# PAM SERIES
## MULTI-VOLTAGE RELAY MODULES

The PAM Series Relays are encapsulated multi-voltage devices with "flying" leads that offer versatile, reliable performance in a convenient package. Several of the versions contain a red LED which indicates when the relay coil is energized. The PAM Series Relays are packaged with a self-tapping screw and a piece of double sided tape for easy installation almost anywhere. The relays are also packaged with wire-nuts to aid installation.

PAM Relays are ideal for applications where remote relays are required for control or status feedback. They are suitable for use with HVAC, Temperature Control, Fire Alarm, Security, Energy Management, Lighting Control Systems and Building Automation Systems.

## PRODUCT DESCRIPTION

### PAM-1
The PAM-1 Relay provides 10.0 A form "C" contacts. The relay may be energized by one of three input voltages: 24VDC, 24VAC, or 120VAC. The input voltages are polarity-sensitive and diode-protected. PAM-1 Relays contain a red LED which indicates when the relay coil is energized.

### PAM-2
The PAM-2 Relay provides 7.0 A form "C" contacts. The relay may be energized by one of two input voltages: 12VDC or 24VDC. The input voltages are polarity-sensitive and diode-protected. PAM-2 Relays contain a red LED which indicates when the relay coil is energized.

### PAM-4
The PAM-4 Relay provides 10.0 A form "C" contacts. The relay may be energized across a wide voltage range from 12VDC to 40VDC, making it ideal for 12VDC and 24VDC EOL circuits. The 20mA operating current is constant across the operating range. The input voltages are polarity-sensitive and diode-protected.

### PAM-SD
The PAM-SD Relay provides 7.0 A form "C" contacts. The relay may be energized by an input voltage between 20VDC to 32VDC, making it ideal for 24VDC NAC circuits. The input voltages are polarity-sensitive and diode-protected. The PAM-SD provides an additional set of wires for redundant input voltage (circuit supervision pass through).
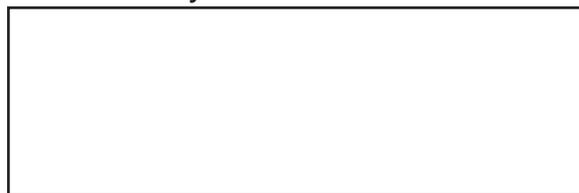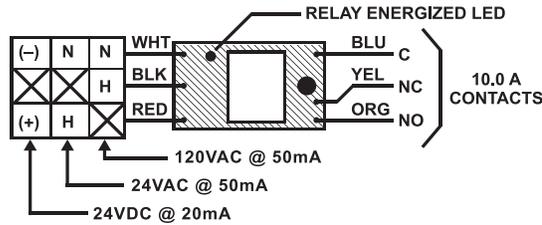
**UUKL**
Smoke Control

c(UL)us **SIGNALING LISTED**

**CSFM LISTED**   **MEA** ACCEPTED

A **HALMA GROUP** COMPANY

*Distributed By:*

# WIRING



**PAM-1**

RELAY ENERGIZED LED
WHT — BLK — RED
BLU C / YEL NC / ORG NO
10.0 A CONTACTS
120VAC @ 50mA
24VAC @ 50mA
24VDC @ 20mA



**PAM-2**

RELAY ENERGIZED LED
ØV(–) WHT
+24VDC @ 20mA GRY
+12VDC @ 20mA RED
BLU C / YEL NC / ORG NO
7.0 A CONTACTS



**PAM-4**

12VDC TO 40VDC @ 20mA
(+) RED
(–) BLK
BLU C / YEL NC / ORG NO
10.0 A CONTACTS



**PAM-SD**

20VDC @ 15mA TO 32VDC @ 25mA
(–) WHT
(–)
(+)
(+) RED
BLU C / YEL NC / ORG NO
7.0 A CONTACTS
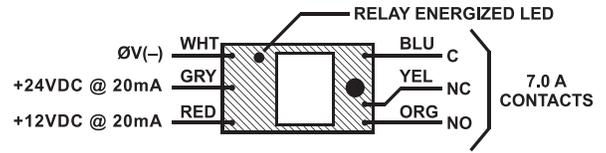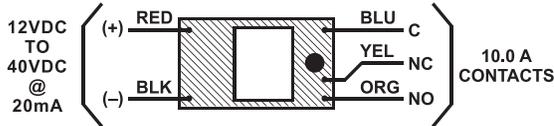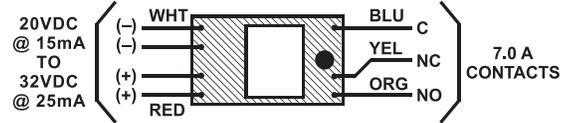
# PRODUCT SPECIFICATIONS

| MODEL NUMBER: | | PAM-1 | PAM-2 | PAM-4 | PAM-SD |
|---|---|---|---|---|---|
| COIL VOLTAGE: | | 24VAC/24VDC/120VAC | 12VDC/24VDC | 12 to 40VDC | 20 to 32VDC |
| POLARIZED: | | Yes | Yes | Yes | Yes |
| ENERGIZED LED INDICATOR: | | Yes | Yes | No | No |
| CURRENT REQUIREMENT: | | | | | |
| | @12VDC | | 20mA | 20mA | |
| | @24VDC | 20mA | 20mA | 20mA | 15mA |
| | @32VDC | | | 20mA | 25mA |
| | @24VAC | 50mA | | | |
| | @120VAC | 50mA | | | |
| CONTACT CONFIGURATION: | | (1) SPDT dry form "C" | (1) SPDT dry form "C" | (1) SPDT dry form "C" | (1) SPDT dry form "C" |
| CONTACT RATINGS: (contact rating/ power factor) | | | | | |
| | @5VDC | 250µA / .35 PF | 250µA / .35 PF | 250µA | 250µA / .35 PF |
| | @24VDC | 7A / .35 PF | 7A / .35 PF | 7A | 7A / .35 PF |
| | @120VAC | 10A | 7A / .35 PF | 10A | 7A / .35 PF |
| RELAY PULL-IN TIME: | | | | | |
| | @12VDC | | < 1s | < 5s | |
| | @24VDC | < 1s | < 1s | < 3s | < 1s |
| | @32VDC | | | < 1.5s | < 1s |
| | @24VAC | < 1s | | | |
| | @120VAC | < 1s | | | |
| WIRE LEADS: | | 6 "flying" leads 12" / 18 AWG Wire-nuts provided | 6 "flying" leads 12" / 18 AWG Wire-nuts provided | 5 "flying" leads 12" / 18 AWG Wire-nuts provided | 7 "flying" leads 12" / 18 AWG Wire-nuts provided |
| AMBIENT TEMPERATURE: (@ 100% RH, condensing) | | 32°F to 120°F (0°C to 49°C) | 32°F to 120°F (0°C to 49°C) | 32°F to 120°F (0°C to 49°C) | 32°F to 120°F (0°C to 49°C) |
| CONSTRUCTION: | | 100% potted (sealed) with "flying" leads | | | |
| MOUNTING: | | Pre-drilled mounting screw hole and self tapping screw provided. Double sided tape provided. | | | |
| DIMENSIONS: | H | 1.50" (38mm) | 1.50" (38mm) | 1.50" (38mm) | 1.50" (38mm) |
| | W | 1.20" (31mm) | 1.20" (31mm) | 1.20" (31mm) | 1.20" (31mm) |
| | D | 0.77" (20mm) | 0.77" (20mm) | 0.77" (20mm) | 0.77" (20mm) |
| LISTINGS AND APPROVALS: UL*: | | U0XX/7.S3403 UUKL | U0XX/7.S3403 UUKL | U0XX/7.S3403 UUKL | U0XX/7.S3403 UUKL |
| | MEA: | 73-92-E Vol. 21 | 73-92-E Vol. 21 | 73-92-E Vol. 21 | 73-92-E Vol. 21 |
| | CSFM: | 7300-1004:101 | 7300-1004:101 | 7300-1004:101 | 7300-1004:101 |

*UOXX=Control Unit Accessories, System; /7=also Certified for Canada   *UUKL (UL864) = Smoke Control System Equipment System