

Monitoring relays

70
SERIES



Air
conditioners



Wood-
processing
machines



Hoists and
cranes



Escalators



Control panels
for pumps



Forced-air
ventilators



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Electronic voltage monitoring relays for single and three-phase applications

- Multifunctional types, providing the flexibility of monitoring Undervoltage, Overvoltage, Window Mode, Phase rotation, Phase loss
- Positive safety logic - Make output contact opens if the relay detects an error
- All functions and values can be easily adjusted by the selector and trimmer on front face
- "Blade + cross" – both flat blade and cross head screw drivers can be used to adjust the regulators and the function selector
- Colored LEDs for clear & immediate visual indication
- 1 CO relay output, 6 or 10 A
- Modular housing, 17.5 or 35 mm wide
- 35 mm rail (EN 60715) mount
- Cd-free contact material

Screw terminal



70.11



Single-phase (220...240)V voltage monitoring:

- Undervoltage
- Overvoltage
- Window mode (overvoltage + undervoltage)
- Voltage fault memory selectable

70.31



Three-phase (380...415)V voltage monitoring:

- Undervoltage
- Overvoltage
- Window mode (overvoltage + undervoltage)
- Voltage fault memory selectable
- Phase loss, even under phase regeneration
- Phase rotation

For outline drawing see page 16

Contact specification

| Contact configuration | | 1 CO (SPDT) | 1 CO (SPDT) |
|--|-----------|-------------|-------------|
| Rated current/Maximum peak current | A | 10/30 | 6/10 |
| Rated voltage/ Max. switching voltage | V AC | 250/400 | 250/400 |
| Rated load AC1 | VA | 2500 | 1500 |
| Rated load AC15 | VA | 750 | 500 |
| Single phase motor rating (230 V AC) | kW | 0.5 | 0.185 |
| Breaking capacity DC1: 24/110/220 V | A | 10/0.3/0.12 | 6/0.2/0.12 |
| Minimum switching load | mW (V/mA) | 300 (5/5) | 500 (12/10) |
| Standard contact material | | AgNi | AgNi |

Supply specification

| | | | |
|----------------------------------|-----------------|-----------|-----------|
| Nominal system voltage (U_N) | V AC (50/60 Hz) | 220...240 | 380...415 |
| Rated power | VA (50 Hz)/W | 2.6/0.8 | 11/0.9 |
| Operating range | V AC (50/60 Hz) | 130...280 | 220...510 |

Technical data

| | | | |
|---|--------|-----------------|-----------------|
| Electrical life at rated load AC1 | cycles | $80 \cdot 10^3$ | $60 \cdot 10^3$ |
| Voltage detection level range | V | 170...270 | 300...480 |
| Asymmetry detection level range | % | — | — |
| Switch-off delay time (T on function diagrams) | s | 0.5...60 | 0.5...60 |
| Switch-on lock-out time | s | 0.5 | 1 |
| Switch-on hysteresis (H on function diagrams) | V | 5 (L-N) | 10 (L-L) |
| Power-on activation time | s | ≈ 1 | ≈ 1 |
| Insulation between supply and contacts (1.2/50 μ s) | kV | 4 | 4 |
| Dielectric strength between open contacts | V AC | 1000 | 1000 |
| Ambient temperature | °C | -20...+60 | -20...+60 |
| Protection category | | IP 20 | IP 20 |
| Approvals (according to type) | | | |

Electronic voltage monitoring relays for three-phase applications

- Multifunctional types, providing the flexibility of monitoring Undervoltage, Overvoltage, Window Mode, Phase rotation, Phase loss, Asymmetry and Neutral loss
- Phase loss monitoring, even under phase regeneration
- Positive safety logic - Make output contact opens if the relay detects an error
- All functions and values can be easily adjusted by the selector and trimmer on front face
- “Blade + cross” – both flat blade and cross head screw drivers can be used to adjust the regulators and the function selector
- Colored LEDs for clear & immediate visual indication
- 1 or 2 CO relay output, 6 or 8 A
- Modular housing, 35 mm wide
- 35 mm rail (EN 60715) mount
- Cd-free contact material

Screw terminal

**70.41**

Three-phase (380...415 V, with or without neutral) voltage monitoring:

- Window mode (overvoltage + undervoltage)
- Phase loss
- Phase rotation
- Asymmetry
- Neutral loss selectable

70.42

Three-phase (380...415 V, with neutral) voltage monitoring:

- Undervoltage
- Overvoltage
- Window mode (overvoltage + undervoltage)
- Voltage fault memory selectable
- Phase loss
- Phase rotation
- Asymmetry
- Neutral loss

For outline drawing see page 16

Contact specification

| Contact configuration | 1 CO (SPDT) | 2 CO (DPDT) |
|---|-------------|-------------|
| Rated current/Maximum peak current A | 6/10 | 8/15 |
| Rated voltage/ Max. switching voltage V AC | 250/400 | 250/400 |
| Rated load AC1 VA | 1500 | 2000 |
| Rated load AC15 VA | 500 | 400 |
| Single phase motor rating (230 V AC) kW | 0.185 | 0.3 |
| Breaking capacity DC1: 24/110/220 V A | 6/0.2/0.12 | 8/0.3/0.12 |
| Minimum switching load mW (V/mA) | 500 (12/10) | 300 (5/5) |
| Standard contact material | AgNi | AgNi |

Supply specification

| | | |
|--|-----------|-----------|
| Nominal system voltage (U_N) V AC (50/60 Hz) | 380...415 | 380...415 |
| Rated power VA (50 Hz)/W | 11/0.9 | 12.5/1 |
| Operating range V AC (50/60 Hz) | 220...510 | 220...510 |

Technical data

| | | |
|--|-----------------|-----------------|
| Electrical life at rated load AC1 cycles | $60 \cdot 10^3$ | $60 \cdot 10^3$ |
| Voltage detection level range V | 300...480 | 300...480 |
| Asymmetry detection level range % | 4...25 | 5...25 |
| Switch-off delay time (T on function diagrams) s | 0.5...60 | 0.5...60 |
| Switch-on lock-out time s | 1 | 1 |
| Switch-on hysteresis (H on function diagrams) V | 10 (L-L) | 10 (L-L) |
| Power-on activation time s | ≈ 1 | ≈ 1 |
| Insulation between supply and contacts (1.2/50 μ s) kV | 4 | 4 |
| Dielectric strength between open contacts V AC | 1000 | 1000 |
| Ambient temperature $^{\circ}$ C | -20...+60 | -20...+60 |
| Protection category | IP 20 | IP 20 |
| Approvals (according to type) | | |

Universal current detecting and monitoring relays

Type 70.51.0.240.2032

- Current Control standard version

Type 70.51.0.240.N032

- Current Control Programmable via NFC version

Multifunctional type, providing the flexibility of monitoring Undercurrent, Overcurrent and Window Mode

- Positive safety logic - Make output contact opens if the relay detects an error
- All functions and values can be easily adjusted by the selector and trimmer on front face (70.51.0.240.2032) OR via NFC toolbox APP (70.51.0.240.N032)
- "Blade + cross" – both flat blade and cross head screw drivers can be used to adjust the regulators and the function selector
- Colored LED for clear & immediate visual indication
- 1 CO 10 A relay output
- Modular housing, 35 mm wide

NEW 70.51.0.240.2032



NEW 70.51.0.240.N032



Screw Terminal



For outline drawing see page 16

Contact specification

| | | |
|---|--------------------|-------------|
| Contact configuration | 1 CO (SPDT) | |
| Rated current/Maximum peak current | A | 10/15 |
| Rated voltage/ Maximum switching voltage | V AC | 250/400 |
| Rated load AC1 | VA | 2500 |
| Rated load AC15 (230 V AC) | VA | 500 |
| Single phase motor rating (230 V AC) | kW | 0.5 |
| Breaking capacity DC1: 24/110/220 V | A | 10/0.3/0.12 |
| Minimum switching load | mW (V/mA) | 300 (5/5) |
| Standard contact material | AgSnO ₂ | |

Supply specification

| | | |
|-----------------------------------|-----------------|---------------------------|
| Nominal voltage (U _N) | V AC (50/60 Hz) | 24...240 |
| | V DC | 24...240 |
| Rated power AC/DC | VA (50 Hz)/W | 2.5/0.53 |
| Operating range | AC | (0.8...1.1)U _N |
| | DC | (0.8...1.1)U _N |

Technical data

| | | |
|--|---|--------------------------------|
| Electrical life at rated load AC1 | cycles | 100 · 10 ³ |
| Detection levels | AC(50/60 Hz)/DC | 50 mA...16 A |
| Switch-on lock-out time (T1 on function diagrams) | s | 0.1...40 |
| Switch-on hysteresis (H on function diagrams) | % | 5...50 (1...99 in Window Mode) |
| Switch-off delay time (T2 on function diagrams) | s | 0.1...30 |
| Electrical isolation: Supply to Measuring circuits | | Yes |
| Ambient temperature range | °C | -20...+55 |
| Protection category | | IP 20 |
| Approvals (according to type) |    | |

Electronic phase loss and rotation monitoring relays for three-phase applications

- Universal voltage monitoring (U_N from 208 V to 480 V, 50/60 Hz)
- Phase loss monitoring, even under phase regeneration
- Positive safety logic - Make contact opens if the relay detects an error
- 2 versions:
 - 1 CO relay output, 6 A (17.5 mm wide), and
 - 2 CO relay output, 8 A (22.5 mm wide)
- 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 (70.61)

70.61
Screw terminal



70.61-P000
Push-in terminal


NEW
70.61/70.61-P000


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

- Phase loss
- Phase rotation

70.62


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

- Phase loss
- Phase rotation

E

For outline drawing see page 17

Contact specification

| Contact configuration | 1 CO (SPDT) | 2 CO (DPDT) |
|---|--------------------|-------------|
| Rated current/Maximum peak current A | 6/15 | 8/15 |
| Rated voltage/ Max. switching voltage V AC | 250/400 | 250/400 |
| Rated load AC1 VA | 1500 | 2000 |
| Rated load AC15 VA | 250 | 400 |
| Single phase motor rating (230 V AC) kW | 0.185 | 0.3 |
| Breaking capacity DC1: 24/110/220 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 | AgSnO ₂ | AgNi |

Supply specification

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

Technical data

| | | |
|---|-----------------------|----------------------|
| Electrical life at rated load AC1 cycles | 100 · 10 ³ | 60 · 10 ³ |
| Switch-off delay time s | 0.5 | 0.5 |
| Switch-on lock-out time s | 0.5 | 0.5 |
| Power-on activation time s | < 2 | < 2 |
| Insulation between supply and contacts (1.2/50 µs) kV | 5 | 5 |
| Dielectric strength between open contacts V AC | 1000 | 1000 |
| Ambient temperature °C | -20...+60 | -20...+60 |
| Protection category | IP 20 | IP 20 |
| Approvals (according to type) | | |
| | | |

- Thermistor temperature sensing relays for industrial application**
- Temperature detection with PTC
 - PTC short circuit detection
 - PTC wire breakage detection
 - Positive safety logic - Make contact opens if the relay detects an error
 - Fault memory selectable
 - LED status indication
 - 35 mm rail (EN 60715) mounting

NEW 70.92.x.xxx.0002



Screw Terminal



- 6 functions
- RESET delay time (0.5s or 3s) selectable
- RESET terminals

For outline drawing see page 17

Contact specification

| | | |
|---|-------------|------------|
| Contact configuration | 2 CO (DPDT) | |
| Rated current/Maximum peak current | A | 8/15 |
| Rated voltage/ Maximum switching voltage | V AC | 250/400 |
| Rated load AC1 | VA | 2000 |
| Rated load AC15 (230 V AC) | VA | 400 |
| Single phase motor rating (230 V AC) | kW | 0.3 |
| Breaking capacity DC1: 24/110/220 V | A | 8/0.3/0.12 |
| Minimum switching load | mW (V/mA) | 300 (5/5) |
| Standard contact material | AgNi | |

Supply specification

| | | |
|---------------------------|-----------------|-----------|
| Nominal voltage (U_N) | V AC (50/60 Hz) | 230 |
| | V AC/DC | 24 |
| Rated power AC/DC | VA (50 Hz)/W | 1/0.5 |
| Operating range | AC | 184...253 |

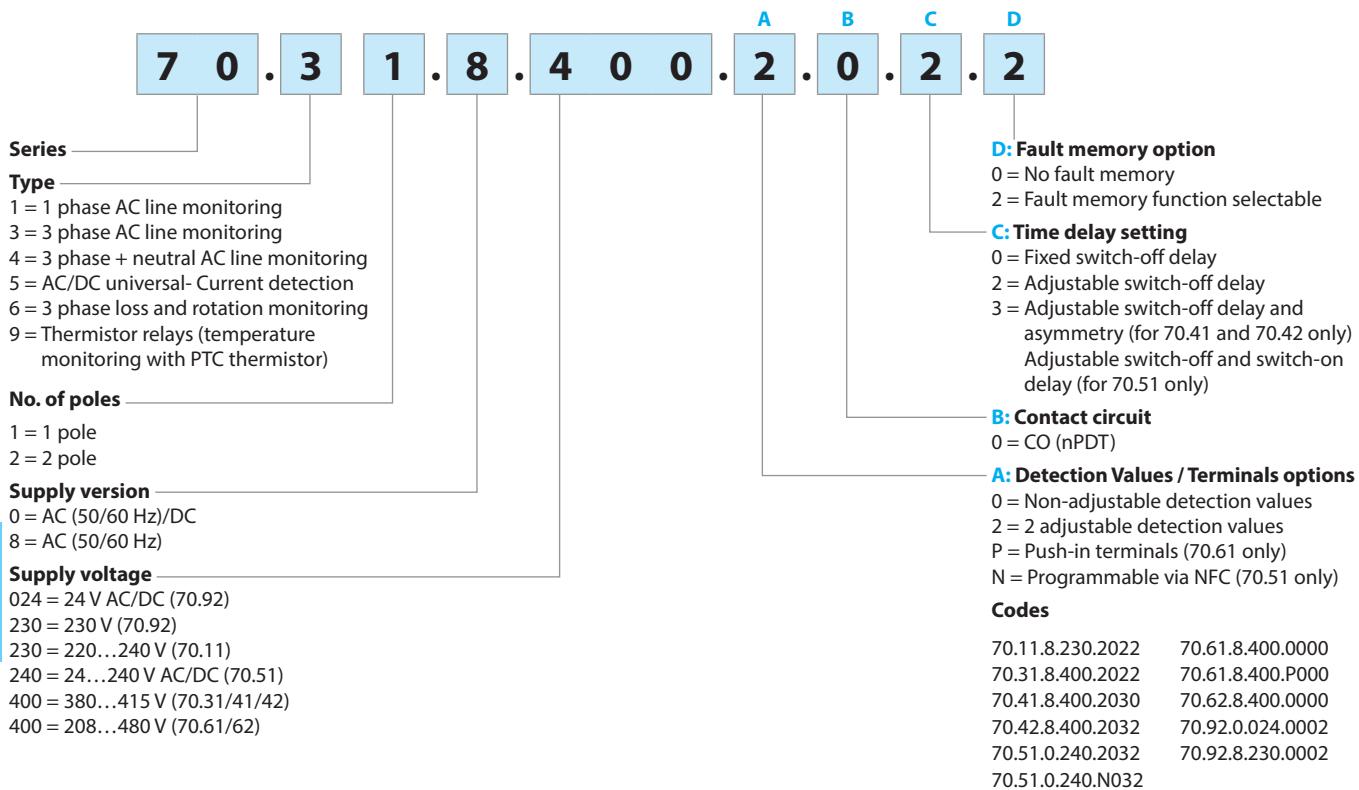
AC/DC 19.2...26.4

Technical data

| | | |
|--------------------------------------|------------------------------|---|
| Electrical life at rated load AC1 | cycles | $100 \cdot 10^3$ |
| PTC detecting: | Short circuit/Temperature OK | <20 Ω / >20 Ω ... <3 k Ω |
| | RESET/PTC break | < 1.3 k Ω / > 3 k Ω |
| RESET delay time | s | 0.5 or 3 |
| Ambient temperature range | °C | -20...+55 |
| Protection category | | IP 20 |
| Approvals (according to type) | CE | UKCA |
| | EAC | |

Ordering information

Example: 70 series, three-phase voltage monitoring relays, 1 output, supply voltage 380...415 V AC.



Selection guide

| Type | 70.11.8.230.2022 | 70.31.8.400.2022 | 70.41.8.400.2030 | 70.42.8.400.2032 | 70.51.0.240.x032 | 70.61.8.400.x000 | 70.62.8.400.0000 | 70.92.x.xxx.0002 |
|---|------------------|------------------|--------------------------------|----------------------|------------------|------------------|------------------|------------------|
| Supply system type | Single phase | 3-phase | 3-phase / 3-phase + neutral | 3-phase + neutral | Single phase | 3-phase | 3-phase | Single phase |
| Functions | | | | | | | | |
| Undervoltage/Ovvoltage | AC | AC | — | AC | — | — | — | — |
| Window mode (Undervoltage and Ovvoltage) | AC | AC | AC | AC | — | — | — | — |
| Phase loss | — | • | • | • | — | • | • | — |
| Phase rotation | — | • | • | • | — | • | • | — |
| Asymmetry | — | — | • | • | — | — | — | — |
| Neutral loss | — | — | • | • | — | — | — | — |
| Overcurrent/Undercurrent | — | — | — | — | • | — | — | — |
| Window mode (Undercurrent and Overcurrent) | — | — | — | — | • | — | — | — |
| Thermistor relay (PTC) | — | — | — | — | — | — | — | • |
| Delay Times | | | | | | | | |
| Fixed | — | — | — | — | — | • | • | • |
| Adjustable | • | • | • | • | • | — | — | — |
| Supply voltage | | | | | | | | |
| 24 V AC/DC | — | — | — | — | — | — | — | • |
| 24...240 V AC/DC | — | — | — | — | • | — | — | — |
| 230 V AC | • | — | — | — | — | — | — | • |
| 400 V AC | — | • | • | • | — | • | • | — |
| Module width | | | | | | | | |
| 35 mm wide | — | • | • | • | • | — | — | — |
| 22.5 mm wide | — | — | — | — | — | — | • | • |
| 17.5 mm wide | • | — | — | — | — | • | — | — |
| Other data | | | | | | | | |
| Fault memory | • | • | — | • | • | — | — | • |
| Contact configuration | 1 CO | 1 CO | 1 CO | 2 CO | 1 CO | 1 CO | 2 CO | 2 CO |

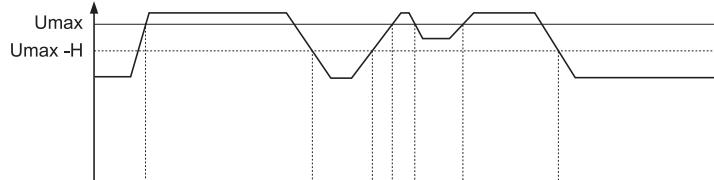
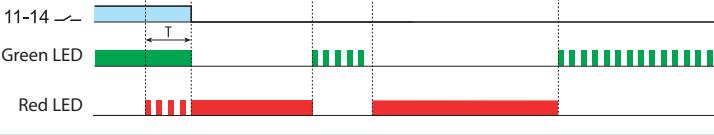
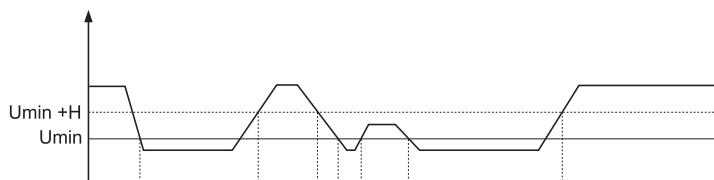
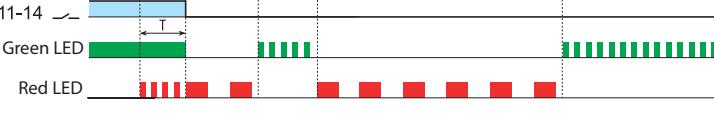
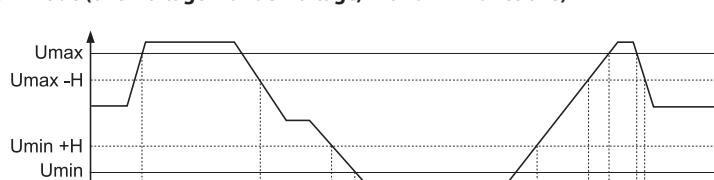
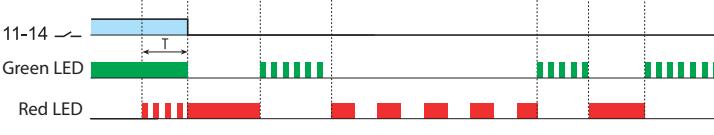
Technical data

| Insulation | | | 70.11/31/41/42 | 70.51 | 70.61 | 70.62/92 |
|--|--|---------------------------|-----------------------|-----------------|--------------------------|-----------------------------------|
| Between supply and contacts | dielectric strength | V AC | 2500 | 2500 | 2500 | 3000 |
| | impulse (1.2/50 µs) | kV | 4 | 4 | 5 | 5 |
| Between open contacts | dielectric strength | V AC | 1000 | 1000 | 1000 | 1000 |
| | impulse (1.2/50 µs) | kV | 1.5 | 1.5 | 1.5 | 1.5 |
| EMC specifications | | | | | | |
| Type of test | | Reference standard | | | | |
| Electrostatic discharge | contact discharge | | EN 61000-4-2 | | 4 kV | |
| | air discharge | | EN 61000-4-2 | | 8 kV | |
| Radiated electromagnetic field | 80...1000 MHz | | EN 61000-4-3 | | 10 V/m | |
| | 1...2.8 GHz | | EN 61000-4-3 | | 5 V/m | |
| Fast transients (burst 5/50 ns, 5 and 100 kHz) | on supply terminals | | EN 61000-4-4 | | 4 kV | |
| | common mode | | EN 61000-4-5 | | 4 kV | |
| Voltage pulses on supply terminals (surge 1.2/50 µs) | differential mode | | EN 61000-4-5 | | 4 kV | |
| | Radiofrequency common mode voltage (0.15...230 MHz) | on supply terminals | EN 61000-4-6 | | 10 V | |
| Voltage dips | 70% U _N | | EN 61000-4-11 | | 25 cycles | |
| Short interruptions | | | EN 61000-4-11 | | 1 cycle | |
| Radiofrequency conducted emissions | 0.15...30 MHz | | CISPR 11 | | class B | |
| Radiated emissions | 30...1000 MHz | | CISPR 11 | | class B | |
| Terminals | | Screw terminals | | | Push-in terminals | |
| Wire strip length | | mm | 10 | | 10 | |
|  Screw torque | | Nm | 0.8 | | — | |
| Min. wire size | | | Solid cable | | Solid cable | |
| | | mm ² | 0.5 | | 0.75 | |
| | | AWG | 20 | | 18 | |
| Max. wire size | | | Solid cable | | Solid cable | |
| | | mm ² | 1 x 6 / 2 x 4 | | 1 x 1.5 / 2 x 1.5 | |
| | | AWG | 1 x 10 / 2 x 12 | | 1 x 16 / 2 x 16 | |
| Min. wire size | | | Stranded cable | | Stranded cable | |
| | | mm ² | 0.5 | | 0.75 | |
| | | AWG | 20 | | 18 | |
| Max. wire size | | | Stranded cable | | Stranded cable | |
| | | mm ² | 1 x 4 / 2 x 2.5 | | 1 x 2.5 / 2 x 2.5 | |
| | | AWG | 1 x 12 / 2 x 14 | | 1 x 14 / 2 x 14 | |
| Other data | | | 70.11 | 70.31/41 | 70.42/61/62/92 | 70.51 |
| Power lost to the environment | without output current | W | 0.8 | 0.9 | 1 | 2 (230 V AC) / 0.2 (24 V DC) |
| | with rated output current | W | 2 | 1.2 | 1.4 | 2.5 (230 V AC) / 0.5 (24 V DC) |

E

Functions

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

| | | |
|---|---|---|
| Type 70.11 70.31 70.42 | Ovvoltage (OV and OV_m functions) | |
| |  | Without memory  With memory  |
| | Undervoltage (UV and UV_m functions) | |
| Type 70.11 70.31 70.42 |  | Without memory  With memory  |
| | Window mode (overvoltage + undervoltage, W and Wm functions) | |
| |  | Without memory  With memory  |

Functions

- = Output contact
(11-14, 21-24 for 70.42 only)
- OV = Overvoltage
- OV_m = Overvoltage with memory
- UV = Undervoltage
- UV_m = Undervoltage with memory
- W = Window mode (OV + UV)
- W_m = Window mode (OV + UV)
with memory
- H = Hysteresis

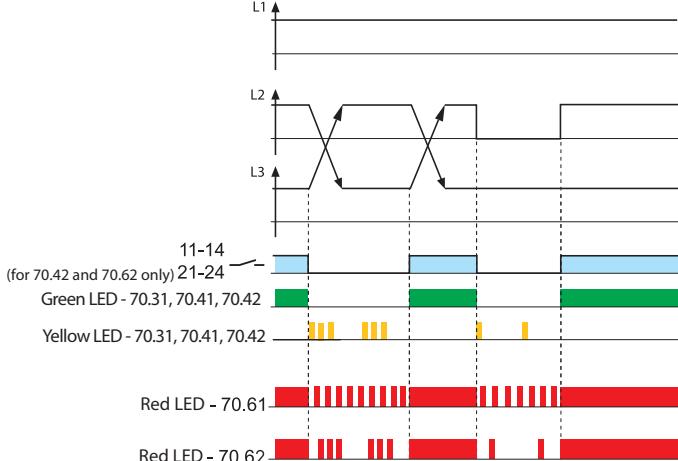
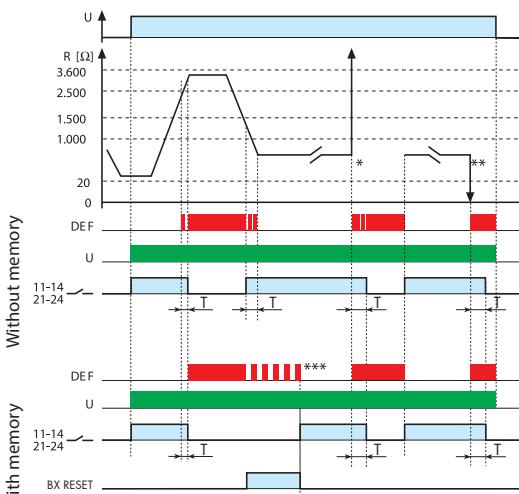
If the voltage moves out of limits, following delay **T** the output relay turns Off.

When the voltage is again within limits (± the Switch-on hysteresis **H**):

- if set in the "without memory" position, the output relay "recovers", i.e. it turns On (after the Switch-on lock-out time) without any memory of the previous event.
- if set in the "with memory" position (70.11, 70.42 and 70.31 only), the output relay remains open. To reset, it is necessary to switch the supply Off and then On again, or to rotate the selector first to an adjacent position and then to the original position.

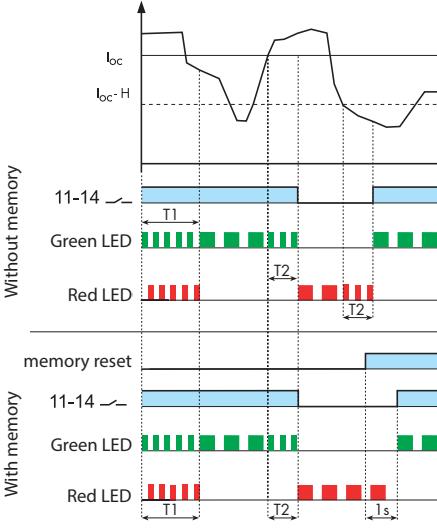
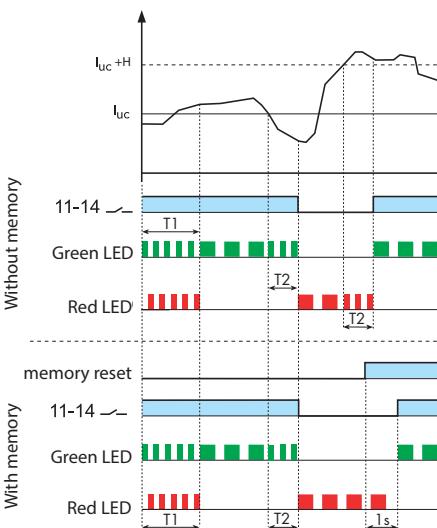
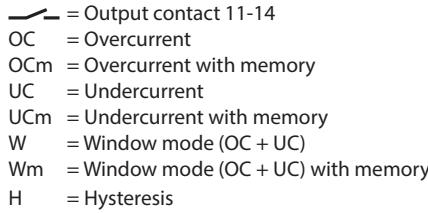
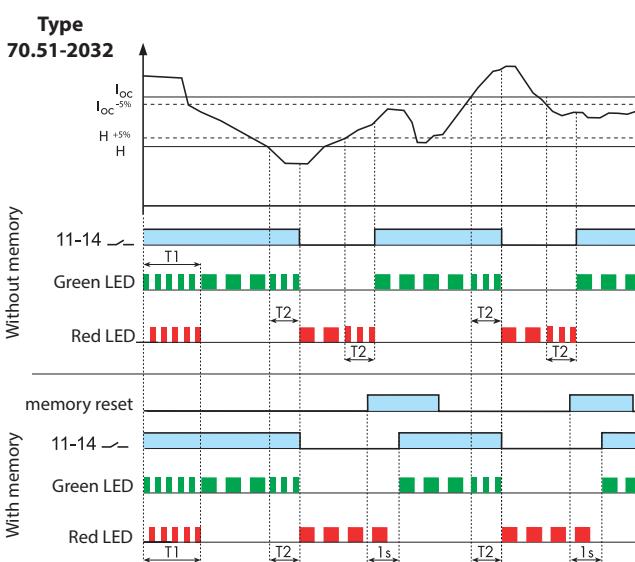
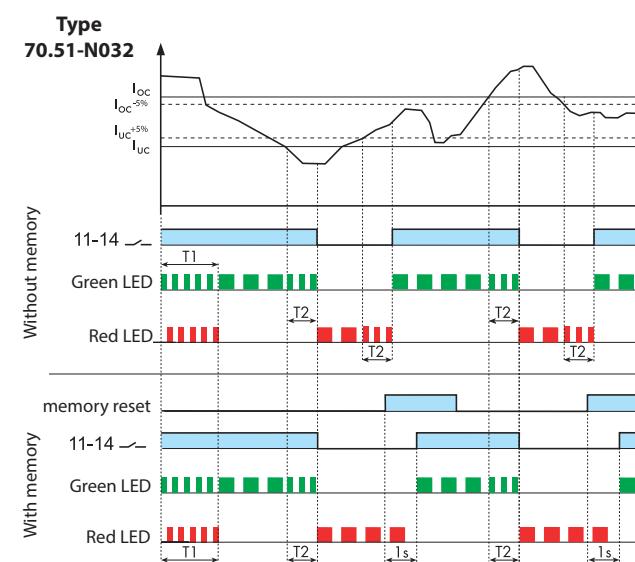
Functions

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

| | | |
|---|---|---|
| Type 70.31 70.41 70.42 70.61 70.62 | Phase loss and phase rotation | <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> |
| |  <p>11-14 (for 70.42 and 70.62 only) 21-24 Green LED - 70.31, 70.41, 70.42 Yellow LED - 70.31, 70.41, 70.42 Red LED - 70.61 Red LED - 70.62</p> | |
| Type 70.41 70.42 | Neutral loss and asymmetry | <p>If the neutral is lost (and the Neutral control function is set), the output relay turns off immediately. When the neutral is again present, the output relay turns on immediately</p> <p>If the asymmetry ($U_{max} - U_{min}$)/U_N is above the % set value, the output relay turns off after the set delay T. When the asymmetry is again below the % set value (with a fixed hysteresis of approximately 2%), the output relay turns on after the Switch-on lock-out time.</p> |
| Type 70.92 |  <p>Without memory With memory</p> <p>11-14 21-24 DEF U BX RESET DX RESET</p> <p>* PTC-Break ** PTC-Short circuit *** RESET MEMORY = Operate the RESET key, or interrupt the supply.</p> | <p>The contact open if:</p> <ul style="list-style-type: none"> - thermistor line break - over temperature $R_{PTC} > (2.5...3.6)k\Omega$ - thermistor line short circuit ($R_{PTC} < 20 \Omega$) - loss of supply <p>The contact close if:</p> <ul style="list-style-type: none"> - temperature within limits - $R_{PTC} > (1.0...1.5)k\Omega$ on power-up - $(1...1.5)k\Omega$ on cooling <p>In BX mode (BF 0.5s or BL 3s) RESET work on falling front of the signal.</p> <p>In DX mode (DF 0.5s or DL 3s) RESET work on rising front of the signal.</p> <p>RESET signal must be >1s.</p> |

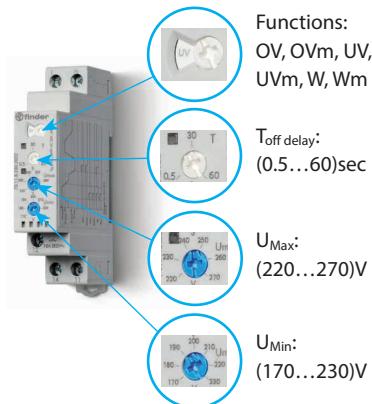
Functions

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

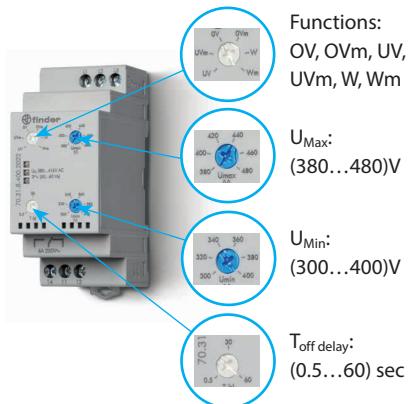
| | | |
|-------------------|--|--|
| Type 70.51 | Overcurrent (OC and OCm functions)  Undercurrent (UC and UCm functions)  | Functions  <p>If the current moves out of limits, following delay T2 the output relay turns Off.</p> <p>When the current is again within limits the Switch-on hysteresis H):</p> <ul style="list-style-type: none"> - if set in the "without memory" position, the output relay "recovers", i.e. it turns On (after the Switch-on lock-out time) without any memory of the previous event; - if set in the "with memory" position the output relay remains open. <p>To reset, it is necessary to switch the supply Off and then On again, or to push button connected on RESET terminals.</p> <p>During T1 delay the relay don't monitoring.</p> |
| | Window Mode (Overcurrent + Undercurrent, W and Wm functions)  | Type 70.51-2032  |

Front view: function selector and regulators

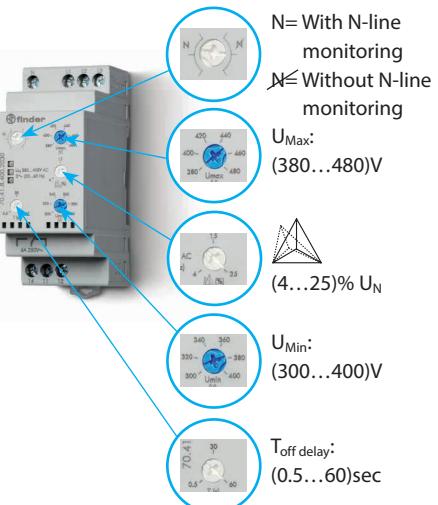
70.11



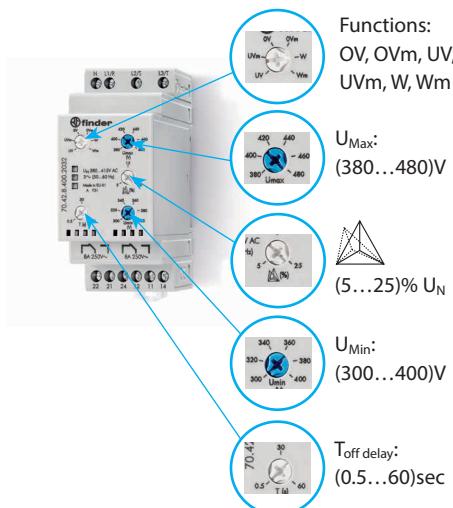
70.31



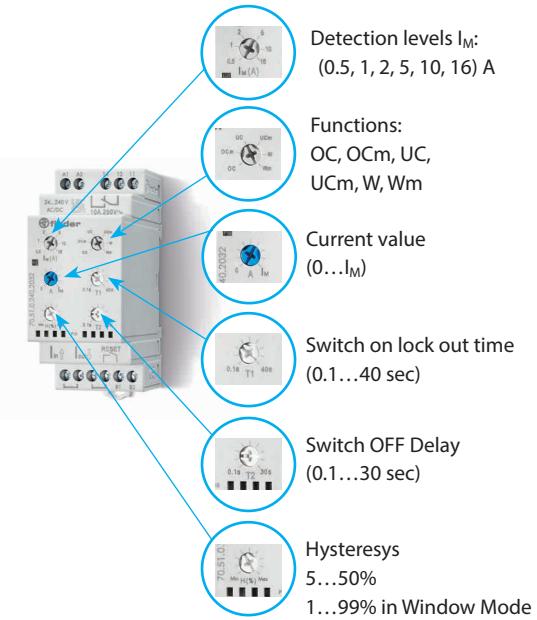
70.41



70.42



70.51



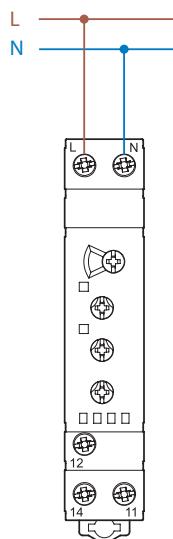
LED indication

| Monitoring relays Type | LED | Supply system normal | Supply system abnormal (Voltage out of limits, switch-off delay time T running) | Supply system abnormal (Reason for switch-off, RESET necessary when "with Memory"** is selected) |
|---------------------------|-------------|------------------------|--|---|
| | | Contact 11 - 14 closed | Contact 11 - 14 closed | Contact 11-14 open |
| 70.11.8.230.2022 | • | | | Overvoltage OV and OVm Undervoltage UV and UVm With Memory, following a failure a manual "RESET" ** is necessary |
| 70.31.8.400.2022 | • | | | Overvoltage OV and OVm Undervoltage UV and UVm Phase loss Phase rotation With Memory, following a failure a manual "RESET" ** is necessary |
| 70.41.8.400.2030 | • ○ ● | | | Overvoltage OV Undervoltage UV Asymmetry Phase loss Neutral loss Phase rotation |
| 70.42.8.400.2032 | • ○ ● | | | Overvoltage OV and OVm Undervoltage UV and UVm Asymmetry Phase loss Neutral loss Phase rotation With Memory, following a failure a manual "RESET" ** is necessary |
| 70.51.0.240.x032 | • ● | | or (during T2 time) (during T1 time) | or (during T2 time) |
| 70.61.8.400.x000 | • | | | Phase rotation or Phase loss |
| 70.62.8.400.0000 | • | | | Phase loss Phase rotation |

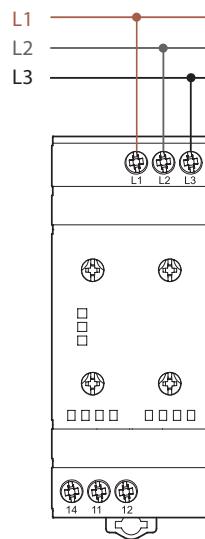
* The function "with Memory" is only available for type 70.11, 70.31, 70.42 and 70.51.

** It is necessary to switch the supply OFF and then On again (U off U on) or to rotate the function selector first to an adjacent position and then to the original position.

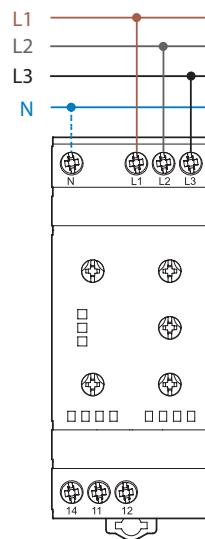
Wiring diagrams



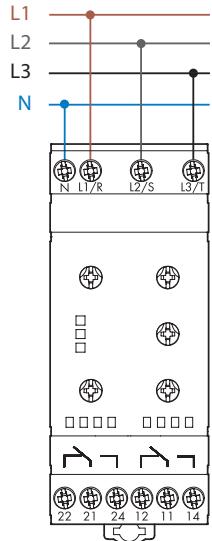
Type 70.11



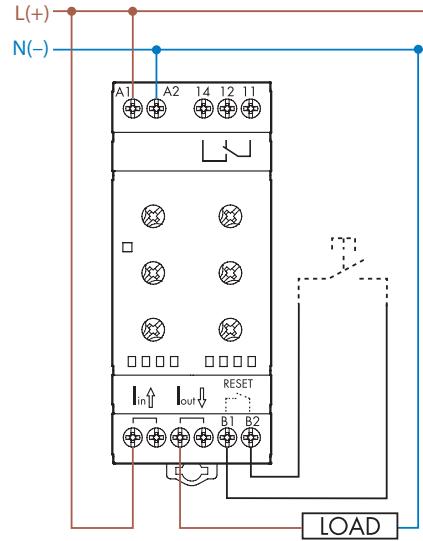
Type 70.31



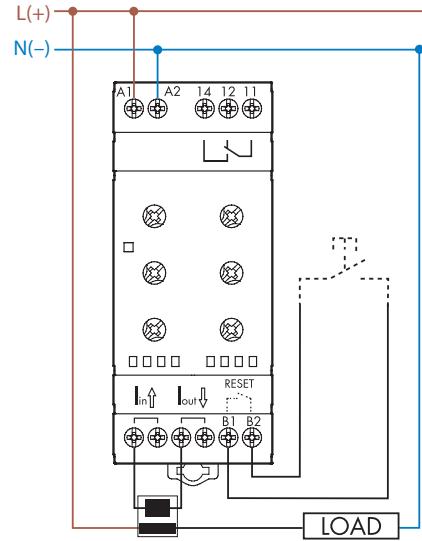
Type 70.41



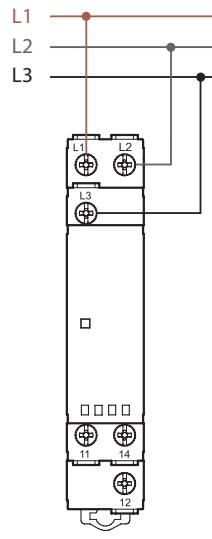
Type 70.42



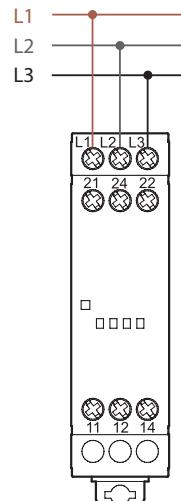
Type 70.51 and 70.51 NFC



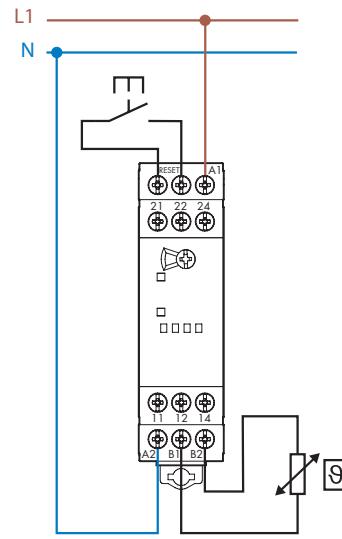
70.51 with TA connection



Type 70.61



Type 70.62

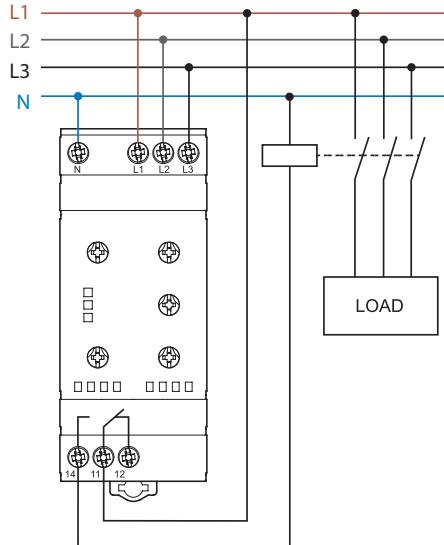


Type 70.92

Wiring diagrams

Application example

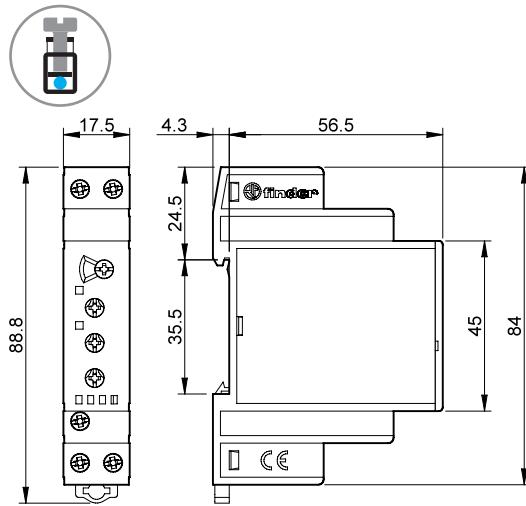
The output contact switches the coil of the line contactor.



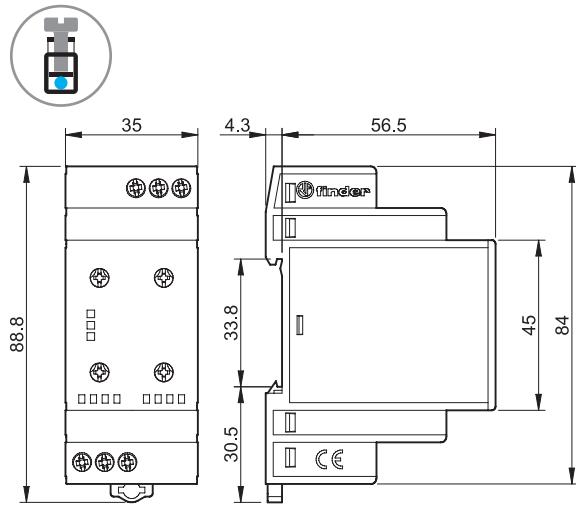
E

Outline drawings

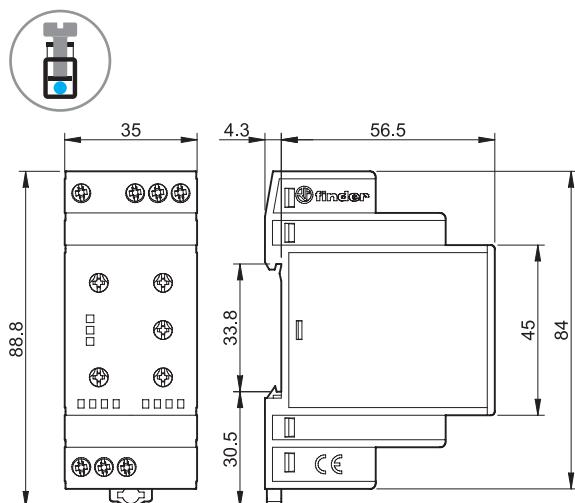
Type 70.11
Screw terminal



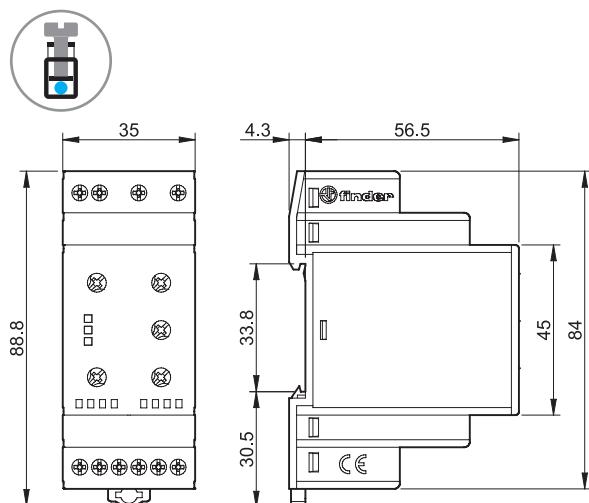
Type 70.31
Screw terminal



Type 70.41
Screw terminal



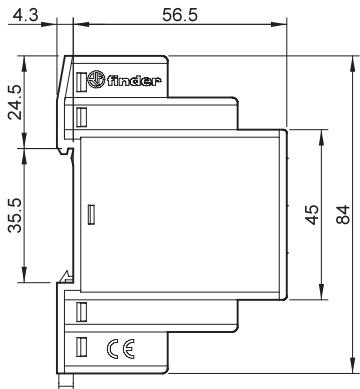
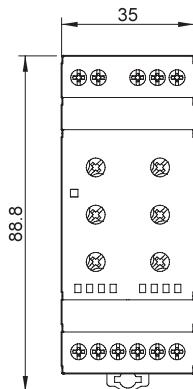
Type 70.42
Screw terminal



Outline drawings

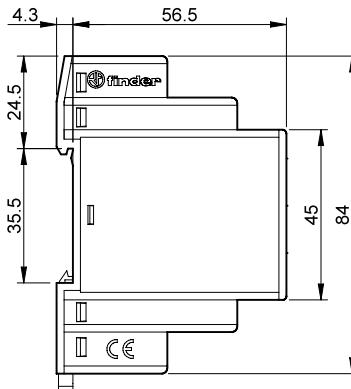
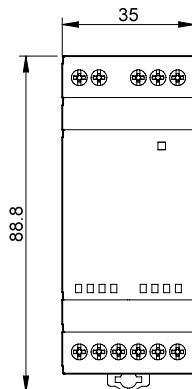
Type 70.51.0.240.2032

Screw terminal



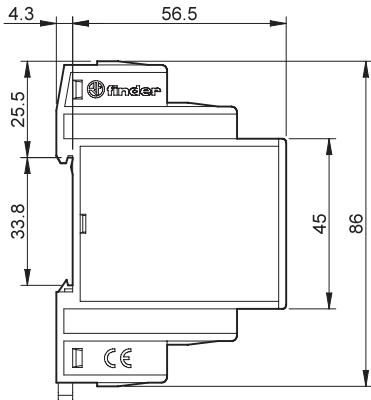
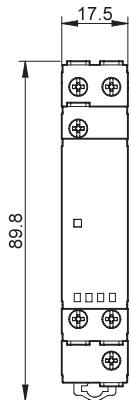
Type 70.51.0.240.N032

Screw terminal



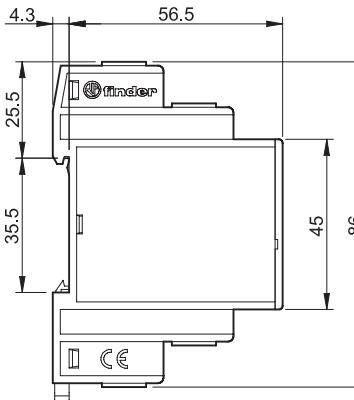
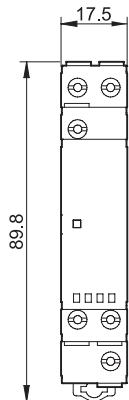
Type 70.61

Screw terminal



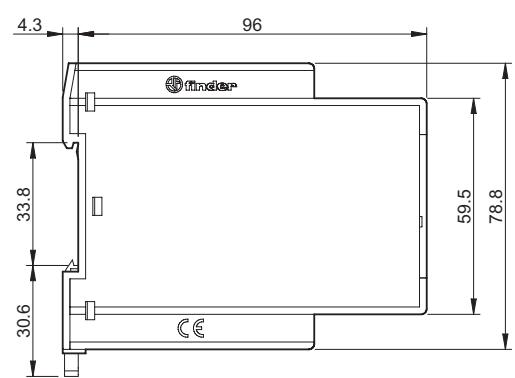
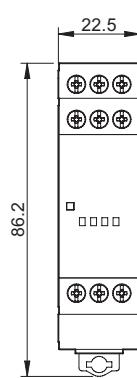
Type 70.61-P000

Push-in terminal



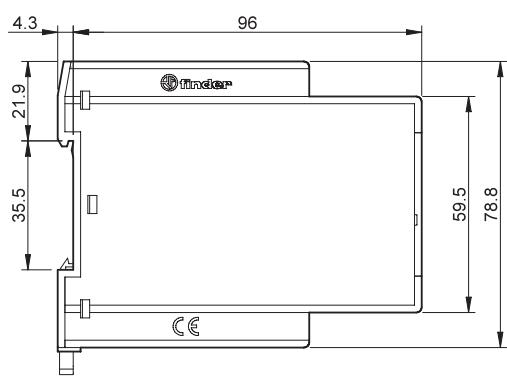
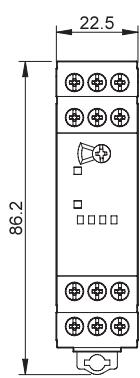
Type 70.62

Screw terminal



Type 70.92

Screw terminal



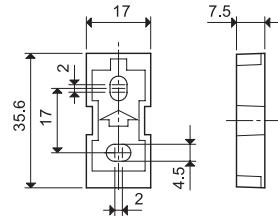
Accessories



020.01

Adaptor for panel mounting, plastic, 17.5 mm wide for 70.11, 70.61 and 70.92

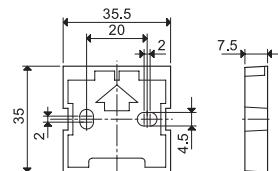
020.01



011.01

Adaptor for panel mounting, plastic, 35 mm wide for 70.31, 70.41, 70.42 and 70.51

011.01



E

060.48

Sheet of marker tags (CEMBRE Thermal transfer printers) for relays types 70.11, 70.31, 70.41, 70.42, 70.51, 70.62 and 70.92 (48 tags), 6 x 12 mm

060.48



022.09

Separator for rail mounting, plastic, 9 mm wide

022.09

