



COMMON SERIES ELECTRIC ACTUATOR

■ Match With Angle Stroke Valve ■ Protection Class IP67



DYNAMIC CORPORATION LIMITED

Product Type List of DCL Common Series Electric Actuator

Actuator Type	Standard Time/Torque	Optional Time/Torque	Turning Angle (Max.range)	Total Weight	Power Supply	Selected Control Circuit	Page
DCL-02	15S/18Nm	7S/9Nm 60S/18Nm	0~180° Adjustable	1.0Kg	DC24V/AC24V AC110V/AC220V	Types of A / B / C / G	P5、 P6
DCL-05	20S/50Nm	4S/20Nm 10S/30Nm 60S/50Nm	0~360° Adjustable	2.0Kg	DC24V/AC24V AC110V/AC220V/AC380V	Types of A / B / C / D / E / F / G / H	P7
DCL-10	30S/100Nm	15S/50Nm 60S/100Nm	0~360° Adjustable	3.0Kg	DC24V/AC24V AC110V/AC220V/AC380V	Types of A / B / C / D / E / F / G / H	P8
DCL-20	30S/200Nm	15S/100Nm 60S/200Nm	0~90° Adjustable	8.0Kg	DC24V AC110V/AC220V/AC380V	Types of A / B / C / D / E / F / G / H	P9
DCL-40	30S/400Nm	15S/200Nm 60S/400Nm		8.5Kg			
DCL-60	45S/600Nm			9.0Kg			
DCL-100	30S/1000Nm	15S/500Nm	0~90° Adjustable	17.0Kg	AC110V/AC220V/AC380V	Types of A / B / C / D / E / F / H	P10
DCL-160	48S/1600Nm			18.0Kg			
DCL-250	75S/2500Nm			18.0Kg			
DCL-M02	15r/min/15Nm		0~16 Turns Adjustable	3.0Kg	AC110V/AC220V (DC24V/AC380V Optional)	Types of A / E / F	P11
DCL-M05	4r/min/50Nm						
DCL-M10	2r/min/80Nm						
Performance Parameters List of Adjusting type (Type E)							P12
Equipment and Function							P13、 P14
Optional Excerpt for Application fields and Outstanding achievements							P15、 P16
Brief Introduction							P17、 P18

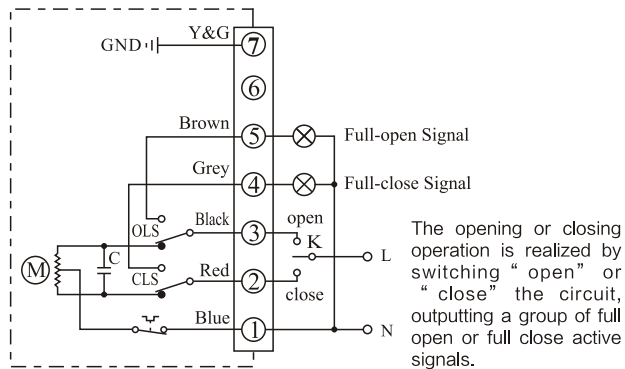
Valve Match (For Reference Only)

Actuator Type	Butterfly Valve (≤PN1.0MPa)	Ball Valve (≤PN1.6MPa)	Vent Valve (≤PN0.1MPa)
DCL-02	≤DN40	≤DN32	
DCL-05	DN50 ~ 65	DN40	DN50 ~ 80
DCL-10	DN80 ~ 100	DN50 ~ 65	DN100 ~ 200
DCL-20	DN125 ~ 150	DN80 ~ 100	DN250 ~ 300
DCL-40	DN200	DN125	DN350 ~ 450
DCL-60	DN250	DN150	DN500 ~ 600
DCL-100	DN300	DN200	DN700 ~ 800
DCL-160	DN350 ~ 400	DN250	DN900
DCL-250	DN450 ~ 600	DN300 ~ 350	DN1000 ~ 1200
DCL-M02	Suitable for Shutoff Valve or Diaphragm Valve under Diameter DN80		
DCL-M05			
DCL-M10			

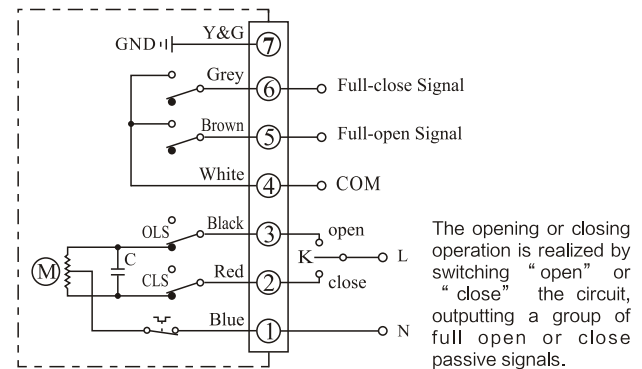
Note: The datum of electric actuator and valve listed in the table above are only for reference. The actual datum shall base on the torque values provided by valve manufacturer.

Due to many categories of valve, the torque values are different from each other. Even if the same type with same specification, it would exist some difference as manufacturing technology, quality level, structural form and quality of material of valves are difference. It would be so happened that the opening torque of valve changes greatly with the differences of medium types, site conditions and working characteristics, and pressure fluctuation as well. In order to ensure the actuator to work stably and reliably, it is necessary to have enough allowance in selection. It is suggested to have 1.1 ~ 1.3 times allowance factor, which is: output torque/torque of valve tested with pressure ≥ 1.1 ~ 1.3 times.

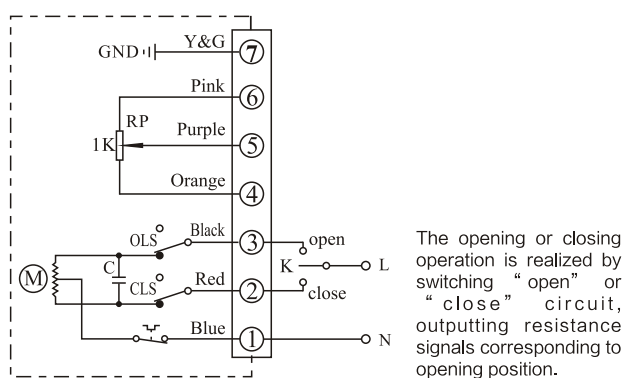
Type A: With Limit Position Switch (Active Contact)



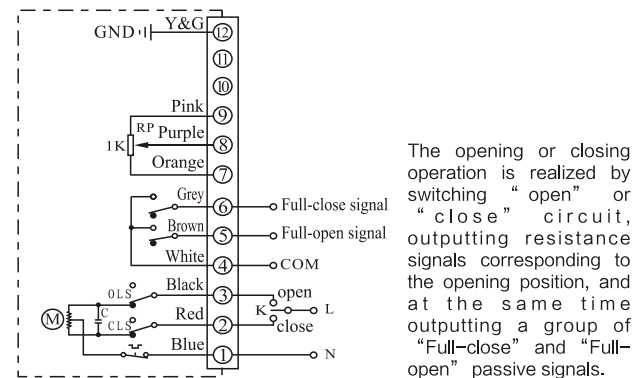
Type B: Switch with Middle Position (Passive Contact)



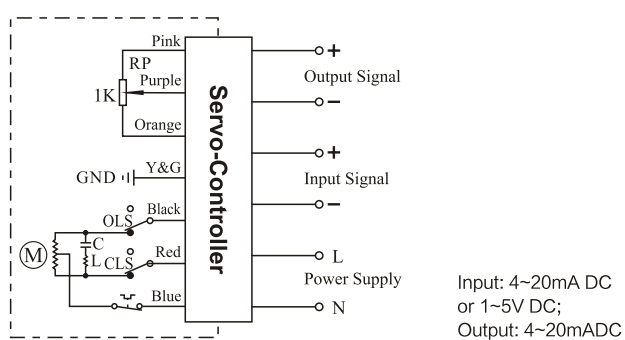
Type C: With 1KΩ (or 500Ω) Potentiometer



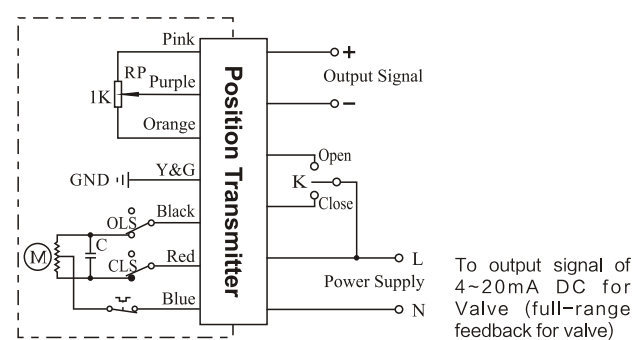
Type D: Position Switch with Potentiometer and Passive Contact



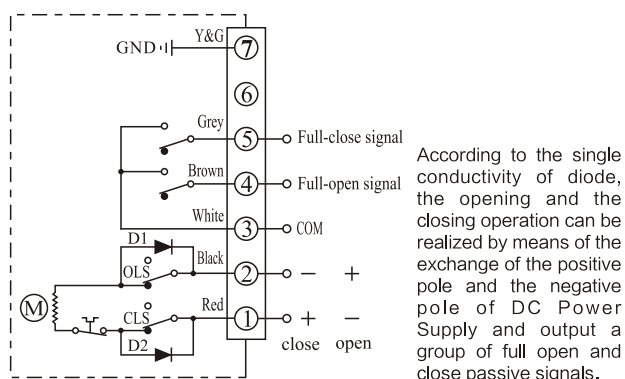
Type E: With Servo Controller (Adjusting Type)



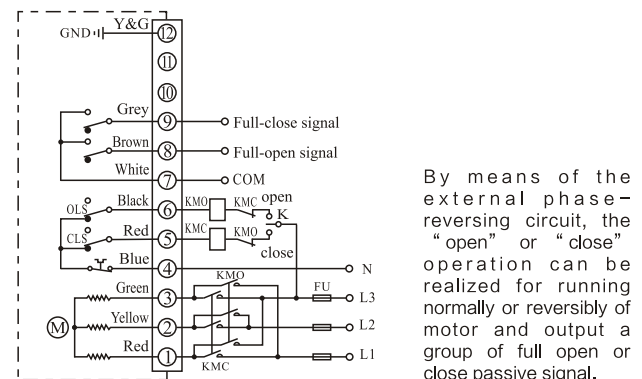
Type F: With Position Transmitter



Type G: DC Control Circuit with Passive Contact Switch



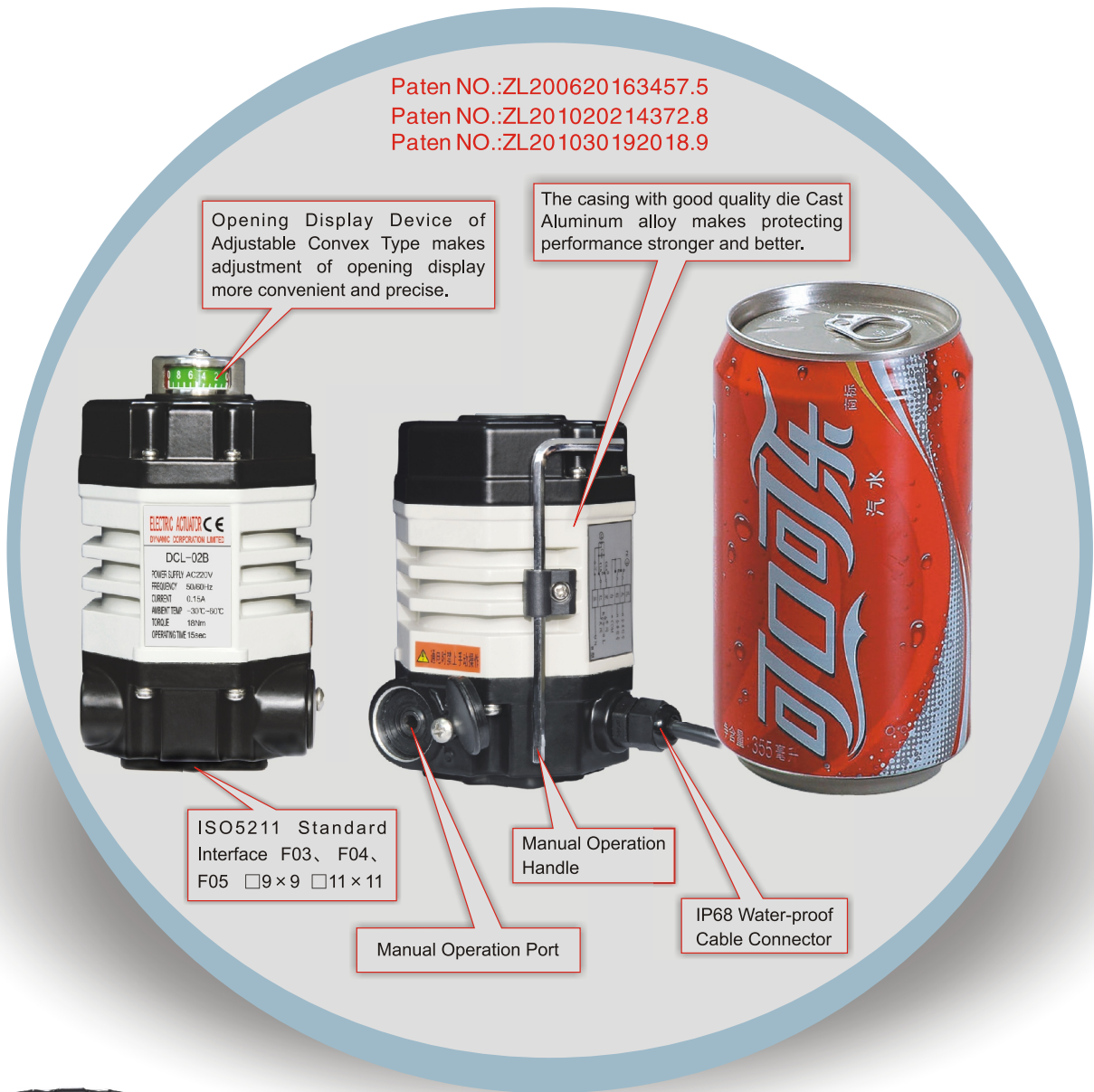
Type H: 3-phase AC Control Circuit with Passive Contact Switch



Note: The internal circuit of actuator is shown in the dotted frame. The circuit out of the dotted frame is for reference of customers.

DCL-02 Series Subminiature-Electric Actuator

Patent NO.:ZL200620163457.5
 Patent NO.:ZL201020214372.8
 Patent NO.:ZL201030192018.9



Three Characteristics

- Subminiature in Volume (Smaller than a pop Can)
- Super Torque (18Nm/15S)
- Super Protection Performance (Full Aluminum alloy Casing)

Main Applications:

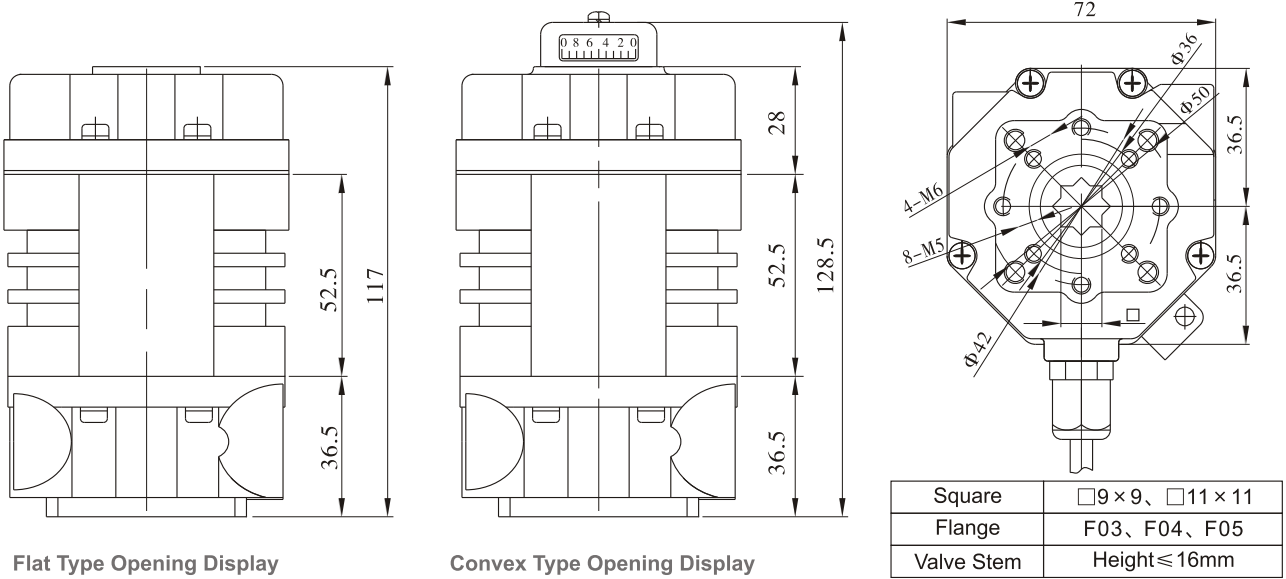
It is widely applied in various automatic operation systems, such as: level, flow, pressure control, air-conditioning systems, fire fighting systems, water treatment systems, and applied to equipment, chemical industry and food machineries. It is matched with butterfly valves with diameter less than DN40 and ball valves with diameter less than DN32.

It is suitable for many kinds of installation conditions with its super miniature in volume and any installation angle within 360.

Warning: These series products possess three patents technology. Any copy being found will be held accountable by law!

DCL-02 Series Subminiature-Electric Actuator

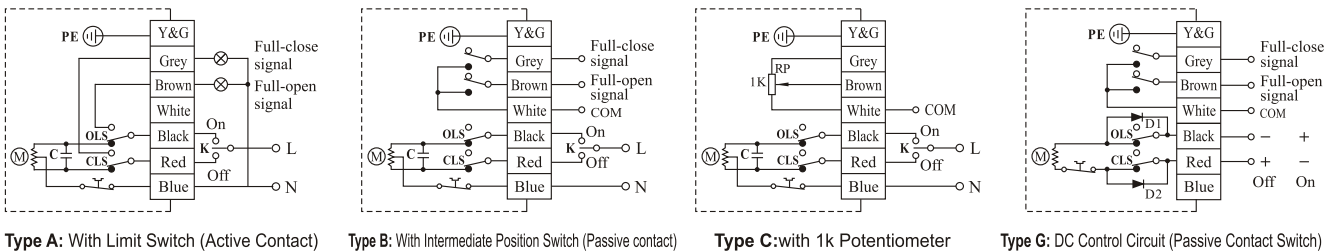
Overall Dimension Drawings



Performance Parameters



Performance Parameters	DCL-02			
	DC24V	AC24V	AC110V	AC220V
Motor Power	8W	6W	6W	6W
Rated Current	0.7A	1.3A	0.3A	0.15A
Standard Time/Torque	15S/18Nm			
Optional Time/Torque	7S/9Nm		60S/18Nm	
Turning Angle	0~90°			
Available Control Circuit	Type G	Types of A、B、C		
Total Weight	1.2kg			
Insulating Resistance	100MΩ/250VDC		100MΩ/500VDC	
Withstand Voltage Class	500VAC 1minutes		1500VAC 1minutes	
Protection Class	IP67			
Installation Angle	360° at any angle			
Electric Interface	7-core cable for connection			
Ambient Temperature	-30℃ ~ +60℃			
Fuse	2A	3A	1A	1A

Control Circuit



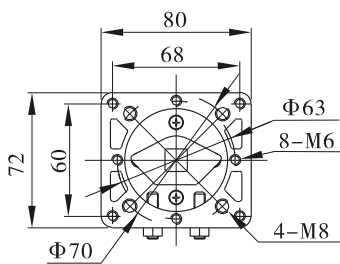
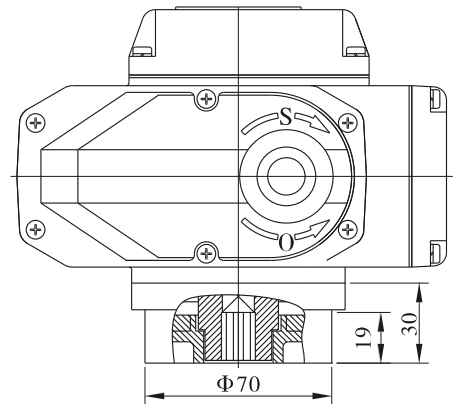
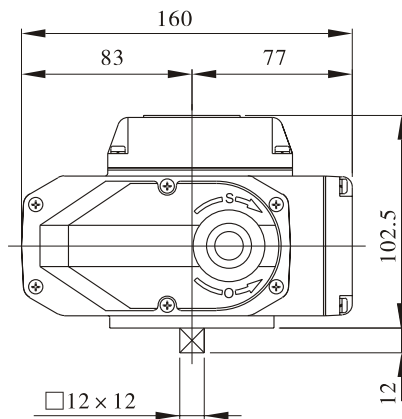
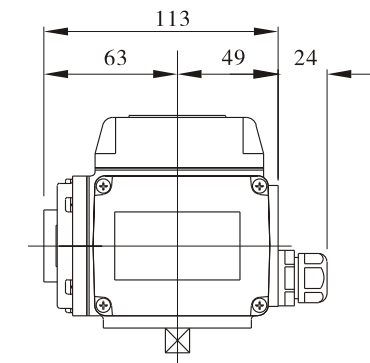
Note: The internal circuit of actuator is shown in the dotted frame.

Overall Dimensions and Performance Parameters of DCL-05

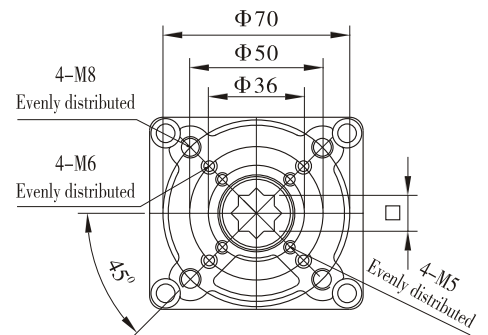
 <p>Standard type</p>	Type	DCL-05				
	Performance Parameters	DC24V	AC24V	AC110V	AC380V	AC220V
 <p>Direct installation type</p>	Motor Power	13W	10W	10W	6W	10W
	Rated Current	1.28A	1.50A	0.24A	0.07A	0.16A
	Standard Time/Torque	20S/50Nm				
	Optional Time/Torque	4S/20Nm 10S/30Nm		4S/20Nm 10S/30Nm 60S/50Nm		
	Turning Angle	0 ~ 360° Adjustable				
	Available Control Circuit	Types of A、B、C、D、E、F、G、H				
	Total Weight	2.0kg				
	Insulating Resistance	DC24V/AC24V: 100MΩ/250VDC AC110V/AC220V/AC380V: 100 MΩ/500VDC				
	Withstand Voltage Class	DC24V/AC24V: 500VAC 1minutes, AC110V/AC220V:1500VAC 1minutes, AC380V:1800VAC 1minutes				
	Protection Class	IP67				
	Installation Angle	360° at any angle				
	Electric Interface	Two G1/2 Water-proof Cable Connectors, one for power line and one for signal line.				
	Ambient Temperature	-30℃ ~ +60℃				
	Optional Function	Heater for eliminating moisture				

Standard type

Direct installation type



Parameters for direct installation	
Square	□9×9 □11×11 □14×14
Flange	F03 F05 F07
Valve stem	Height ≤ 19mm



Overall Dimensions and Performance Parameters of DCL-10

Type Performance Parameters	DCL-10				
	DC24V	AC24V	AC110V	AC380V	AC220V
Motor Power	25W	25W	25W	15W	25W
Rated Current	2.03A	2.12A	0.57A	0.10A	0.35A
Standard Time/Torque	30S/100Nm				
Optional Time/Torque	15S/50Nm		15S/50Nm 60S/50Nm		
Turning Angle	0 ~ 90° Adjustable、0 ~ 360° Adjustable				
Available Control Circuit	Types of A、B、C、D、E、F、G、H				
Total Weight	3.0kg				
Insulating Resistance	DC24V/AC24V: 100MΩ/250VDC AC110V/AC220V/AC380V: 100 MΩ/500VDC				
Withstand Voltage Class	DC24V/AC24V: 500VAC 1minutes、AC110V/AC220V:1500VAC 1minutes、AC380V:1800VAC 1minutes				
Protection Class	IP67				
Installation Angle	360° at any angle				
Electric Interface	Two G1/2 Water-proof Cable Connectors, one for power line and one for signal line.				
Ambient Temperature	-30°C ~ +60°C				
Optional Function	◆ Over-torque Protector ◆ Heater for eliminating moisture				

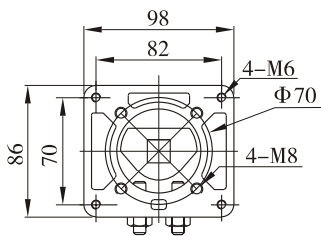
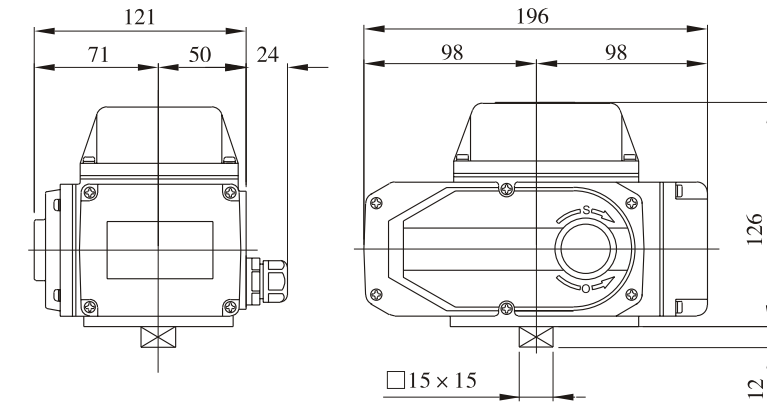


Standard type



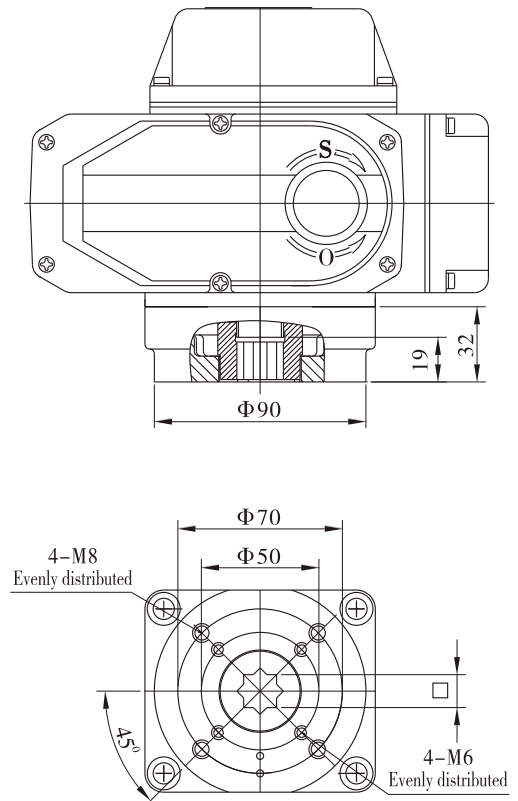
Direct installation type

Standard type



Parameters for direct installation	
Square	□9×9 □11×11 □14×14
Flange	F05 F07
Valve stem	Height ≤ 19mm

Direct installation type



Overall Dimensions and Performance Parameters of DCL-20/40/60

Type Performance Parameters	DCL—20				DCL—40				DCL—60				
	DC24V	AC110V	AC380V	AC220V	DC24V	AC110V	AC380V	AC220V	DC24V	AC110V	AC380V	AC220V	
Motor Power	35W	40W	30W	40W	70W	90W	40W	90W	70W	90W	40W	90W	
Rated Current	3.57A	0.65A	0.15A	0.37A	5.13A	1.12A	0.29A	0.57A	6.04A	1.18A	0.29A	0.60A	
Standard Time/Torque	30S/200Nm				30S/400Nm				45S/600Nm				
Optional Time/Torque	15S/100Nm				15S/100Nm 60S/200Nm	15S/100Nm				15S/100Nm 60S/200Nm			
Turning Angle	0~90° Adjustable												
Available Control Circuit	Types of A、B、C、D、E、F、G、H												
Total Weight	8.0kg				8.5kg				9.0kg				
Insulating Resistance	DC24V/AC24V: 100MΩ/250VDC AC110V/AC220V/AC380V: 100 MΩ/500VDC												
Withstand Voltage Class	DC24V/AC24V: 500VAC 1minutes, AC110V/AC220V:1500VAC 1minutes, AC380V:1800VAC 1minutes												
Protection Class	Ip67												
Installation Angle	360° at any angle												
Electric Interface	Two G1/2 Water-proof Cable Connectors, one for power line and one for signal line.												
Ambient Temperature	-30℃ ~ +60℃												
Optional Function	◆Over-torque Protector						◆Heater for eliminating moisture						

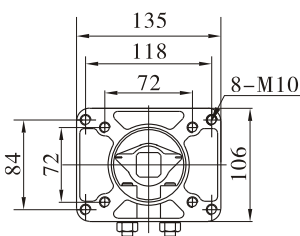
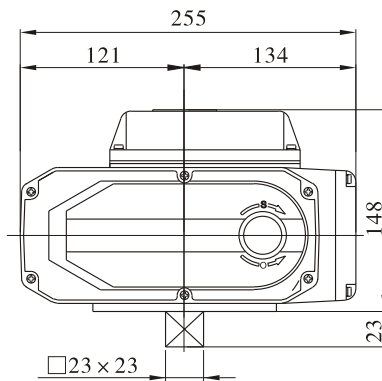
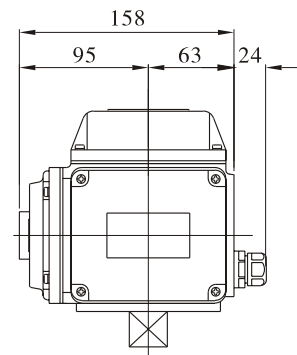


Standard type



Direct installation type

Standard type



Parameters for direct installation		
	DCL-20	DCL-40/60
Square	□14×14 □17×17	□17×17or□22×22
Flange	F07	F10
Valve stem	Height ≤ 25mm	

Direct installation type

