

Voltage/Current Control Signal Selection Dip Switch

In its default shipping position, the voltage/current control signal dip switch (see Fig. 4) is set to OFF (= voltage control). as shown in Fig. 4. Setting it to ON results in current control.

Position Indication

The hub adapter indicates the rotation angle position by means of the rotational angle scales (0...90° / 90...0°).

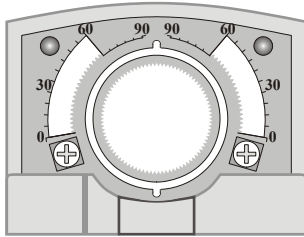


Fig. 6. Position indication

Manual Adjustment

IMPORTANT

In order to prevent equipment damage, you must remove power before manual adjustment.

After removing power, the gear train can be disengaged using the declutch button, permitting the actuator shaft to be manually rotated to any position. The feedback signal will then follow the new position.

Limitation of Rotation Stroke

Two mechanical end limits (adjustable in 3° increments) are provided (20 Nm [175 lb-in] models, only) to limit the angle of rotation as desired (see Fig. 7).

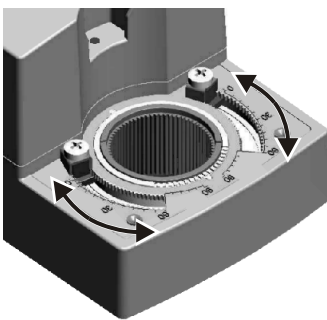


Fig. 7. Mechanical end limits

The mechanical end limits must be securely fastened in place as shown in Fig. 8. Correct / incorrect tightening of end limits. Specifically, it is important that they properly mesh with the rotational angle scales when the screws are tightened.

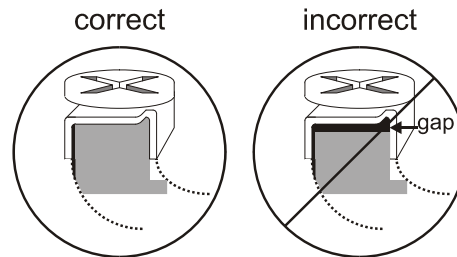


Fig. 8. Correct/incorrect tightening of end limits

Internal Auxiliary Switches

The internal auxiliary switches are set to change from “common” to “normally open” at angles of 5° and 85°, respectively, from the totally counterclockwise position.

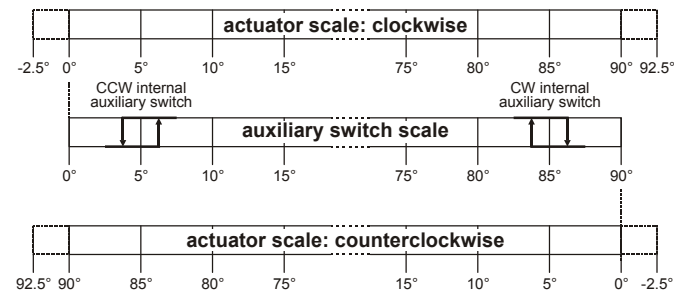


Fig. 9. Internal auxiliary switches

Override

If terminal 3 of the terminal strip (see section “Wiring Diagrams” on page 6) is unplugged, the stroke will be 0%; reversing the rotation direction using the rotation direction switch will result in a max. stroke of 100%. If terminal 3 is jumped with terminal 1 (24 V), the stroke will be 50%.

INSTALLATION

These actuators are designed for single-point mounting.

IMPORTANT

In order to prevent equipment damage, you must remove power or set the rotation direction switch to the “Service/Off” position before manual operation.

Mounting Instructions

All information and steps are included in the Installation Instructions supplied with the actuator.

Mounting Position

The actuators can be mounted in any desired orientation (no NEMA2 or IP54 if mounted upside down; see Fig. 10). Choose an orientation permitting easy access to the actuator's cables and controls.

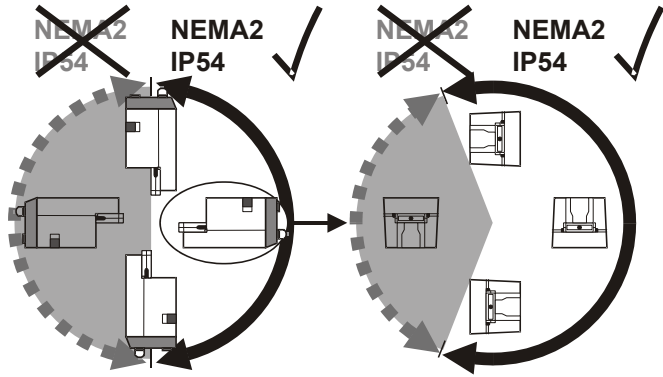


Fig. 10. Mounting for IP54/NEMA2

Mounting Bracket and Screws

If the actuator is to be mounted directly on a damper shaft, use the mounting bracket and screws included in the delivery package.

Self-Centering Shaft Adapter

The self-centering shaft adapter can be used for shafts having various diameters ($3/8...1-1/16"$ [10...27 mm]) and shapes (square or round).

In the case of short shafts, the shaft adapter may be reversed and mounted on the duct side.

Stroke Limitation with Mechanical End Limits

The mechanical end limits (20 Nm [175 lb-in] models, only) enable the stroke to be limited from 0...90° in increments of 3°.

Wiring

Access cover

To facilitate wiring the actuator to the controller, the access cover can be detached from the actuator.

IMPORTANT

Remove power before detaching the access cover. Once the access cover has been removed, please take care to avoid damaging any of the parts now accessible.

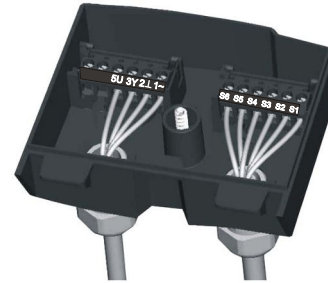


Fig. 11. Access cover

Depending upon the model, the access cover may have one or two terminal strips, including a layout with a description for each of the terminals.

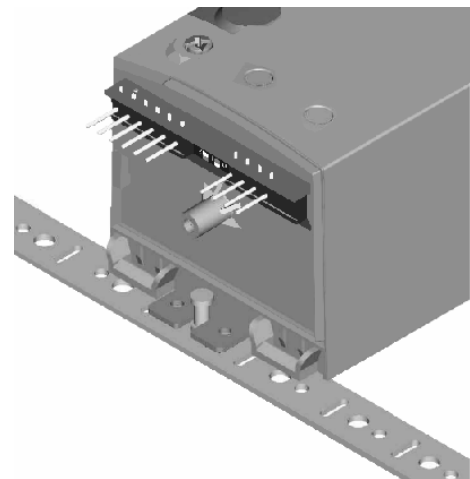
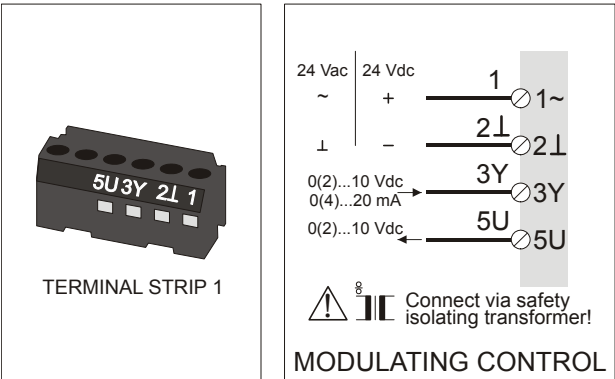


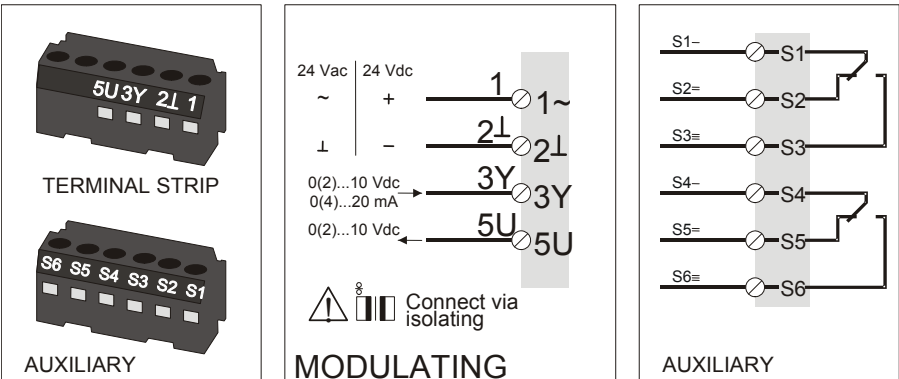
Fig. 12. Actuator with access cover removed

Wiring Diagrams

MN7220/MN7234



MN7220 WITH SWITCHES



NOTE: Internal auxiliary switches S1 and S4 must be connected to the same power source.

connecting cable		terminal	name
supply and signal lines		1~	24 Vac~ / 24 Vdc+
		2⊥	24 Vac⊥ / 24 Vdc-
		3Y	0(2)...10 Vdc / 0(4)...20 mA control signal
		5U	0(2)...10 V feedback signal
auxiliary switched (when included)	CCW (left) 5°	S1	Common
		S2	normally closed
		S3	normally open
	CW (right) 85°	S4	Common
		S5	normally closed
		S6	normally open