KLD100N/200N/500N/800N/1100N/2000N/4000N Motorized Valve Manual

ver:26.v1.r2

1 Technical Parameters

Series	Max Torque	Running time ※1	Enclosure	Ambient Temp / Ambient Humidity ※3 ※4	Service Life ※5	Medium pressure	Medium temp.
100N	10N.m	5s/10s	IP67 F type ※2	-15°C-45°C (ABS) -15°C-60°C (die-casting aluminum) 5-90%RH, non-condensing(IP67) >90%RH (F type)	about 20000 cycles	※6 1.0MPa 1.6MPa 4.0MPa	※7 0~100°C
200N	20N.m	10s/15s					
500N	50N.m	12s/20s					
800N	80N.m	10s/20s					
1100N	110N.m	10s/20s					
2000N	200N.m	25s					
4000N	400N.m	25s					

※1 Angle of rotation @90°.Running time above is for normal valve, and hi-speed optional(Specification Reference).
※2 F type [damp-proof, adding dehumidifying heather]As Per Q/12NK 4404-2023.
※3 Customized when Operating at Ambient Temp. t>45°C or t<-15°C.
① t < -40°C, connect power at least 15 mins (30 mins recommend) before usage.
② t < -40°C for long time, add protection to the motorized valve(both actuator and valve), eg: heating cable.
※4 Can be customized for other temp.
※5 Test condition:Rated load,test at under 25℃ working temperature and 50% humidity,lead the result from 2 times switching cycle,which will be influenced by different load and working environment.
※6 Metal Valve body（1.0MPa 1.6MPa 4.0MPa）,PLastic Valve body（1.0MPa）.
※7 UPVC＜45°,CPVC＜90°.

2 Wiring Electrical data

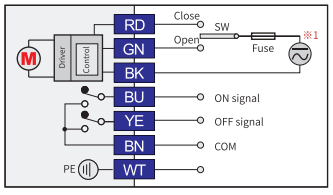
Wiring	Nominal voltage	Nominal voltage range	Power consumption						
			100	200	500	800	1100	2000	4000
B2S B2C B2P B2R	DC12V	DC10-15V	12W	15W(15N·m)	-	60W	-	-	-
	DC12Vh	DC10-15V	24W	25W	-	-	-	-	-
	DC24V	DC22-30V	12W	15W	-	60W	-	-	-
	AC/DC24V	AC20-26V DC22-30V	24W@2s(6N·m)	85W@1s	-	-	-	-	-
B3S B3C B3P B3R	DC12V	DC10-15V	12W	15W(15N·m)	25W	60W	100W	-	-
	DC12Vh	DC10-15V	24W	25W	-	-	-	-	-
	DC24V	DC22-30V	12W	15W 85W@1s	100W@1s	60W	-	-	-
	AC/DC24V	AC20-26V DC22-30V	12W/24W@2s	15W 25W@6s(15N·m)	25W 40W@5s	60W	100W	50W	80W
	AC220V	AC95-265 DC100-300	12W	15W 25W@6s(15N·m)	25W 40W@5s	60W	100W	50W	80W
	AC24V	AC24V±10%	12W	15W	40W	60W	100W	-	-
	AC110V	AC110V±10%	12W	15W	40W	60W	100W	-	-
	AC220V	AC220V±10%	12W	15W	40W	60W	100W	-	-
BD3S BD3C BD3P BD3R	DC12V	DC10-15V	12W	15W(15N·m)	25W	60W	100W	-	-
	DC12Vh	DC10-15V	24W	25W	-	-	-	-	-
	DC24V	DC22-30V	12W	15W 85W@1s	100W@1s	60W	-	-	-
	AC/DC24V	AC20-26V DC22-30V	12W/24W@2s	15W 25W@6s(15N·m)	25W 40W@5s	60W	100W	50W	80W
	AC220V	AC95-265 DC100-300	12W	15W 25W@6s(15N·m)	25W 40W@5s	60W	100W	50W	80W
	AC24V	AC24V±10%	-	15W	40W	60W	100W	-	-
	AC110V	AC110V±10%	-	15W	40W	60W	100W	-	-
	AC220V	AC220V±10%	-	15W	40W	60W	100W	-	-
KT32S KT32C KT32P KT32R	DC12V	DC10-15V	18W(6N·m)	25W(15N·m)	-	-	-	-	-
	DC12Vh	DC10-15V	24W(6N·m)	36W	-	-	-	-	-
	AC/DC24V	AC20-26V DC22-30V	18W(6N·m)	36W	40W	60W	100W	50W	80W
	AC220V	AC95-265 DC100-300	18W(6N·m)	36W	40W	60W	100W	50W	80W

3 Vibration amplitude

10 to 50HZ ≤ 1.0mm Double amplitude, vibration shock ≤ 2g（Customized for special vibration occasions）

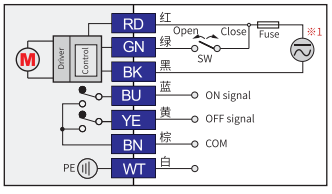
4 Wirings

B3S



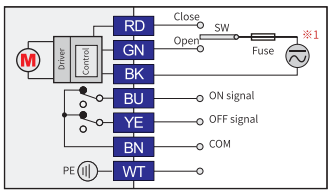
1.If SW is connected with RD, the actuator will rotate clockwise. When the valve is closed completely, BN is connected with YE, giving closing signal.
2.If SW is connected with GN, the actuator will rotate anticlockwise. When the valve is open completely, BN is connected with BU, giving opening signal.
※ Notice 1: ≂ means DC and AC voltage, when using DC, RD or GN is connected with positive, BK is connected with negative.
※ Notice 2: BN is non-connected with BU and YE, when the actuator is rotating.
※ Notice 3: The feedback signal is a little earlier than the actual position, so please do not cut power immediately, when you get the feedback signal.
※ Notice 4: It is recommended that PLC delay for 3-5s before cutting power when the feedback signal is detected, otherwise maybe the valve is not open or close completely.
※ Notice 5: Feedback loading capacity:0.1A/250VAC 0.5A/30VDC.

BD3S



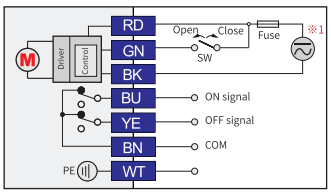
1.If SW is disconnected, the actuator will rotate valve close clockwise. When the valve is closed completely, BN is connected with YE, giving closing signal.
2.If SW is connected, the actuator will rotate valve open anticlockwise. When the valve is open completely, BN is connected with BU, giving opening signal.
※ Notice 1: ≂ means DC and AC voltage, when using DC, RD or GN is connected with positive, BK is connected with negative.
※ Notice 2: BN is non-connected with YE BU, when the actuator is rotating.
※ Notice 3: The feedback signal is a little earlier than the actual position,so please do not cut power immediately, when you get the feedback signal.
※ Notice 4:It is recommended that PLC delay for 3-5s before cutting power when the feedback signal is detected, otherwise maybe the valve is not open or close completely.
※ Notice 5: Feedback loading capacity:0.1A/250VAC 0.5A/30VDC.

B3C



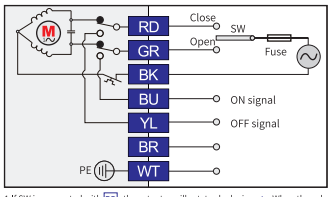
1.If SW is connected with RD, the actuator will rotate clockwise. When the valve is closed completely, BN is disconnected with YE, giving closing signal.
2.If SW is connected with GN, the actuator will rotate anticlockwise. When the valve is open completely, BN is disconnected with BU, giving opening signal.
※ Notice 1: ≂ means DC and AC voltage, when using DC, RD or GN is connected with positive, BK is connected with negative.
※ Notice 2: BN is connected with BU and YE, when the actuator is rotating.
※ Notice 3: The feedback signal is a little earlier than the actual position, so please do not cut power immediately, when you get the feedback signal.
※ Notice 4:It is recommended that PLC delay for 3-5s before cutting power when the feedback signal is detected, otherwise maybe the valve is not open or close completely.
※ Notice 5: Feedback loading capacity:0.1A/250VAC 0.5A/30VDC.

BD3C



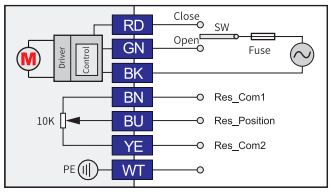
1.If SW is disconnected, the actuator will rotate valve close clockwise. When the valve is closed completely, BN is disconnected with YE, giving closing signal.
2.If SW is connected, the actuator will rotate valve open anticlockwise. When the valve is open completely, BN is disconnected with BU, giving opening signal.
※ Notice 1: ≂ means DC and AC voltage, when using DC, RD or GN is connected with positive, BK is connected with negative.
※ Notice 2: BN is connected with YE BU, when the actuator is rotating.
※ Notice 3: The feedback signal is a little earlier than the actual position,so please do not cut power immediately, when you get the feedback signal.
※ Notice 4:It is recommended that PLC delay for 3-5s before cutting power when the feedback signal is detected, otherwise maybe the valve is not open or close completely.
※ Notice 5: Feedback loading capacity:0.1A/250VAC 0.5A/30VDC.

B3P



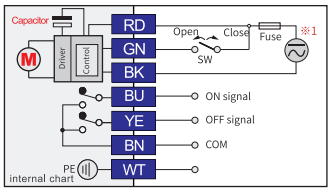
1.If SW is connected with RD, the actuator will rotate clockwise. When the valve is closed completely, RD is connected with YE, giving closing signal.
2.If SW is connected with GN, the actuator will rotate anticlockwise. When the valve is open completely, GN is connected with BU, giving opening signal.
※ Notice 1: GN is disconnected with BU RD and YE, when the actuator is rotating.
※ Notice 2: The feedback signal is synchronous with actual positon.

B3R



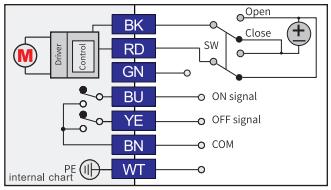
1.If SW is connected with RD,the actuator will rotate clockwise. The resistance value between BN and BU will decrease, and the valve will stop when the valve is closed completely.
2.If SW is connected with GN,the actuator will rotate anticlockwise. The resistance value between BN and BU will increase, and the valve will stop when the valve is open completely.
※ Notice 1: ≂ means DC and AC voltage,when using DC, RD or GN is connected with positive, BK is connected with negative.

KT32S



1.If SW is disconnected, the actuator will rotate valve close clockwise. When the valve is closed completely, BN is connected with YE, giving closing signal.
2.If SW is connected, the actuator will rotate valve open anticlockwise. When the valve is open completely, BN is connected with BU, giving opening signal.
※ Notice 1: ≂ means DC and AC voltage, when using DC, RD or GN is connected with positive, BK is connected with negative.
※ Notice 2: BN is non-connected with YE BU, when the actuator is rotating.
※ Notice 3: The feedback signal is a little earlier than the actual position, so please do not cut power immediately, when you get the feedback signal.
※ Notice 4: KT32S will close automatically when power off.
※ Notice 5:It is recommended that PLC delay for 3-5s before cutting power when the feedback signal is detected, otherwise maybe the valve is not open or close completely.
※ Notice 6: Feedback loading capacity:0.1A/250VAC 0.5A/30VDC.

B2S

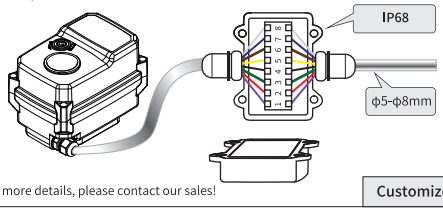


1.If SW is connected with Close,the actuator will rotate clockwise. When the valve is closed completely,BN is connected with YE,giving closing signal.
2.If SW is connected with Open ,the actuator will rotate anticlockwise. When the valve is open completely, BN is connected with BU,giving opening signal.
※ Notice 1: BN is non-connected with BU and YE, when the actuator is rotating.
※ Notice 2: The feedback signal is a little earlier than the actual position, so please do not cut power immediately, when you get the feedback signal.
※ Notice 3: It is recommended that PLC delay for 3-5s before cutting power when the feedback signal is detected, otherwise maybe the valve is not open or close completely.
※ Notice 4: Feedback loading capacity:0.1A/250VAC 0.5A/30VDC.

Test terminal for the cable end_wiring instruction

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.
5. Some products adopt wiring box ,user could wiring according to the order of number.

【Waterproof Terminal Box】 Mode



For more details, please contact our sales!

Customized

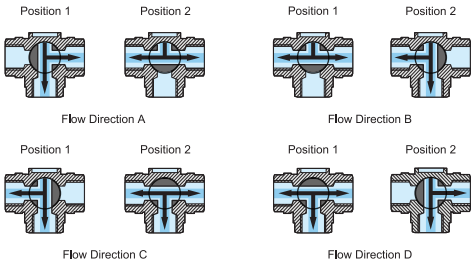


diagram of cable terminal(7pin)

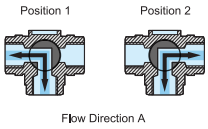
Default

5 Flow Direction

■ T port



■ L port



Note: position 1 means open, position 2 means closed.

6 Instructions on Manual Override Function

■ The manual operation hole is located at the top of the actuator.

■ For manual operation, insert the included hex wrench into the actuator's manual operation hole.Rotate in "O"/"S" direction per markings, observe the indicator's direction, and set the valve to the desired position.

■ It is only permitted to use when power is cut.

7 Warnings on Installment and Usage

■ Make sure voltage in practicable range. Working voltage means the voltage reaching valve. The circuit will be burned if surpassing the upper limit. Valve will have problem to work if lower than the range.

■ It is forbidden to install actuator upside-down, as figure 1.

■ During installation, ensure sufficient space is reserved for manual operation, wiring, and future maintenance or replacement.

■ The terminal is for inspection on production line. Please cut it when using.

■ Ball Valve Usage Precautions

1.Avoid letting the seal tape enter the ball cavity, as it may impair the valve's sealing performance.

2.If there is much heavy scale or sand in your working medium,filters should be installed, otherwise it will harm the seal and cause leakage.

3.UPVC/CPVC ball valve

- The double union ball valve is pre-adjusted at the factory; do not attempt manual adjustments during installation.
- Don' t overtighten the union during installation, as it may cause difficulty in rotating the valve ball.
- The arrow on the valve body indicates the water flow direction. Please install the valve body as shown in Figure 2.

4.Straight pipe installation is recommended. Typically, a minimum of 2xDN straight pipe length is advised upstream of the valve to achieve optimal control performance, while no specific requirement exists downstream. as shown in Figure 3.

5.Ensure the wrench in the right position as shown in Figure 4.



Figure 1: Wrong

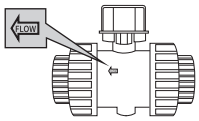


Figure 2: Flow Direction

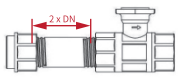


Figure 3: Straight pipe installation recommended

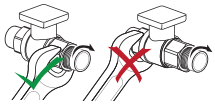
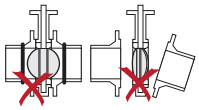


Figure 4: Wrench Position

■ Butterfly Valve Usage Precautions



- The wafer flange standard must comply with the butterfly valve flange standard (GB9113.3). Recommended flanges: butt welding flange, butterfly valve-specific flange, or integral flange. If using flat welding flange, ensure post-weld deformation does not exceed 0.2mm.
- The disc must be in the closed position during installation. No additional sealing gasket is required for wafer-type butterfly valves.
- Ensure the wafer flange is properly aligned to prevent excessive radial stress on the valve.For electric butterfly valves exceeding DN100,install a corrugated pipe on one side of the valve and provide pipe supports to eliminate radial stress.
- For more details, please refer to Figures 5, 6, and 7:
- Before powering up, manually rotate the disc both clockwise and counterclockwise for one full revolution to confirm there are no obstructions and no significant increase in torque.
- Do not operate the valve for extended periods without media. Manual override function should only be used when power is cut. After manual adjustment, ensure the position indicator aligns with the operational range, otherwise valve cannot work properly when power on.

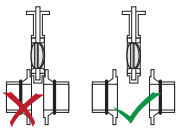


图5

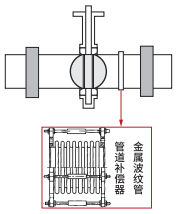


图6

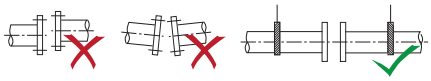


图7

8 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.

⚠This product is non-explosion-proof, avoid flammable and explosive environment.

⚠ When power on, it is not allowed to dismantle driving device. It is not allowed to do wiring work.

※ You need to install protective device for the actuator if it is exposed to the rain or sunshine.

※ 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.

※ Do not open the cover for wiring or replace the wires, otherwise it will damage the sealing of the actuator.

※ If there is a high-power motor or other high-power inductive load on the power supply circuit of the motorized valve, or if it is used in areas with frequent thunderstorms, it is necessary to install a lightning surge filter on the power supply circuit.



Inform respectfully: The manual will be subject to change without notice.

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