MOUNTING INSTRUCTIONS

0. GENERAL

The actuator can be installed in any position. Leave free space of about 10 cm above the cover to allow access to the internal components and the terminal board to perform the wiring.

1. MECHANICAL ASSEMBLY

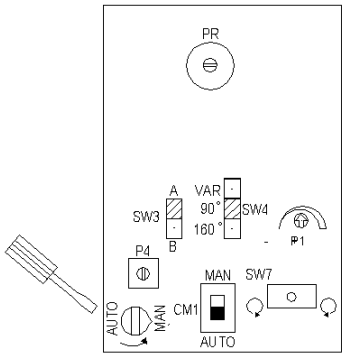
The actuator can be installed through either the holes on the base or the ones located on the front using the holes on both shaft outlets. The actuator is supplied with the shaft in 0 position of the external position indicator. For an easier installation, it is possible to unlock the main shaft rotating the internal pin 180° with a screwdriver (see Fig 1) so that it can be turned in both directions.

Once assembly operations have been completed, bring the shaft back to its original position and lock it by turning the pin in the opposite direction.

WARNING: The shaft unlocking mechanism must never be operated under load.

All 24V~ actuators can also be driven manually through an internal electric device; in such case power on the actuator, move CM1 switch onto MAN and act on the SW7 switch. This option is not available on MDL2./6.

ELECTRONIC BOARD



N3033 **FIG. 1**

2. STROKE ADJUSTMENT

The actuator is set for a 90° angular stroke. To select different strokes, it is necessary to calibrate the actuator:

- **mechanical calibration**: use the wrench inserted into the slot near the blue cam, by acting on:
  - the red cam to modify the initial stroke angle
  - the yellow cam to modify the end stroke angle

  For an easier cam positioning at the angular extremes, unlock the main shaft following the instructions at paragraph 1; once the cams adjustment has been carried out, bring the main shaft back to 0 of the outside position indicator and lock it by turning the pivot clockwise.
- **electrical calibration**: (MDL3./5. proportional actuators only), follow the instructions below:
  Move the CM1 switch onto MAN, power on the actuator and turn counter-clockwise the PR potentiometer shaft (Fig. 1) using a screwdriver up to its mechanical stop. Bring the actuator to the stroke end through the SW7 switch. Then:
  - move the SW4 jumper to 160 position, to select 160 stroke .
  - to select different strokes (minimum angular range 55°):
    - Move the SW4 onto VAR position
    - Put the actuator at initial stroke by SW7 switch
    - Connect a voltmeter between M and S2 terminals and operate on P1 trimmer until you read 0 V.

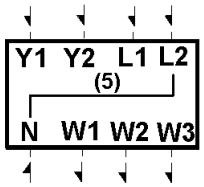
Put CM1 switch back to AUTO position.

3. ELECTRICAL CONNECTIONS

Carry out the electrical connections on the terminal board in compliance with existing rules and using max. 2.5 mm² section. For 230 V~ models (MDL2.), carry out the connections with power supply off and, if the actuator is connected, always power off before removing the cover.

To reverse the rotation direction: MDL2./4./6 actuators reverse the connections between Y1 and Y2
MDL3./5. actuators act on the SW3 jumper.

TERMINAL BOARD - MDL 2./4./6. (4) LEGEND



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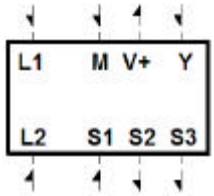
L1, L2 — Power supply

Control: Y1 Clockwise; N Common; Y2 Counter-clockwise

Potentiometer: W1, W2 Central, W3

TERMINAL BOARD - MDL 3./5. LEGEND



L1, L2 — Power supply

(1): M Common; V+ +15 V- output; Y Control signal (2)

(3): S3 10...0 V- o 200...0 uA; S2 0...10 V- o 0...200 UA; S1 Analogue common

(1) For the MDL3. model, connect the central of the controller's potentiometer (165 ohm) to Y terminal, a side connector to M terminal and the other to the V+ terminal.
(2) With jumper SW3 in A position, looking at the actuator from the power side, for increasing control signal, the shaft moves clockwise.
(3) Connect the eventual indicator with current input to terminals S3 (or S2) and S1 (max 200 uA).
Connect the eventual indicator with voltage input to terminal S3 (or S2) and M (max 2 mA).
The value of voltage (current) on extreme left corresponds to shaft in position 0°.
(4) The MDL2./4./6. actuator is supplied with L1 and L2 jumpered.
The power supply to the actuator is given by the controller through the control signal (between N-Y1 for clockwise rotation or N-Y2 for counter-clockwise rotation).
Manual control: available only on MDL4 actuator. To enable such control, remove the jumper between L1 and L2 and connect them to power supply. In this case the controller control has to come from contacts free from potential (clean contacts) connected between N-Y1 or N-Y2.
(5) Internally connected.

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