

# AUMA MATIC Operation Instructions



AUMA MATIC Compacts consist of motor controls, local controls (optional) and other control elements, which are required to operate an electric actuator

## Scope


These instructions are intended to cover the AUMA MATIC compact in both the C and S configuration with an AUMA interface board. These instructions are for general startup and basic troubleshooting

For calibration/setting of optional Electronic Positioner 601 or Pulse Timer, refer to the appropriate instructions.

## Electrical Connections

 **CAUTION:** Observe safety regulations.

- Verify that the motor and control voltages correspond with equipment supplied. Refer to the nameplate on motor and/or AUMA MATIC Compact.39
- Attach conduit or cables following approved practices.

 **CAUTION:** Appropriate conduit and sealing methods must be followed to ensure the NEMA rating for the enclosure furnished

- Connect field wiring according to wiring diagram supplied. If drawing is not available, contact the nearest AUMA office with the Sales Order Number located on the actuator nameplate. A replacement drawing will be provided.
- Actuator limit switches and optional RWG (position feedback transmitter), if supplied, should be set using appropriate setting instructions prior to proceeding.

The AUMA MATIC Compact contains a programmable logic board. The following DIP switch settings are made on the logic board. The factory has preset the logic board switches per the order requirements, if requested, prior to shipment.

### Dip Switch S1

**Position 1:** Limit switch seating in the closed direction.

**Position 2:** Torque seating in the closed direction.

**Note:** Limit switch closed must be set just prior to the torque seating position for closed indication or a fault will occur.

*Closed direction is clockwise output of electric actuator. For counter clockwise seating options consult factory.*

### Dip Switch S2

**Position 1:** Seal-in circuit remote close

**Position 2:** Seal-in circuit remote open

**Position 3:** Seal-in circuit local close

**Position 4:** Seal-in circuit local open

**Position 5:** Optional blinker switch off

**Position 6:** Torque switch included in collective fault signal

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## Test Run

- Switch selector switch to local position. If local control is not supplied, refer to electrical drawing for reference to local operation.
- Turn control switch or operate push-button in either open or close direction.
- If actuator fails to operate, access the interface board by removing cover and checking to see if the following LEDs are illuminated. An LED that is on signals a fault.

### V14 LED

- Motor (line power) phasing is incorrect. Reverse U1 and W1 at field connection terminals (3Ø only) or there may be a loss of phase. Check incoming 3Ø power.


### V15 LED

- Torque switch is tripped. Check torque switch settings. Declutch actuator and manually move to a different position to ensure smooth operation.

### V14 and V15

- Thermal switch in motor is tripped. Feel motor, and if hot, wait until it cools down, and try operation again. If motor continues to overheat or motor is cool and thermal switch is tripped, consult factory.
- Optional overload relay is tripped. Standard version is set in auto reset mode. The manual reset is located on top of the overload which can be accessed by removing the circuit board assembly.

### If LED's Are Not Illuminated, But Actuator Will Not Operate:

- No line power.
  - Check for loose connection.
  - Check for correct voltage at terminals U1, V1 and W1.
  - Check for correct capacitor connection (1Ø).
- Field jumpers are not correct.
  - Verify the field wiring matches electrical drawing supplied by AUMA.
- Fuses are open.
  -  **CAUTION:** Before Checking/replacing fuses, ensure all power is disconnected.
  - Remove selector switch/push-button cover. Primary fuse(s) are located in black fuse holders.
  - Secondary fuses are located on power supply board which can be accessed by removing the circuit board where the primary fuse(s) are located.

**Note:** Replace fuse(s) with same type and size. For fuse sizes, refer to appropriate service instruction.

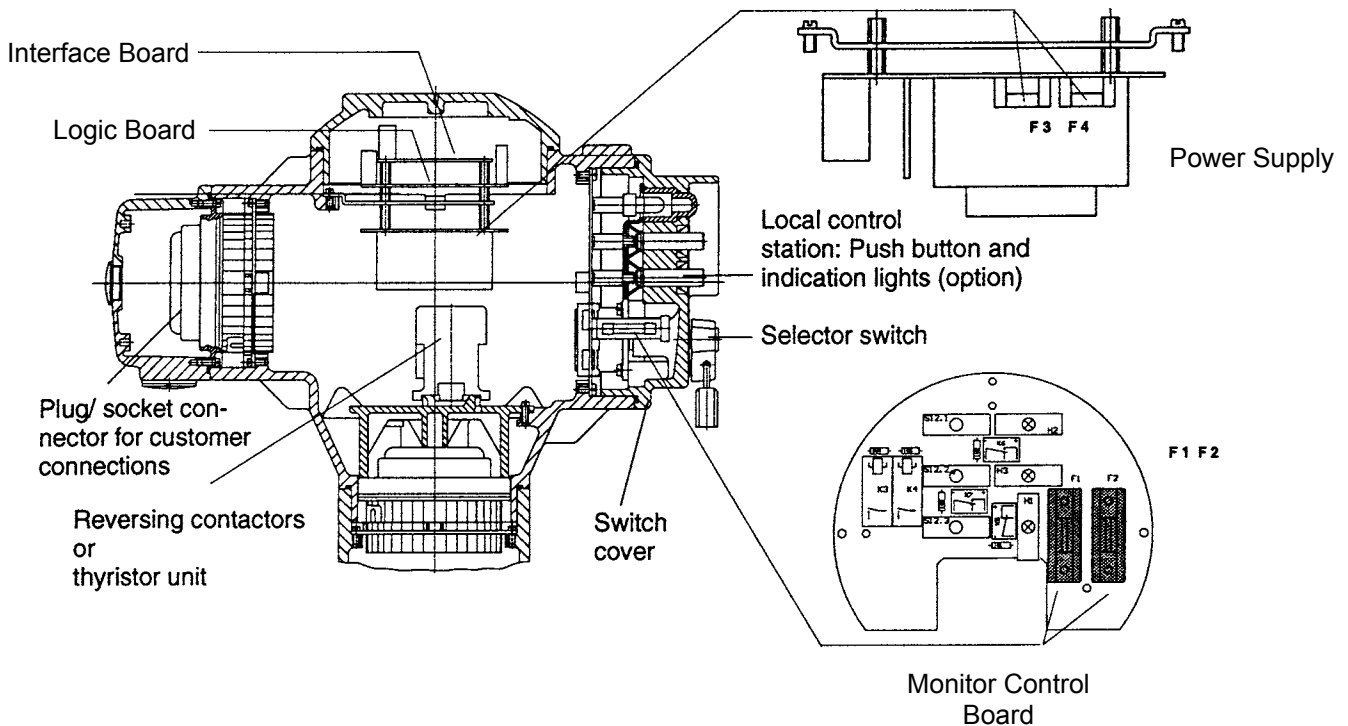
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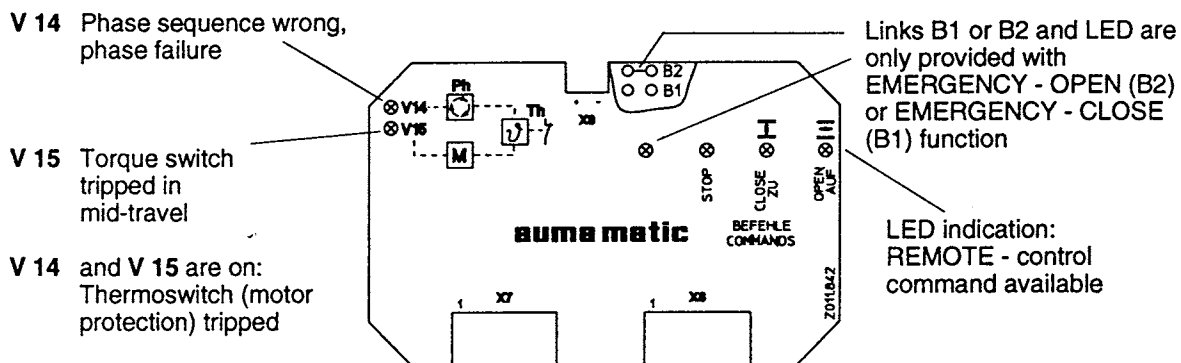
## Actuator Operates Automatically as Soon as Power is Applied

The AUMA MATIC with an interface board has an emergency override circuit which can be programmed to operate the actuator open or closed. Programming is accomplished by adding or removing the appropriate jumper at solder links B1 and B2--Jumper B1 for emergency closed, jumper B2 for emergency open.

Check the electrical drawing for correct emergency override circuit configuration. A normally closed contact in the override circuit will, upon opening, force the actuator to the pre-programmed position. When the contact returns to the normally closed position, the actuator will respond normally.



### Interface Board



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## Logic Board

### Programming

- Refer to Figure 1.
- The Logic Board has 3 sets of switches S1-2, S2-2 and S3-2.
- Switches S1-2 and S3-2 allow for either limit or torque seating in closed and open positions.

### Switch S1-2

- In position 1, the actuator is set for *limit* seating in the clockwise direction.
- In position 2 the actuator is set for *torque* seating in the clockwise direction.

### Switch S3-2

- In position 1, the actuator is set for *limit* seating in the counterclockwise direction.
- In position 2 the actuator is set for *torque* seating in the counterclockwise direction.

### Switch S2-2

Switch Position S2-2 "ON"	
S2.1	Remote seal in for clockwise
S2.2	Remote seal in for counter clockwise
S2.3	Local seal in for clockwise
S2.4	Local seal in for counter clockwise
S2.5	Blinker transmitter off
S2.6	Torque switch included in collective fault signal

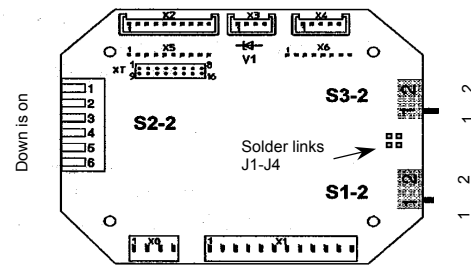


Figure 1

Also provided on the Logic Board are four solder links. When the soldered link is present on pads J1 and J3, the integral open and close lights on the Monitor Control board within the AUMA Matic will both be on in an intermediate valve position. When the soldered link is present on pads J2 and J4 the integral open and close lights on the Monitor Control board will both be off in an intermediate valve position.

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