

INDOOR/OUTDOOR INSTALLATION & OPERATING INSTRUCTIONS MAX[®] SERVICE ENTRANCE PROTECTOR

DESCRIPTION

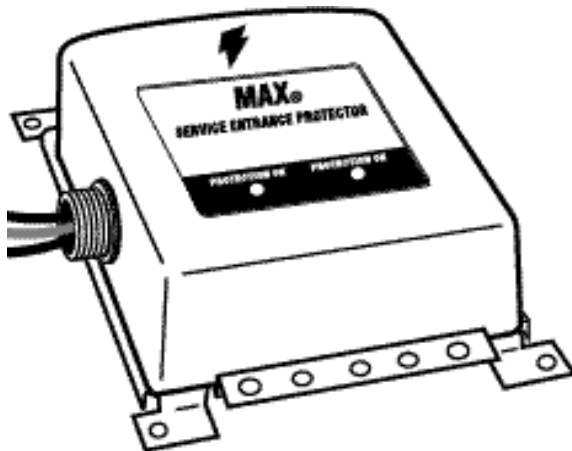
AC surge protector permanently connected to main service panel. MAX[®] SERVICE ENTRANCE PROTECTOR features a compact chassis, visible and audible diagnostics, easy installation and a five-year warranty (see back page).

Features 120/240 V, 1 Phase, 2 wire plus ground.

APPLICATION

Max service entrance protects against electrical surges that can cause damage to electric and electronic equipment. Catastrophic failures and gradual component degradation can be caused by high voltage surges, which are generated by harsh weather conditions, external power problems, or day-to-day electrical component switching.

The MAX[®] SERVICE ENTRANCE PROTECTOR will protect electrical equipment against surges caused by the above factors. Panamax also recommends using secondary plug-in protectors at the equipment you would like to protect.



⚠ SAFETY CONSIDERATIONS

A licensed electrician must install the MAX[®] SERVICE ENTRANCE PROTECTOR. Installation must follow applicable electrical codes. Failure to follow installation instructions may result in personal injury, equipment damage and invalidation of the warranty.

Your electrical system must be grounded per Article 250 of the NEC. Surge protection works best when a secure ground is established. Check grounding before restoring power.



CAUTION:
When installing or removing this protector from service, disconnect power. Failure to do so may result in equipment damage, serious injury or death.

MOUNTING INSTRUCTIONS

Install the MAX[®] SERVICE ENTRANCE PROTECTOR according to local electrical codes, or using instructions below. **Lead lengths must be as short as possible to keep voltage drop to a minimum. Trim excessive length to minimize wire impedance to the surge protector.** In the event of lightning or other power transients, a one-foot reduction of lead length can result in a decrease of 100 volts or more across leads.

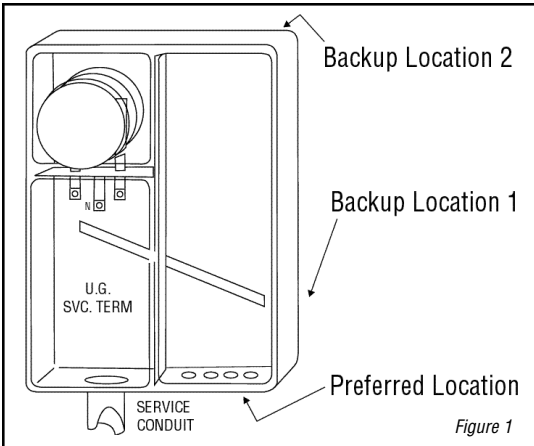


Figure 1

Use a threaded nipple or thin-wall conduit to connect the MAX[®] SERVICE ENTRANCE PROTECTOR to the service panel. Feed the wires through into the conduit and into the panel.

Using the screw holes on the back plate corners, mount MAX[®] SERVICE ENTRANCE PROTECTOR as close as possible to the service panel (Figure 2).

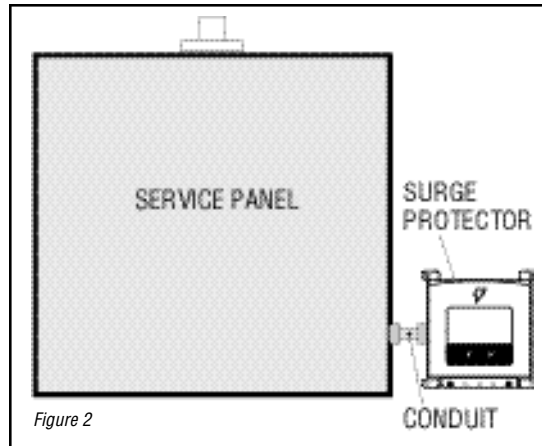


Figure 2

Back Mounting

For back mounting, use pull-through elbow conduit(s) and additional conduit sections as needed.

(Figures 3 & 4).

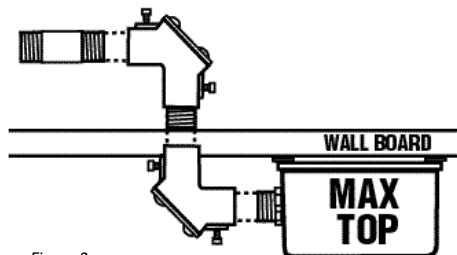


Figure 3

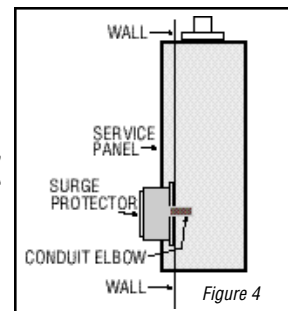


Figure 4

INSTALLATION BEFORE THE MAIN DISCONNECT

WARNING: REMOVE THE METER OR OTHERWISE DISCONNECT THE AC POWER BEFORE BEGINNING THE INSTALLATION!!!

USE A TEST LAMP TO CONFIRM THAT THE POWER HAS BEEN REMOVED!!

The MAX[®] SERVICE ENTRANCE PROTECTOR is UL Listed for installation either before or behind the main service disconnect. Proper installation before the service disconnect usually provides better protection (lower limiting voltage) than installations behind the service disconnect. The mechanical installation to the meter pan or meter side of the service panel is as described in figures 1-3, as close as possible to the wiring between the meter and the service disconnect.

CONNECTIONS:

1. The 3 MAX[®] SERVICE ENTRANCE PROTECTOR wires should be connected to the points "B" in figure 5. The connections can be made at the meter socket or on the wiring to the main disconnect.
2. Connect the MAX[®] SERVICE ENTRANCE PROTECTOR green (ground) wire to the service raceway, the panel ground bus, or any other part of the grounding electrode system. The ground wire should be kept as short as possible.
3. Connect the 2 MAX[®] SERVICE ENTRANCE PROTECTOR black wires to the two phase terminals of the metersocket or to the conductors to the disconnect. An insulated tap connector such as ILSCO KUPLER IPC 4/0-#6 is a fast and easy way to connect the black (phase) wires to the service conductors.
4. Check the connections!
5. Replace the meter, or turn the AC power switch back on. The two green lights on the MAX[®] SERVICE ENTRANCE PROTECTOR should come on, confirming that the connections are correct and there is power to both phases.

INSTALLATION AFTER THE MAIN DISCONNECT

1. The MAX[®] SERVICE ENTRANCE PROTECTOR should be installed by a qualified electrician.
2. Turn "OFF" and lock out the power to the enclosure in which the MAX[®] SERVICE ENTRANCE PROTECTOR is to be installed.
3. Connect the green wire to the ground bus or connector.
4. Install the appropriate 2 pole, 30 ampere (or larger) circuit breaker or lug kit (See table) to the panelboard or meter combination device. If a sub-feedlug kit is available, it is a better and more economical connection than a breaker.
5. Connect the black leads to the load terminals of the circuit breaker or lug kit and tighten to the required torque.
6. Double check connections, then reconnect power.
7. When both LEDs are on, the protector is functioning as desired.

Figure 5

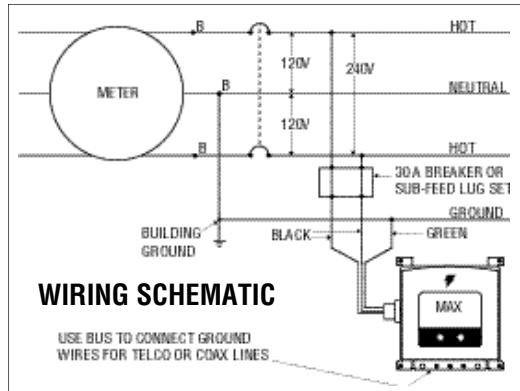
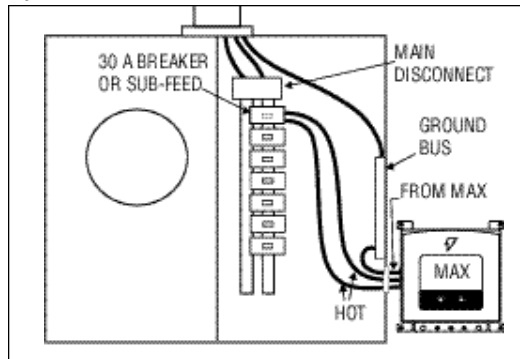


Figure 6



RECOMMENDED BRANCH CIRCUIT BREAKER

If your panel is:	Manufacturer	Catalog Number
SIEMENS / GOULD / ITE	SIEMENS	Q230
ITE PUSHMATIC	SIEMENS	P230
MURRAY / CROUSE-HINDS SEARS	MURRAY	MP230
GE	GE	THQL2130
SQUARE D QO	SQUARE D	QO230
SQUARE D HOMELINE	SQUARE D	HOM230
CUTLER-HAMMER CH	CUTLER-HAMMER	CH230
CUTLER HAMMER BR CHALLENGER SYLVANIA / WESTINGHOUSE	CUTLER HAMMER	BR230
THOMAS & BETTS / BRYANT	THOMAS & BETTS	TB230

Panamax, MAX® Service Entrance Protector Five-Year Product Warranty

Panamax warrants to the original owner of the MAX® Service Entrance Protector, for five years following the date of purchase of the protector, that the surge protector shall be free of defects in design, material, or workmanship, and Panamax will repair or replace any defective unit. For product replacement see "NOTIFICATION" below.

Panamax Three-Year Connected Major Appliance Protection Policy

Valid only in the United States and Canada

It is the policy of Panamax that it will, in its sole discretion, replace, pay to replace at fair market value, or pay to repair, up to an aggregate total of \$10,000, if the major household appliance, as defined herein, is damaged by an AC power or lightning surge during the three-year period from the protector's date of purchase. Panamax must determine that the MAX® Service Entrance Protector shows signs of surge damage or is operating outside of design specifications, relative to its surge protection capability, and under all of the circumstances failed to protect your connected appliances.

Original owner is defined as: either the original purchaser of the MAX® Service Entrance Protector or the first homeowner to reside in the residential household with the MAX® Service Entrance Protector installed.

Major household appliances are defined as the following household loads: refrigerator, freezer, oven, range, washer, dryer, ceiling fan or dishwasher.

THIS POLICY IS SUBJECT TO THE CONDITIONS BELOW:

1. PROPER INSTALLATION: A licensed electrician must install the MAX® Service Entrance Protector. Building wiring, grounding and other electrical connections must conform to applicable codes (NEC for USA or CEC for Canada). Panamax installation instructions and diagrams must be followed.

2. NOTIFICATION: You must notify Panamax within ten days of any event precipitating a request for product replacement or payment for connected appliance damage. At this time, you must notify Panamax if you believe you have a claim for damaged appliances. A return merchandise authorization (RMA) number must first be obtained from the Panamax Customer Relations Department at www.panamax.com/support * or toll-free at 1-800-472-5555 before returning the protector to Panamax.

Have a licensed electrician remove the protector from the building circuitry. A connection diagram of your system will be required as part of the claim kit. Be sure to have the electrician make a diagram of its configuration before disconnecting your equipment.

Once you obtain an RMA number, mark the number on the bottom of the unit and pack it in a shipping carton/box with enough packing material to protect it during transit. The RMA number must also be clearly marked on the outside of the carton. Ship the unit to Panamax. Please note that you are responsible for any and all charges related to both the electrician's services and shipping the unit to Panamax.

If appliance damage was indicated on your RMA request, Panamax will, upon receipt of your surge protector, mail you a claim kit to be completed and returned within 30 days.

3. DETERMINATION OF FAILURE: Panamax will evaluate the protector for surge damage. The Panamax protector must show signs of surge damage or must be performing outside (>10%) of design specifications relative to its surge protection capability. Opening the enclosure, tampering with, or modifying the unit in any way shall be grounds for an automatic denial of your request for payment. Panamax, after evaluating all information provided, shall, in its sole discretion, determine whether or not your request is eligible for payment.

If the protector shows no signs of AC surge damage and is working within design specifications, Panamax will return the unit to you with a letter explaining the test results and notifying you of the rejection of your claim. Exception: If a dealer or installer replaces the protector for the customer, the unit will be returned to the dealer or installer.

Panamax reserves the right to inspect the damaged parts or circuit boards of your connected appliances. Please note that you are responsible for any and all charges related to shipping the damaged equipment to Panamax. Panamax also reserves the right to inspect the customer's facility. Damaged equipment deemed uneconomical to repair must remain available for inspection by Panamax until the claim is finalized.

4. REQUEST PAYMENTS: Once Panamax has determined that you are entitled to compensation, Panamax will, at its election, pay you the present fair market value of the damaged equipment, or pay for the cost of the repair, or send you replacement equipment.

5. OTHER INSURANCE/WARRANTIES: This coverage is secondary to any existing manufacturer's warranty, implied or expressed, or any insurance and/or service contract that may cover the loss.

6. EXCLUSIONS: THE PANAMAX CONNECTED EQUIPMENT PROTECTION POLICY DOES NOT APPLY TO: Service charges, installation costs, reinstallation costs; setup cost; diagnostic charges; periodic checkups; routine maintenance; loss of use of the product; costs or expenses arising out of reprogramming or loss of programming and/or data; shipping charges or fees; service calls; loss or damage occasioned by fire, theft, flood, wind, accident, abuse or misuse, and products subject to manufacturer's recall or similar event.

7. DISPUTE RESOLUTION: Any controversy or claim arising out of or relating to Panamax's Connected Equipment Protection Policy, or the alleged breach thereof, shall be settled by arbitration administered by the American Arbitration Association under its Commercial Arbitration Rules. You may file for arbitration at any AAA location in the United States upon the payment of the applicable filing fee. The arbitration will be conducted before a single arbitrator, and will be limited solely to the dispute or controversy between you and Panamax. The arbitration shall be held in any mutually agreed upon location in person, by telephone, or online. Any decision rendered in such arbitration proceedings will be final and binding on each of the parties, and judgment may be entered thereon in a court of competent jurisdiction. The arbitrator shall not award either party special, exemplary, consequential, punitive, incidental or indirect damages, or attorney's fees. The parties will share the costs of arbitration (including the arbitrator's fees, if any) in the proportion that the final award bears to the amount of the initial claim.

8. GENERAL: If you have any questions regarding the product warranty or the connected equipment protection policy, please contact the Panamax Customer Relations Department at www.panamax.com/support or toll-free at 1-800-472-5555. This warranty supersedes all previous warranties. This is the only warranty provided with the protector and any other implied or expressed warranties are non-existent. This warranty may not be modified except in writing, signed by an officer of the Panamax Corporation.

* Forms are available on the Panamax web site for requesting RMAs and opening a claim for connected equipment damage.

Effective Date 2/03

Rev. D

Q01L0014

INS8002 REV. B 2/03