



# LMR-1

## LOAD MANAGEMENT RELAY

The LMR-1 load management relay provides three isolated “dry”, mercury-wetted sets of contacts from a single Form “C” input. All three sets of contacts are configured as “Form C” (K, Y, & Z) contacts. The first set 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 (end of interval, load control, etc.) conveniently accessible for customer use. The typical application of the LMR-1 is the utility’s interface between the KWH meter & data or load profile recorders, and a customer-owned energy control system. The LMR-1 provides in one compact ready-to-mount case everything necessary to provide a customer with energy pulses and control signals in one box.



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

The use of the 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 responsibility or customer responsibility by the simple question “Are the LEDs flashing?” The double “K” lead coordinated fusing of the LMR-1’s output will prevent damage to the relay under almost any conditions a user might cause such as excessive current, incorrect wiring, etc. The LMR-1 has built-in transient protection for the mercury-wetted relay’s contacts which eliminates the need for external or off-the-board transient suppressors.

### SOLID STATE INSTRUMENTS

a division of Brayden Automation Corp.

6230 Aviation Circle, Loveland, Colorado 80538

Phone: (970) 461-9600 Fax: (970) 461-9605 E-mail: [sales@solidstateinstruments.com](mailto:sales@solidstateinstruments.com)

# LMR-1 SPECIFICATIONS

## ELECTRICAL

Power Input: 90 to 325 VAC. Burden: 10 MA. at 120 VAC

Output: Two sets of "dry" Form "C" contacts (K, Y, & Z) for energy pulses. The contacts are mercury-wetted "Three sets of "Form C" contacts (K, Y, & Z), one set located in the customer's compartment and two sets located in the utility's compartment. The contacts are mercury-wetted "no bounce" relays rated at 500 VDC or 350 VAC 2 Amps. break, 5 amps carry. The maximum rating of the contacts is 100 VA. Factory fused at 1/2 amp (3AG).

Sense Voltage: +13VDC

Contact Resistance: 50 milliohms maximum, 12 to 14 typical

Insulation Resistance: 50 megohms typical

Operate and Release Time: 2.5 milliseconds typical operate; 3.0 milliseconds typical release

## MECHANICAL

Mounting: Within 30 degrees of vertical

Size: 9.00 inches wide, 11.00 inches high, 4.50 inches deep

Type/Material: : NEMA 4X Fiberglass Enclosure

Weight: 9.5 pounds

## TEMPERATURE

Temperature Range: -38° C to +70° C, -36.4° F to +158° F

Humidity: 0 to 98% non-condensing

## OPTIONS

Input Voltages: Contact Factory



Solid State Instruments  
6230 Aviation Circle  
Loveland, CO 80538

(970) 461-9600 • (888) 272-9336  
FAX (970) 461-9605  
email: [info@solidstateinstruments.com](mailto:info@solidstateinstruments.com)  
[www.solidstateinstruments.com](http://www.solidstateinstruments.com)

Local Representative