

# Explosion-Proof Electric 3-Way Threaded Ball Valve **INSTRUCTION MANUAL**



**dc DELCO**

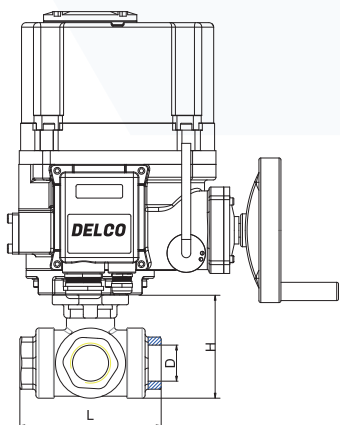
Specialized Control Valve Manufacturer



## Introduction

Explosion proof electric internal thread three-way ball valve is powered by AC220V, AC380V or DC24V power supply voltage, and receives (4-20mA) current signal or voltage signal input from industrial automation instrument control system to control operation and achieve proportional adjustment or two position switching control of process medium. Three way ball valve is a new type of three-way switching regulating valve developed by integrating domestic and foreign technologies. The standard core has an L-shaped tee, and changing the relative angle between the core and the pipeline can achieve different combinations of fluid control for the three pipelines; T-shaped channels can play a proportioning role and are suitable for adjusting and controlling the proportioning of liquids, gases, steam and other media.

## Actuator Technical Parameters



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

T-Pattern Flow Direction Diagram



L-Pattern Flow Direction Diagram



## Technical Parameters

<b>Nominal Size</b>	DN15~DN100
<b>Body Material</b>	SS304, SS316, SS316L
<b>Connection Type</b>	Thraed
<b>Pressure Rating</b>	PN1.6-PN6.3MPa
<b>Structure Type</b>	Floating Ball Core, 3Way-T Type, 3Way-L Type
<b>Seat Material</b>	PTFE: -30°C~180°C
<b>Core Material</b>	SS304, SS316, SS316
<b>Stem Material</b>	SS304, SS316, SS316L
<b>Applicable Medium</b>	Water, Liquids, Gas, Oil, Powder, Steam, Acid-Base Corrosive Medium

## Threaded Type Main Outline and Connecting Flange Size

Size	DN08	DN10	DN15	DN20	DN25	DN32	DN40	DN50	DN65
<b>G</b>	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
<b>D</b>	10	12	12	15	20	25	32	38	48.5
<b>L</b>	71	71	74	88	92	124	138	154	180
<b>H</b>	56	56	58	60	70	82	95	100	180

## Main Technical Parameters, Specifications

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

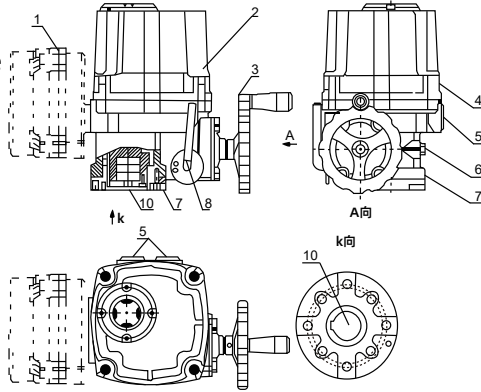
## Standard Specification

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

## Structure Composition

The Electric Actuator Mainly Consists of the Following Parts:

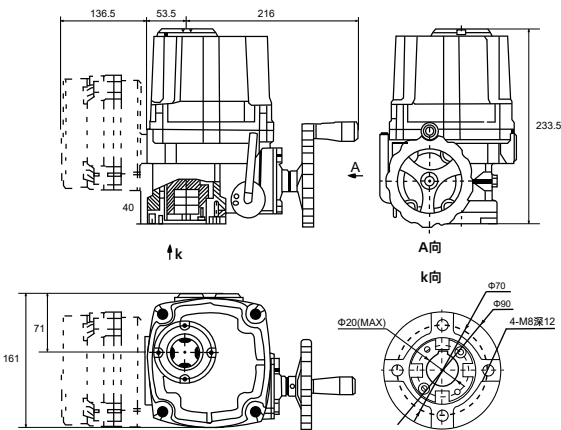
- »Housing part: including housing and base;
- »Driving part: powered by a high- performance fullyenclosed squirrel- cage motor;
- »Transmission mechanism: double worm gear and clutch;
- »Proportional control part: isolated from the mechanical part toimprove reliability;
- »Torque switch and limit switch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



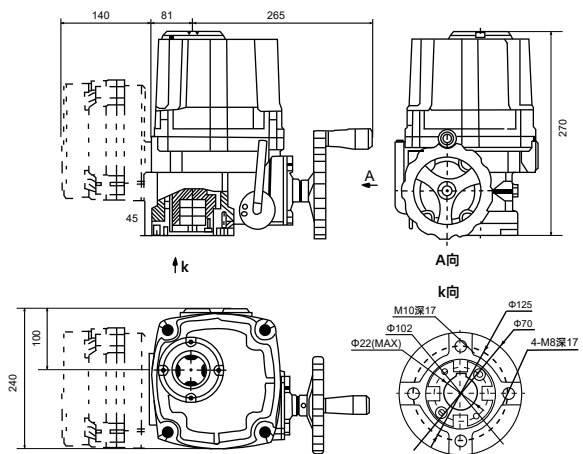
01	Control Room
02	Enclosure
03	Handwheel
04	Housing
05	Cable Connection Plyg
06	Mechanical Limit Screw
07	Connecting Flange
08	Clutch Handle
09	Window
10	Output Shaft

## Outline Dimension Drawing Of Actuator

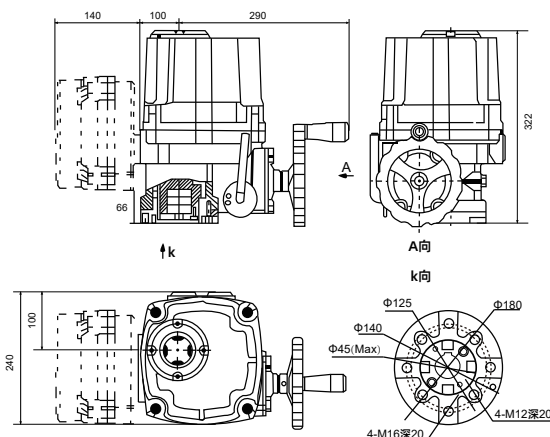
QT-10/15



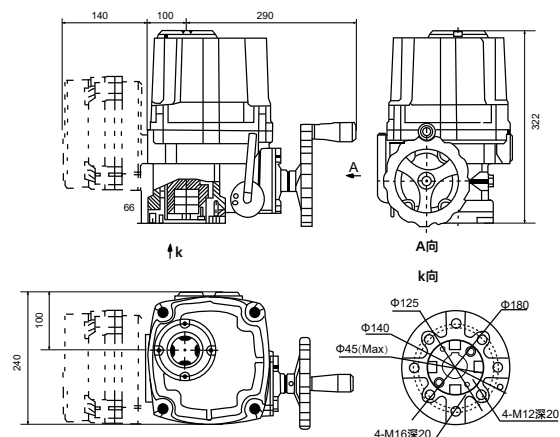
QT-20



QT-50/60

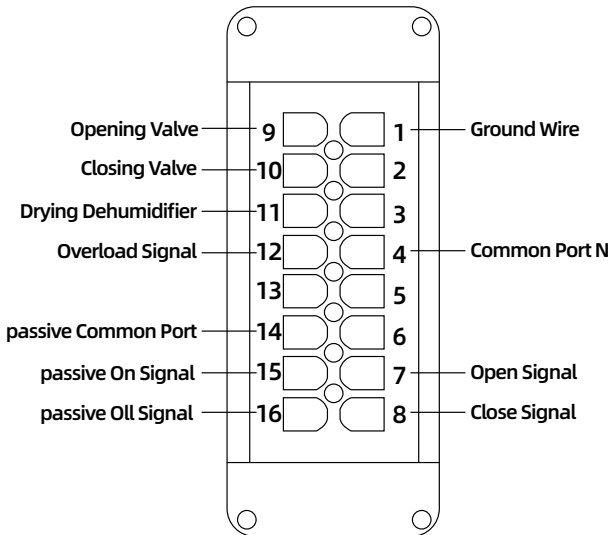


QT-100/200

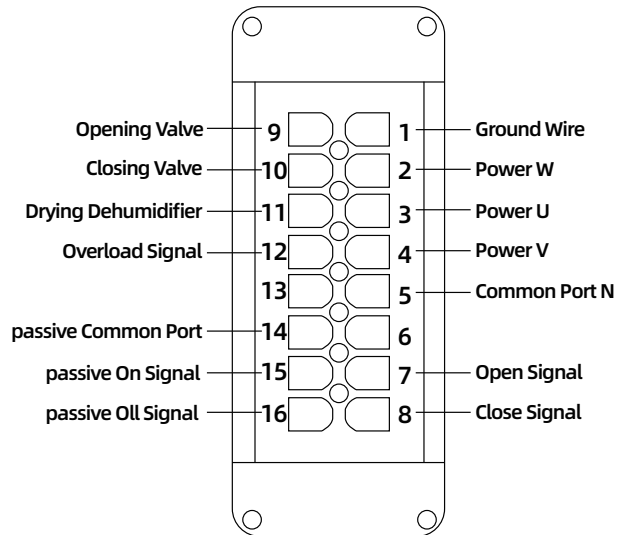


Wiring Diagram

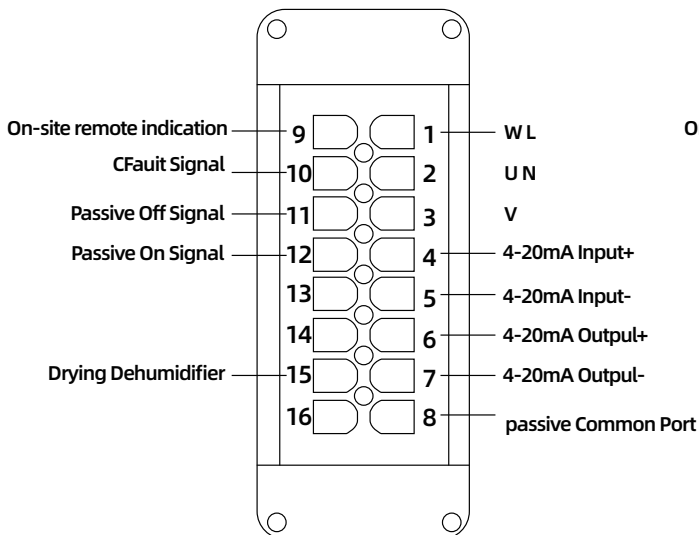
220V Wiring Diagram Of Switch Type



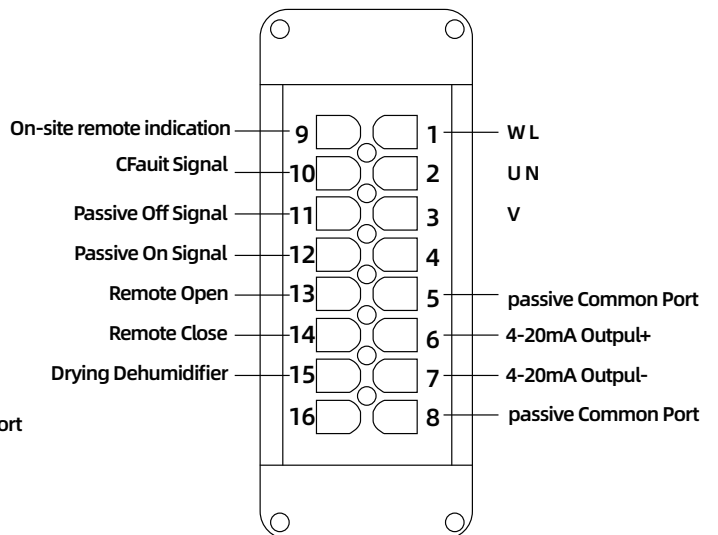
380V Wiring Diagram Of Switch Type



Wiring Diagram Of Intelligent Adjustable Type



Wiring Diagram Of Intelligent Switch Type



# Seeking For Global Distributors



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