



Better. By Design.



# THREE-PHASE MONITOR RELAYS

PROTECT EQUIPMENT FROM DAMAGE

# MOST COMPLETE LINE OF THREE-PHASE MONITOR RELAYS

One family, many levels of protection

Protect your critical equipment from damaging power conditions with the next generation of Three-Phase Monitor Relays from Macromatic.

These relays are designed to provide cost-effective protection against premature failures caused by phase reversal, phase loss, undervoltage, overvoltage and phase unbalance in three-phase systems.

## MACROMATIC'S THREE-PHASE MONITOR RELAY FEATURES

- True RMS voltage measurement for improved protection regardless of load type or wave shape
- ◆ Full status LED retains fault indication and continues monitoring all voltages even with a phase loss
- Full fault indication on top of unit for easy troubleshooting
- ◆ Controls more loads with the industry's best contact ratings - wider voltage range, higher current range, wider variety of ratings
- Offers complete range of line-line voltages up to 600V
- All products are offered in an industry standard 8-pin plug-in version (PMD Series offers DIN-rail mounted version)

◆ *Exclusive to Macromatic's Three-Phase Monitor Relay Products*

## SELECT THE PROTECTION FOR YOUR APPLICATION

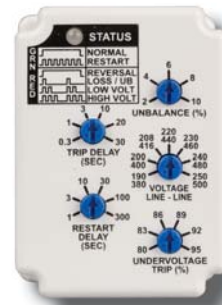
Series	Macromatic's Three-Phase Monitor Relays Offer Protection From:				
	Phase Reversal (Phase Sequence)	Phase Loss (Single Phase)	Undervoltage	Overvoltage	Phase Unbalance
PMP & PMD	Yes	Yes	Adjustable 80-95% of Line-Line Voltage	Fixed at 110% of Line-Line Voltage	Adjustable 2-10%
PMPU-FA8 & PMPU-FA8X	Yes	Yes	Fixed at 90% of Line-Line Voltage	Fixed at 110% of Line-Line Voltage	Fixed at 6%
PAP	Yes	Yes	Adjustable 75-95% of Line-Line Voltage	—	—
PLP	Yes	Yes	—	—	—
PCP	Yes	—	—	—	—

All products work on 50/60 Hz

# PMP & PMD SERIES

Protection from phase reversal, phase loss, undervoltage, overvoltage & phase unbalance conditions

- Expanded line-line voltage range for use in more applications**  
 PMPU & PMDU relays have a universal voltage range of 190-500V (Separate catalog numbers cover 120V & 575V three-phase systems)
- Customized protection for a variety of applications**  
 Field-selectable undervoltage & unbalance trip and time delay adjustments allow exact settings for specific requirements
- Prevents rapid cycling of critical equipment**  
 Adjustable restart delay of 1-300 seconds can be used to prevent rapid cycling of motors and equipment
- Manual Reset works with external switch**  
 Allows unit to be easily reset from outside the enclosure



**PMP Series**  
Plug-in



**PMD Series**  
DIN-Rail Mounted  
Meets IEC/DIN enclosure design standards

# PMPU-FA8 & PMPU-FA8X SERIES

**NEW!**

Protection from phase reversal, phase loss, undervoltage, overvoltage & phase unbalance conditions

- PMPU-FA8 is same as PMPU, but with fixed settings for undervoltage trip, unbalance trip and time delays**  
 Fixed settings allow easy setup with only line-line adjustment required
- PMPU-FA8X is same as PMPU-FA8, but with an extra SPNO output contact & no manual reset**  
 Alarm circuit can be at different voltage than control circuit, eliminating need for separate relay for voltage isolation

**PMPU-FA8 & PMPU-FA8X Series**



# PAP SERIES

Protection from phase reversal, phase loss & undervoltage conditions

- Adjustable Undervoltage Trip Setting**  
 Adjustable from 75-95% of nominal voltage
- Separate versions for 208V, 240V, 400V, 480V & 575V**

**PAP Series**



# PLP SERIES

Protection from phase reversal & phase loss

# PCP SERIES

Protection from phase reversal



**PLP Series**

- Expanded voltage range for use in more applications**  
 PLP & PCP are the only units in their class with a universal voltage range of 190-500V (separate catalog numbers cover 575V three-phase systems)



**PCP Series**

**THE LEADER IN THREE-PHASE MONITOR RELAYS**



## Three-Phase Monitor Relays Catalog Numbers

	PMP/PMD Series				PAP Series					PLP Series		PCP Series	
Line-Line Voltage (50/60Hz $\pm 5\%$ )	190-500V AC	190-500V AC	102-138V AC	460-600V AC	208V AC	240V AC	400V AC	480V AC	575V AC	190-500V AC	460-600V AC	190-500V AC	460-600V AC
8-Pin   Plug-In Catalog Number	PMPU	PMPU-FA8* PMPU-FA8X**	PMP120	PMP575	PAP208	PAP240	PAP400	PAP480	PAP575	PLPU	PLP575	PCPU	PCP575
35mm   DIN-Rail Catalog Number	PMDU	-	PMD120	PMD575	-	-	-	-	-	-	-	-	-

Note: PMP Series | SPDT output contacts\*\*  
PMD Series | DPDT output contacts

\* Same as PMPU, but with fixed settings for easier setup.

\*\* Same as PMPU-FA8, but with extra SPNO output and no manual reset.

Visit: [www.macromatic.com/ProtectMyMotor](http://www.macromatic.com/ProtectMyMotor)

## MACROMATIC'S PRODUCT LINE

- Three-Phase Voltage Monitor Relays
- Alternating Relays
- Time Delay Relays
- Seal Leakage & Over Temperature Relays
- Liquid Level Control Relays
- Voltage Monitor Relays
- Current Sensing Relays
- Intrinsically-Safe Relays
- Custom-Engineered Controls
- Accessories

## ABOUT MACROMATIC INDUSTRIAL CONTROLS

Located in Menomonee Falls, Wisconsin, Macromatic Industrial Controls engineers and manufactures industrial relays that control electrical processes and monitor power for damaging fault conditions. Providing solutions for most applications in any industry, Macromatic specializes in the HVACR, pump control, material handling, motor control, generator, and lift and elevator industries.

As an independently-owned manufacturer of state-of-the-art control and monitoring products for over 40 years, Macromatic takes pride in its short lead-time, flexible product design, and exceptional technical support.



- Five Year Warranty
- Short lead-times
- Superior customer service
- Advanced technical support
- Products meet UL and CE
- RoHS manufacturing



All Macromatic plug-in and encapsulated products are either UL Component Recognized (UR) and CSA or UL Component Recognized combined with Canadian approval (cURus). All plug-in products are UL listed when used with the appropriate socket. All DIN-rail mount products are UL Listed combined with Canadian approvals (cULus). Many products meet CE requirements. All Macromatic products are RoHS-compliant, ensuring they meet the latest requirements for protecting the environment.

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