

# VSI<sup>®</sup>



QUARTER TURN ACTUATOR

## VS-EQ SERIES

ELECTRIC ACTUATOR





## About VSI

Valve Solutions, Inc. (VSI) originated in Alpharetta, GA, USA, in 1995. Our primary focus is crafting actuation control products for both Commercial and Industrial sectors. Collaborating closely with valve companies, we deliver automated valve packages to some of the globe's leading controls enterprises.

Our range of electric actuators undergoes comprehensive development, manufacturing, and testing within our own facilities. These products find extensive application across diverse industries including Oil & Gas, HVAC, Marine, Mining, Pulp & Paper, Food & Beverage, Power, Water & Wastewater, Pharmaceutical, and Chemical sectors worldwide.

VSI Actuators holds numerous invention patents, along with new utility patents and software copyrights. Our commitment revolves around "Quality-driven, Technical innovation, Reliable service," ensuring the provision of optimal actuator solutions to the market.

## VS-EQ

### QUARTER-TURN ELECTRIC ACTUATOR



#### Features

- Compact design for a wide range of valves.
- Efficient transmission design with self-locking.
- The unique adjustment cam design enables easy valve position adjustments.
- Double anti-condensation design, the probability of electrical failure is lower.
- Modular design, ease of operation and maintenance.
- Enclosure protection of IP67, IP68 as option
- Explosion-proof enclosure protection up to Exd IⅡ Ct6.
- Independent electrical compartment design and powerful pre-protection circuit.
- Control accuracy up to 1%.

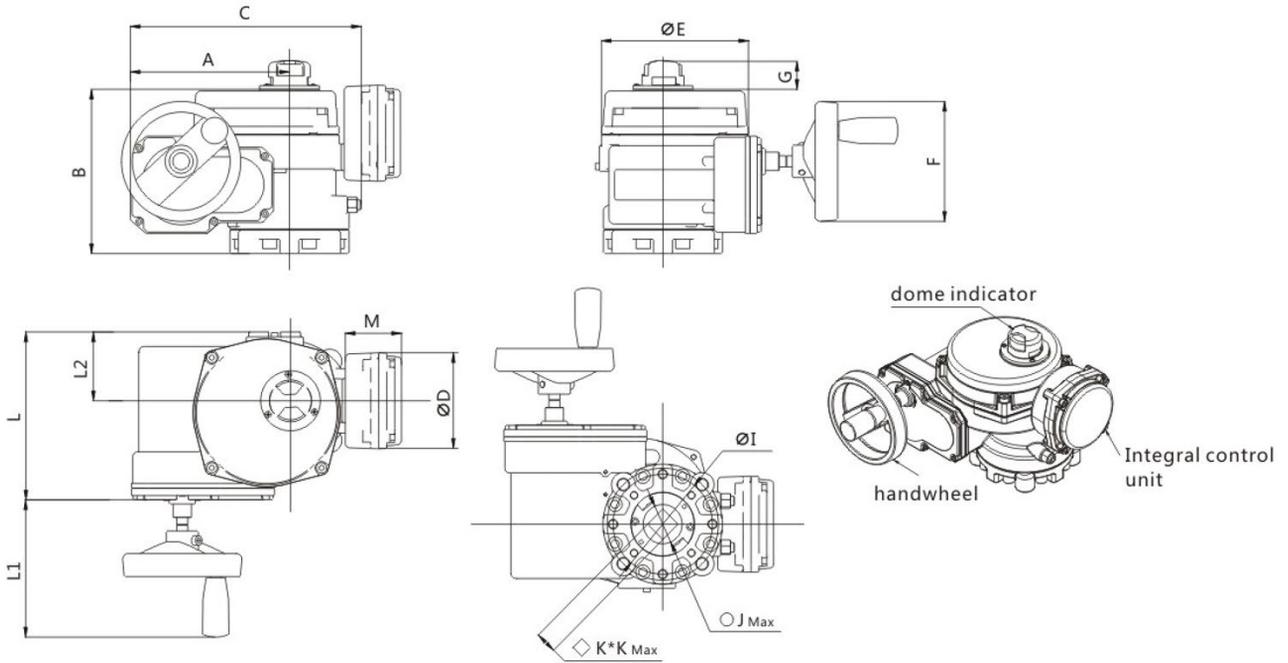
Torque	50~3000 N.m(without gearbox ); 3000~8000 N.m(with gearbox)
Enclosure protection	IP67 as standard,IP68 as option(15m under water without leakage for 72hours)
Explosion proof	ExdIICT6
Working time	ON-OFF: S2:120Min Modulating:S4:30~50%1200 start/Hour
Voltage	AC 110 V , AC 220 V± 10% 1Phase ;50/60 Hz±5% , as option AC /DC 24V , AC400V
Ambient temperature	-25°C ~ +70 °C
Ambient humidity	90% (25 °C)
Motor	F class, thermal protection
Mounting base	ISO5211 standard with starbushing
Modulating configuration	Provide signal loss mode,4mA and 20mA position calibrate
Manual operation	With handle lever
Position indicator	Mechanical arrow(Dome indicator as option)
Input signal	ON-OFF control: Lamp signal and dry contact signal Input signal Modulating control:4-20mA as standard(Inout impedance:150Ω).0-10V,2-10V;(Multiple signals appearance) Optical isolation
Output signal	ON-OFF control: Lamp signal+dry contact signal Modulating control:4-20mA as standard(Output impedance:750 Ω).0-10V,2-10V:(Multiple signals appearance) Optical isolation
Cable entries	Standard :2-M20×1.5, customizable
Space heater	As standard(25W~30W)
Color	ColorRAL9004(Black), Epoxy polyester powder coating
Control accuracy	Higher accuracy can be customized

Model		Output torque (N.m)	Working time (S)	Motor Power (W)	Rated current (A)					Weight (Kg)
					AC400V	AC220V	AC110V	DC24V		
VS-EQ1	-5	50	20	12	0.11A	0.25A	0.47A	1.5A	12S	4
	-8	80	30	12	0.11A	0.25A	0.47A	1.5A	18S	4
	-10	100	30	15	0.12A	0.31A	0.53A	1.87A	18S	4
VS-EQ2	-15	150	40	25	0.13A	0.32A	0.55A	2.1A	22S	5
	-20	200	40	30	0.17A	0.41A	0.71A	2.7A	22S	5
VS-EQ3	-25	250	30	40	0.18A	0.38A	0.72A	4.0A	18S	7
	-40	400	30	60	0.25A	0.5A	1.0A	6.8A	18S	8
	-60	600	30	90	0.3A	0.75A	1.5A	9.5A	18S	9
VS-EQ4	-80	800	35	90	0.38A	0.75A	1.5A	9.5A	20S	18
	-100	1000	54	90	0.38A	0.75A	1.5A	9.5A	30S	19
	-120	1200	54	120	0.55A	1.1A	2.3A	12.2A	30S	19.5
VS-EQ5	-150	1500	30	200	0.9A	1.9A	3.9A	13A	35S	28
	-200	2000	40	200	0.9A	1.9A	3.9A	18A	35S	28
	-250	2500	50	200	0.9A	1.9A	3.9A	23A	35S	28
	-300	3000	60	200	0.9A	1.9A	3.9A	30A	35S	28
VS-EQ4JS	-400	4000	140	90	0.38A	0.75A	1.5A	9.5A	120S	52
VS-EQ5JS	-600	6000	120	200	0.9A	1.9A	3.9A	13A	120S	62
	-800	8000	160	200	0.9A	1.9A	3.9A	18A	120S	62
	-1000	10000	200	200	0.9A	1.9A	3.9A	23A	120S	62

**Note:**

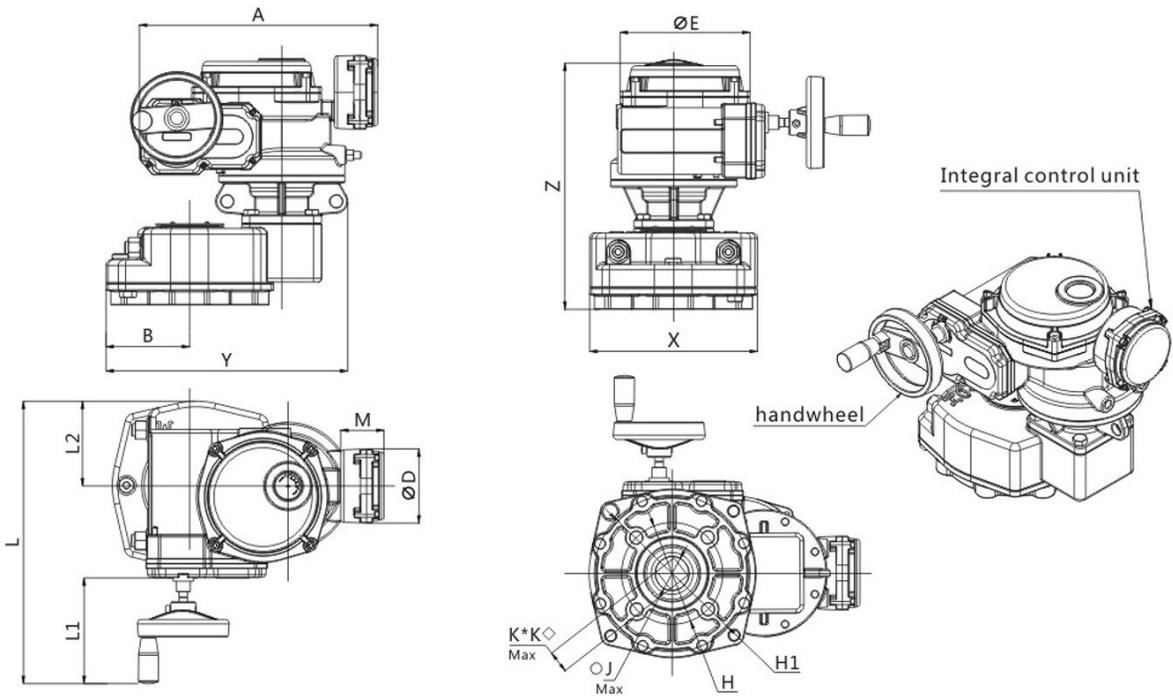
1. Above table is the factory standard configuration of the product.
2. The rated torque will be 0.75 times the maximum torque.
3. Above working time is for 50HZ, the working time of 60HZ will be 5 to 6 times of 50HZ. The maximum torque is the same as above.
4. Please contact our sales staff to customize the sizes according to the valve stem.

## VS-EQ Basic ON/OFF and Modulating Dimensions



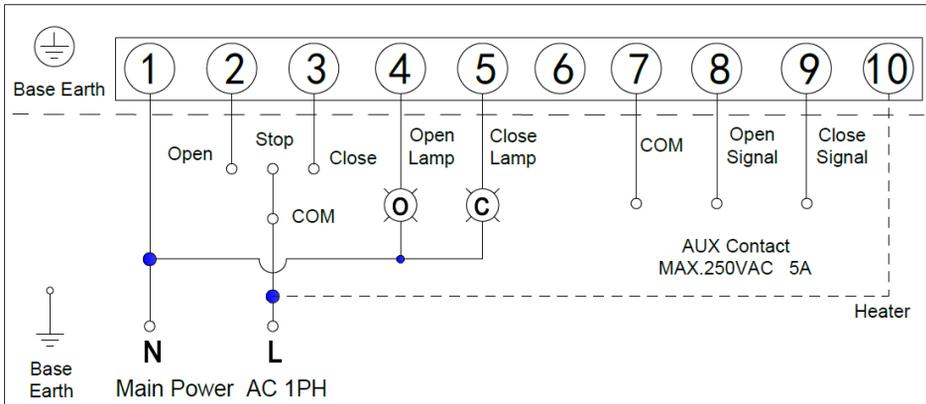
Item	A	B	C	D	E	F	G	L	L1	L2	M	I	◇ K*K	◇ JMax	◇ KMax	Stem depth
VS-EQ1-05													M11	≤Φ16	≤◇17	31
VS-EQ1-08	112	146	166	120	112	100	35	138	98	66	70	F05/F07	M14			
VS-EQ1-10																
VS-EQ2-15													M14	≤Φ16	≤◇17	31
VS-EQ2-20	131	158	182	120	130	100	35	156	93	75	70	F05/F07	M17			
VS-EQ3-25													M14			
VS-EQ3-40													M17	≤Φ32	≤◇27	45
VS-EQ3-60													M22			
VS-EQ4-80													M28			
VS-EQ4-100													M27	≤Φ45	≤◇36	45
VS-EQ4-120	200	205	230	120	185	150	35	214	141	86	70	F12	M36			
VS-EQ5-200																
VS-EQ5-250																
VS-EQ5-300	232	231	360	120	212	150	35	250	141	100	70	F14orF16	M36	≤Φ52	≤◇46	74

## VS-EQ Basic Unit ON/OFF and Modulating Dimensions

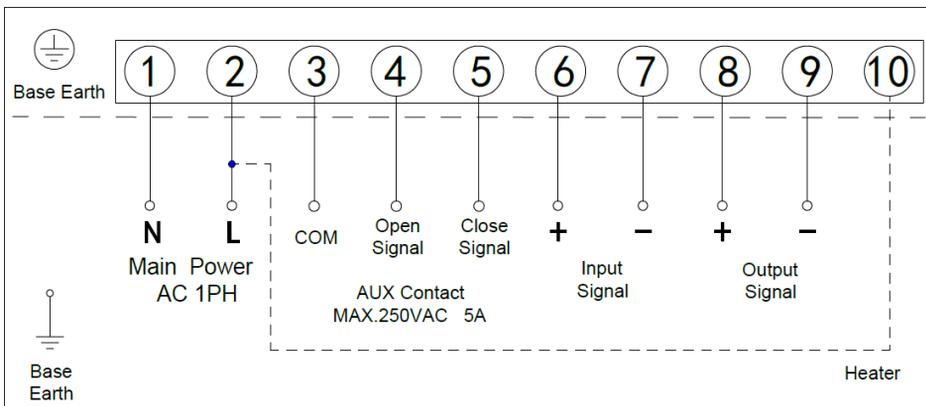


Item	A	B	D	E	H/H1	K*K(Max)		J(Max)	X	Y	Z	L	L1	L2	M	Stem depth
						S	A									
VS-EQ400	339	137	120	339	F14/F16/F25	50*50	35*35	760	274	365	395	355	141	137	70	120
VS-EQ600	388	137	120	388	F14/F16/F25	50*50	35*35	760	274	392	405	391	141	137	70	120
VS-EQ800	388	137	120	388	F14/F16/F25	50*50	35*35	760	274	392	405	391	141	137	70	120
VS-EQ1000	388	137	120	388	F14/F16/F25	50*50	35*35	760	274	392	405	391	141	137	70	120

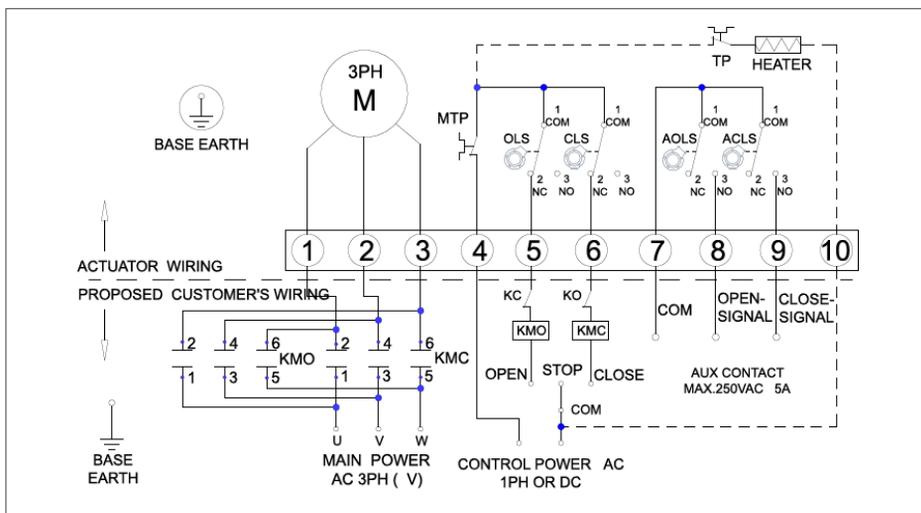
## VS-EQ Basic AC wiring diagram ( without Local control unit )



**AC 1 Phase, Basic, On/OFF**

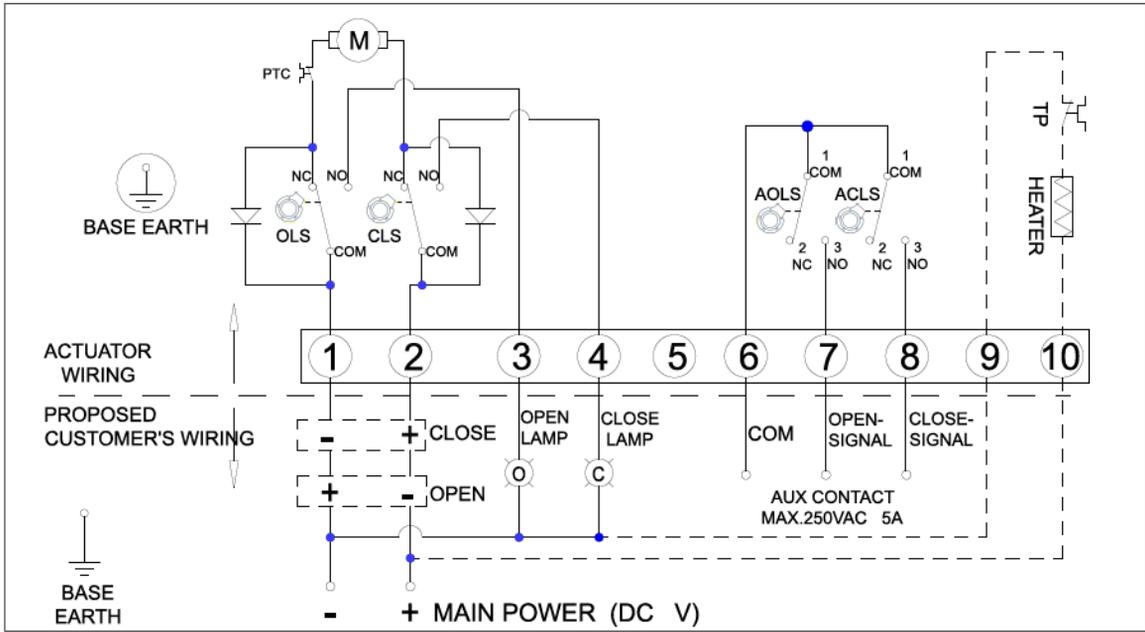


**AC 1 Phase, Basic, Modulating**



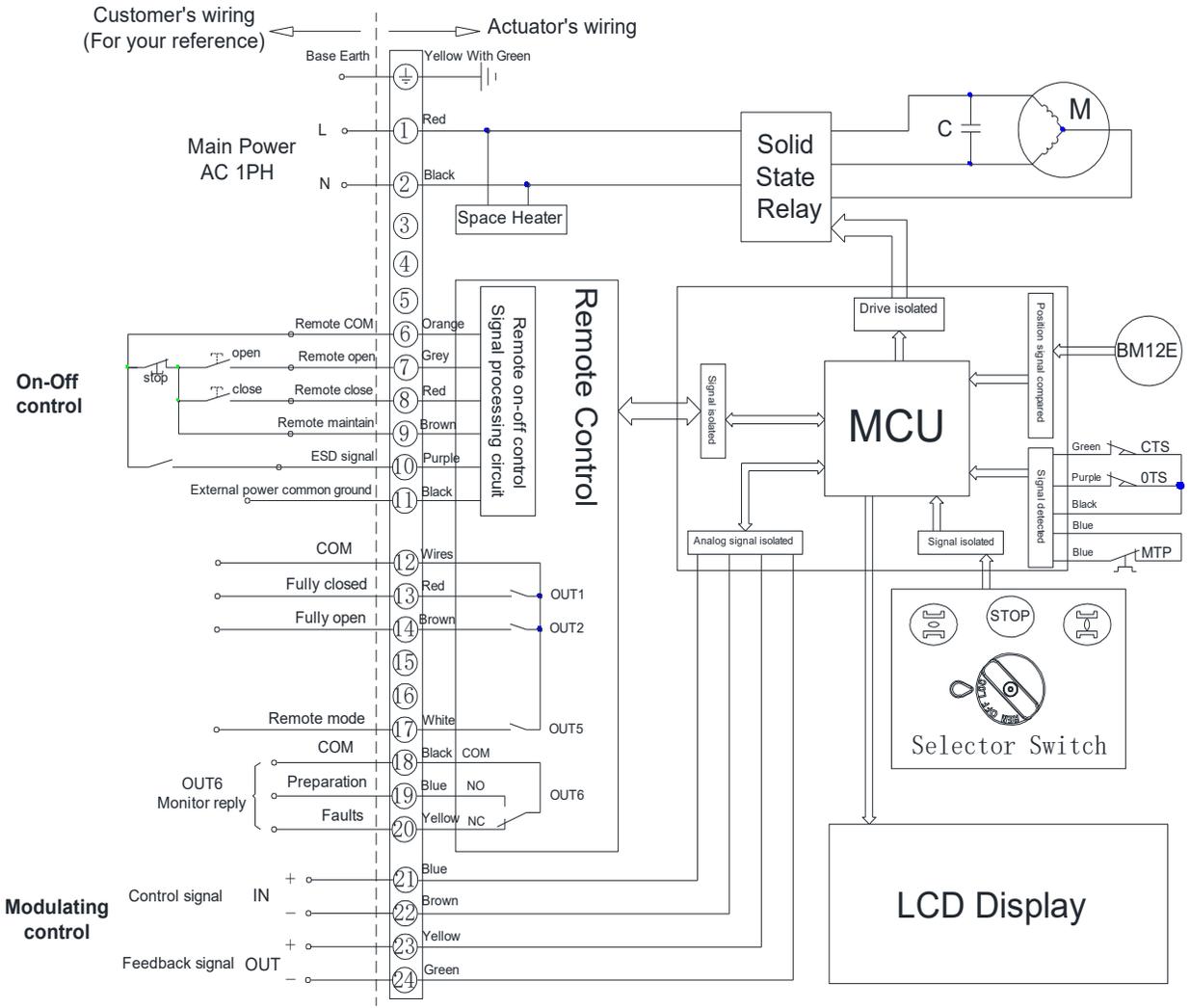
**AC 3 Phase, Basic, ON/OFF**

## VS-EQ Basic DC wiring diagram ( without Local control unit )

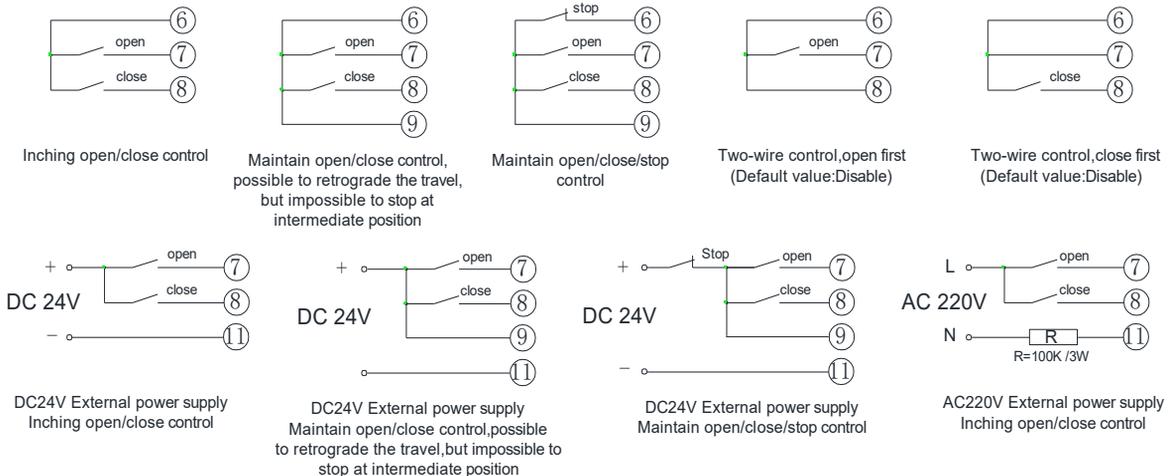


**DC 24V, Basic, On/OFF**

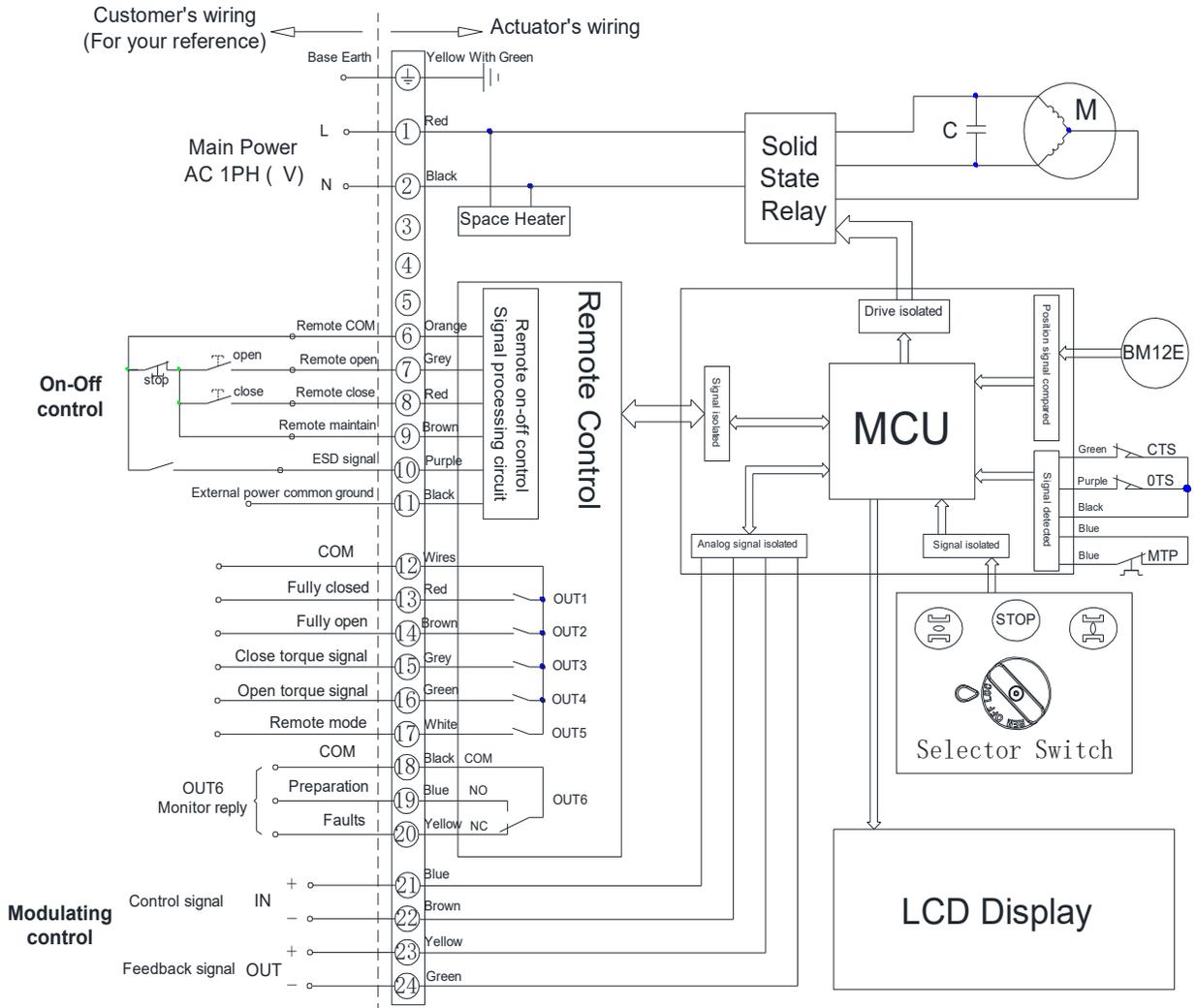
## VS-EQ1-2 SMART SF type AC 1 PH



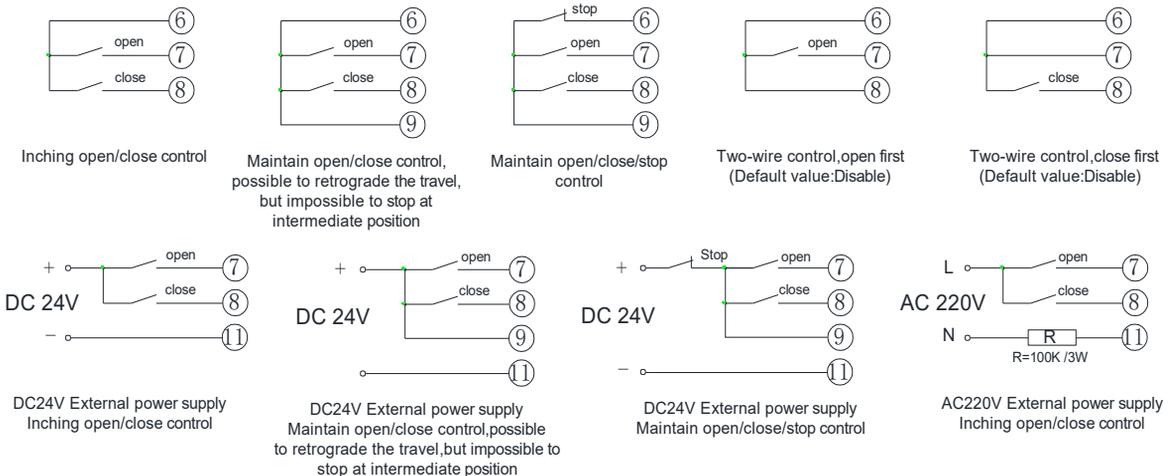
### Remote on-off (Manual) control



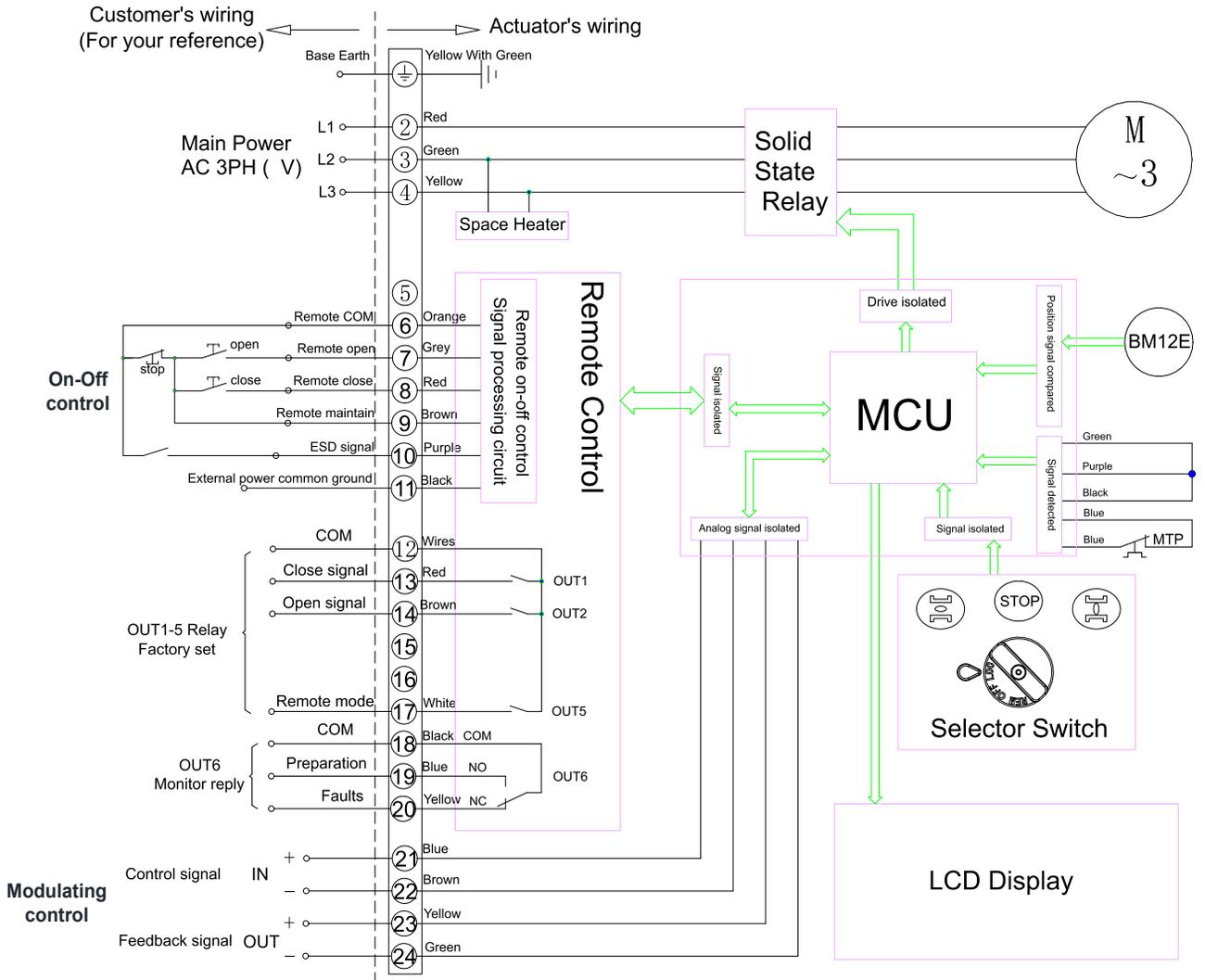
## VS-EQ-3-5 SMART SF type AC 1 PH



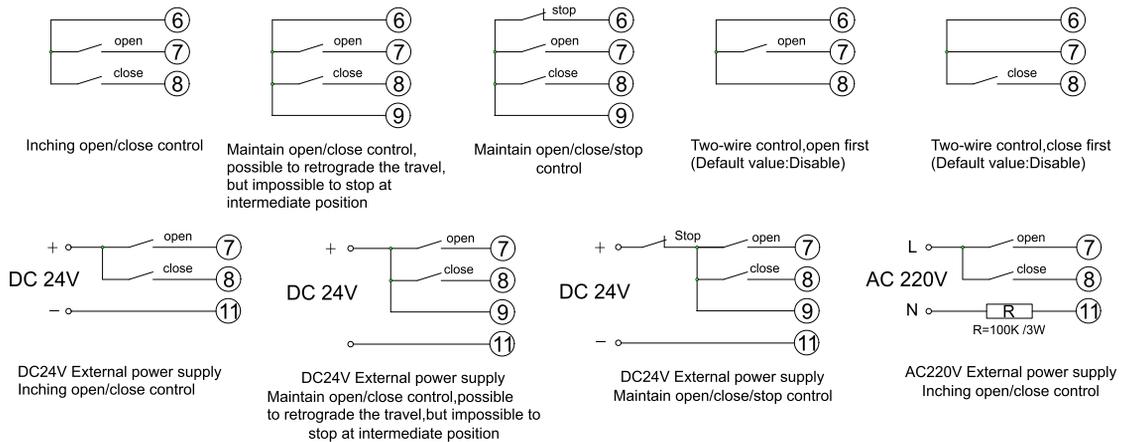
### Remote on-off (Manual) control



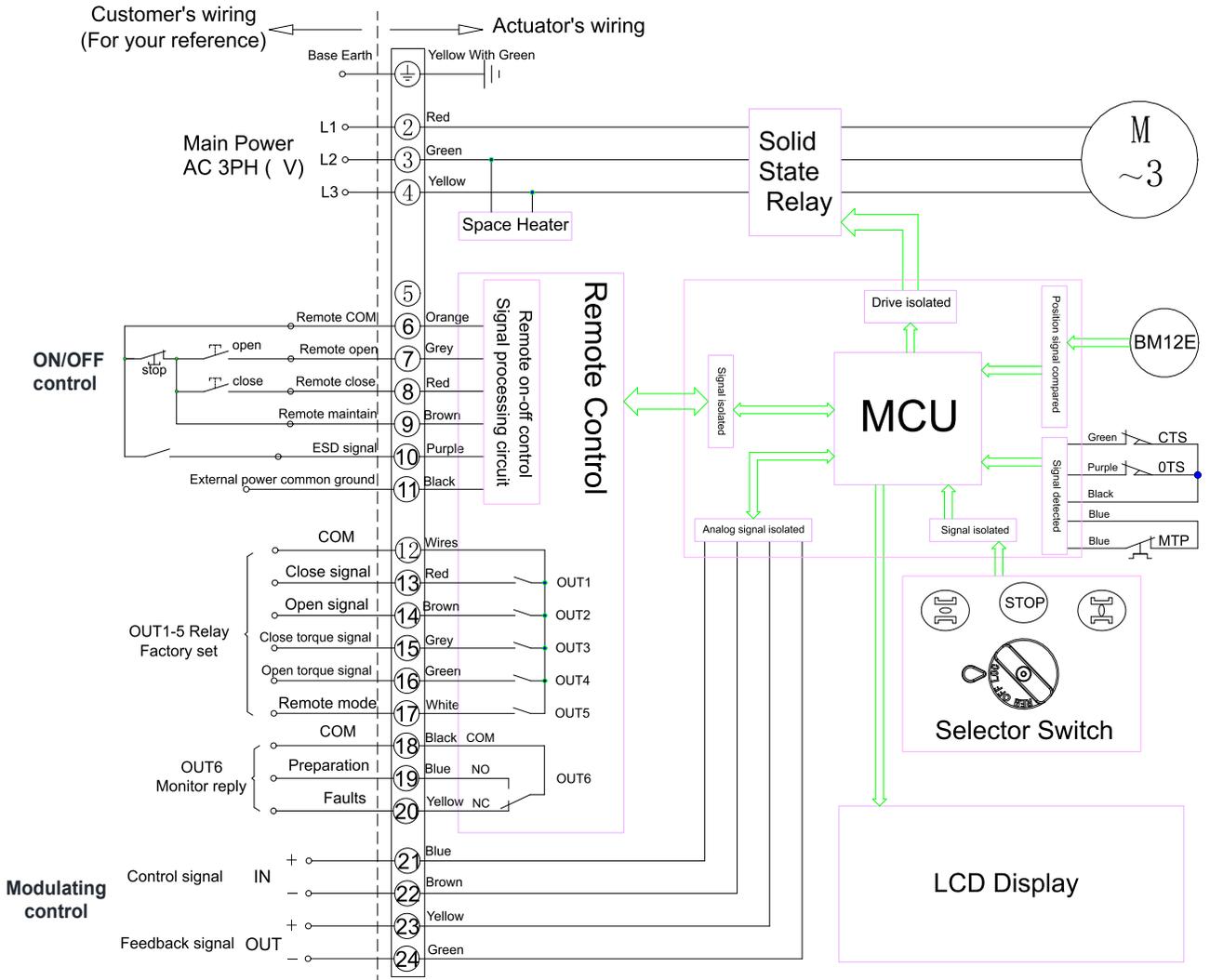
## VS-EQ-1-2 SMART SF type AC 3 PH



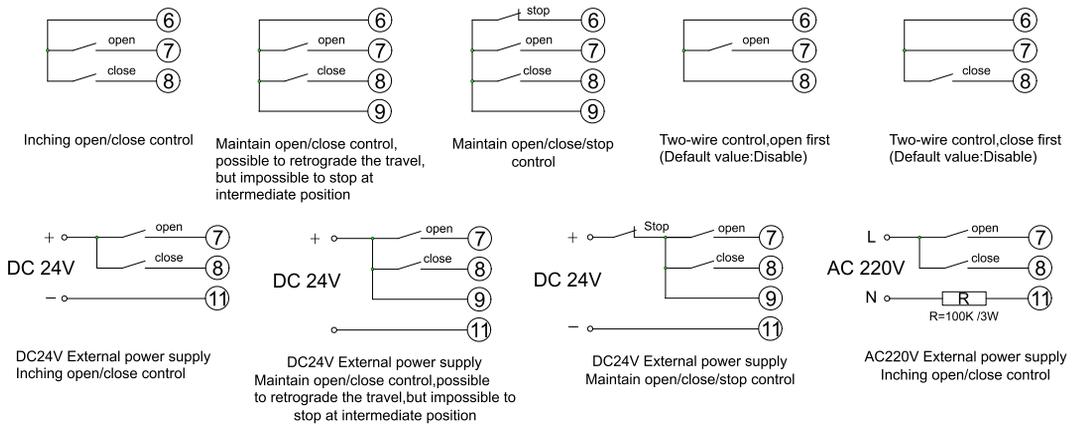
### Remote on-off (Manual) control



## VS-EQ-3-5 SMART SF type AC 3 PH



### Remote on-off (Manual) control



## Ordering information

---

**VS-EQ2 - 20 - B1 K4 - a B1 - R**

Optional function: Blank-no optional function, R-overtorque protection,  
J-counter, F-breather valve...

Color: B1-RAL9004, S1-RAL5015, L-RAL7035...

Voltage: a-AC220V, b-AC380V, c-DC24V, d-AC24V, e-AC110V...

Feedback: K4-active+passive, K5-passive+potentiometer, K9-analog feedback...

**Control:**

B1-Basic on off; B2- Basic modulating;

SF1-SMART Noninvasive on off; SF2- SMART Noninvasive modulating

Torque: 20-torque:200NM;... 800-torque8000NM

Model: VS-EQ1, VS-EQ2, VS-EQ3, VS-EQ4, VS-EQ5



**VALVE SOLUTIONS, INC.**  
1205 Alpha Dr, Alpharetta,  
GA 30004, United States

**VSI-CONTROLS Pte Ltd (Asia)**  
Email: [sales@vsi-controls.com](mailto:sales@vsi-controls.com)

VS-EQ- 2024.06-EN/1.1

- 
- The content of this catalogue is only for the basic information of this series of products, if you need more specification parameters, please contact us.
  - Reproduction of parts of this product manual is prohibited. In accordance with copyright law, the use of the contents of this product manual for any other purpose without the permission of VSI is prohibited.
-