

# Monitoring relays 6 - 8 A

70  
SERIES



Air conditioning



Couplers



Ancillary equipment





**3 Phase - Rotation and phase loss monitoring relay**

- Complies with EN 45545-2 +A1:2016 (protection against fire of materials), EN 61373 (resistance against random vibrations and shock, Category 1, Class B), EN 50155 (resistance to temperature and humidity, T1 class)
- Universal voltage monitoring ( $U_N$  from 208 V to 480 V, 50/60 Hz)
- Phase loss monitoring, under phase regeneration
- Positive safety logic - make contact opens if the relay detects an error
- 2 versions:
  - 1 CO, 6 A (width 17.5 mm)
  - 2 CO, 8 A (width 22.5 mm)
- 35 mm rail (EN 60715) mount
- European patent pending for the innovative principle at the root of the 3 phase monitoring and error survey system

Screw terminal



\* Short term (10 min) +70°C

For outline drawing see page 5

**70.61T**



Three-phase (208...480)V voltage monitoring:

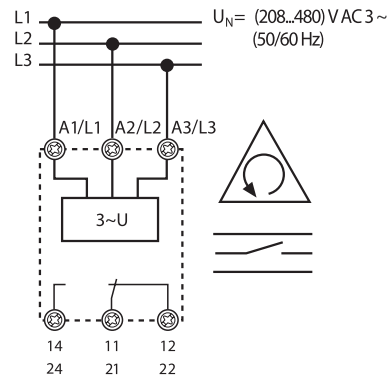
- Phase loss
- Phase rotation

**70.62T**



Three-phase (208...480)V voltage monitoring:

- Phase loss
- Phase rotation



**Contact specification**

Contact configuration		1 CO (SPDT)	2 CO (DPDT)
Rated current/Maximum peak current	A	6/15	8/15
Rated voltage/ Maximum switching voltage	V AC	250/400	250/400
Rated load AC1	VA	1500	2000
Rated load AC15 (230 V AC)	VA	250	400
Single phase motor rating (230 V AC)	kW	0.185	0.3
Breaking capacity DC1: 30/110/220 V	A	3/0.35/0.2	8/0.3/0.12
Minimum switching load	mW (V/mA)	500 (10/5)	300 (5/5)
Standard contact material		AgCdO	AgNi

**Supply specification**

Nominal system voltage ( $U_N$ )	V AC 3 ~	208...480	208...480
Frequency	Hz	50/60	50/60
Rated power	VA (50 Hz)/W	8/1	11/0.8
Operating range	V AC 3 ~	170...500	170...520

**Technical data**

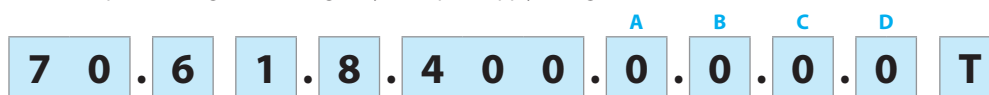
Electrical life at rated load AC1	cycles	$100 \cdot 10^3$	$60 \cdot 10^3$
Switch-off/reaction time	s	<0.5/<0.5	<0.5/<0.5
Ambient temperature	°C	-25...+55*	-25...+55*
Protection category		IP 20	IP 20

**Approvals** (according to type)



## Ordering information

Example: 70 series, three-phase voltage monitoring relay, 1 output, supply voltage 208...480 V AC.



**Series**  
**Type**  
6 = 3 phase loss and rotation monitoring  
**No. of poles**  
1 = 1 pole  
2 = 2 pole  
**Supply version**  
8 = AC (50/60 Hz)  
**Supply voltage**  
400 = 208...480 V AC 3~

**D: Fault memory option**  
0 = No fault memory  
**C: Time delay setting**  
0 = Fixed switch-off delay  
**B: Contact circuit**  
0 = CO  
**A: Detection values**  
0 = Non-adjustable detection values

## Technical data

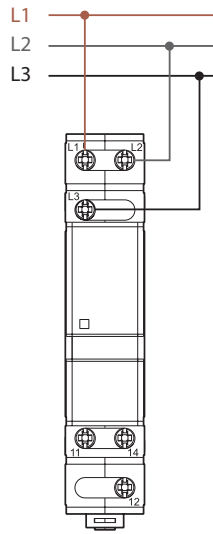
Insulation				
Insulation	between supply and contacts	Dielectric strength	Impulse (1.2/50 μs)	
	between open contacts	3000 V	5 kV	
		1000 V	1.5 kV	
EMC specifications				
<b>Type of test</b>		<b>Reference standard</b>		
Electrostatic discharge	contact discharge	EN 61000-4-2	4 kV	
	air discharge	EN 61000-4-2	8 kV	
Fast transients (burst) (5-50 ns, 5 kHz)	on A1, A2, A3	EN 61000-4-4	2 kV	
Surge (1.2/50 μs)	differential mode	EN 61000-4-5	4 kV	
Other data				
Start up time (NO contact closure after energising)		s	< 2	
Regeneration level (Maximum)			≤ 80% of average of other 2 phase	
Power lost to the environment	without contact current	W	1	
	with rated current	W	1.4	
Screw torque		Nm	0.8	
Max. wire size		solid cable	stranded cable	
		mm <sup>2</sup>	1 x 6 / 2 x 4	1 x 4 / 2 x 2.5
		AWG	1 x 10 / 2 x 12	1 x 12 / 2 x 14

## Functions

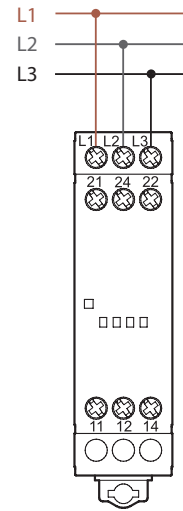
Output relay On (NO closed) when all OK: positive logic.

<p><b>Type</b> 70.61T 70.62T</p>	<p><b>Phase loss and phase rotation</b></p>	<p>If the sequence (L1, L2, L3) is incorrect at power-on, the output relay will not turn-on.</p> <p>If a phase is lost, the output relay turns off immediately. When the phase is again active, the output relay turns on immediately.</p> <p>Phase loss monitoring possible even under regeneration up to 80% of the average of the other 2 phases.</p>
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**Wiring diagrams**



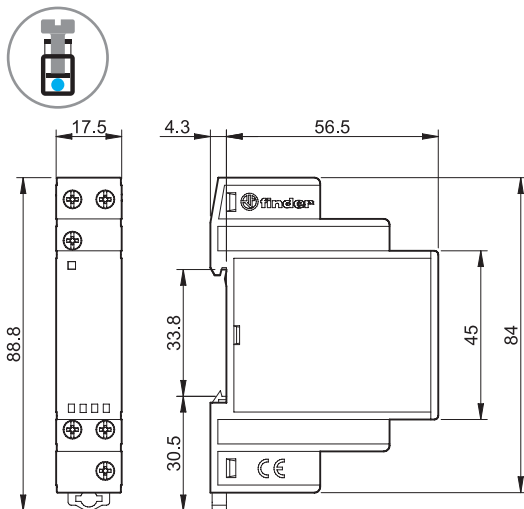
**Type 70.61T**



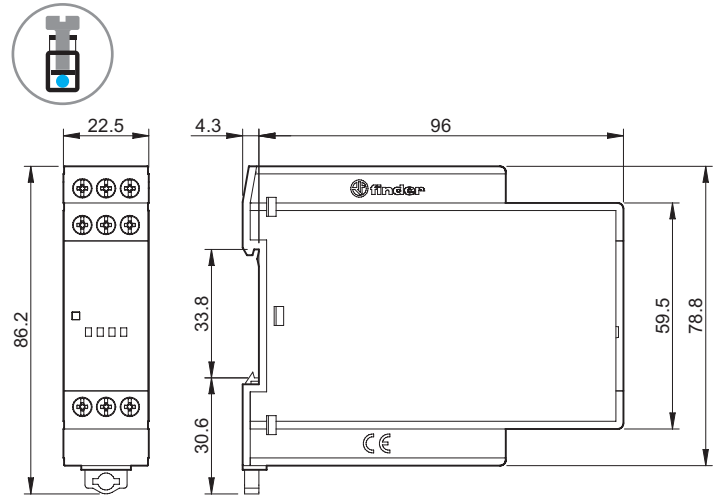
**Type 70.62T**

**Outline drawings**

70.61T  
Screw terminal



70.62T  
Screw terminal



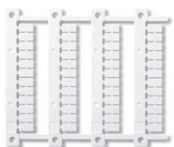
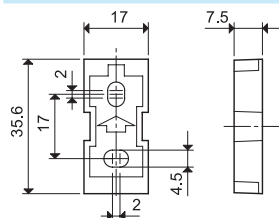
**Accessories**



**020.01**

**Adaptor for panel mounting, plastic, 17.5 mm wide**

**020.01**



**060.48**

**Sheet of marker tags, plastic, 48 tags, 6 x 12 mm, for CEMBRE's thermal transfer printers for type 70.62**

**060.48**



**020.24**

**Sheet of marker tags, plastic, 24 tags, 9 x 17 mm for type 70.61**

**020.24**

