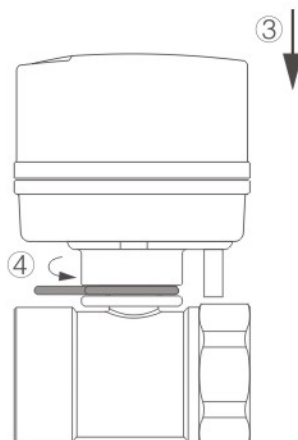


1. Check the state of the actuator shaft (groove direction) to ensure the metal circlip lever that face the side.



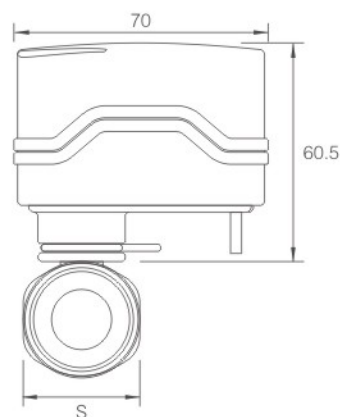
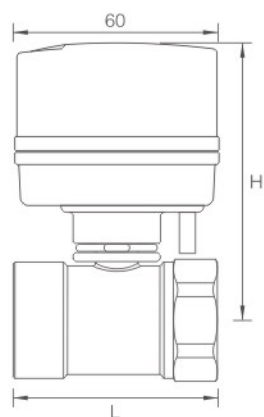
2. Use the tool to adjust the valve stem to make it with the same state with actuator shaft.

3. Fix the actuator and valve together.



4. Turn the metal circlip with 90 degrees, pull the actuator after hearing the bleep sound to confirm the installation completed.

Dimension



Item		Valve Size		Dimension		
		DN(mm)	Internal Thread(G)	L	H	S
2 way	HLF04-15	15	1/2"	52	74	25.5
	HLF04-20	20	3/4"	58	77	33
	HLF04-25	25	1"	65	80	39



					
ZX electric PVC ball valve	ZX electric two-way brass ball valve	HL electric lined fluorine butterfly valve	HL electric full lined fluorine butterfly valve	HL electric butterfly valve	HL electric butterfly valve with PTFE
					
HL waterproof electric wafer butterfly valve(IP68)	HL electric high pressure ball valve	HL electric high pressure ball valve	HL electric flanged sanitary Ball valve	HL electric PP Ball valve	HL electric high temperature ball valve
					
HL electric sanitary clamp ball valve	HL electric lined fluorine ball valve	EX motorized sanitary butterfly valve	EX motorized sanitary ball valve		
					
LQ electric actuator	LQ electric actuator	LQ Electric Butterfly valve	LQ Electric Butterfly valve	LQ electric wafer butterfly valve with local control	LQ electric sanitary butterfly valve
					
LQ explosion-proof electric PVC Butterfly valve with local control	LQ waterproof electric wafer butterfly valve(IP68)	LQ electric sanitary ball valve	LQ explosion-proof electric 3 way ball valve with local control	LQ explosion-proof electric flanged 3 way ball valve with local control	LQ explosion-proof electric lined fluorine ball valve with local control
					
LQ flange butterfly valve	LQ 3 way PVC ball valve	LQ Electric intelligent ball valve with flange	LQ Electric ball valve with thread		

Electric actuator (HL type)

Electric valve (HL type)

Explosion proof electric actuator (LQ type)

Electric valve (LQ type)

Damper actuator

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