

Features

1 - Phase 230 V
Over & Under voltage monitoring relays

71.11.8.230.0010

- Fixed Over & Under voltage detection
- Link selectable 5 or 10 minute lock-out delay

71.11.8.230.1010

- Adjustable Over & Under voltage detection
- Switch selectable 5 or 10 minute lock-out delay
- 35 mm rail (EN 60715) mounting
- LED indication
- Positive safety logic (healthy conditions - output relay energised)

71.11.8.230.0010



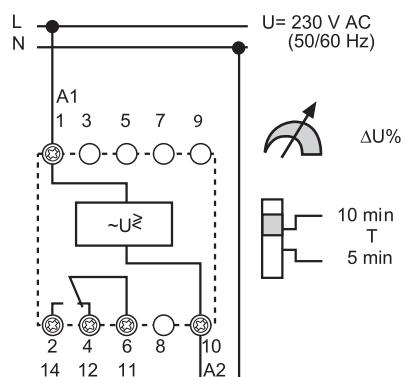
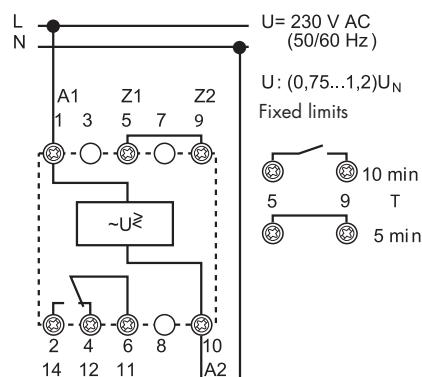
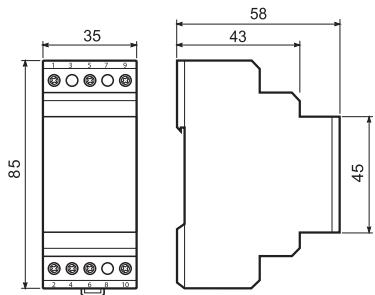
- Fixed - Over/Under voltage limits, $(0.75\dots1.2)U_N$ respectively
- Link selectable - 5 min or 10 min delay

71.11.8.230.1010



- Adjustable - symmetrical Over/Under voltage limits adjustable between $\pm 5\%$ to $\pm 20\% U_N$
- Switch selectable - 5 min or 10 min delay

- Detects and trips on out-of-limits L-N voltage, and protects against excessive "starts/hour" through "power-on" and "lock-out" time delays.
- Typical applications - protection of compressor motors and high pressure discharge lamp circuitry.



Contact specification

Contact configuration	1 CO (SPDT)	1 CO (SPDT)
Rated current/Maximum peak current A	10/15	10/15
Rated voltage/Maximum switching voltage V AC	250/400	250/400
Rated load AC1 VA	2,500	2,500
Rated load AC15 (230 V AC) VA	500	500
Single phase motor rating (230 V AC) kW	0.5	0.5
Breaking capacity DC1: 30/110/220 V A	10/0.3/0.12	10/0.3/0.12
Minimum switching load mW (V/mA)	300 (5/5)	300 (5/5)
Standard contact material	AgCdO	AgCdO

Supply specification

Nominal voltage (U_N) V AC (50/60 Hz)	230	230
	V DC	—
Rated power AC/DC VA (50 Hz)/W	4/—	4/—
Operating range	AC $(0.75\dots1.2)U_N$	DC $(0.8\dots1.2)U_N$

Technical data

Electrical life at rated load AC1 cycles	$100 \cdot 10^3$	$100 \cdot 10^3$
Detection levels	Fixed $(0.75\dots1.2)U_N$	Adjustable $(\pm 5\dots\pm 20)\% U_N$
Switch-on lock-out time/reaction time	$(5 \text{ or } 10)\text{min} / < 0.5 \text{ s}$	$(5 \text{ or } 10)\text{min} / < 0.5 \text{ s}$
Fault memory	—	—
Electrical isolation: Supply to Measuring circuits	None – circuits are electrically common	None – circuits are electrically common
Ambient temperature range °C	$-20\dots+55$	$-20\dots+55$
Protection category	IP 20	IP 20
Approvals (according to type)	 	

Features

3 - Phase 400 V
Over & Under voltage monitoring relay

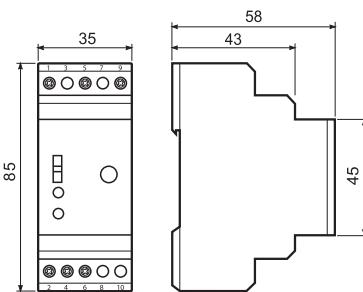
71.31.8.400.1010

- Adjustable Over & Under voltage detection
- Switch selectable 5 or 10 minute lock-out delay

- 35 mm rail (EN 60715) mounting

- LED indication

- Positive safety logic (healthy conditions - output relay energised)

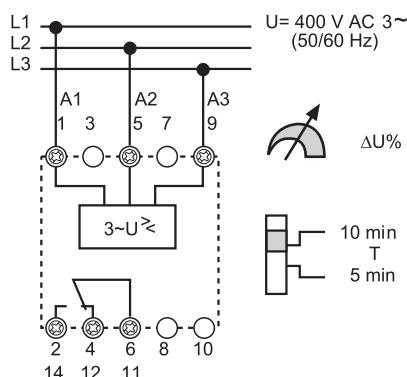


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- Adjustable - symmetrical Over/Under voltage limits adjustable between $\pm 5\%$ to $\pm 20\% U_N$
- Switch selectable - 5 min or 10 min delay

- Detects and trips on out-of-limits L-L voltage, and protects against excessive "starts/hour" through "power-on" and "lock-out" time delays.
- Typical applications - protection of compressor motors and high pressure discharge lamp circuitry.



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 2,500

Rated load AC15 (230 V AC) VA 500

Single phase motor rating (230 V AC) kW 0.5

Breaking capacity DC1: 30/110/220 V A 10/0.3/0.12

Minimum switching load mW (V/mA) 300 (5/5)

Standard contact material AgCdO

Supply specification

Nominal voltage (U_N) V AC (50/60 Hz) 400

V DC —

Rated power AC/DC VA (50 Hz)/W 4/—

Operating range AC $[0.8 \dots 1.2] U_N$

DC —

Technical data

Electrical life at rated load AC1 cycles $100 \cdot 10^3$

Detection levels V (50/60 Hz) Adjustable ($\pm 5 \dots \pm 20\% U_N$)

Switch-on lock-out time/reaction time (5 or 10)min / < 0.5 s

Fault memory —

Electrical isolation: Supply to Measuring circuits None – circuits are electrically common

Ambient temperature range °C $-20 \dots +55$

Protection category IP 20

Approvals (according to type)  

Features

3 - Phase 400 V - Line monitoring relays

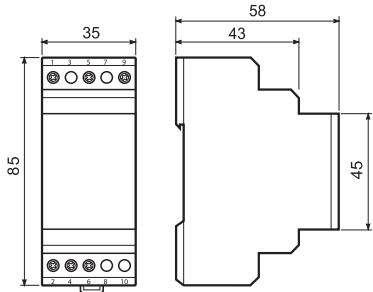
71.31.8.400.1021

- Over & Under voltage trip on-delay
- Fault memory

71.31.8.400.2000

- Phase asymmetry
- Phase rotation
- Phase loss

- 35 mm rail (EN 60715) mounting
- LED indication
- Positive safety logic (healthy conditions - output relay energised)

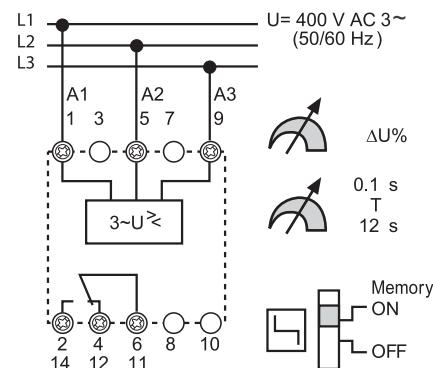


71.31.8.400.1021



- 3 phase 400 V - line voltage monitoring
- Detects over and under voltage
- Adjustable trip on-delay
- Switch selectable fault memory

- Under voltage trip level (0.8...0.95)U_N - Adjustable
- Over voltage trip level 1.15 U_N - Fixed
- Trip delay time (0.1...12)s adjustable
- Fault memory, switch selectable
- Fault acknowledgement by switch manipulation from ON to OFF and back to ON or power down

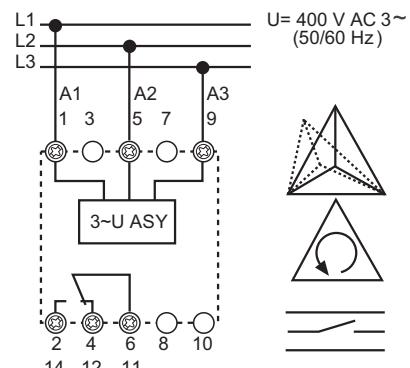


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- 3 phase asymmetry monitoring
- Phase rotation monitoring
- Phase loss monitoring

- Asymmetry between phases (-5...-20)% U_N adjustable
- Detection of the supply voltage U to A1 (1) and/or A2 (5) > 1.11 U_N



Contact specification

Contact configuration	1 CO (SPDT)	1 CO (SPDT)
Rated current/Maximum peak current A	10/15	10/15
Rated voltage/Maximum switching voltage V AC	250/400	250/400
Rated load AC1 VA	2,500	2,500
Rated load AC15 (230 V AC) VA	500	500
Single phase motor rating (230 V AC) kW	0.5	0.5
Breaking capacity DC1: 30/110/220 V A	10/0.3/0.12	10/0.3/0.12
Minimum switching load mW (V/mA)	300 (5/5)	300 (5/5)
Standard contact material	AgCdO	AgCdO

Supply specification

Nominal voltage (U _N) V AC (50/60 Hz)	400	400
	V DC	—
Rated power AC/DC VA (50 Hz)/W	4/-	4/-
Operating range	AC (0.8...1.15)U _N	(0.8...1.15)U _N
	DC —	—

Technical data

Electrical life at rated load AC1 cycles	100 · 10 ³	100 · 10 ³
Detection level U _{min} /U _{max} /Asymmetry	(0.8...0.95)U _N / 1.15 U _N / —	0.8 U _N / 1.11 U _N / (-5...-20)% U _N
Trip on-delay/reaction time	(0.1...12)s / < 0.5 s	— / < 0.5 s
Fault memory - selectable	Yes	—
Electrical isolation: Supply to Measuring circuits	None – circuits are electrically common	None – circuits are electrically common
Ambient temperature range °C	-20...+55	-20...+55
Protection category	IP 20	IP 20
Approvals (according to type)	 	

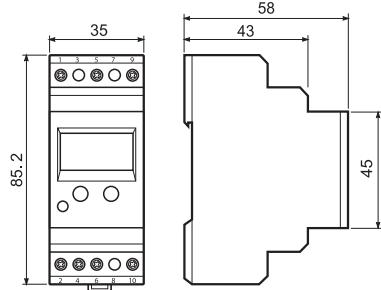
Features

Universal voltage or current detecting and monitoring relay

71.41.8.230.1021 - Voltage monitoring

71.51.8.230.1021 - Current monitoring

- Zero voltage memory according to EN 60204-7-5
- Programmable for DC or AC detection level:
 - range detecting: upper and lower value
 - upper set point minus hysteresis range (5...50)% for switch on
 - lower set point plus hysteresis range (5...50)% for switch on
- Fault memory
- Electrical isolation between measuring and supply circuits
- Immune to supply interruptions of < 200 ms
- Wide detecting range:
 - voltage: DC (15...700)V, AC (15...480)V
 - 35 mm rail (EN 60715) mounting



71.41.8.230.1021



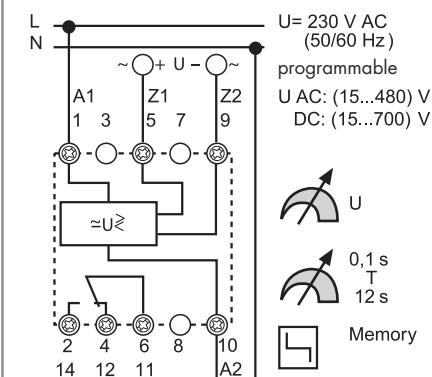
- Programmable universal voltage monitoring relay

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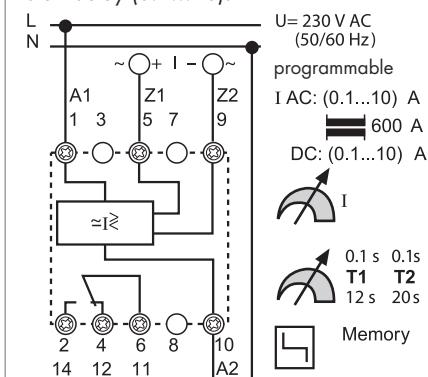


- Programmable universal current monitoring relay
- Usable with current transformer 50/5, 100/5, 150/5, 250/5, 300/5, 400/5 or 600/5

- AC/DC voltage detection - adjustable
- AC (50/60 Hz) (15...480)V
- DC (15...700)V
- Switch-on hysteresis (5...50)%
- Switch-off delay (0.1...12)s



- AC/DC current detection - adjustable
- AC(50/60Hz) (0.1...10)A with current transformer to 600A
- DC (0.1...10)A
- Switch-on hysteresis (5...50)%
- Switch-off delay (0.1...12)s
- Start delay (0.1...20)s



Contact specification

Contact configuration

1 CO (SPDT)

1 CO (SPDT)

Rated current/Maximum peak current A

10/15

10/15

Rated voltage/Maximum switching voltage V AC

250/400

250/400

Rated load AC1 VA

2,500

2,500

Rated load AC15 (230 V AC) VA

500

500

Single phase motor rating (230 V AC) kW

0.5

0.5

Breaking capacity DC1: 30/110/220 V A

10/0.3/0.12

10/0.3/0.12

Minimum switching load mW (V/mA)

300 (5/5)

300 (5/5)

Standard contact material

AgCdO

AgCdO

Supply specification

Nominal voltage (U_N) V AC (50/60 Hz)

230

230

V DC

—

—

Rated power AC/DC VA (50 Hz)/W

4 / —

4 / —

Operating range AC

(0.85...1.15) U_N

(0.85...1.15) U_N

DC

—

—

Technical data

Electrical life at rated load AC1 cycles

100 · 10³

100 · 10³

Detection levels AC(50/60 Hz)/DC

(15...480)V/(15...700)V

(0.1...10)A at transducer to 600A / (0.1...10)A

Switch-off/reaction/Start delay

(0.1...12)s / < 0.35 s / < 0.5 s

(0.1...12)s / < 0.35 s / (0.1...20)s

Switch-on level of the detecting level %

5...50

5...50

Fault memory - programmable

Yes

Yes

Electrical isolation: Supply to Measuring circuits

Yes

Yes

Ambient temperature range °C

-20...+55

-20...+55

Protection category

IP 20

IP 20

Approvals (according to type)



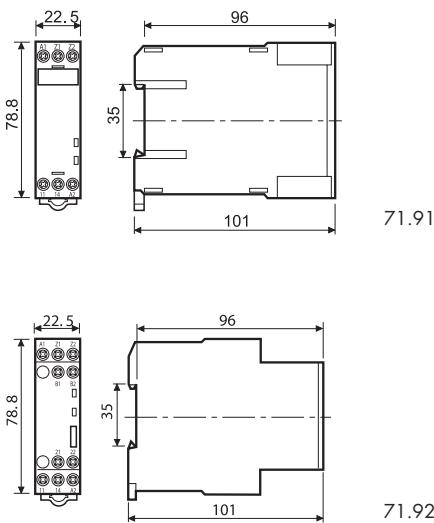
Features

Thermistor temperature sensing relays for industrial applications

71.91 - 1 Pole, without fault memory

71.92 - 2 Pole, with fault memory

- Overload protection according EN 60204-7-3
- Positive safety logic - make contact opens if the measured value is outside of the acceptable range
- Industry standard module
- LED status indication
- 35 mm rail (EN 60715) mounting

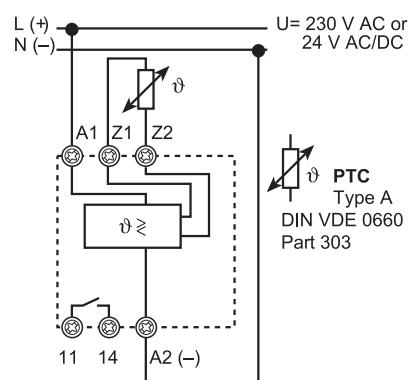


71.91.x.xxx.0300



- Thermistor relay
- 1 Pole normally open contact
- 24 V AC/DC, or 230 V AC supply

- Temperature detection with PTC
- PTC short circuit detection
- PTC wire breakage detection

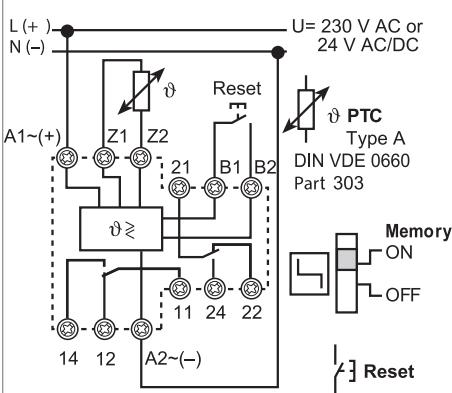


71.92.x.xxx.0001



- Thermistor relay with fault memory
- 2 Pole changeover contacts
- 24 V AC/DC, or 230 V AC supply

- Temperature detection with PTC
- Fault memory – switch selectable
- Reset by Reset button or supply interruption
- PTC short circuit detection
- PTC wire breakage detection



Contact specification

Contact configuration	1 NO (SPST-NO)	2 CO (DPDT)
Rated current/Maximum peak current A	10/15	10/15
Rated voltage/Maximum switching voltage V AC	250/400	250/400
Rated load AC1 VA	2,500	2,500
Rated load AC15 (230 V AC) VA	500	500
Single phase motor rating (230 V AC) kW	0.5	0.5
Breaking capacity DC1: 30/110/220 V A	10/0.3/0.12	10/0.3/0.12
Minimum switching load mW (V/mA)	300 (5/5)	300 (5/5)
Standard contact material	AgCdO	AgCdO

Supply specification

Nominal voltage (U_N) V AC (50/60 Hz)	230	230
	24	24
Rated power AC/DC VA (50 Hz)/W	1/0.5	1/0.5
Operating range AC	$(0.85 \dots 1.15)U_N$	$(0.85 \dots 1.15)U_N$
	—	—

Technical data

Electrical life at rated load AC1 cycles	$100 \cdot 10^3$	$100 \cdot 10^3$
PTC detecting: Short circuit/Temperature OK	$<20 \Omega / >20 \Omega \dots <3 \text{ k}\Omega$	$<20 \Omega / >20 \Omega \dots <3 \text{ k}\Omega$
Reset/PTC break	$<1.3 \text{ k}\Omega / >3 \text{ k}\Omega$	$<1.3 \text{ k}\Omega / >3 \text{ k}\Omega$
Delay time/activation time	— / $< 0.5 \text{ s}$	— / $< 0.5 \text{ s}$
Fault memory - switch selectable	—	Yes
Electrical isolation: Supply to Measuring circuits	Yes	Yes
Ambient temperature range °C	$-20 \dots +55$	$-20 \dots +55$
Protection category	IP 20	IP 20
Approvals (according to type)	 	

Ordering information

Example: Universal voltage monitoring relay with LCD display for AC/DC voltage detection, 1 CO (SPDT) contact rated 10 A 250, supply voltage 230 V, programmable delay time and fault memory.

7 1 . 4 1 . 8 . 2 3 0 . 1 0 2 1

Series

Type

- 1 = 1 phase AC line monitoring
- 3 = 3 phase AC line monitoring
- 4 = AC/DC universal- Voltage detection
- 5 = AC/DC universal- Current detection
- 9 = Thermistor relay (temperature monitoring with PTC thermistor)

No. of poles

- 1 = 1 CO (SPDT) types 71.11, 31, 41, 51
- 1 = 1 NO (SPST-NO) type 71.91
- 2 = 2 CO (DPDT) type 71.92

Supply version

- 0 = AC(50/60Hz)/DC
- 8 = AC (50/60 Hz)

Supply voltage

- 024 = 24 V AC/DC
- 230 = 230 V
- 400 = 400 V

Additional functions

- 0 = Basic function
- 1 = Adjustable detection value
- 2 = Adjustable: Asymmetry, phase loss, phase rotation

Special versions

- 0 = No fault memory
- 1 = Fault memory

Options

- 0 = No delay time
- 1 = Two selectable delay times
- 2 = Adjustable delay times

Contact circuit

- 0 = CO (nPDT)
- 3 = NO (nPST-NO)

Technical data

Insulation

Insulation according to EN 61810-1	insulation rated voltage V	250
	rated impulse withstand voltage kV	4
	pollution degree	3
	over-voltage category	III

Dielectric strength (A1, A2, A3, B1, B2), and contact terminals (11, 12, 14) and terminals (Z1, Z2)	V AC	2,500
	kV (1.2/50 µs)	6

Dielectric strength at open contact	V AC	1,000
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EMC specifications

Type of test	Reference Standard
Electrostatic discharge	EN 610004-2
	8 kV
	air discharge
	EN 610004-2
	8 kV
Radio-frequency electromagnetic field (80...1,000)MHz	EN 610004-3
Fast transients (burst) (5-50 ns, 5 kHz) on (A1, A2, A3, B1, B2) and (Z1, Z2)	EN 610004-4
Surges (1.2/50 µs) on (A1, A2, A3, B1, B2) and (Z1, Z2)	EN 610004-5
	4 kV
	common mode
	EN 610004-5
	4 kV
Radio-frequency common mode (0.15 ÷ 80 MHz) to A1 - A2	EN 610004-6
Radiated and conducted emission	EN 55022
	class B

Other data

Voltage and current values at terminals Z1 Z2	Type 71.11	Link for time range	V / mA	230 V / –
	Type 71.91, 71.92	PTC temperature measurement	V / mA	24 V / 2.4
Maximum length of wiring to the Supply terminals/ Measuring terminals	Type 71.11, 71.31	Contact bridge for time range	m	150 / –
	Type 71.41	Voltage measurement	m	150 / 50
	Type 71.51	Current measurement	m	150 / 50
(Wiring capacitance no greater than 10 nF/100 m)	Type 71.91, 71.92	PTC temperature measurement	m	50 / 50
Measuring principle	Type 71.11, 71.31, 71.41, 71.51, 71.91, 71.92	The measured value is the arithmetical average of 500 individual measurements taken over a 100 ms period. Interruptions less than <200 ms are ignored.		
Safety logic	Type 71.11, 71.31, 71.41, 71.51, 71.91, 71.92	Positive safety logic - When the value being monitored lies within the acceptable area, the make contact is closed.		
Reaction time (following the application of the supply voltage)	Type 71.11, 71.31, 71.41, 71.51, 71.91, 71.92	≤ 0.5 s		
Power lost to the environment	without contact load	W	4	
	with rated current	W	5	
Permitted storage temperature range	°C	–40...+85		
Protection category		IP 20		
⊕ Screw torque	Nm	0.8		
Max. wire size		solid cable		standed cable
	mm ²	0.5...{2 x 2.5}		{2 x 1.5}
	AWG	20...{2 x 14}		{2 x 16}

Functions

Monitoring relay	Types					Times	Supply voltage	Module width	Contact conf.
	1-phase 230 V, Under/Oversupply	3-phase 400 V, Under/Oversupply	3-phase 400 V, Phase/Symmetry	3-phase 400 V, Phase loss	3-phase 400 V, Phase				
71.11.8.230.0010	•								
71.11.8.230.1010	•								
71.31.8.400.1010	•								
71.31.8.400.1021	•								
71.31.8.400.2000		•	•	•					
71.41.8.230.1021	•								
71.51.8.230.1021									
71.91.0.024.0300							•		•
71.91.8.230.0300							•		•
71.92.0.024.0001					•	•	•		•
71.92.8.230.0001					•	•	•		•
Current transformer	Source as required								

Explanation of relay marking and LED/LCD display

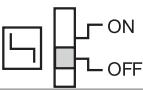
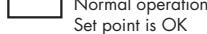
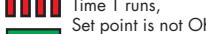
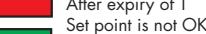
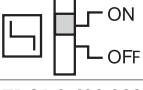
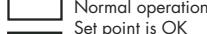
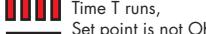
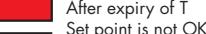
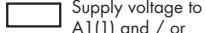
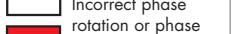
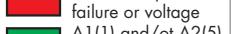
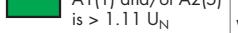
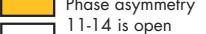
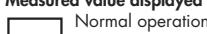
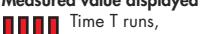
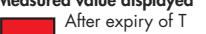
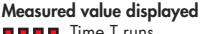
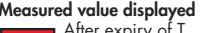
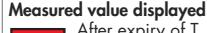
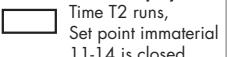
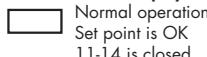
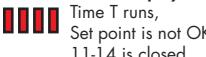
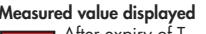
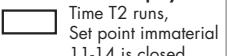
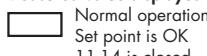
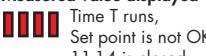
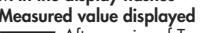
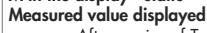
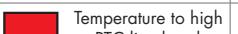
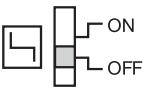
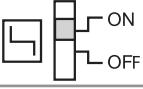
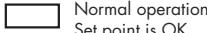
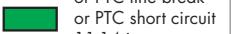
Monitoring relay without LCD-display

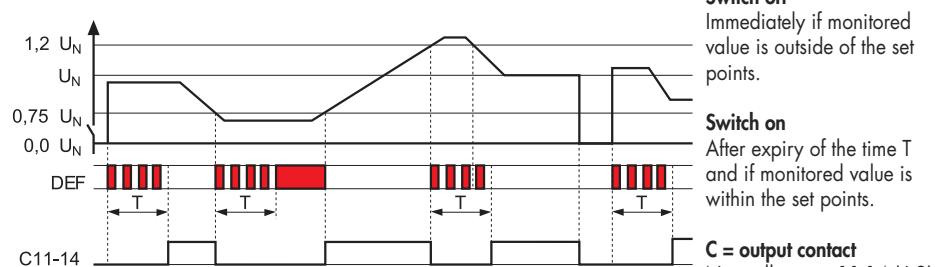
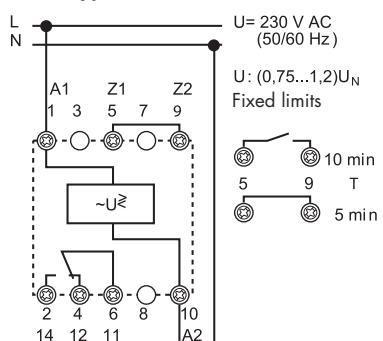
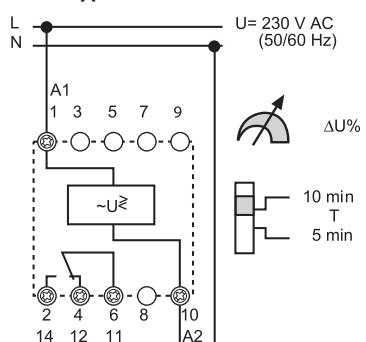
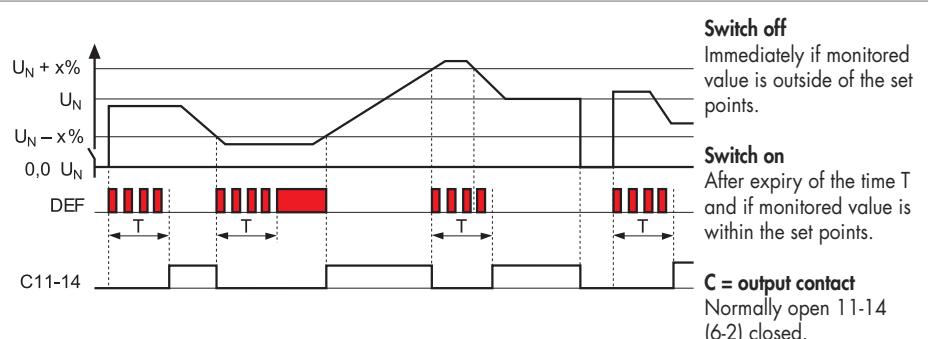
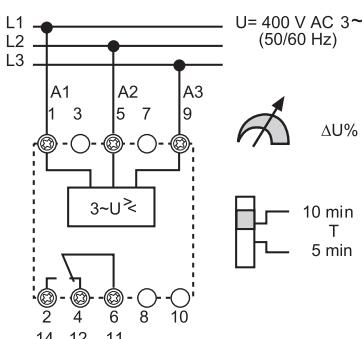
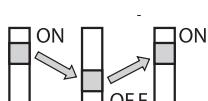
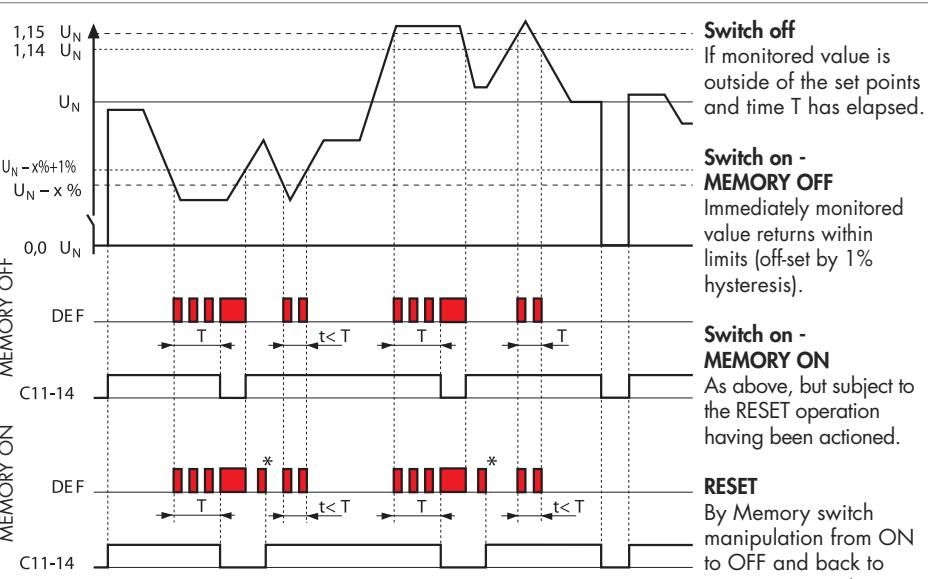
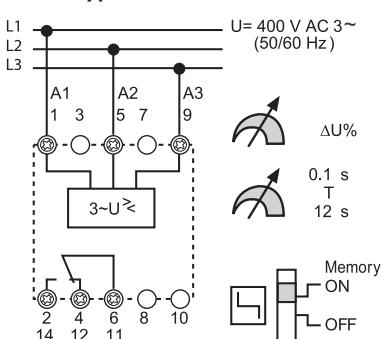
ON	LED green steady light: supply voltage is on and measuring system is active.
DEF	Default: the detected value is outside of the acceptable range (asymmetric is shown by the LED ASY). LED red flashing: delay time is running, see the function diagram. LED red steady light: output relay is off, contact 11-14 (6-2) is open.
ASY	Phase asymmetry is outside of the predefined range. LED steady light: output relay is turned off, contact 11-14 (6-2) is open.
LEVEL	Selected range as % value.
TIME	Delay time min (minutes) or s (seconds).
MEMORY ON	Fault memory switched on: the state of the output relay after the occurrence of a fault –contact 11-14 (6-2) open– will be maintained, monitored value returns to within acceptable limits. Fault reset is made by switch manipulation from ON to OFF to ON, or by power down (71.31.8.400.1021 & 71.92.x.xxx.0001), or by operating of the "RESET" (71.92.x.xxx.0001).
MEMORY OFF	Fault memory turned off: the state of the output contacts will only remain in the "fault" condition –contact 11-14 (6-2) open– while the monitored value is outside of the acceptable limits. When the monitored value returns within the acceptable limits the contact will revert to the energised state. Monitored equipment will start again automatically.

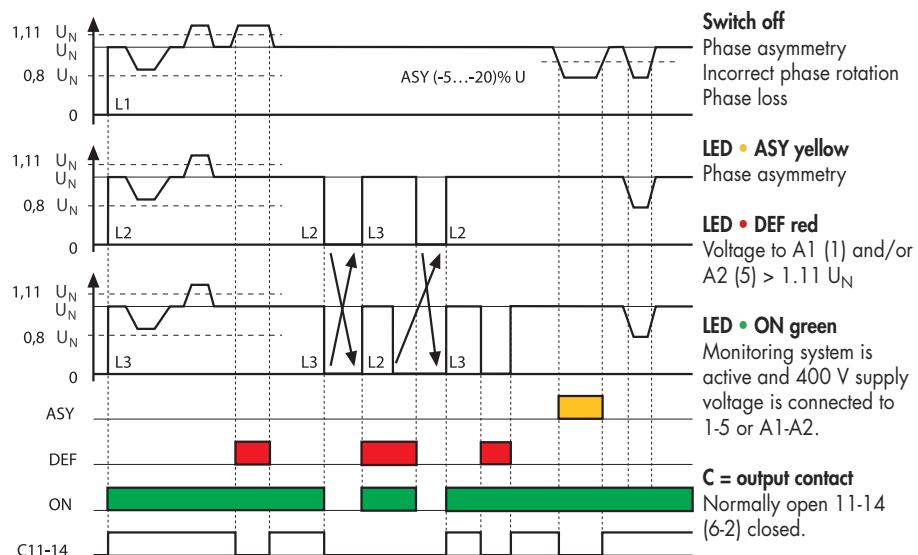
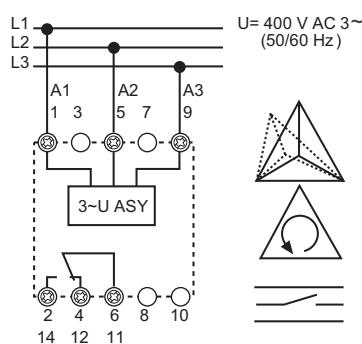
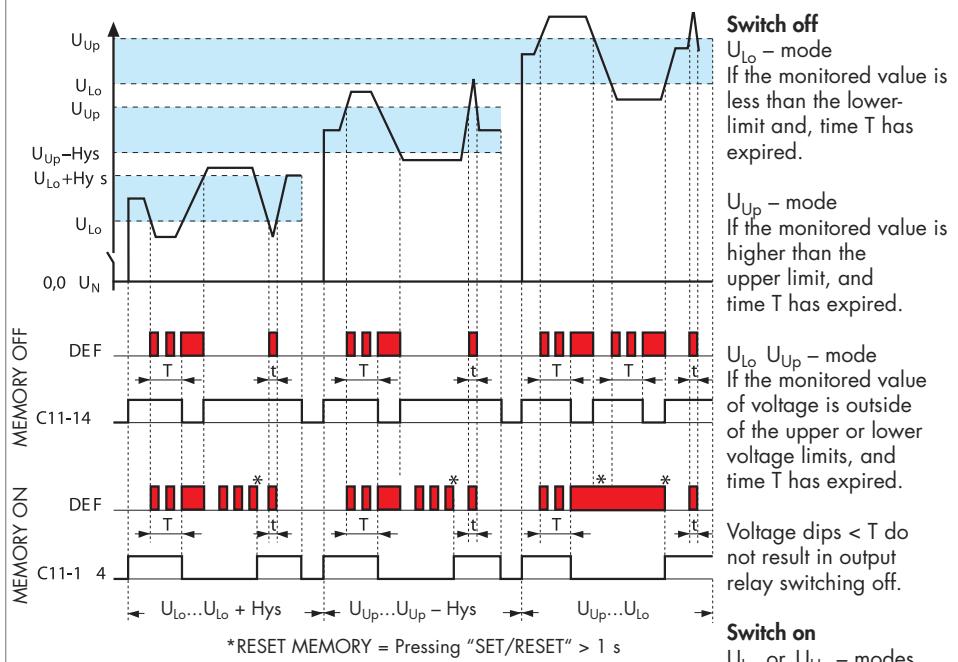
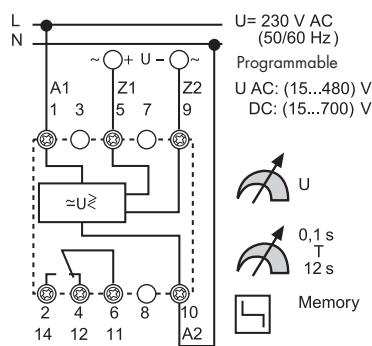
Monitoring relay with LCD-display

SET/RESET	Relay 71.41 and 71.51. Sets and resets the programmable values - see operating in the packing.		
SELECT	Relay 71.41 and 71.51. Selects the desired parameter for programming - see operating instructions.		
DEF	Default, LED red steady or flashing.		
PROG Modus	Enter the programming mode by simultaneously pressing the buttons "SET/RESET" and "SELECT" for 3 seconds. The word "prog" is shown for 1 second. "SELECT" allows the choice of "AC" or "DC", and is confirmed with "SET/RESET". Successively pressing the button "SELECT" brings up the choices of Up, or Up _{Lo} . The appropriate choice is made by pressing the "SET/RESET" button. The next step will program the appropriate values and the selection of the fault memory function (which is selected with a "YES" or "NO"). If all programming steps are completed the display will read "end".		
Short programmin instruction	After repeatedly pressing the "SET/RESET" button the measured value will be displayed, or "0" appears if nothing is connected to Z1 and Z2 (5 and 9). If the programming is broken off before "end" is shown in the display the previous program will remain unchanged after an interruption of the supply voltage.		
Program query	Pushing the "SELECT" button for at least 1 second, enters the "program inquiry mode". The programmed mode and the values are shown on the repeated pressing of the "SELECT" button.		
Flashing M (memory)	Fault memory has had effect (fault acknowledgement and reset is made by a 1 second press of the "SET/RESET" button).		
LCD-display	V = volt A = amp Up = upper limit (with hysteresis in down direction) Lo = lower limit (with hysteresis in up direction) Up _{Lo} = upper and lower limit - range detecting	Level= value Hys = hysteresis M = memory (fault) Yes = yes - with memory no = no - without memory	t ₁ = T ₁ - time during which short-time fluctuations are not taken into account t ₂ = T ₂ - (monitoring relay 71.51) the time during which inrush currents are not taken into account

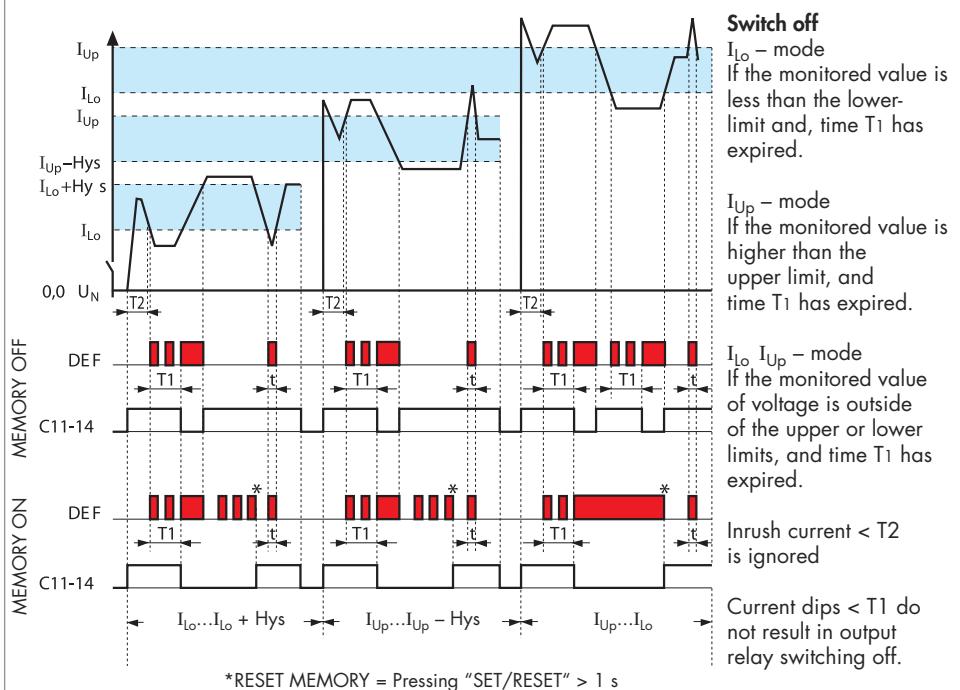
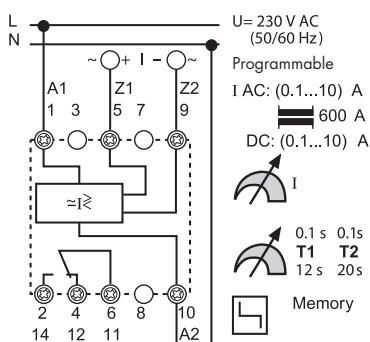
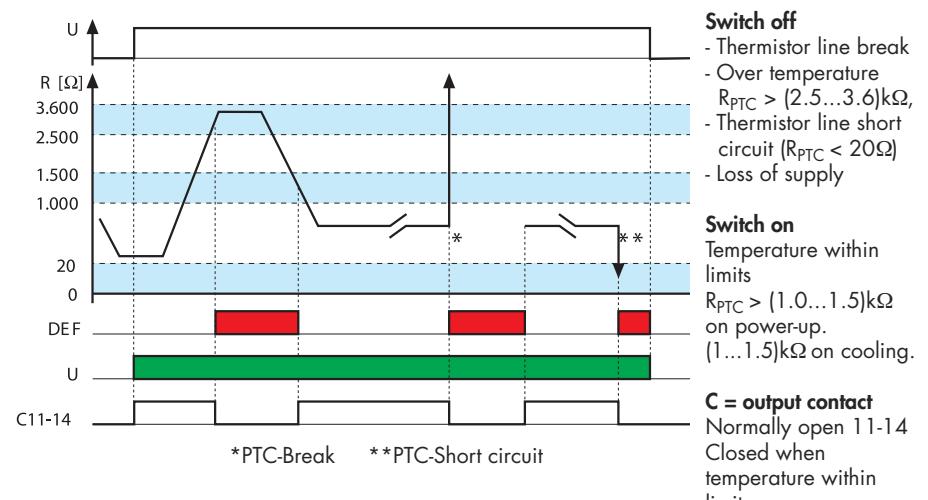
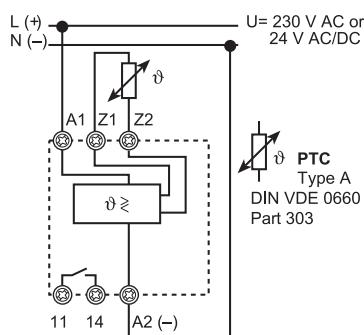
LED/LCD status announcement/advice

Type	Starting mode	Normal operation	Abnormal mode	Reset	
71.11.8.230.0010 71.11.8.230.1010 71.31.8.400.1010	 After connecting T = 5 or 10 min 11-14 open	 Normal operation Set point is OK 11-14 is closed	 Time T runs Set point is immaterial 11-14 is open Will close after T, if set point is OK	 After expiry of T Set point is not OK 11-14 is open Will close, if set point is OK	
71.31.8.400.1021 Memory OFF		 Normal operation Set point is OK 11-14 is closed	 Time T runs, Set point is not OK 11-14 is closed	 After expiry of T Set point is not OK 11-14 is open Will close, if set point is OK	
71.31.8.400.1021 Memory ON		 Normal operation Set point is OK 11-14 is closed	 Time T runs, Set point is not OK 11-14 is closed	 After expiry of T Set point is not OK 11-14 is open Will not close at RESET	
71.31.8.400.2000		 Normal operation Set point is OK 11-14 is closed	 Supply voltage to A1(1) and / or A2(5) is missing 11-14 is open, Will close if supply voltage restored and set point OK		
			 Incorrect phase rotation or phase failure or voltage  A1(1) and / or A2(5)  is > 1.11 U _N 11-14 is open Will close, if set point is OK	 Phase asymmetry  11-14 is open  Will close, if set point is OK	
71.41.8.230.1021 Memory OFF		Measured value displayed  Normal operation Set point is OK 11-14 is closed	Measured value displayed  Time T runs, Set point is not OK 11-14 is closed	Measured value displayed  After expiry of T Set point is not OK 11-14 is open Will close, if set point is OK	
71.41.8.230.1021 Memory ON		Measured value displayed  Normal operation Set point is OK 11-14 is closed	Measured value displayed  Time T runs, Set point is not OK 11-14 is closed	M in the display flashes Measured value displayed  After expiry of T Set point is not OK 11-14 is open Will not close at RESET	M in the display - static Measured value displayed  After expiry of T Set point is OK 11-14 is open Will close at RESET
71.51.8.230.1021 Memory OFF	Measured value displayed  Time T2 runs, Set point immaterial 11-14 is closed	Measured value displayed  Normal operation Set point is OK 11-14 is closed	Measured value displayed  Time T runs, Set point is not OK 11-14 is closed	Measured value displayed  After expiry of T Set point is not OK 11-14 is open Will close, if set point is OK	
71.51.8.230.1021 Memory ON	Measured value displayed  Time T2 runs, Set point immaterial 11-14 is closed	Measured value displayed  Normal operation Set point is OK 11-14 is closed	Measured value displayed  Time T runs, Set point is not OK 11-14 is closed	M in the display flashes Measured value displayed  After expiry of T Set point is not OK 11-14 is open Will not close at RESET	M in the display - static Measured value displayed  After expiry of T Set point is OK 11-14 is open Will close at RESET
71.91.x.xxx.0300		 Normal operation Set point is OK 11-14 is closed	 Temperature to high or PTC line break  or PTC short circuit 11-14 is open Will close, if set point is OK		
71.92.x.xxx.0001 Memory OFF		 Normal operation Set point is OK 11-14 is closed	 Temperature to high or PTC line break  or PTC short circuit 11-14 is open Will close, if set point is OK		
71.92.x.xxx.0001 Memory ON	 	 Normal operation Set point is OK 11-14 is closed	 Temperature to high or PTC line break  or PTC short circuit 11-14 is open		 Temperature is OK 11-14 is open Will close at RESET

Functions
Type 71.11.8.230.0010

Type 71.11.8.230.1010

Type 71.31.8.400.1010

Type 71.31.8.400.1021


Functions
Type 71.31.8.400.2000

Type 71.41.8.230.1021


C = output contact
Normally open 11-14
(6-2) closed.

Functions
Type 71.51.8.230.1021

Type 71.91.x.xxx.0300


Functions

