



Model A2081-9027 Isolated Loop Circuit Protector Installation Instructions

GENERAL

The Autocall Model A2081-9027 protects Autocall building system equipment from electrical transients induced on wire runs that are external to the building.

Model A2081-9027 will protect most Autocall low voltage circuits, but is *not* compatible with:

- AC input power.
- DC power to BT/FABT Transponders.
- RS232 Communication.
- Video Signals.
- All signal lines which would be degraded by 6 ohms per line of added resistance.
- Any signals which exceed the operating specifications listed below.

Specifications

Maximum operating voltage (for voltage breakdown range, see chart below):

38VDC, 27VAC RMS line to line
45VDC, 35VAC RMS line to ground

Maximum operating current:

200 mA

Series Resistance:

3 Ohms per line (6 Ohms per protector)

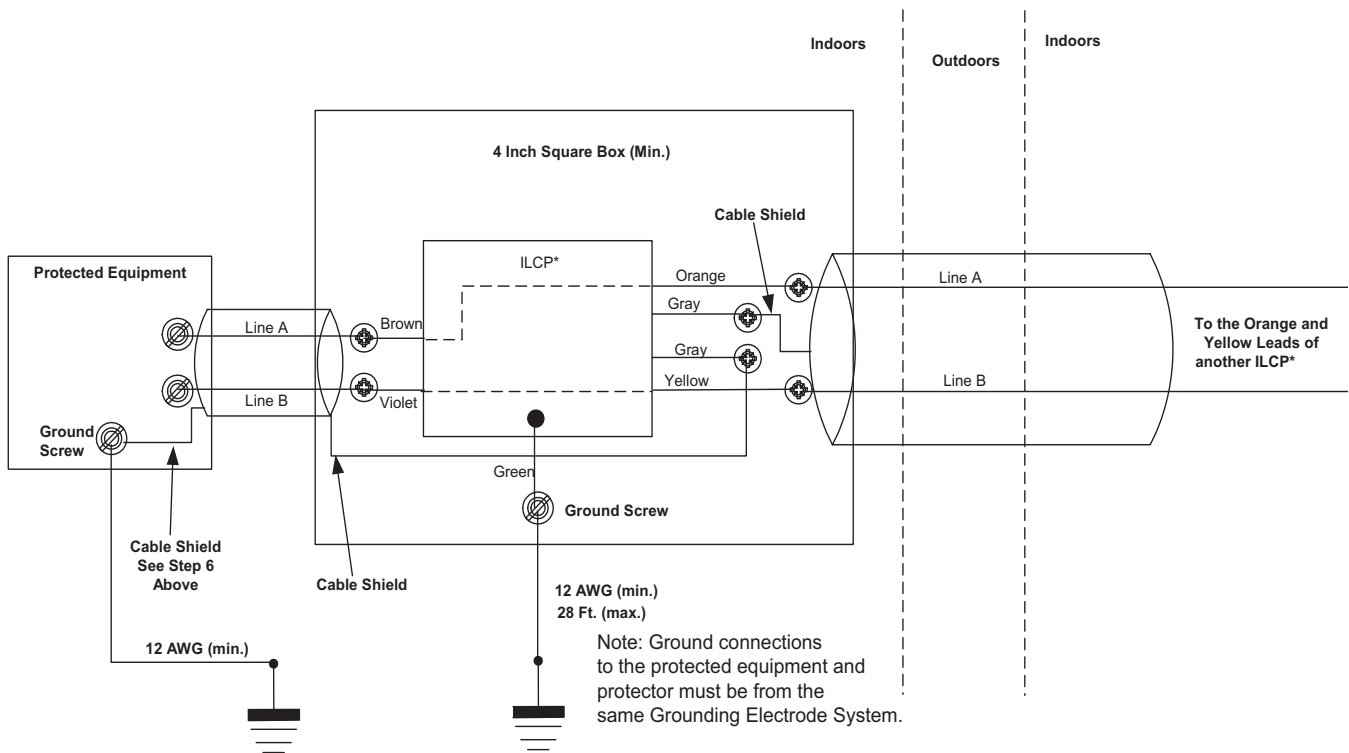
VOLTAGE BREAKDOWN RANGE (PER UL 497B)

	LINE-GROUND	LINE-LINE	SHIELD-GROUND
STRIKE (100V/S)	40 - 70V	40 - 60V	70 - 110V
SURGE (100V/uS)	90 - 350V	100 - 360V	300 - 450V

INSTALLATION PROCEDURE (See illustration on next page)

- PER UL 497B LISTING REQUIREMENTS: The external wiring must be confined to a one block area containing the building of origin. The wiring must also be installed in such a manner that there is no possibility of accidental contact (by failure of supports or insulation) with electric light or power conductors operating at over 300V peak to ground.
- For optimum protection, install the A2081-9027 apart from the protected equipment and as close as practical to the point where the circuit leaves or enters the building.
- Protected and unprotected wiring must not share the same conduit.

1. Mount the protector in a 4 in. (10.16 cm) or larger square box.
 - At least 2 in. (5.08 cm) distance must separate the “in” from the “out” conduit.
2. Cut the protector’s GREEN lead as short as possible and tie it to the mounting box with a standard grounding screw.
3. Bond the box containing the protector to the Building Grounding Electrode System.
 - Use 12 AWG (3.309 mm²) or larger solid copper wire.
 - The ground wire’s length must not exceed 28 ft. (8.6m)
 - Bends in the ground wire of less than 2 in. (5.08 cm) radius are *not* permitted.
 - If enclosed in metal conduit, the ground wire must be bonded to the conduit at both ends.
4. A. Connect the protector’s BROWN and VIOLET leads to the lines coming from the protected equipment.
 - B. Connect the protector’s ORANGE and YELLOW leads to the lines going out of the building.
 - C. Connect one of the protector’s GRAY leads to one of the cable shields. Then connect the remaining GRAY lead to the other shield.
5. At the protector, dress the input and output cables as far apart as possible (no less than 2 in. [5.08 cm] distance must separate the two cables).
6. At the signal source, connect the cable shield to the cabinet’s ground screw. The following represent signal sources:
 - 2120 BMUX for communication lines
 - Transponder or fire alarm panel for alarm initiating or signal circuits.



*A2081-9027 Protector