Larson Electronics LLC
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MOD-RLY-PHM-3PH-120V-5A-DPDT

3-Phase Monitoring Relay - 120V AC - 5A DPDT Switch - Phase Loss/Sequence/Voltage Monitoring

Product ID: 342441

Please see last page for supporting documentation for this product (certificates, CAD files & drawings, IES files, wiring diagrams, etc).



Image: MOD-RLY-PHM-3PH-120V-5A-DPDT

Larson Electronics LLC manufactures a wide variety of products, including custom built to spec designs. The pictures displayed for this unit are a general representation of form factor for the product line and may not accurately represent this exact configuration in every detail due to custom builds and changes between similar products in our standard catalog. The specifics for this configuration are listed in the specification table and supporting documentation (CAD files, Dimensional Drawing, Name Plate Diagram, Wiring Diagram, etc.). This means that specific details (receptacles, plugs, wires, connections, mounting brackets, external finishes, etc.) may not be accurately represented in images vs specifications. Please review specifications and do not order based solely on images.

MOD-RLY-PHM-3PH-120V-5A-DPDT Explosion Proof

Relay Type: Multifunction 3-Phase Monitoring Relay

Monitoring Functions: Phase Loss, Phase Sequence, Asymmetry, Overvoltage & Undervoltage Protection
Nominal Voltage: 120V AC, 3-Phase
Voltage Monitoring Range: 90-130V AC (typical)
Supply Voltage Limits: 95-140V AC (typical)
Nominal Frequency: 50/60 Hz ±10%
Undervoltage Adjustment: -12% to -2% of Nominal Voltage
Overvoltage Adjustment: +2% to +10% of Nominal Voltage
Asymmetry Threshold Adjustment: 5-15% of Nominal Voltage
Voltage Detection Threshold: <106V AC (typical)
Output Contacts: (2) C/O Contacts (DPDT)
Max Switching Voltage: 250V AC / 250V DC
Max Switching Current: 5A AC / 5A DC
Minimum Switching Current: 10mA @ 5V DC
Switching Capacity: 1250 VA
Time Delay: Adjustable 0.1-10 Seconds
Response Time: <200 ms
Reset Time: 500 ms

Ratings/Approvals

Certifications: UL, CSA, CE, GL, GOST, C-Tick
Standards: IEC 60255-1, IEC 60947-5-1, IEC 61000-6-2/3/4

Power-Up Delay: 650 ms
Measurement Cycle: 140 ms True RMS
Measurement Accuracy: <1% Across Full Range
Repeat Accuracy: 0.3% Time Delay / 0.5% Measurement Circuit
Hysteresis: 2%
Power Consumption: 5-10 VA @ 120V AC (typical)
Mounting: 35mm DIN Rail
Terminal Type: Screw Clamp
Wire Capacity: 0.5-4 mm² Solid / 0.2-2.5 mm² Flexible
Protection Rating: IP20 Terminals / IP30 Housing
Housing Material: Polycarbonate
Operating Position: Any Position Without Derating
Operating Temp: -20°C to 50°C
Storage Temperature: -40°C to 70°C
Relative Humidity: 95% @ 55°C
Shock Resistance: 15 gn for 11 ms
Vibration Resistance: IEC 60068-2-6 Compliant
Dielectric Strength: 2kV AC, 1 Minute
Surge Immunity: 4kV
Pollution Degree: 3
Overvoltage Category: III
Mechanical Life: 30,000,000 Operations
Electrical Life: 100,000 Operations
Operating Rate: ≤360 Operations/Hour at Full Load

Dimensions & Shipping
Dimensions: 35mm W x 90mm H x 72mm D
Weight: 0.13 kg

Shipping
Shipped via standard freight

Special Orders - Requirements
Contact us for special requirements
Toll Free: 1-800-369-6671
Intl: 1-903-270-1187
Fax: 1-903-765-7664
E-mail: sales@larsonelectronics.com

Larson Electronics manufactures a wide variety of custom power distribution systems. The pictures displayed for this unit are a general representation of form factor and may not accurately represent this exact configuration in every detail due to being custom builds. The specifics for this configuration are listed in the specification table and applicable drawings.

The Larson Electronics MOD-RLY-PHM-3PH-120V-5A-DPDT is a 3-Phase Monitoring Relay. This protective relay operates on 120V AC, 50/60Hz and protects motors and equipment from damage caused by phase loss, incorrect phase sequence, asymmetry, overvoltage, and undervoltage conditions on three-phase power systems.

When the proper 3-phase line voltage is applied to the unit and the phase sequence is correct, the relay is energized after the adjustable restart delay is completed. Any one of several fault conditions — including phase failure, voltage imbalance, overvoltage, or undervoltage — will de-energize the relay after the adjustable fault delay. Re-energization is automatic once the fault has been successfully corrected. LED indicators provide power, relay status, and fault indication for simplified monitoring and troubleshooting.

Monitoring Functions: This relay continuously monitors 120V three-phase supply voltage for phase loss, incorrect phase sequence, voltage asymmetry between phases, and overvoltage

or undervoltage conditions relative to nominal voltage.

Switching Package: The output relay is rated for 30,000,000 mechanical operations and 100,000 electrical operations, at up to 360 operations per hour at full load.

Construction: The relay housing is constructed of polycarbonate, rated IP20 at the terminals and IP30 for the overall housing, and mounts to a standard 35mm DIN rail via screw-clamp terminals accepting 0.5-4mm² solid or 0.2-2.5mm² flexible wire. The unit may be installed in any position without derating, and carries a dielectric strength rating of 2kV AC for one minute with 4kV surge immunity.

Environmental Ratings: The relay is rated for operation from -20°C to 50°C (storage -40°C to 70°C) at up to 95% relative humidity (non-condensing) @ 55°C, with shock resistance of 15gn for 11ms and vibration resistance per IEC 60068-2-6. The unit is rated Pollution Degree 3, Overvoltage Category III.

Ratings & Approvals: This relay is listed for use in the United States and Canada, and carries UL, CSA, CE, GL, GOST, and C-Tick certifications. The unit is designed in accordance with IEC 60255-1, IEC 60947-5-1, and IEC 61000-6-2/3/4 standards.

At Larson Electronics, we do more than meet your lighting needs. We also provide replacement, retrofit, and upgrade parts as well as industrial grade power accessories. Our craftsmen can custom build any lighting system and/or accessories to fit the unique demands of your operation. A commitment to honesty, quality, and dependability has made Larson Electronics a leader in the lighting and electronics business since 1973. Contact us today at 800-369-6671 or message sales@larsonelectronics.com for more information about our custom options tailored to meet your specific industry needs.

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Frequently Asked Questions (FAQ)

There are no Faqs

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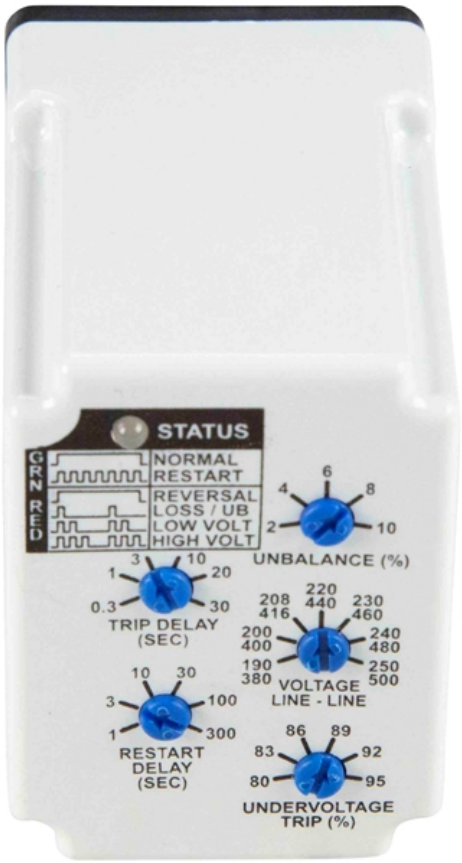

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Export Control Classification Number (ECCN): EAR99

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