






# Control relays

## Protections

-  **Phase imbalance or phase loss**
-  **Phase sequence**
-  **Overtemperature**
-  **Temperature variation**
-  **Thermistor short-circuit**

## Phase relay

- To protect 3-phase devices
- Suitable for air conditioning, elevators, cranes, hoists and similar installations.
- Sensitive to incorrect phase sequence.

## Phase and temperature relay






- To protect 3-phase devices
- Suitable for motors with built-in PTC sensors in applications such as elevators, cranes, hoists and similar installations.
- Sensitive to incorrect phase sequence.
- Monitoring of short circuit and broken wire in PTC circuit.






**S**



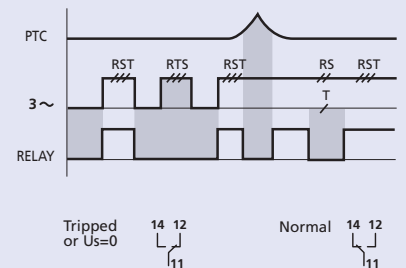
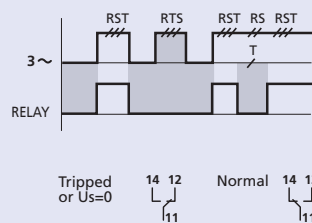
**ST**



Protections	 	  
<b>Models</b>	<b>S2</b> <b>S4</b>	<b>ST2</b> <b>ST4</b>
Nominal voltage of the line to be monitored ( $\pm 15\%$ )	3 x 230 V                      3 x 400 V	3 x 230 V                      3 x 400 V
Voltage supply ( $\pm 15\%$ )	Self-powered (3-phase)	
Code no.	12033                      12034	12001                      12012

Characteristics	<b>S</b>	<b>ST</b>
Nominal frequency	50/60 Hz	50/60 Hz
Control range	Phase loss: with resistive loads it trips when a phase loss occurs. With three-phase motors it trips if the voltage regenerated by the motor is lower than 60% of the main voltage. Phase imbalance > 40%	Phase loss: with resistive loads it trips when a phase loss occurs. With three-phase motors it trips if the voltage regenerated by the motor is lower than 60% of the main voltage. Phase imbalance > 40%
Hysteresis	-	-
PTC sensor: min/max cold resist - Trip resist	-	100Ω / 1500Ω - 2300Ω
Trip time delay	< 0,1 s	< 0,1 s
Reset mode	Automatic	Automatic
Signalling LED's	2 LED's: ON +  	3 LED's: ON +   
Output contacts	1 relay with 1 change over NO - NC	1 relay with 1 change over NO - NC
Switching power	$I_{th}$ : 5A; AC15 - 250V - 2A; DC13 - 30V - 2A	$I_{th}$ : 5A; AC15 - 250V - 2A; DC13 - 30V - 2A
Maximum terminal section / screw torque	2,5 mm <sup>2</sup> , No. 22 - 12AWG / 20Ncm, 1,8 LB - IN	2,5 mm <sup>2</sup> , No. 22 - 12AWG / 20Ncm, 1,8 LB - IN
Power consumption	7,5 VA (230 Vac) - 11 VA (400 Vac)	7,5 VA (230 Vac) - 11 VA (400 Vac)
Protection degree / weight	IP20 / 0,12 kg	IP20 / 0,12 kg
Storage / operation temperature	-30°C +70°C / -15°C +60°C	-30°C +70°C / -15°C +60°C

CE



For dimensions: see page 35.