



LEVEL TRANSMITTERS

Lightning and Secondary Surge Protection for AMETEK PMT Level Measurement System

FEATURES

- ◆ Protection for the LevelMate, Model DMC Meter, Model 550, and Model 575 Transmitters
- ◆ Nanosecond, bipolar response
- ◆ AC and DC protection available
- ◆ Powerful surge protection
- ◆ Small, compact size
- ◆ New or existing installation
- ◆ Enhances system integrity
- ◆ Reduces downtime
- ◆ Maintenance free



LIGHTNING AND SECONDARY SURGE PROTECTORS FOR LEVEL MEASUREMENT SYSTEMS

DESCRIPTION

Lightning protection units are available to help protect your AMETEK U.S. Gauge, PMT Products Level Measurement System from unexpected lightning and secondary surges.

These high performance LP units are easy to install, are maintenance-free and respond in less than one nanosecond. When placed at the meter and at the transmitter, they defend against powerful surges on both the signal and power lines.

If a surge should occur, the LP unit will clamp the circuit, preventing excessive voltage from damaging your sensitive equipment. This saves you replacement and downtime costs.

Lightning and Secondary Surge Protection

ORDERING INFORMATION

PART NO. LMA912

Used in the transmitter excitation/signal lines and the meter analog output lines to protect the meter and/or the transmitter.

SPECIFICATIONS 30 VDC PROTECTOR

1. For protection of equipment against lightning and surges.
2. For use on a pair of wires with a 24 VDC supply.
3. Combines a fast acting zener clamp as well as a spark discharge tube for optimal protection.
4. The Line side and Equipment side common returns are isolated from each other. These may be tied together if desired.
5. Response time: Instantaneous.
6. Maximum surge current rating: 15,000 amp, 8 x 20 μ s wave; 750 amp, 10 x 1000 μ s wave.
7. Clamping voltage: Starts at 30 volts. As surge current increases the clamping voltage will increase up to a point where at 50 amperes of surge current the clamping voltage drops to approximately 20 volts. The 20 volts is maintained for any current value until the surge passes and the protector automatically restores.
8. The in-line impedance of the protector is 10 ohms.

PART NO. LMA918

Used in the 115 VAC power input to protect the meter.

SPECIFICATIONS 120 VAC SINGLE PHASE PROTECTOR

1. For protection of equipment against transients caused by lightning, switching and EMP.
2. A gapless 3 wire secondary arrester for use on 120V RMS, Single Phase, 50/60 Hz circuits of unlimited power rating.
3. Consists of an MOV matrix, providing optimal protection for any possible fault condition.
4. Voltage rating:
Nominal 120V RMS
Maximum 150V RMS
Protection is equally provided between any 2 wires,
black and white
black and green
white and green
5. Joule rating: 1000 joules minimum
6. Response time: Instantaneous
7. Bipolar operation, same performance in either polarity of surge.
8. Discharge (clamp) voltage between any 2 wires of arrester:

@1.5 kA 8 x 20 μ s	460V maximum
5 kA 8 x 20 μ s	520V maximum
10 kA 8 x 20 μ s	600V maximum
15 kA 8 x 20 μ s	650V maximum
9. Surge life, operations between any 2 wires of arrester:

@1.5 kA 8 x 20 μ s	3500 minimum
3 kA 8 x 20 μ s	750 minimum
100A 10 x 1000 μ s	3500 minimum
10. Power follow current: None
11. Power consumption: None
12. Extreme duty 8 x 20 μ s wave: 25kA between any 2 wires of arrester

PART NO. LMA919

Used in the 230 VAC power input to protect the meter.

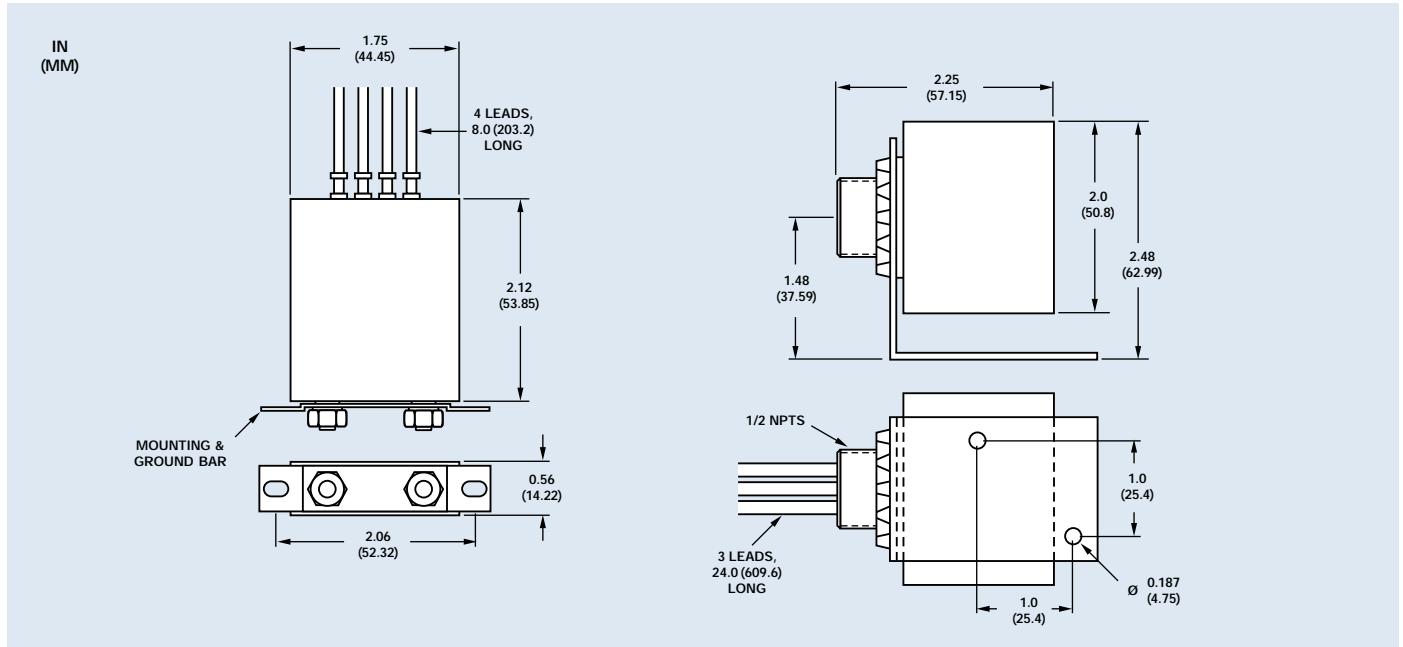
SPECIFICATIONS 220 VAC SINGLE PHASE PROTECTOR

1. For protection of equipment against transients caused by lightning, switching and EMP.
2. A gapless 3 wire secondary arrester for use on 220V RMS, Single Phase, 50/60 Hz circuits of unlimited power rating.
3. Consists of an MOV matrix, providing optimal protection for any possible fault condition.
4. Voltage rating:
Nominal 220V RMS
Maximum 250V RMS
Protection is equally provided between any 2 wires,
black and white
black and green
white and green
5. Joule rating: 1000 joules minimum
6. Response time: Instantaneous
7. Bipolar operation, same performance in either polarity of surge.
8. Discharge (clamp) voltage between any 2 wires of arrester:

@1.5 kA 8 x 20 μ s	690V maximum
5 kA 8 x 20 μ s	770V maximum
10 kA 8 x 20 μ s	900V maximum
15 kA 8 x 20 μ s	975V maximum
9. Surge life, operations between any 2 wires of arrester:

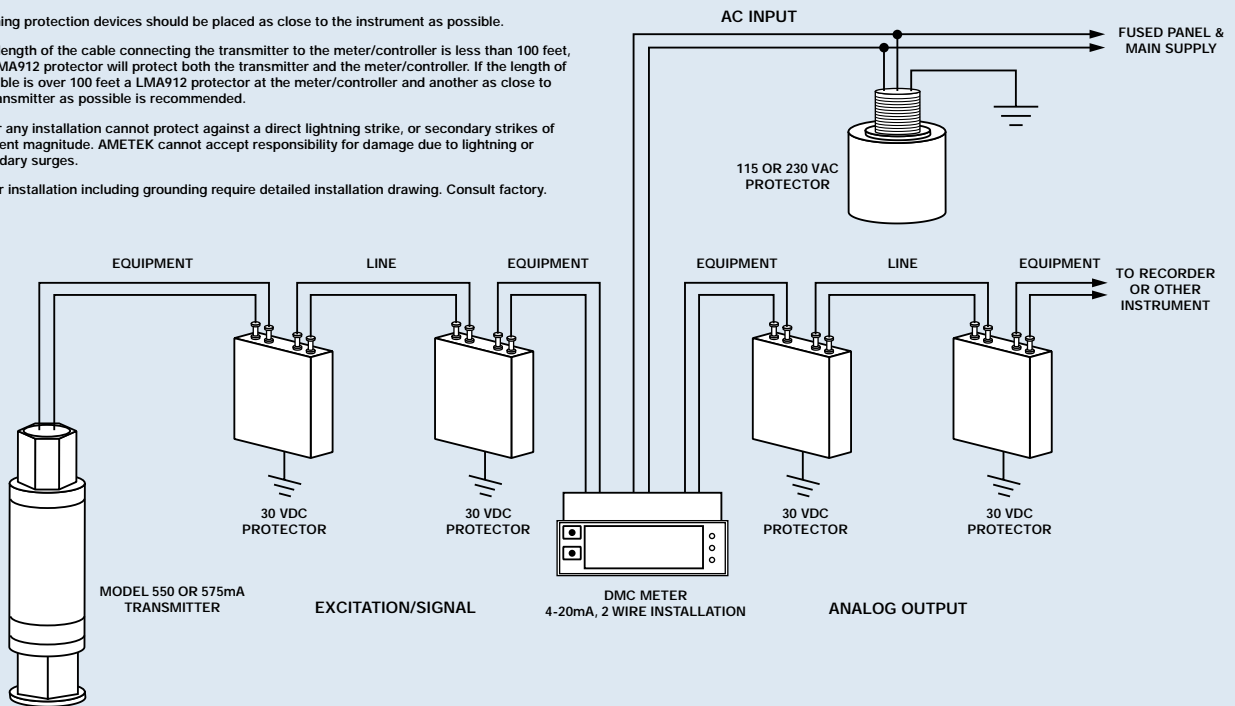
@1.5 kA 8 x 20 μ s	3500 minimum
3 kA 8 x 20 μ s	750 minimum
100A, 10 x 1000 μ s	3500 minimum
10. Power follow current: None
11. Power consumption: None
12. Extreme duty 8 x 20 μ s wave: 25kA between any 2 wires of arrester

DIMENSIONS



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

- Lightning protection devices should be placed as close to the instrument as possible.
- If the length of the cable connecting the transmitter to the meter/controller is less than 100 feet, one LMA912 protector will protect both the transmitter and the meter/controller. If the length of the cable is over 100 feet a LMA912 protector at the meter/controller and another as close to the transmitter as possible is recommended.
- This or any installation cannot protect against a direct lightning strike, or secondary strikes of sufficient magnitude. AMETEK cannot accept responsibility for damage due to lightning or secondary surges.
- Proper installation including grounding require detailed installation drawing. Consult factory.





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