

Product overview

- Rated voltage: DC24V
- Rated torque: 30N.m@DC24v
- Install below (rated torque*0.75) N.m valves: 2-way, 3-way valve
- Wiring and feedback model: B3、 BD3
- High performance brushless motor, Overload protection of internal motor
- It can be used 20,000 times.*1
- Two and more actuators can be used in parallel



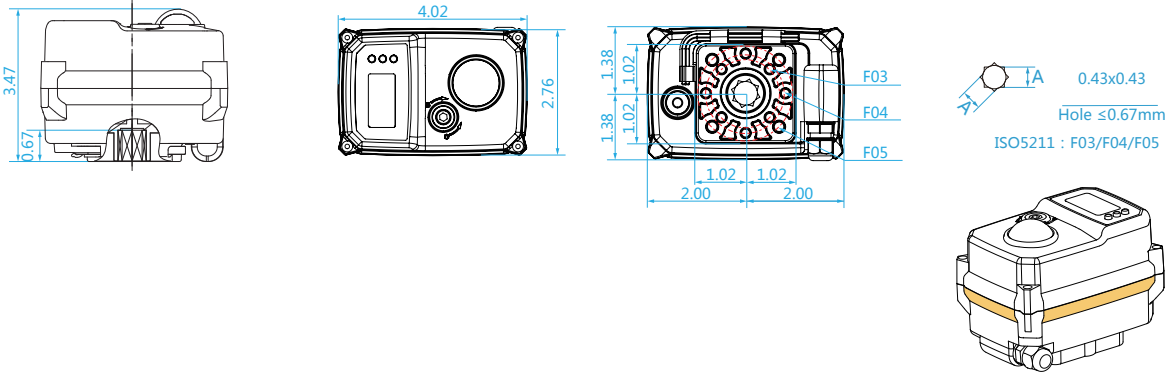
Technical Data

Electrical data	Rated voltage	DC24V	
	Rated voltage range	DC22-28V	
	Power consumption	9.6W@running 0.3W@holding	
	Peak current	500mA@5ms @DC24V	
	Fuse	2A	
Functional data	Rated torque	30N.m@DC24V	
	Connecting cable	7*0.2mm ² cable, voltage withstand AC300V(Length 800mm)	
	Angle of rotation	180°	
	Max angle of rotation	360°	
	Manual operation	※ Matching hexagon wrench, using at no power	
	Running time	About 16S (per 180°)	
	Operating frequency	Not continuous operation operating cycle ≥1min	
Working conditions	Sound power level	Max50dB(A)	
	Position indicator	Mechanical	
	Electricity safety level	III(safety low voltage)	
	Inflaming retarding level	1.6mmHB/ UL94 test method	
	Enclosure	IP67 As Per En60529/GB4208-2008 (all directions) F type can add bracket or dehumidifying heater	
	Insulation resistance	100MΩ/500VDC	
	Withstand voltage	500VAC 1Min	
	Medium temperature	≤80°can install to actuator directly ※ >80° need to install heat radiation stand	
	Working environment	※ Indoor or outdoor; if exposed to the rain or sunshine, need to install protective device for the actuator	
	Explosion-proof level	⚠ Not explosion proof products, do not use them in flammable and explosive environment	
	Ambient temp	-20℃— 60℃(ABS)/-20℃— 80℃(Casting aluminum)	
	Non-operation temp	≤-40℃ or ≥80℃	
	Ambient humidity	5-95%RH non-condensing	
	Shock resistance	≤300m/S ²	
	Vibration	※ 10 to 55 Hz, 1.5 mm double amplitude	
	Installation notes	360°any angle, need manual operation or allow for wiring space	
	Maintenance	Free maintenance	
	Dimensions / weight	Certification	CE / MA / AL
		Dimensions (LXWXH)	See "Dimensions"
		Connection standard	ISO5211 F03、 F04、 F05
Output axis specification		Female octagonal or male square	
Hole deepness		≤17mm(Female octagonal)/6.5mm(Male square)	
Weight		ABS material 0.7kg,Casting aluminum 0.82kg	

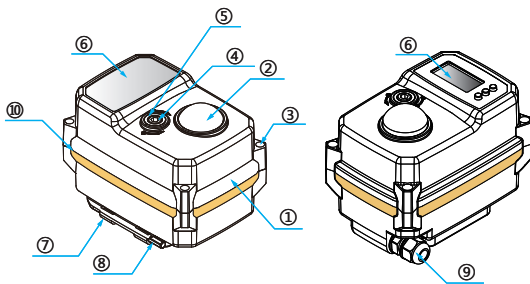
Dimension 【TCN-02X-ABS-II / Die-casting Aluminum】

unit: in

Direct mount [female octagonal output shaft]



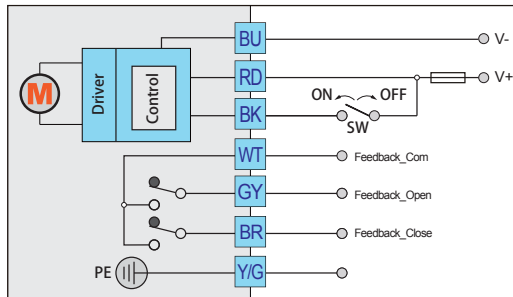
Main parts



Parts	Material	Parts	Material
1 Actuator	Heatproof ABS or Casting aluminum	6 Label	PVC
2 Indicator	Transparent AS	7 Wrench fixed	Heatproof_ABS
3 Screw X 4	304	8 Hexagon wrench	Tool steel
4 Manual shaft	304	9 Waterproof cable connector	NiLon
5 Oil seal	NBR	10 Lid seal	NBR

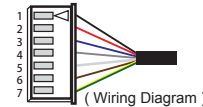
Wiring diagrams_1

BD3S- [DC series]



Wiring instructions:

- 1.Fuse:please refer to manual for more parameters.
- 2.SW switching capability:please refer to manual for more parameters.
- 3.Feedback signal contact load capacity:0.1A/250VAC 0.5A/30VDC.
- 4.Please make sure actuator connect ground reliably.

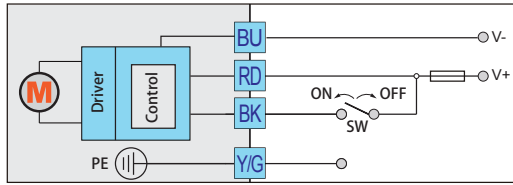


Control instructions:

- If SW is disconnected,the actuator will drive valve close clockwise ↻.When the valve is closed completely,WT is connected with WR,giving signal of closing.
- If SW is connected,the actuator will drive valve open anticlockwise ↻.When the valve is open completely,WT is connected with GY,giving signal of opening .
- ※ Notice 1: WT is not connected with WR/GY,when the actuator is running.
- ※ Notice 2:The feedback signal is a little earlier than the actual position,so please do not out power when you get the feedback signal.

Wiring diagrams_2

BD3- [DC Series]

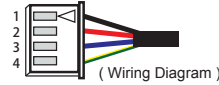


Control instructions:

- If SW is disconnected;the actuator will drive valve close clockwise.
- If SW is connected,the actuator will drive valve open anticlockwise.

Wiring instructions:

- 1.Fuse:please refer to manual for more parameters.
- 2.SW switching capability:please refer to manual for more parameters.
- 3.Please make sure actuator connect ground reliably.



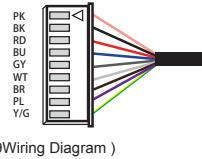
Anti-condensation heater [Accessory]



- ※ Notice 1: The range of power is 2W-3W;
- ※ Notice 2: The Voltage between A ,B is Actuator work voltage.
- ※ Notice 3: PK: the wire color is Pink, PR: the wire color is Purple.
- ※ Notice 4: The range of constant temperature heating is 25°C ± 20%.

Wiring instructions:

- 1.Fuse:please refer to manual for more parameters.
- 2.SW switching capability:please refer to manual for more parameters.
- 3.Feedback signal contact load capacity:0.1A/250VAC 0.5A/30VDC.
- 4.Please make sure actuator connect ground reliably.



Working environment

- Indoor and outdoor are both optional.
- Not explosion proof products, ⚠ do not use them in flammable and explosive environment.
- You need to install protective device for the actuator if it is exposed to the rain or sunshine.
- Please pay attention to the ambient temp.
- When installing, you need to consider the reserved space for wiring and repairing.
- When power on, ⚠ it is not allowed to dismantle actuator and valve.
- When power on, ⚠ it is not allowed to do wiring.
- ※ Absolutely no falling down the ground, which will hit the device and lead to improper operation.
- ※ Absolutely no standing on the device, which will cause device malfunction or personal accident.
- ※ It is forbidden to do wiring project in rainy day or when there is water splash.

Safety notice

- In order to use the device safely for a long term, please pre-read the manual carefully to ensure correct use.
- Notice item: Please understand the product specification and using method clearly to prevent personal safety danger or device damage.
- In order to indicate damage and danger, here we classify them as “warning ⚠ ” and “notice ※ ”.
- Both of contents are very important, which should be obeyed strictly.
- “Warning ⚠ ”: It will cause death or serious injury if not obeyed.
- “Notice ※ ”: It will cause slight injury or device damage if not obeyed.
- Subject to technical changes.