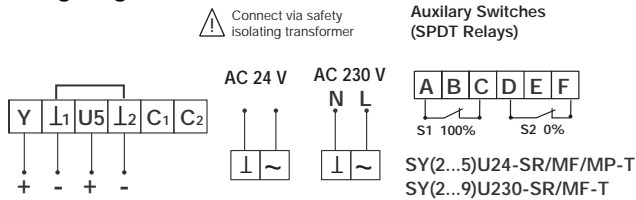


SY(2...5)U24-SR/MF/MP-T modulating actuator SY(2...9)U230-SR/MF-T actuator

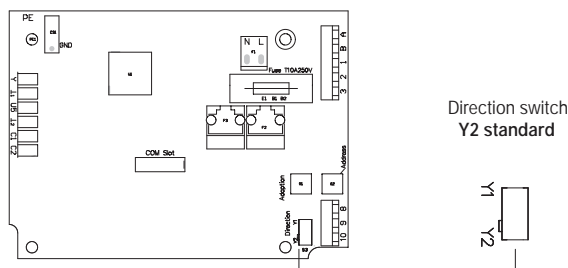
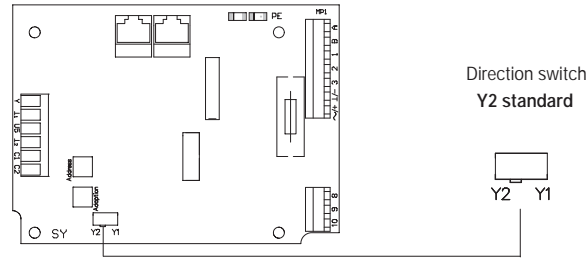
71102-00001A

Wiring diagram



Note: 1) Power supply Com/Neutral and control signal "-" wiring to a common is prohibited. Incorrect wiring will damage the actuator!
2) 75% duty cycle

Circuit Board Set Up

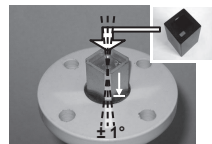
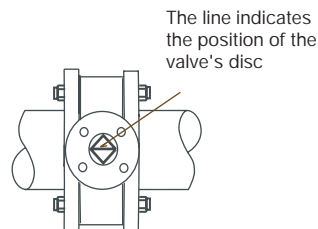


Before power on, make sure the input signal and voltage are in accordance with the actuator nameplate.

! If it's necessary to change the following settings, only authorized and trained persons are allowed to do that.

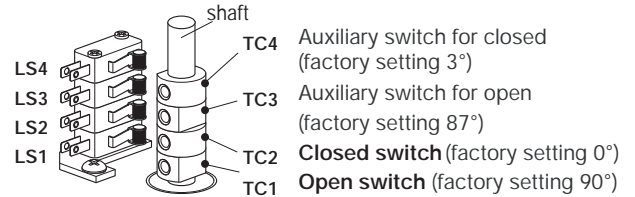
Install to butterfly valve

- Manual operate the actuator to the similar open position of the valve, which can be judged by the valve disc or the red line on the valve top stem.
- Fit coupling on the top stem of the valve.
- Mount the actuator onto the coupling, manual operate the actuator to align the holes of valve top flange and actuator bottom; then tighten the bolts by wrench in diagonal sequence.
- Uncover the actuator, wire according to the wiring diagram, check the DIP switch setting.
- Power on to test run the actuator, check its stroke and feedback position, do some adjustment if necessary.
- Put the cover on and tighten the bolts for it.



Limit switches LS.. with travel cams TC..

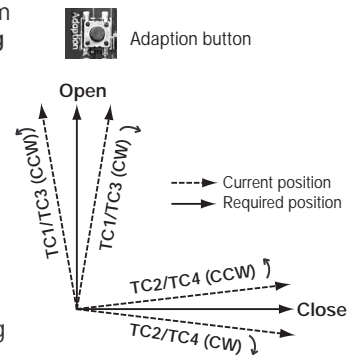
The TC.. cams operating the LS.. limit switches rotate with the shaft. Clockwise movement of the shaft closes the actuator, counterclockwise opens the actuator. There are 4 cams included, marked with two colors: blue for open, silver for close; each cam can be set independently.



SY(2...5)U24-SR/MF/MP-T
SY(2...9)U230-SR/MF-T

1. How to adjust the travel cam
Perform an adaption after changing the position of the travel cam.

- Loosen the cam to be adjusted with a 2.5 mm allen key;
- By turning the key rotate and adjust the cam as shown in the right diagram;
- Commission;
- Tighten the cam after successful adjustment.



2. Closed position (0%) setting

- Power on. The actuator will stop.
- Adjust travel cam TC2 in the closed position. (The fanshaped cam which connected with the potentiometer need to be loosed firstly, then retightened after the travel limit switches setting is terminated.)
- Check whether LS2 switch trips prior to manual operation stop. (So when motor stops at fully closed position, it should be possible to further operate the handwheel CW 1/2...3/4 turn. Otherwise the stop screw for close need to be adjusted.)

Proceed in the similar way for TC1 in open position.

Limiting of manual rotation with stop screws

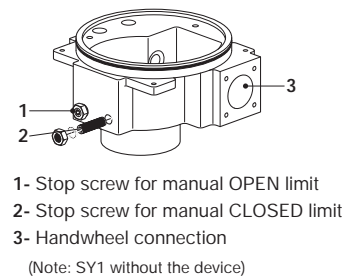
SY quarter-turn actuator is provided with a limiting of manual rotation device to avoid over-travel with the handwheel going beyond the 1/4-turn rotation.

The actuator is supplied and tested for 90° electrical operation, and -2°...92° limiting of manual rotation.

The limiting of manual rotation is realized by the stop screws 1 and 2 (max. ± 2° which corresponding to 1 turn of the stop screw).

The stop screws must be secured with the lock nut after any adjustment. (by both a allen key and a wrench)

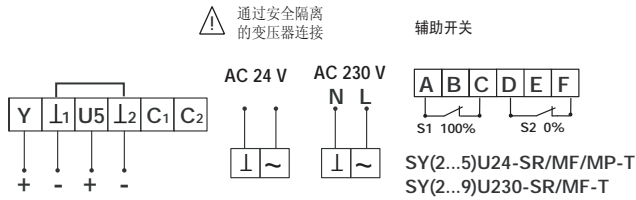
The 90° travel must always be limited by the travel limit switches so they must be set to trip just BEFORE stop screw's contact. To achieve this, loose stop screws by 2 1/2 turns. Then, after travel limit switch setting is terminated, (see paragraph Limit switches LS.. with travel cams TC..), operate the actuator electrically to closed position. Now rotate the stop screw 2 to closed position, re-loose 1 turn, and secure by lock nut. Proceed in the same way for stop screw 1 in open position.



It is emphasized that the limiting of manual rotation device is only a design feature to prevent over-travel when the actuator is being operated manually, not a safety function to prevent over-travel in the event of travel limit switch failure.

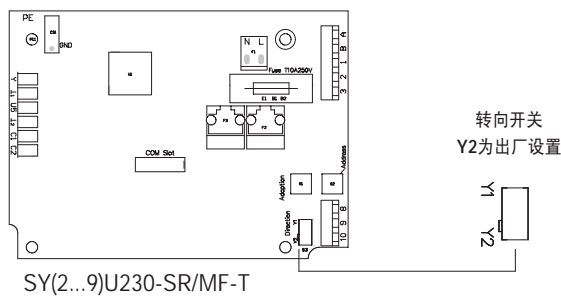
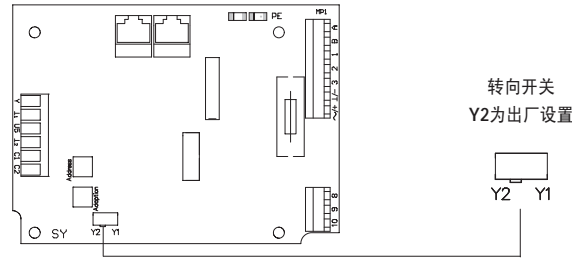
SY(2...5)U24-SR/MF/MP-T 调节型执行器 SY(2...9)U230-SR/MF-T 执行器

接线说明



- 注:
- 禁止将电源零线与控制信号零线共线。错误的接线可能会损坏执行器。
 - 75% 工作频率

调节板设置

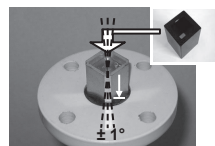
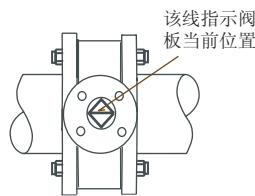


通电前请检查各项接线是否与执行器标牌中接线说明一致。

! 只有经过培训和授权的人员才允许改变以下设置

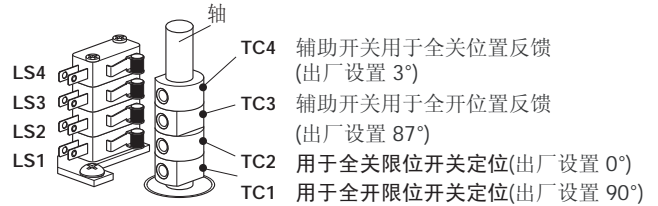
与蝶阀安装

- 根据阀板或阀轴顶端红线所指示位置，将执行器手动打开至该位置。
- 将连接件套在阀轴顶端。
- 将执行器套上连接件，之后手动操作执行器使阀门上法兰螺栓孔与执行器下方安装孔对齐，然后通过扳手将螺栓按对角线顺序紧固。
- 拆下执行器上盖，按接线说明接线。
- 给执行器通电并试运行，检查运行状况与反馈位置，需要时调整。
- 装好上盖并紧固螺栓。



限位开关 LS.. 与行程凸轮 TC..

行程凸轮TC.. 随轴的转动使电子行程开关LS.. 动作。轴顺时针方向转动时执行器关闭，逆时针转动时执行器打开。共有4个行程凸轮，以两种颜色标记：蓝色表示控制打开状态，银行表示控制关闭状态；任何一个行程凸轮都可以单独调整。



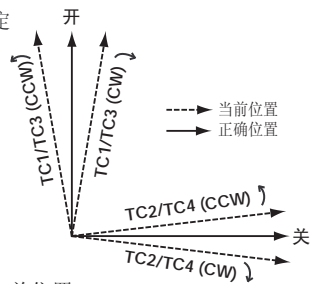
SY(2...5)U24-SR/MF/MP-T
SY(2...9)U230-SR/MF-T

1. 如何调整行程凸轮

调整过凸轮位置后需执行一次“daption”自适应。



- 将2.5 mm内六角扳手插入所要设定的凸轮的螺孔内，松动螺栓。
- 用内六角扳手挑动凸轮，按左图所示方法调整凸轮位置，并预拧紧螺栓。
- 通电检查限位开关LS的动作是否使阀板到位。
- 成功调整完毕后，务必锁定凸轮。



2. 关闭位置 (0%) 设定

- 接通电源，直至执行器停止在全关位置。
- 调节行程凸轮TC2至全关位置。
(在调节前将与电位计相连的凸轮先松开，待调整过程完成后再次紧固。)
- 检查电子限位行程是否在机械限位范围之内。
(即马达于全关位置停止后，逆时针方向操作手轮能旋转1/2...3/4圈，否则需调整止附螺栓。)

调整全开位置方法与上述类似。

机械限位

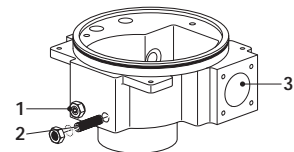
SY执行器具有机械限位。

执行器经过测试只提供90°电子行程以及-2°...92°的机械限位范围。

机械限位由止附螺栓1和止附螺栓2控制 (转动限位螺栓1圈相当于最多2°)。

止附螺栓被调整后必须紧固螺母 (通过一个内六角与一个扳手)

电子行程必须被设定在90°以内并在机械限位范围之内。当电子行程设定结束后，(参见：电子行程开关LS.. 与行程凸轮TC.. 部分)可将止附螺栓拧松2圈半左右，然后通电运转执行器到全关位置。



- “全开”止附螺栓
- “全关”止附螺栓
- 连接手轮，用于手动操作

将止附螺栓2顺时针旋至尽头后，再逆时针转1圈，紧固螺母。对于止附螺栓1请重复上述操作。

需要强调的是SY执行器机械限位仅为了避免手轮过度转动，而不可替代电子行程开关的作用。