PELTEC
Timers & Controls

# 410 / 420

## CURRENT MONITORING RELAYS

- Used to monitor overload/relief (machines, motors, etc.), check consumption, diagnostic on a remote device (burning, short circuit, increased current draw, etc.)
- Relay is used for monitoring AC or DC current in three ranges.
- Monitors level of current in two independent levels (Imax, Imin).
- Setting the monitored upper level (Imax) in % of range.
- Setting the monitored lower level (Imin):
  - **410**: in % of the set upper limit (410, function HYSTERESIS)
  - **420**: in % of range (420, function WINDOW)
- Selectable function of output contacts (independently/in parallel).
- Independent adjustable time delay of both levels (eliminating short-term drops and spikes).
- Galvanically separated power supply from monitoring inputs.
- Output contact for each monitored current level.


**410**


**420**

## TECHNICAL PARAMETERS

| SUPPLY CIRCUIT | |
|---|---|
| **Supply terminals:** | A1-A2 |
| **Supply voltage:** | AC/DC 24 – 240 V (AC 50-60 Hz) |
| **Consumption (max.):** | 3 VA/1 W |
| **Supply voltage:** | AC 400 V (50-60 Hz) |
| **Consumption (max.):** | 5 VA/2.5 W |
| **Supply voltage tolerance:** | –15 %; +10 % |

| MEASURING CIRCUIT | | | |
|---|---|---|---|
| **Monitored terminals:** | C-B1 | C-B2 | C-B3 |
| **Monitored ranges*:** | AC/DC 3.2 - 16A (AC 50-60 Hz) | AC/DC 1 - 5A (AC 50-60 Hz) | AC/DC 0.32 - 1.6A (AC 50-60 Hz) |
| **Input resistance:** | 2.3 mΩ | 11 mΩ | 23 mΩ |
| **Max. permanent current:** | 16 A | 8 A | 3 A |
| **Inrush overload (1 s):** | 20 A | 16 A | 6 A |
| **Time delay Imax (t1):** | adjustable, 0.1 – 10 s | | |
| **Time delay Imin (t2):** | adjustable, 0.1 – 10 s | | |

| ACCURACY | |
|---|---|
| **Setting accuracy (mech.):** | 5% |
| **Repeat accuracy:** | < 1 % |
| **Temperature dependance:** | < 0.1 %/°C (°F) |
| **Limit values tolerance:** | 5 % |
| **Hysteresis (fault to OK):** | selectable, 5 %/10 % from the upper range value |

| OUTPUT | |
|---|---|
| **Contact type:** | 2× changeover/SPDT (AgNi) |
| **Current rating:** | 16 A/AC1; 1 HP\|240 Vac, 1/2 HP\|120 Vac; PD. B300 |
| **Breaking capacity:** | 4000 VA/AC1, 384 W/DC1 |
| **Inrush current:** | 30 A/< 3 s |
| **Switching voltage:** | 250 V AC/24 V DC |
| **Power dissipation (max.):** | 2.4 W |
| **Mechanical life:** | 10,000,000 ops. |
| **Electrical life (AC1):** | 100,000 ops. |

| OTHER INFORMATION | |
|---|---|
| **Operating temperature:** | –20 .. 55 °C (–4 .. 131 °F) |
| **Storage temperature:** | –30 .. 70 °C (–22 .. 158 °F) |
| **Dielectric strength:** | |
| supply – output | AC 4 kV |
| output 1 – output 2 | AC 4 kV |
| **Operating position:** | any |
| **Mounting:** | DIN rail EN 60715 |
| **Protection degree:** | IP40 front panel / IP20 terminals |
| **Overvoltage category:** | III. |
| **Pollution degree:** | 2 |
| **Cross-wire section – solid/ stranded with ferrule (mm2):** | max. 1× 2.5, 2× 1.5/ max. 1× 2.5 (AWG 14) |
| **Dimensions:** | 90 × 52 × 65 mm (3.5" × 2" × 2.6") |
| **Weight:** | UNI – 166 g (5.86 oz), 400V – 248 g (8.7 oz) |
| **Standards:** | EN 60255-1, EN 60255-26, EN 60255-27 |

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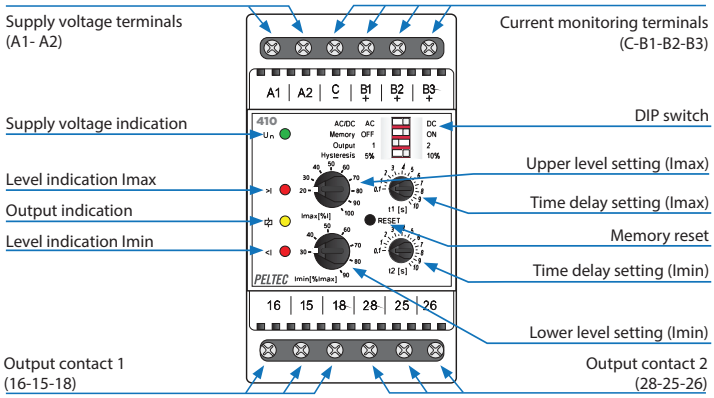
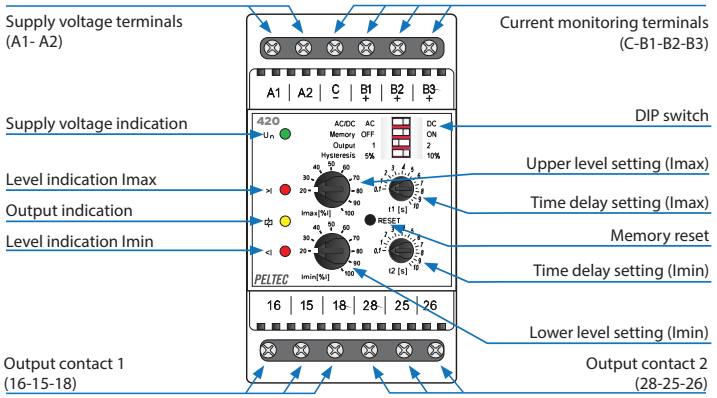
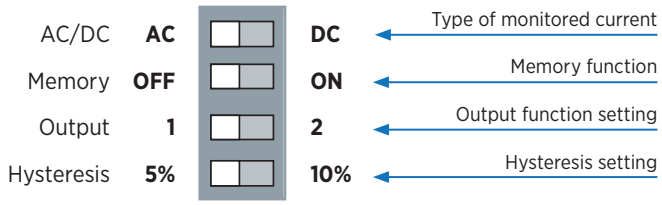
## FEATURES :: 410



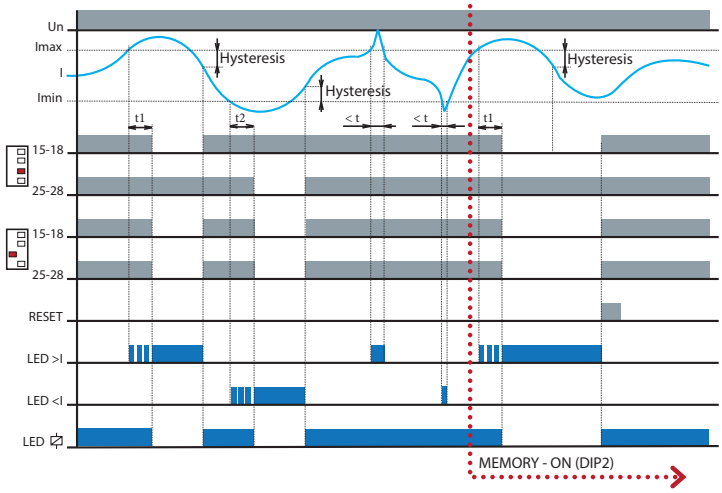

## FEATURES :: 420




## DETAIL OF DIP-SWITCH




## FUNCTION




- If the value of the monitored current is in the zone between the set upper and lower levels, the OK state occurs, both output contacts are closed and the yellow LED illuminates. If the value of the monitored current is outside the set limits (> Imax or < Imin), a fault state occurs.
- When moving to a fault state (I > Imax), time delay t1 is running and red LED >I simultaneously flashes. After the time t1 elapses, the red LED >I illuminates and the relevant output contact opens.
- When moving to a fault state (I < Imin), time delay t2 is running and red LED <I simultaneously flashes. After the time t2 elapses, the red LED <I illuminates and the relevant output contact opens.
- When moving from a fault state to the OK state, the relevant red LED immediately goes out, and the corresponding output contact closes.

## CONNECTION