



23PCV3 CONTROLLER

TROUBLESHOOTING:

The 23PCV3 is simple to troubleshoot. Most problems can be found using a meter at the controller in just a few minutes.

1. Transformer fuse blows: Indicates a problem with the contactor or valve coils, or the doors locked circuit when used. Use the ohmmeter to check between AC- and other terminals to locate the problem.
2. Board fuse blows: Indicates part of the control circuit has grounded, or shorted. Use the ohmmeter to check between - and other terminals to locate the problem.
3. Controller does not have power: Check for blown fuses. Check for proper power at AC+ and AC- (24 VAC) and + and - (24 VDC). If you have power at AC+ and AC- , the board fuse is good, but have no power at + and -, you have a blown trace or a bad bridge rectifier.
4. Car does not run: There are a multitude of reasons why the car will not run, most of which are external to the controller. First try running the car from the AC section of the controller as described in #8 above to rule out the motor, contactors, and valves. The easiest way to troubleshoot the DC logic section is to use the voltmeter. Set it to measure 24 VDC, and connect the common probe to -. Start checking terminals to verify you have power where you should. Verify power at each point before proceeding to the next. Below is a suggested order, and where to look if there is no power at the terminal:
 - + See #3 above
 - HS Hatch safety switches and wiring
 - CS Car safety switches and wiring
 - GC Gate switch, car stop switch, and wiring
 - DCL Door locks and wiring
 - CPC Low oil timer
 - CPH Non interference timer
 - RUN Inspection station wiring, or make sure jumper installed from DCL to RUN if no inspection

With floor relay in:

- UL2 Floor relay contact (3 & 2)
- LL2 Floor relay contact (1 & 2)
- UL1 Up terminal
- LL1 Down terminal
- U Up pilot relays contacts or coils, low oil timer.
- D Down pilot relays contacts or coils.

Leveling circuit:

- DZ Feed to DZ on leveling unit; DZ output
- LU Feed to LU on leveling unit (through DZ) , LU output on leveling unit
- LD Feed to LD on leveling unit (through DZ) , LD output on leveling unit
- Check diodes D3, D4, D5, D6 if power at LU or LD but no further action
- Check DZ contacts if leveling does not work with doors open

5. Car travels wrong direction to intermediate landing: check for continuity between 2L01 and 2LO2 when car is at intermediate floor.
6. Gate operation: There will always be a gate close signal, unless the car is not running and is in the door zone. Check the G and DZ relays, and diodes D7 & D8.

CM-001 23PCV3b Controller

These suggestions are simply a guide to developing troubleshooting procedures. They are not a replacement for skill required to properly install and maintain complex elevator control systems. Only qualified elevator personnel should attempt to install, troubleshoot or repair elevator control systems. If you have any questions regarding this control system, please contact us.

23PCV3 CONTROLLER DESIGNATIONS

CONTROL RELAYS: (Terminals that match relay designations indicate the same function)

U1 & U2	Up pilot
D1 & D2	Down pilot
UP	Up direction
DN	Down direction
UC	Up contactor
DC	Down contactor
1/2/3	Call relays
2UD	Direction selection latching relay
NITR	Non interference timer relay - from NIT timer
LOT1 & 2	Low oil timer relay - from LOT timer
DCR	Doors closed
RC	Retiring cam relay
DZ	Door Zone relay

Gate control relays:

O	Gate open relay
C	Gate close relay
SE	Safe edge relay
S	Front/rear selector relay

Other terminal designations:

+	24 VDC control power supply - for logic
-	24 VDC control power common
24AC+	24 VAC control power supply - for contactors and valve coils
24AC-	24 VAC control power common
HS	Hatch safety string
CS	Car safety string
GC	Gate closed
DCL	Door closed
DL	Door locked
CPC	Control power car
CPH	Control power hall
LU	Level up
LD	Level down
LL1 & 2	Lower terminal limit
UL2 & 2	Upper terminal limit
1L	Lower floor switch (connect with 1)
2L	Intermediate floor switch (connect with 2)
3L	Upper floor switch (connect with 3)
2LO1 & 2	Intermediate floor switch open contact
DBZ	Door buzzer
OP	Gate open signal
CL	Gate close signal
RUN	Run - not on inspect