



The Electro 11 pin plug-in range of control and timing devices are to be installed into a standard 11 pin base making installation easy and convenient.

type	function	description	contact
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**Current monitor**

The module directly interfaces with conventional 5A CTs. The relay will only operate as long as monitored current remains below the pre-set limit or above the pre-set limit.

- Hysteresis 5-50%

<b>LA5*</b>	over / under current	current monitor	10A SPDT
<b>LA5/P*</b>	pivot control relay	current monitor	10A SPDT
<b>WA5*</b>	over / under	current monitor	10A SPDT

\* Voltage: 12 VAC, 24 VAC, 48 VAC, 110 VAC, 230 VAC, 400 VAC, 525 VAC  
12 VDC, 24 VDC, 48 VDC (other voltages available on request)

**Voltage monitor**

V1C is a precise UNDER / OVER voltage monitoring relay. This relay monitors a separate voltage input (Pins 5 + 7). The relay will only operate as long as the monitored voltage remains "BELOW" the pre-set overvoltage limit or "ABOVE" the pre-set overvoltage limit.

<b>V1C*</b>	over or under	voltage monitor	10A SPDT
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**Frequency monitor**

The relay is energised as long as measured frequency is within the presettable limits.

- Upper - 50-56Hz
- Lower - 40-50Hz

<b>H1E*</b>	over and under	frequency monitor	10A SPDT
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**Phase failure / sequence relay**

The SF1 monitors negative phase sequence (NPS) voltage to detect phase failure, phase reversal and phase imbalance. The relay will only operate while all three phases are present and in sequence. Provides effective protection of phase failure / phase reversal / excessive phase and all imbalance and phase angle error.

<b>SF1*</b>	phase failure		10A SPDT
<b>SF1/K*</b>	phase failure with adjustment for NPS		10A SPDT

\* Voltage: 110 VAC, 230 VAC, 400 VAC, 525 VAC

**Over / under voltage monitor (incorporating phase failure)**

Monitors own supply. Relay will only operate whilst the supply voltage is within the presettable "OVER" and "UNDER" voltage limits and all three phases present and in sequence. Providing effective power supply supervision and protection.

- Phase failure protection / phase reversal protection
- Over / under voltage protection

<b>V1E*</b>	over and under	single phase voltage monitor	10A SPDT
<b>V3E*</b>	over and under	3 phase voltage monitor	10A SPDT
<b>V3E/N*</b>	over and under	3 phase +neutral voltage monitor	10A SPDT

\* Voltage: 110 VAC, 230 VAC, 400 VAC, 525 VAC

**Plastic housings (for electronic components)**

type	dimensions (mm) (H) x (W) x (D)	description
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**Plug-in housings (black)**

<b>EX11</b>	80 x 35 x 79	11 pin empty housing complete (black)
<b>EX08</b>		blank adhesive label for front of housing
<b>EX06</b>		potentiometer knob for above housing

**Modular housings (grey) 6.3 mm terminal centre spacing**

- Standard modular housing (2 modules) or (3 modules wide)
- DIN rail mounting
- Lines up with standard DIN MCBs and modular devices

<b>EMD02</b>	92 x 35.5 x 64	2 module complete housing Din rail mount
<b>EMD03</b>	92 x 35.5 x 64	3 module complete housing Din rail mount

<b>EMX02</b>	blank adhesive front label for EMD02 (2 modular) housing
<b>EMX03</b>	blank adhesive front label for EMD03 (3 modular) housing
<b>EMX04</b>	screw adjustable knob for internal potentiometer

Note: For printed circuit terminals see page J-32