



PMV10A440



PMV55A240



PMA30240



PMA50...

**Modular protection relays**

- Modular DIN rail mounting (*aligns with standard MCB's*)
- Adjustable "trip" and "reset delay"
- True RMS measurements

| type | description | monitored voltage | module width (mm) |
|------|-------------|-------------------|-------------------|
|------|-------------|-------------------|-------------------|

**Phase failure / reversal relay**

|                  |                                      |               |       |
|------------------|--------------------------------------|---------------|-------|
| <b>PMV10A440</b> | phase failure / phase reversal relay | 208 - 480 VAC | 18 mm |
| <b>PMV20A575</b> | phase failure / phase reversal relay | 208 - 575 VAC | 35 mm |

**Voltage monitors *single or three phase***

- Voltage monitoring relays, self powered, for minimum and maximum voltage
- Adjustments
  - "V max" maximum voltage tripping threshold 105 - 115% Ue
  - "V min" minimum voltage tripping threshold 80 - 95% Ue
  - "tripping" and "reset" time delay 0.1 - 20sec

**Single phase monitoring**

|                  |   |               |       |
|------------------|---|---------------|-------|
| <b>PMV55A240</b> | single-phase over/under voltage monitor | 208 - 240 VAC | 35 mm |
|------------------|---|---------------|-------|

**Three phase monitoring**

- Self powered, for minimum and maximum voltage, phase loss and incorrect phase sequence

**Three phase monitoring (*without neutral*)**

|                  |  |               |       |
|------------------|--|---------------|-------|
| <b>PMV50A575</b> | three-phase over/under voltage monitor | 380 - 575 VAC | 35 mm |
|------------------|--|---------------|-------|

**Three phase monitoring (*with or without neutral*) self powered**

- For minimum and maximum voltage, phase loss, neutral loss and incorrect phase sequence

|                   |                                |               |       |
|-------------------|--------------------------------|---------------|-------|
| <b>PMV50NA440</b> | minimum and maximum AC voltage | 380 - 440 VAC | 54 mm |
| <b>PMV50NA600</b> | minimum and maximum AC voltage | 480 - 600 VAC | 54 mm |

**Current monitoring relays *TRMS measurements***

- AC/DC minimum or maximum current control
- Multi-voltage auxiliary power supply 24 - 240 VAC/DC
- Direct connection up to 16A or by current transformer (CT)
- Automatic or manual reset
- Adjustments
  - "max" or "min" current tripping threshold: 5 - 100% Ie
  - maximum hysteresis threshold: 1 - 50%
  - "trip" delay: 0.1 - 30sec
  - "inhibition" time - external input or power up: 1 - 60sec
  - current selection: 5A or 16A
  - tripping memory (*latch*): On or Off

|                 |                                    |                 |       |
|-----------------|------------------------------------|-----------------|-------|
| <b>PMA30240</b> | minimum or maximum current monitor | 24 - 240 VAC/DC | 35 mm |
|-----------------|------------------------------------|-----------------|-------|

**Pump protection relay**

- Pump protection relay against dry running, auxiliary AC power supply
- Single or three-phase systems (*selectable*)
- Maximum AC current and minimum cosφ. Delayed trip
- Phase loss and incorrect phase sequence. Instantaneous trip
- Voltage control range 80 - 660 VAC
- Adjustments
  - "Max" cosφ threshold: 0.1-0.99
  - Maximum (*over*) current threshold: 10-100%
  - "Trip" delay for min cosφ and max current: 0.1-10sec
  - "Inhibition" time - external input or power up: 1-60sec
  - Automatic reset time: Off - 100min
  - Current selection: 5A or 16A

|                  |  |               |       |
|------------------|--|---------------|-------|
| <b>PMA50A240</b> | pump protection relay ( <i>against dry running</i> ) | 220 - 240 VAC | 54 mm |
| <b>PMA50A415</b> | pump protection relay ( <i>against dry running</i> ) | 380 - 440 VAC | 54 mm |