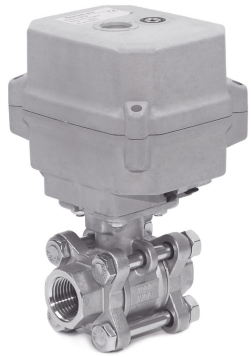
台州通禾流体控制股份有限公司

Taizhou Tonhe Flow Control Co., Ltd

Tonhe A150 M Series　Proportional actuator ball valve



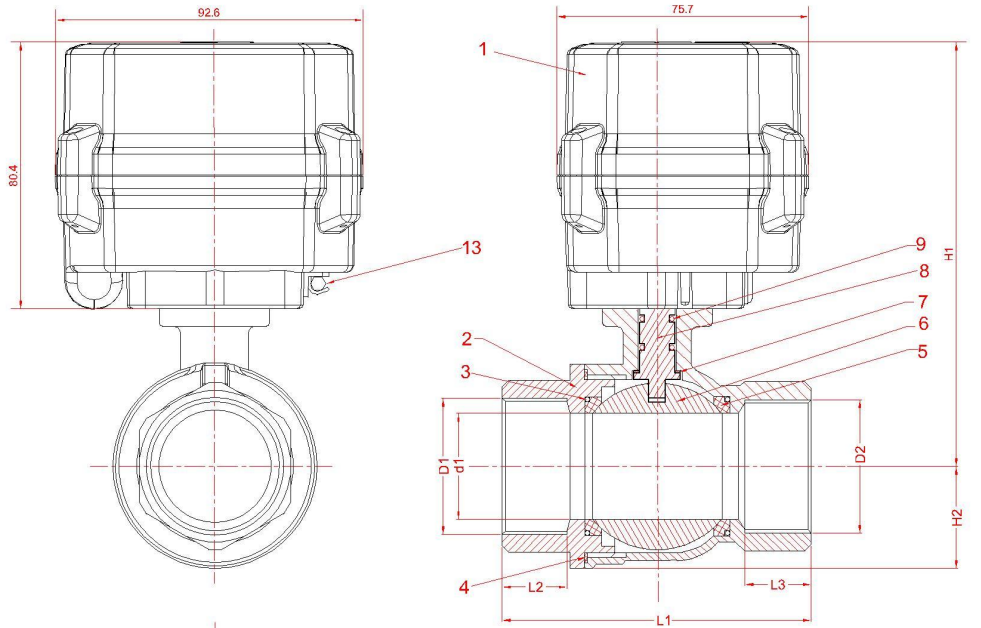
www.tonheflow.com

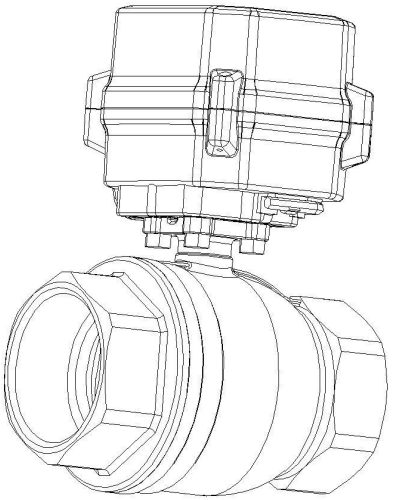
➢ Technical Parameters

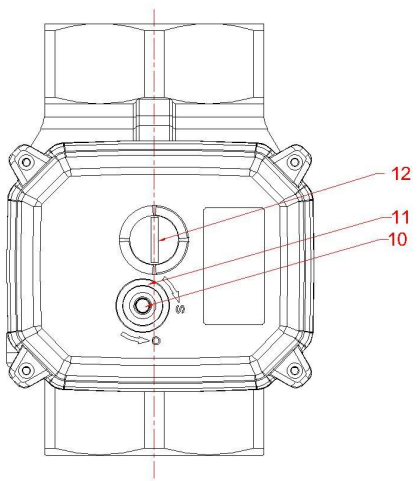
Connection standard 连接标准	ISO5211 F03、F05
Output axis specification 输出轴规格	Female octagonal 9*9 or 11*11(H 18MM)
Maximum working pressure 最大介质压力	1.0MPa
Rated voltage 额定电压	DC12-24V　DC24V (Optional)
Rated current 额定电流	200mA（DC12V） 100mA（DC24V）
locked-rotor current 堵转电流	1.5A（DC12V） 1A（DC24V）
Wiring diagram 接线图	4-20mA，1-5V，2-10V (Optional)
Life time 寿命	70000 times（testing pressure is 0.4MPa, medium is water）
Actuator material 执行器材质	Engineering Plastics PPO
Torque force 扭力	15 N.m
Cable Length 线长	0.5m;1.5m (Optional)
Environment temperature 环境温度	-15℃～60℃
Liquid temperature 液体温度	2℃～90℃
Manual operation 手动操作	Yes
Open/close indicator 开关指示	Yes
Protection class 防护等级	IP67
Company quality management system 公司认证	ISO 9001:2015
阀体	不锈钢三片式二通 DN15/20/25； 不锈钢二片式二通 DN15/20/25/32/40/50； PVC 三通，DN15/20/25; 不锈钢三通 DN15/20/25; PVC 蝶阀 DN50/DN65;DN80, 不锈钢蝶阀 DN32/DN40/DN50/DN65

A150-M 不锈钢两通电动阀组装图

PART CODE :







No.	NAME	Material	Specification	Quantity	
13	Hexagon wrench	stainless steel	303	1	
12	Indicator	PC		1	
11	Oil-seal	NBR		1	
10	Manual Shaft	stainless steel	303	1	
9	O-ring	FKM		2	
8	Stem	stainless steel	304	1	
7	Gasket	PTFE		1	
6	Ball	stainless steel	304	1	
5	Sealing	PTFE		2	
4	Sealing	PTFE		1	
3	O-ring	FKM		2	
2	Body Cover	stainless steel	304	1	
1	Actuator	PPO		1	

T50(2") Electric valve	2"	49	130	25±1	66	141.4	44.5
T40(11/2") Electric valve	1 1/2"	38	115	25±1	52	130	36
T32(11/4") Electric valve	1 1/4"	32	102	23±1	47	122	31
DESCRIPTION	D1/D2	d1	L1	L2/L3	E1	H1	H2

MATERIAL	DRN & DATE	A150-T 2Way Electric Valve	MODEL NO
QTY/SET	2017-10-14		
FINISH	CHK & DATE		
TREATMENT			
COLOUR	APPD & DATE		
UNIT MM			SHEET NO
	SCALE	DRG NO/PDD REF NO	ISSUE

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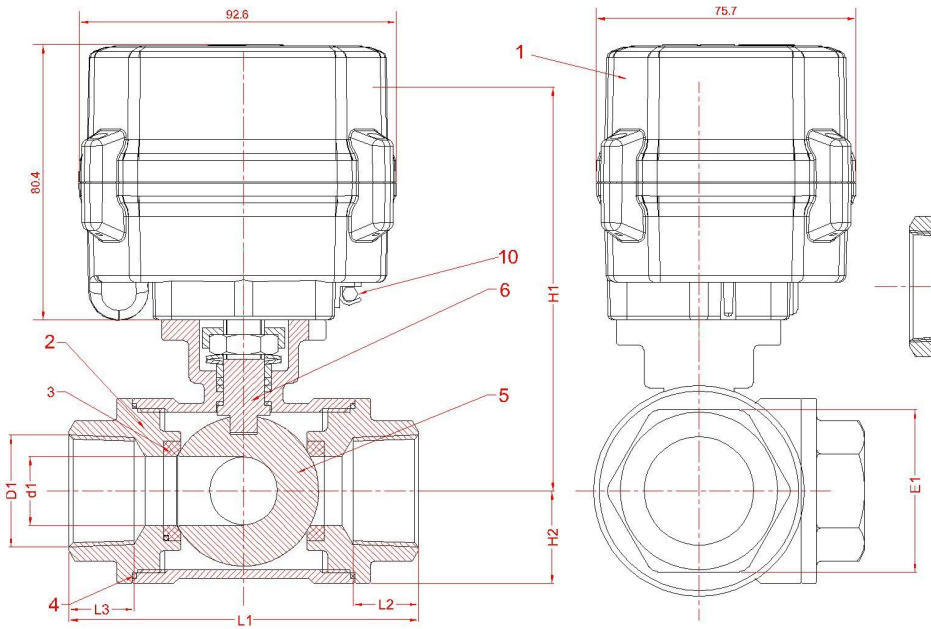
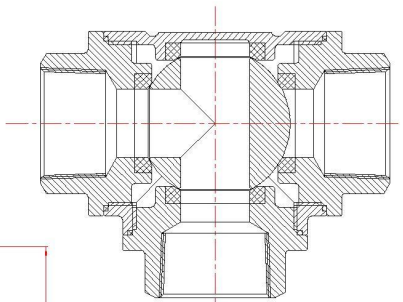
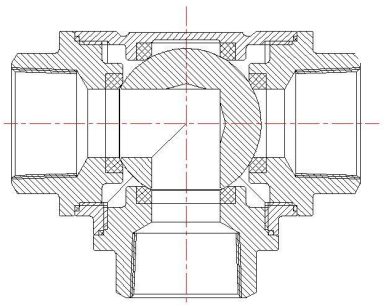
PART CODE :

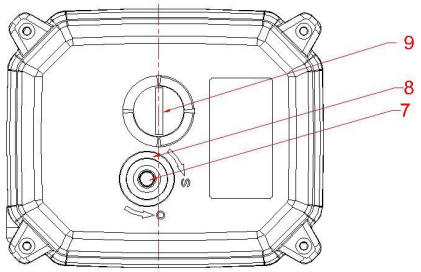




T-Type



L-Type



No.	NAME	Material	Specification	Quantity	
10	Hexagon wrench	stainless steel	303	1	
9	Indicator	PC		1	
8	Oil-seal	NBR		1	
7	Manual Shaft	stainless steel	303	1	
6	Stem	stainless steel	304	1	
5	Ball	stainless steel	304	1	
4	Sealing	PTFE		3	
3	Sealing	PTFE		4	
2	Body Cover	stainless steel	304	1	
1	Actuator	PPO		1	

DESCRIPTION	D1	d1	L1	L2/L3	E1	H1	H2
T25(1") Electric valve	1"	18	85	15	38.5	127	23.5
T20(3/4") Electric valve	3/4"	15	75	15	31	120	20
T15(1/2") Electric valve	1/2"	12	68	14	24.5	117	18

MATERIAL	DRN & DATE	A150-T 3Way Electric Valve	MODEL NO
QTY/SET	2017-10-14		
FINISH	CHK & DATE		
TREATMENT			
COLOUR	APPD & DATE		
UNIT MM			
	SCALE		SHEET NO
		DRG NO/PDD REF NO	ISSUE

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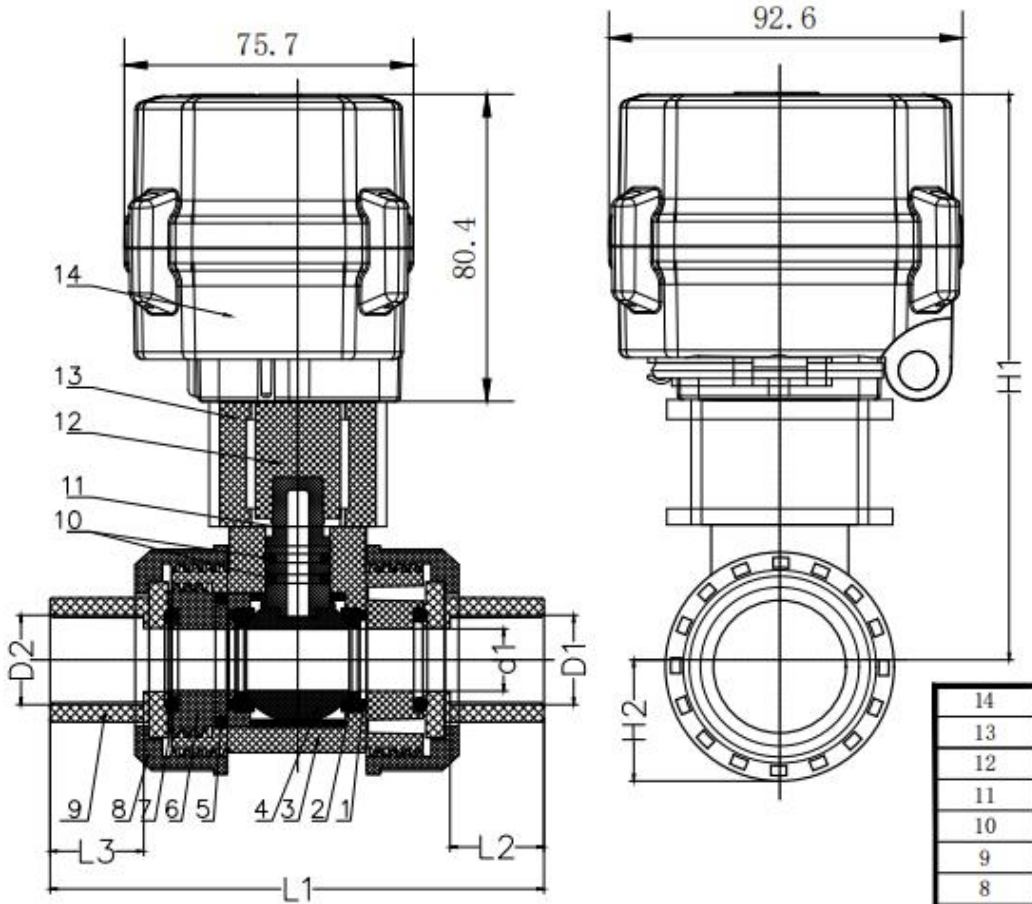
A150-M UPVC 两通电动阀组装图

Hexagon wrench



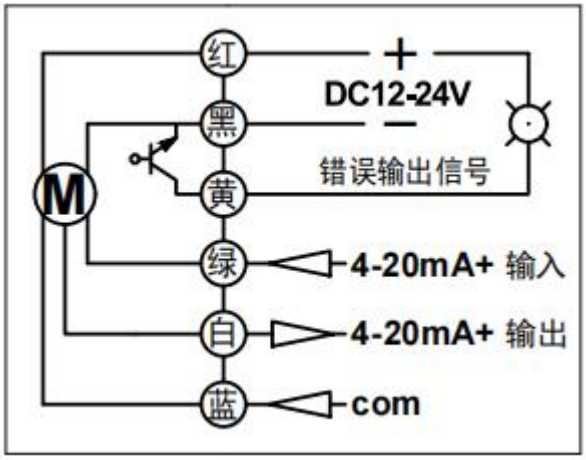
No.	Name	Material	Specification	Quantity	
14	Actuator	PPO		1	
13	Holder	PA/304		1	
12	Coupling	PA/304		1	
11	Stem	UPVC		1	
10	O-ring	EPDM/VITON		2	
9	Socket	UPVC		2	
8	Gland	UPVC		2	
7	O-ring	EPDM/VITON		2	
6	Bonnet	UPVC		2	
5	O-ring	EPDM/VITON		2	
4	Ball	UPVC		1	
3	Valve body	UPVC		1	
2	Sealing	PTFE		2	
1	O-ring	EPDM/VITON		2	

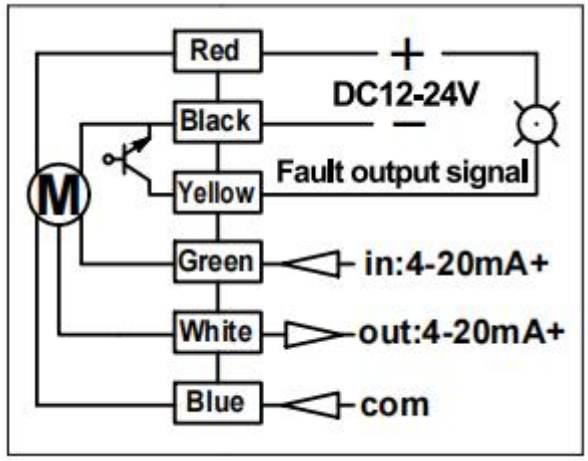
Description	D1/D2	d1±0.3	L1±1	L2/L3±1	H1±1	H2
50-P2-B	2″	50	173	38	194.4	60
40-P2-B	1-1/2″	40	161	35	174	50
32-P2-B	1-1/4″	32	144	32	162.4	42.75
25-P2-B	1″	25	129	28.6	156.25	37.25
20-P2-B	3/4″	20	115	25.5	141.2	32
15-P2-B	1/2″	15	107	22.3	136.7	27.5

MATERIAL		DRN & DATE	TITLE	MODEL NO
QTY/SET			A150 Electric valve	
FINISH		CHK & DATE		
TREATMENT				
COLOUR		APPD & DATE 2023-8-11		
UNIT	MM	SCALE		SHEET NO
			DRG NO/PDD REF NO	ISSUE

A150-M 接线方式列表-----调节型

1、4-20mA 控制 Input and output analog signals 4-20mA Type





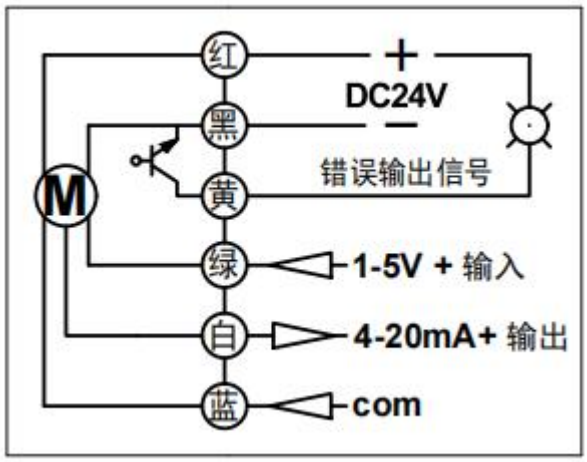
1.红线接电源正极，黑线接电源负极，
2.黄线为错误输出，具体表现为阀门堵转后黑线和黄线断开，正常情况下黄线和黑线导通；
3.绿线接 4-20mA 信号输入正极，蓝线接 4-20mA 信号输入负极;
4.白线接 4-20mA 信号输出正极，蓝线接 4-20mA 信号输出负极;
5.20mA 顺时针转，阀门全开；4mA 逆时针转，阀门全闭；

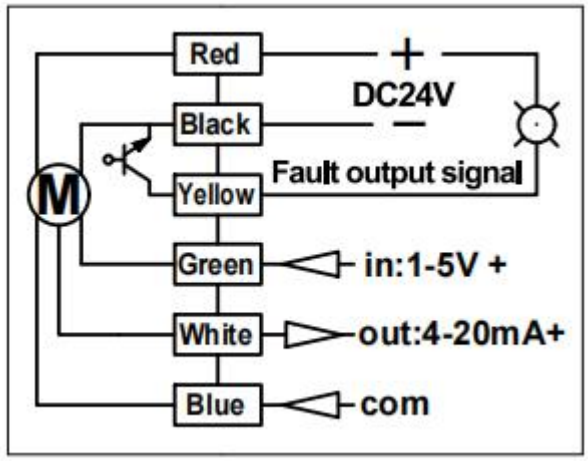
- 电压选配： ☐ DC12-24V
- 不得超过电压工作

1. Red wire connects to power's positive pole, black wire connects to power's negative pole;
2. Yellow wire is error output, the specific performance is the black and yellow wires disconnected when valve blocked. Normally, the yellow and black wires are connected;
3. Green wire connects to input analog signal 4-20mA's positive pole, blue wire connects to input analog signal 4-20mA's negative pole;
4. White wire connects to output analog signal 4-20mA's positive pole, blue wire connects to output analog signal 4-20mA's negative pole;
5. When analog signal is 20mA, valve will clockwise running till fully open; when 4mA, valve will anticlockwise running till fully close.

- Voltage: **DC12-24V**
- Over voltage working is not allowed.

2、1-5V 控制 1-5V input and 4-20mA output analog signals Type





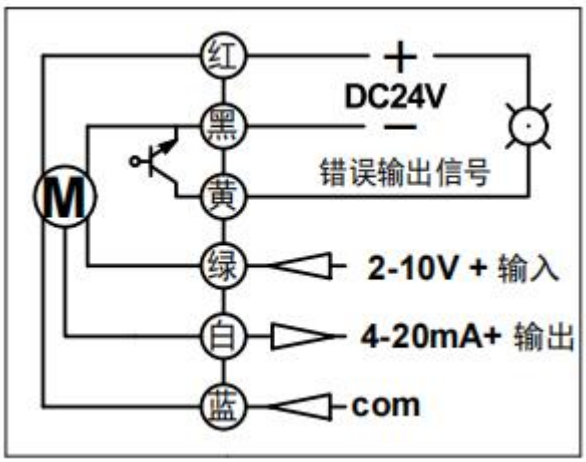
1.红线接电源正极，黑线接电源负极，
2.黄线为错误输出，具体表现为阀门堵转后黑线和黄线断开，正常情况下黄线和黑线导通；
3.绿线接 1-5V 信号输入正极，蓝线接 1-5V 信号输入负极；
4.白线接 4-20mA 信号输出正极，蓝线接 4-20mA 信号输出负极；
5.5V 顺时针转，阀门全开；1V 逆时针转，阀门全闭；

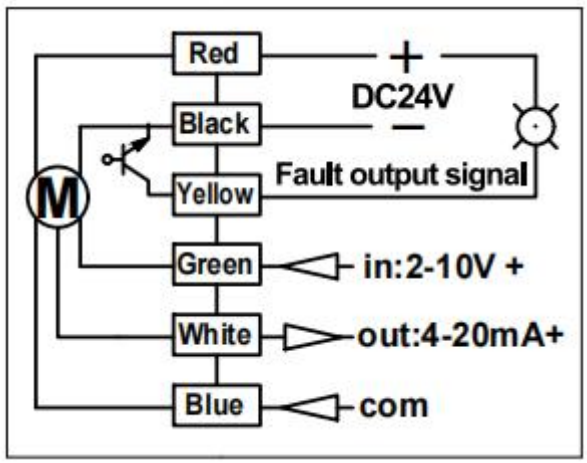
- 电压选配： DC24V
- 不得超过电压工作

1. Red wire connects to power's positive pole, black wire connects to power's negative pole;
2. Yellow wire is error output, the specific performance is the black and yellow wires disconnected when valve blocked. Normally, the yellow and black wires are connected;
3. Green wire connects to input analog signal 1-5v's positive pole, blue wire connects to input analog signal 1-5v's negative pole;
4. White wire connects to output analog signal 4-20mA's positive pole, blue wire connects to output analog signal 4-20mA's negative pole;
5. When analog signal is 5v, valve will clockwise running till fully open; when 1v, valve will anticlockwise running till fully close.

- Voltage: **DC24V**
- Over voltage working is not allowed.

3、2-10V 控制 2-10 Input and 4-20mA output analog signal Type





1.红线接电源正极，黑线接电源负极，

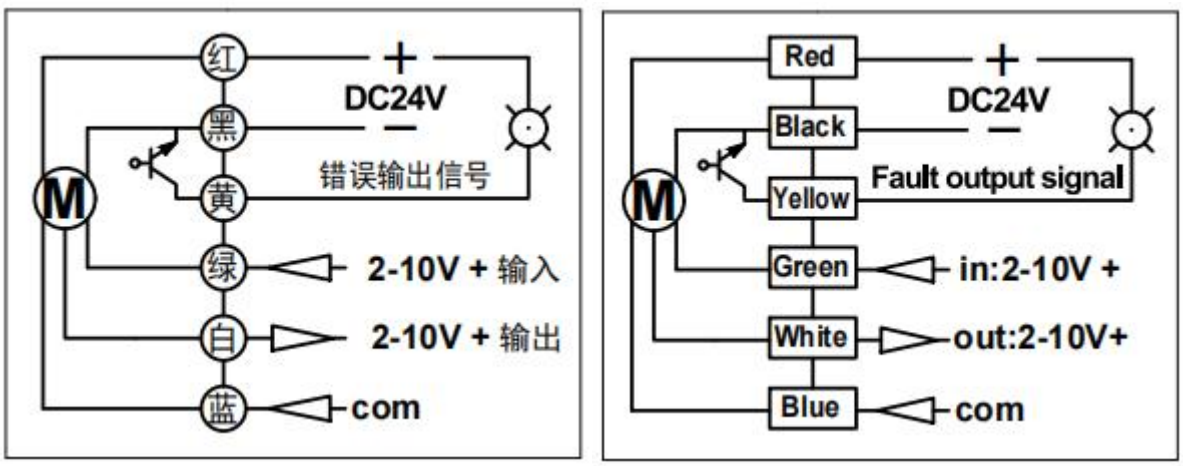
2. 黄线为错误输出，具体表现为阀门堵转后黑线和黄线断开，正常情况下黄线和黑线导通；
3. 绿线接 2-10V 信号输入正极，蓝线接 2-10V 信号输入负极；
4. 白线接 4-20mA 信号输出正极，蓝线接 4-20mA 信号输出负极；
5. 10V 顺时针转，阀门全开；2V 逆时针转，阀门全闭；

- 电压选配： ☐ DC24V
- 不得超过电压工作

1. Red wire connects to power's positive pole, black wire connects to power's negative pole;
2. Yellow wire is error output, the specific performance is the black and yellow wires disconnected when valve blocked. Normally, the yellow and black wires are connected;
3. Green wire connects to input analog signal 2-10v's positive pole, blue wire connects to input analog signal2-10v's negative pole;
4. White wire connects to output analog signal 4-20mA's positive pole, blue wire connects to output analog signal 4-20mA's negative pole;
5. When analog signal is 10v, valve will clockwise running till fully open; when 2v, valve will anticlockwise running till fully close.

- Voltage: **DC24V**
- Over voltage working is not allowed.

4、输入输出都是 2-10V 2-10V Input and output analog signal Type



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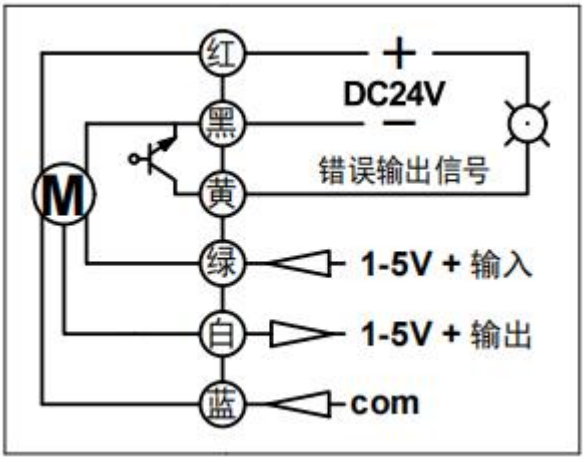
2. 黄线为错误输出，具体表现为阀门堵转后黑线和黄线断开，正常情况下黄线和黑线导通；
3. 绿线接 2-10V 信号输入正极，蓝线接 2-10V 信号输入负极；
4. 白线接 2-10V 信号输出正极，蓝线接 2-10V 信号输出负极；
5. 10V 顺时针转，阀门全开；2V 逆时针转，阀门全闭；

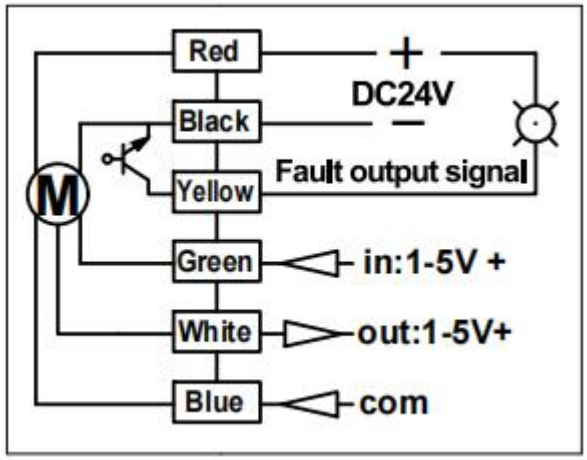
- 电压选配： DC24V
- 不得超过电压工作

1. Red wire connects to power's positive pole, black wire connects to power's negative pole;
2. Yellow wire is error output, the specific performance is the black and yellow wires disconnected when valve blocked. Normally, the yellow and black wires are connected;
3. Green wire connects to input analog signal 2-10v's positive pole, blue wire connects to input analog signal 2-10v's negative pole;
4. White wire connects to output analog signal2-10v's positive pole, blue wire connects to output analog signal 2-10v's negative pole;
5. When analog signal is 10v, valve will clockwise running till fully open; when 2v, valve will anticlockwise running till fully close.

- Voltage: **DC24V**
- Over voltage working is not allowed.

5、输入输出都是 1-5V 1-5V Input and output analog signal Type





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2.黄线为错误输出，具体表现为阀门堵转后黑线和黄线断开，正常情况下黄线和黑线导通；
3.绿线接 1-5V 信号输入正极，蓝线接 1-5V 信号输入负极；
4.白线接 1-5V 信号输出正极，蓝线接 1-5V 信号输出负极；
5.5V 顺时针转，阀门全开；1V 逆时针转，阀门全闭；

- 电压选配： DC24V
- 不得超过电压工作

1. Red wire connects to power's positive pole, black wire connects to power's negative pole;
2. Yellow wire is error output, the specific performance is the black and yellow wires disconnected when valve blocked. Normally, the yellow and black wires are connected;
3. Green wire connects to input analog signal 1-5v's positive pole, blue wire connects to input analog signal 1-5v's negative pole;
4. White wire connects to output analog signal 1-5v's positive pole, blue wire connects to output analog signal 1-5v's negative pole;
5. When analog signal is 5v, valve will clockwise running till fully open; when 1v, valve will anticlockwise running till fully close.

- Voltage: **DC24V**
- Over voltage working is not allowed.