



SELF-CONTAINED RELAYS (OUTDOOR)

LMR-1PS LOAD MANAGEMENT RELAY

FORMERLY THE LMR-1

DESCRIPTION

The LMR-1PS Load Management Relay provides three isolated solid state dry contacts from a single Form C input. All three sets of contacts are configured as Form C (K, Y, & Z) contacts. The first set of contacts is available for the customer's use. The remaining two sets are designed for utility use. In addition, the LMR-1 has provisions for making utility control signals — such as end-of-interval (EOI), load control, etc. — conveniently accessible for customer use. The typical application of the LMR-1 is the utilities' interface between the KWH meter and data or load profiles recorder and a customer-owned energy control system. The LMR-1PS includes everything necessary to provide a customer with energy pulses and control signals in one compact ready-to-use weather-resistant enclosure.



The LMR-1PS is internally divided into two compartments. Once installed, the upper compartment is normally locked and only accessible to utility metering personnel. It contains all of the electronics along with fusing that is coordinated with the fuse contained within the customer compartment. The lower compartment (customer compartment) contains a terminal strip, fusing, and output status LEDs. A switch allows utility load control signals to be temporarily disconnected for service or simulated for testing. The red and green LEDs light alternately upon changes of the KYZ input status.

The use of LEDs in the customer's compartment allows a rapid visual check of the system's performance by inexperienced personnel without requiring any additional test equipment. Because of the redundant, coordinated fusing in both the utility's and customer's compartments, the meter shop service coordinator can usually determine the location of the service problem as to either utility or customer responsibility by the simple question "are the LEDs flashing?" The double "K" lead coordinated fusing of the LMR-1PS's output will prevent damage to the relay under almost any condition a user might cause such as that caused by excessive current, incorrect wiring, etc. The LMR-1PS' robust solid state switching device is rated at 800V and 750mA giving maximum protection from lightning or transient voltage damage. The LMR-1PS has built-in transient protection for the solid state switching devices that eliminates the need for external or off-the-board transient suppressors.

FUNCTIONAL SUMMARY

| | IN | OUT |
|------|--------|--------|
| # | 1 | 3 |
| TYPE | 3 Wire | 3 Wire |
| FORM | C | C |

#

TYPE

FORM

LMR-1PS



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SPECIFICATIONS

ELECTRICAL

| | |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Input: | 120, 208-277 VAC. Burden: 10 mA at 120 VAC |
| Pulse Input: | One Form C (3-wire) input with +13VDC wetting voltage on the K terminal |
| Pulse Output: | Three Form C dry contact solid state outputs, one in the customer's compartment and two in the utility compartment. The contacts are solid-state "no bounce" relays rated at 250VACVDC at 1/2 Amp. The maximum rating of the contacts is 100 VA. Factory fused at 1/2 amp. (3AG) |
| Contact On-State Resistance: | 2.3 ohms maximum, 1.7 ohms typical |
| Insulation Resistance: | 50 megohms typical |
| Operate and Release Time: | Turn-on time - 8 mS typical, 20mS MAX Turn-off time - .15 mS typical, 5mS MAX |
| Input/Output Isolation Voltage: | 2500Vrms |

MECHANICAL

| | |
|----------------|-----------------------------------|
| Mounting: | Any position |
| Size: | 9.0" wide, 11.0" high, 4.50" deep |
| Weight: | 9 pounds |
| Type/Material: | NEMA 4X Fiberglass Case |

TEMPERATURE

| | |
|--------------------|---------------------------------------|
| Temperature Range: | -38° C to +85° C, -36.4° F to +158° F |
| Humidity: | 0 to 98% non-condensing |

OPTIONS

| | |
|-----------------|----------------------|
| Input Voltages: | 24 VAC/24VDC, 125VDC |
|-----------------|----------------------|

LMR-1PS