

# OMICRON





**OMICRON**



## COMPANY PROFILE

Is one of the national new high-tech enterprises integrated of researching, producing and selling water-proof electric, low-voltage electric and new energy electric products.

Established in 1992,OMICRON now is gradually becoming the influential electric manufacturer in the World after many years well development. With a great brand effect,OMICRON has the completed sales and service network with its products been exported to all over the world like Europe. Australia. American. Africa. Oceania. South east of Asia, and district of HongKong, Macaw, Turkey and Taiwan. OMICRON is awarded the title of Famous Export Brand.

OMICRON now has the factory area 60000 m<sup>2</sup> and workers more than 600, including over 10 senior engineers, 30 professional technicians and 30 senior executives. Products pass the certification of CE, CB, UL, VDE, TUV, KEMA, SAA, SEMKO, ROHS, and China CCC as well as quality management system such as ISO9001, ISO14001, ISO45001, ISO5001.

Cooperated with domestic and foreign R&D institutions,OMICRON, successively developed more than 100 independent intellectual properties; some of them were successfully awarded the national patent for invention and utility models as its well performance.OMICRON now has been selected as provincial technical research and development center and patent demonstration enterprise by government.

OMICRON always adheres to the enterprise principle of "Scientific management, independent Innovation, Coordinating Collaboration and Cultural Brand", keep faith of "moral first" and fulfill the core value of "double-win cooperation with customers, creating profit for company owners, getting rich together with workers, building harmony for society" and fight for the mission of "make the dream of world famous electrical brand come true".

# CERTIFICATE



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# OMELR332/732 Earth Leakage Relay



## Technical Data

Settings	
Sensitivity adjustment	Range 1 is stepping from 0.03A-0.05A-0.10A-0.15A
	Range 2 is from 0.02A to 0.75A in step of 0.05A
	Range 3 is from 0.80A to 3.00A in step of 0.05A
Delay time adjustment	From 0.05 to 3.00 sec in step of 0.05 sec
	From 3.00 to 10.0 sec in step of 0.50 sec
Contacts	
Contact arrangement	Change-over
Contact rating	6A,250V AC ( $\cos\phi = 1$ ) for tripping contact
	5A,250V AC ( $\cos\phi = 1$ ) for safety contact *
	5A,250V AC ( $\cos\phi = 1$ ) for 50% pre-fault contact **
Contact material	Silver alloy
Operating time	15 ms max.
Expected electrical life	100,000 operations at rated current
Expected mechanical life	$5 \times 10^6$ operations
Approval	UL/CSA, VDE, TUV, SEMKO
Input	
Remote Test/ Reset Inputs	N.O. dry contact *
Auxiliary supply	
Supply voltage	198~265V AC
	90~120V AC
Rated frequency	50 or 60 Hz
VA rating	3 VA typical
Indicators	
Auxiliary supply	Green LED
Time delay	Red LED
Trip	7-segment LED and red LED
Real-time leakage current	7-segment LED
Zero-phase current transformer	
To operate with PCT series of current transformer	
Mechanical	
Mounting method	Panel mounted, DIN rail mounted, Screws mounted
Front panel	Standard DIN 96mm x 96mm
Weight	0.8kg (excluding PCT)

### Features

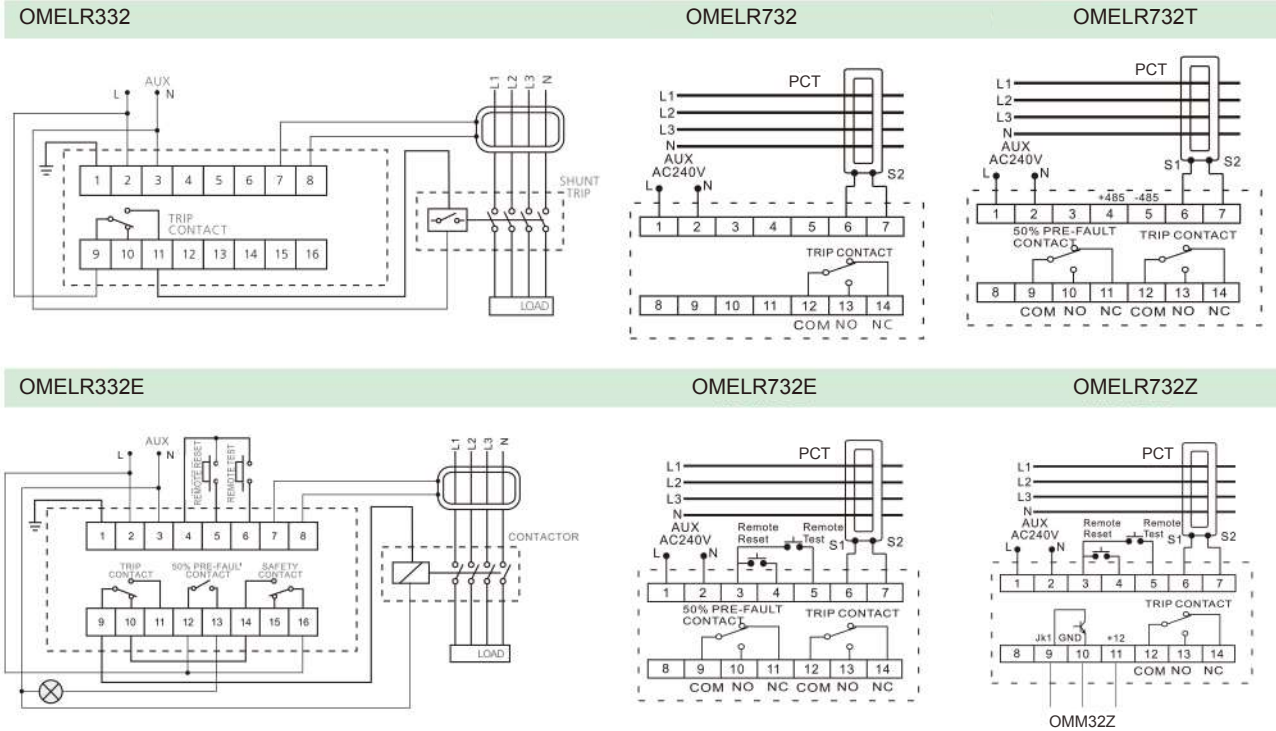
- Numerical earth leakage relay
- Programmable current sensitivity and time delay
- Built-in digital harmonic filter
- Detection of no connection to current transformer
- Real-time leakage current display
- Relay tripped indicator
- Leakage current recording when tripped
- IEC60755 standard

\*\*Applicable to OMELR332E/732E series only

\*\*Applicable to OMELR332E series only

# OMELR332/732 Earth Leakage Relay

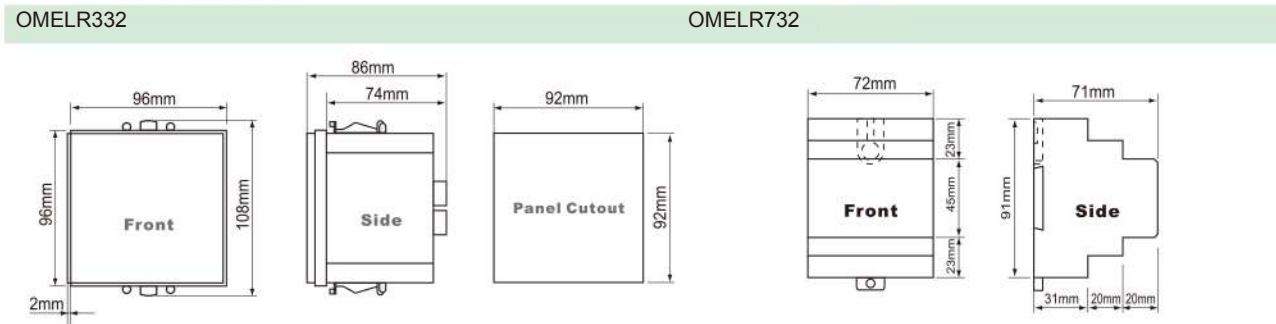
## Typical Application Diagram



### Features for OMELR332E only

- 50% of the pre-fault output contacts
- Active safety output contacts
- Remote testing and remote reset functions

## Case Dimensions



## Ordering Information

Model	Description
OMELR332/732	With 240 VAC, 50/60Hz power supply
OMELR332/732-110	With 110 VAC, 50/60Hz power supply
OMELR332E/732E	With 240 VAC, 50/60Hz power supply
OMELR332E/732E-110	With 110 VAC, 50/60Hz power supply
OMELR332D/732D	With 240 VAC, 50/60Hz power supply
OMELR332D/732D-110	With 110 VAC, 50/60Hz power supply
OMELR332T/732T	With 240 VAC, 50/60Hz power supply
OMELR332T/732T-110	With 110 VAC, 50/60Hz power supply
OMELR332Z/732Z	With 240 VAC, 50/60Hz power supply
OMELR332Z/732Z-110	With 110 VAC, 50/60Hz power supply

## OMELR333/733 Reclosing Earth Leakage Relay



### Technical Data

Settings	
Sensitivity adjustment	Range 1 is stepping from 0.03A-0.05A-0.10A-0.15A
	Range 2 is from 0.20A to 0.75 A in step of 0.05A
	Range 3 is from 0.80A to 3.00 A in step of 0.05A
Delay time adjustment	From 0.05 to 3.00 sec in step of 0.05 sec
	From 3.00 to 10.0 sec in step of 0.50 sec
Number of self-reclosing	From 1 to 100 times in step of 1
Reclosing time delay	From 1 to 999 sec in step of 1 sec
Automatic reset time	From 1 to 999 min in step of 1 min
Contacts	
Contact arrangement	Change-over
Contact rating	6A,250V AC ( $\cos\phi = 1$ ) for tripping contact
	5A,250V AC ( $\cos\phi = 1$ ) for alarm contact
Contact material	Silver alloy
Operating time	15 ms max.
Expected electrical life	100,000 operations at rated current
Expected mechanical life	$5 \times 10^6$ operations
Approval	UL/CSA, VDE, TUV, SEMKO
Input	
Remote Test/ Reset Inputs	N.O. dry contact
Auxiliary supply	
Supply voltage	198~265V AC
	90~120V AC
Rated frequency	50 or 60 Hz
VA rating	3 VA typical
Indicators	
Auxiliary supply	Green LED
Time delay	Red LED
Trip	7-segment LED and red LED
Real-time leakage current	7-segment LED
Zero-phase current transformer	
To operate with PCT series of current transformer	
Mechanical	
Mounting method	Panel mounted, DIN rail mounted, Screws mounted
Front panel	Standard DIN 96mm $\times$ 96mm
Weight	0.8kg (excluding PCT)

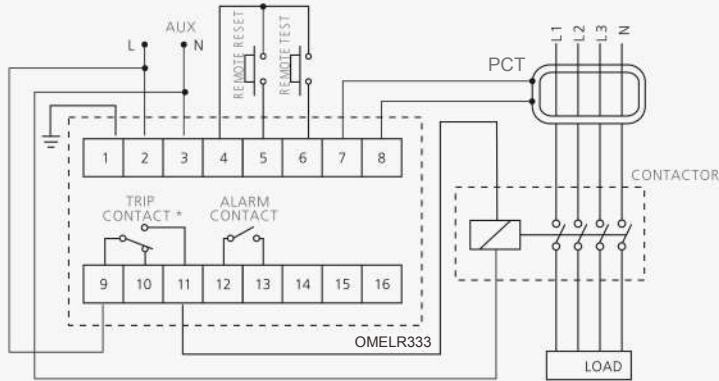
### Features

- Numerical self-reclosing earth leakage relay
- Programmable current sensitivity and time delay
- Programmable number of reclosing
- Programmable time delay for reclosing
- Programmable automatic reset time
- Built-in digital harmonic filter
- Detect on of no connection to current transformer
- External test and external reset dry contact inputs
- Tripping contact output
- Alarm output
- Real-time leakage current display
- Relay tripped indicator
- Leakage current recording when tripped
- IEC60755 standard

# OMELR333/733 Reclosing Earth Leakage Relay

Typical Application Diagram

OMELR333

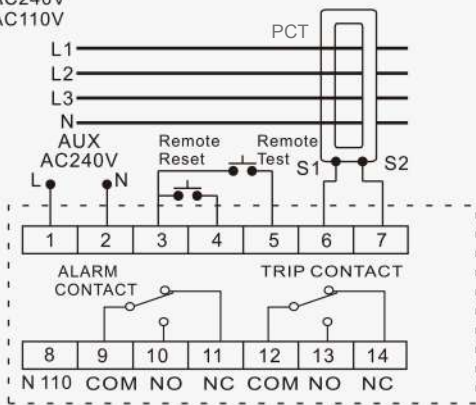


The trip contact is activated (terminal 9-11 closed) when the relay is in normal power-up condition with the measured leakage current less than the sensitivity setting, in This logic applicable to OMELR333 only.

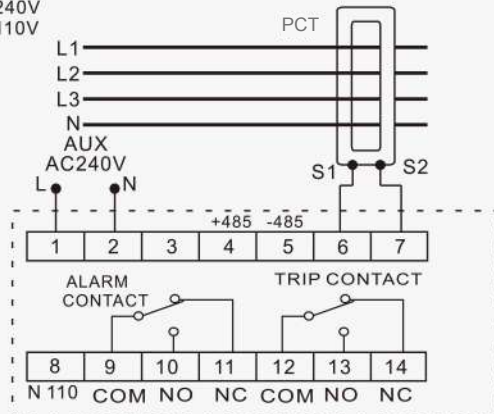
OMELR733

OMELR733T

1-2: AC240V  
1-8: AC110V

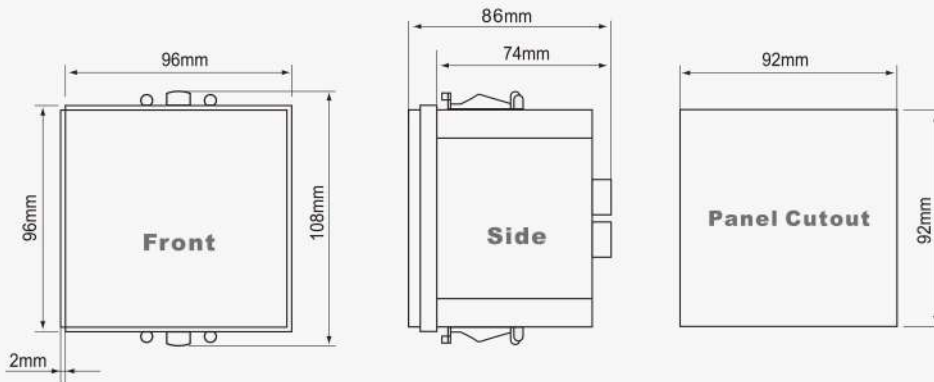


1-2: AC240V  
1-8: AC110V



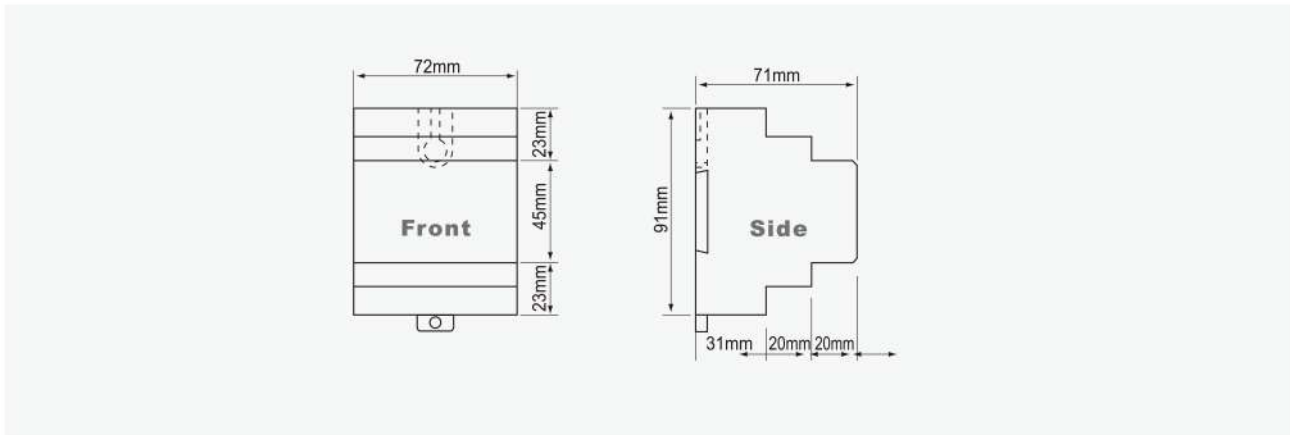
Case Dimensions

OMELR333



## OMELR333/733 Reclosing Earth Leakage Relay

### OMELR733



### Ordering Information

Model	Description	
OMELR333/733	50/60Hz	With 240 VAC, 50/60Hz power supply
OMELR333/733-110	50/60Hz	With 110 VAC, 50/60Hz power supply
OMELR333T/733T	50/60Hz	With 240 VAC, 50/60Hz power supply
OMELR333T/733T-110	50/60Hz	With 110 VAC, 50/60Hz power supply

## OMELR121 Earth Leakage Relay



### Technical Data

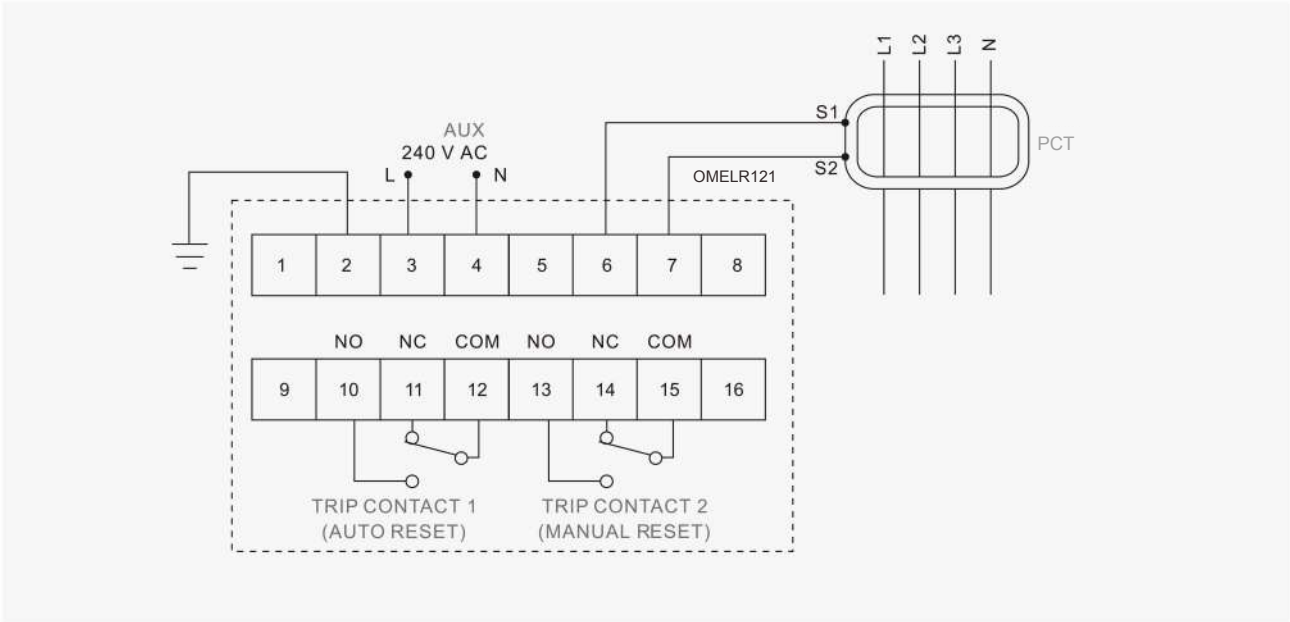
Settings	
Sensitivity adjustment	0.1 to 1.0 A
Delay time adjustment	0.1 sec to 3.0 sec
Contacts	
Contact arrangement	1× latching type with manual reset
	1× non-latching type with auto reset
	Both NC and NO contacts available
Contact rating	6A,250V AC (cosφ =1) contact rating
Contact material	Silver alloy
Operating time	15 ms max.
Expected electrical life	100,000 operations at rated current
Expected mechanical life	5× 10 <sup>6</sup> operations
Approval	UL/CSA, VDE, TUV, SEMKO
Auxiliary supply	
Supply voltage	198~265V AC
	90~120V AC
Rated frequency	50 or 60 Hz
VA rating	3 VA typical
Indicators	
Auxiliary supply	Green LED
Time delay	Red LED
Trip	Red LED
Performance	
Adjustable accuracy	Less than ± 5%.
Repeatability	Less than 0.5% of full scale.
Zero-phase current transformer	
To operate with PCT series of current transformer	
Mechanical	
Mounting method	Panel mounted
Front panel	Standard DIN 96mm× 96mm
Weight	0.8kg (excluding PCT)

### Features

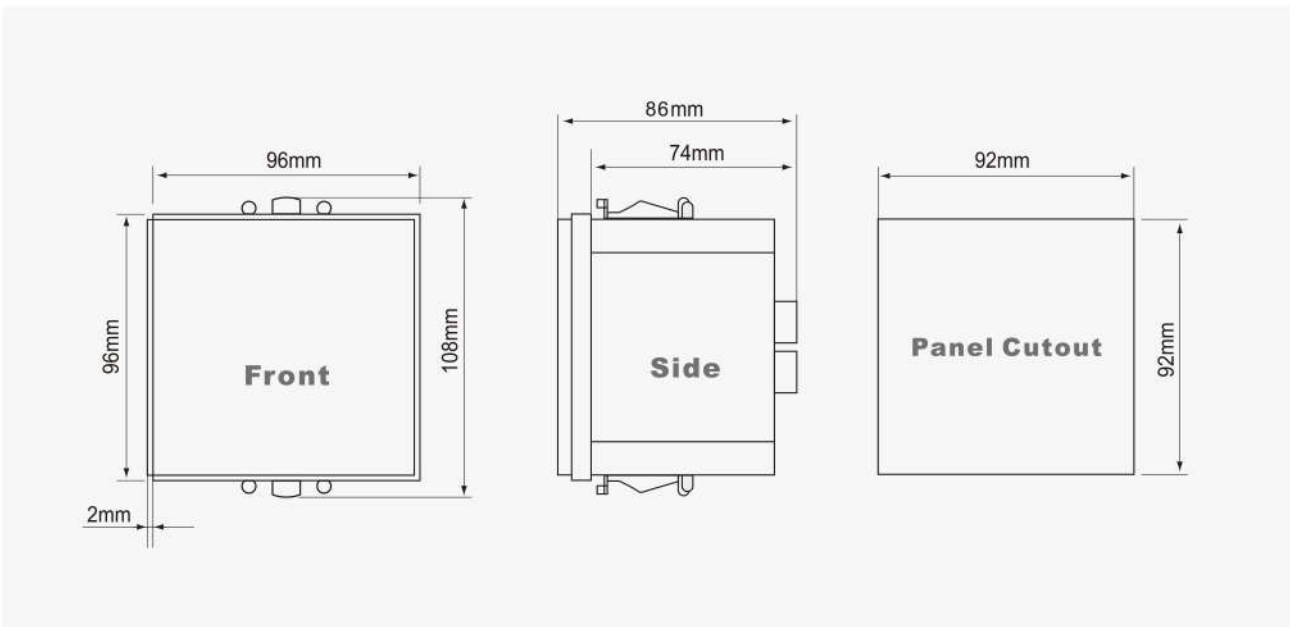
- Both latching and non-latching type of tripping contacts
- Trip starting indicator
- Relay tripped indicator
- Detection of no connection to current transformer for extra safety
- High immunity to electrical interference

# OMELR121 Earth Leakage Relay

Typical Application Diagram



Case Dimensions



Ordering Information

Model	Description
OMELR121	With 240 VAC, 50/60 Hz power supply
OMELR121-110	With 110 VAC, 50/60 Hz power supply

## OMELR122 Earth Leakage Relay



### Technical Data

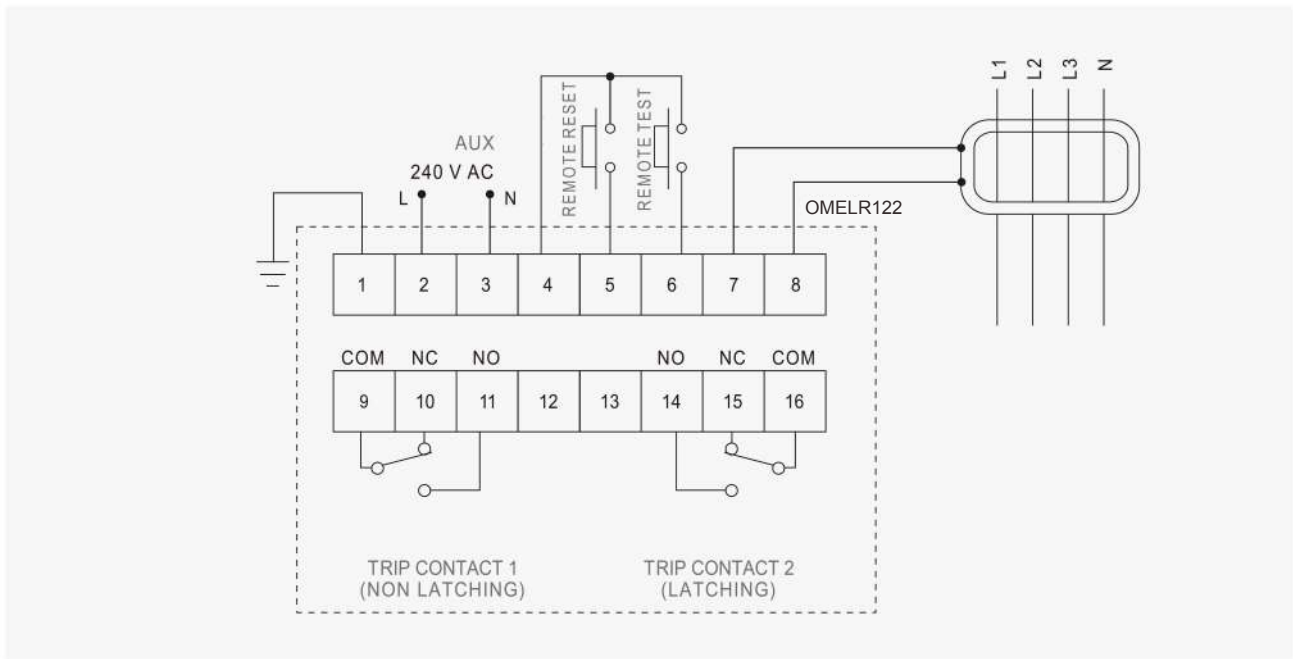
Settings	
Sensitivity adjustment	0.1 to 1.0 A
Delay time adjustment	0.1 sec to 3.0 sec
Contacts	
Contact arrangement	1× latching type with manual reset
	1× non-latching type with auto reset
	Both NC and NO contacts available
Contact rating	6A,250V AC ( $\cos\phi = 1$ ) contact rating
Contact material	Silver alloy
Operating time	15 ms max.
Expected electrical life	100,000 operations at rated current
Expected mechanical life	$5 \times 10^6$ operations
Approval	UL/CSA, VDE, TUV, SEMKO
Inputs	
Remote Test/ Reset Inputs	N.O. dry contact
Auxiliary Supply	198~265V AC
Supply voltage	90~120V AC
Rated frequency	50 or 60 Hz
VA rating	3 VA typical
Indicators	
Auxiliary supply	Green LED
Time delay	Red LED
Trip	Red LED
Performance	
Adjustable accuracy	Less than $\pm 5\%$ .
Repeatability	Less than 0.5% of full scale.
Zero-phase current transformer	
To operate with PCT series of current transformer	
Mechanical	
Mounting method	Panel mounted
Front panel	Standard DIN 96mm× 96mm
Weight	0.8kg (excluding PCT)

### Functions

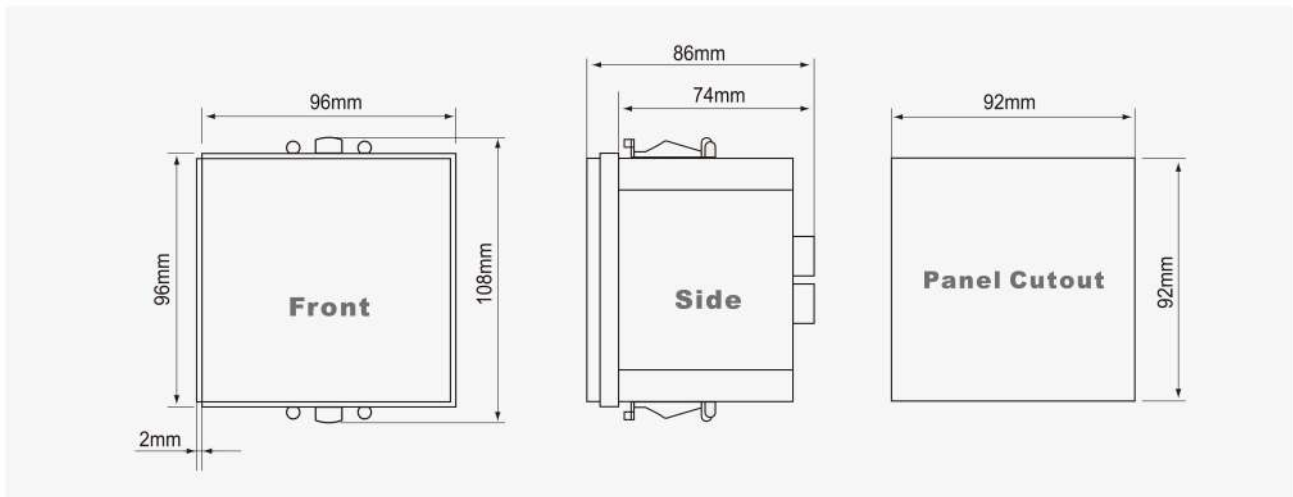
- Both latching and non-latching type of tripping contacts
- Trip starting indicator
- Relay tripped indicator
- Earth leakage level indicators
- Detection of no connection to current transformer for extra safety
- High immunity to electrical interference
- Remote reset and remote test functions

# OMELR122 Earth Leakage Relay

Typical Application Diagram



Case Dimensions



Ordering Information

Model	Description
OMELR122	With 240 V AC, 50/60 Hz power supply
OMELR122-110	With 110 V AC, 50/60 Hz power supply

## OMELR523 Earth Leakage Relay



### Technical Data

Settings	
Sensitivity adjustment	30mA,50mA,75mA,100mA,125mA,150mA,200mA,250mA,300mA,500mA,750mA, 1A, 1.25A, 1.5A, 2A, 2.5A, 3A, 5A, 7.5A, 10A, 12.5A, 15A, 20A, 25A, 30A
Accuracy	+0% -15%
Time delay setting	50ms, 100ms , 150ms , 250ms , 350ms , 500ms , 1s , 3s.
Accuracy	± 5%
Auxiliary supply	
Supply voltage	110V AC ± 10% or 240V 90-120VAC
Frequency	50 Hz or 60 Hz
VA rating	Less than 3 VA
Indicators	
Auxiliary supply	Green LED
Time delay	Red LED
Trip	Red LED
Leakage current*	5 red LED for leakage levels
Inputs	
Remote test/ reset inputs	N.O. dry contact*
Sensor	PCT
Outputs	
Contacts (Trip / 50% pre-fault*)	
Contact arrangement	Change over
Contact rating	6A, 250VAC(cos φ = 1)
Contact material	Silver alloy
Operating time	15 ms max.
Expected electrical life	100,000 operations at rated current
Expected mechanical life	5× 10 <sup>6</sup> operations
Approval	UL/CSA, VDE, TUV, SEMKO
Mechanical	
Mounting method	Panel mounted, DIN rail mounted, Screws mounted
Weight	0.3kg

\*Applicable to OMELR523 model only

### Functions

- 25 selectable sensitivity settings: 30 mA to 30 A
- 9 selectable time delays: 0 ms to 3s
- Earth leakage level indicators
- Detection of no connection to PCT
- Relay tripped indicator
- Trip starting indicator
- Protected against nuisance tripping



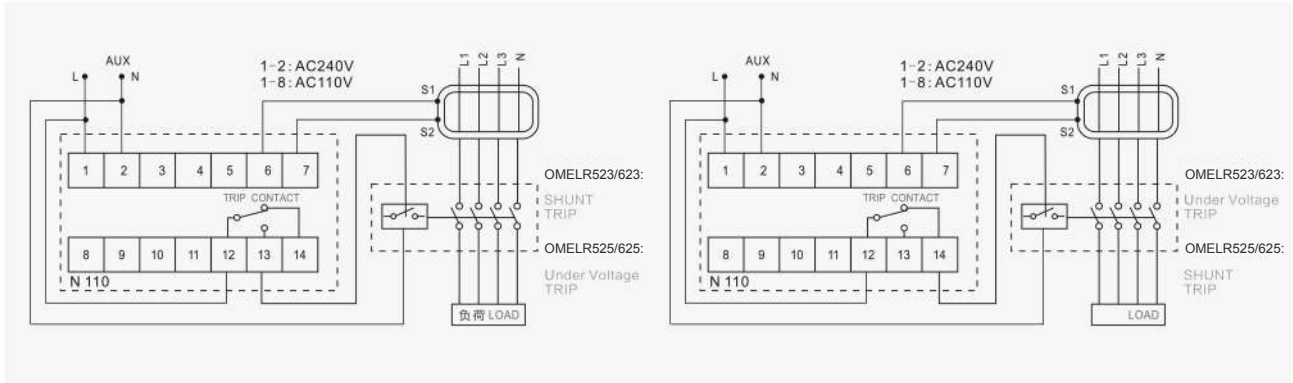
### Features for OMELR523only\*

- 50% pre-fault output contact
- Remote test and remote reset functions

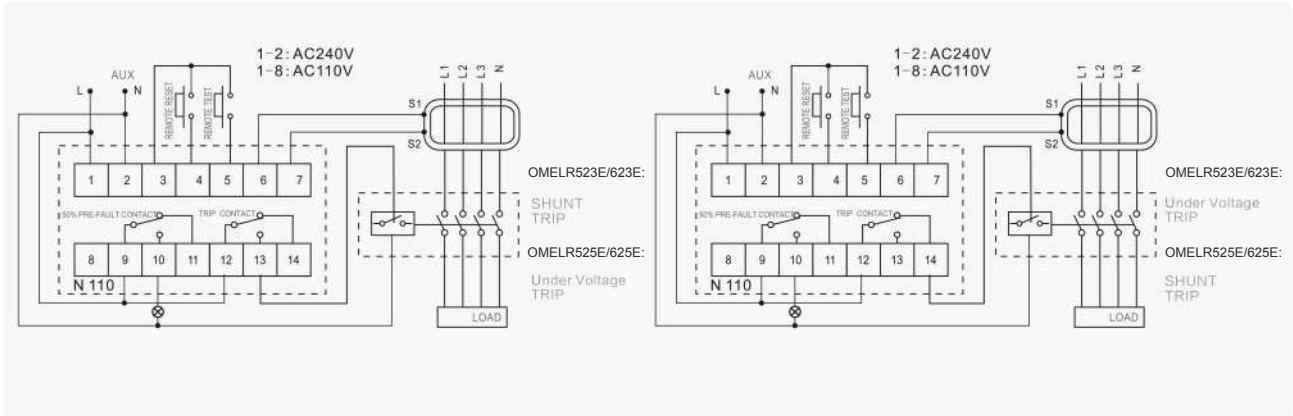
# OMELR523/623/525/625 Earth Leakage Relay

Typical Application Diagram

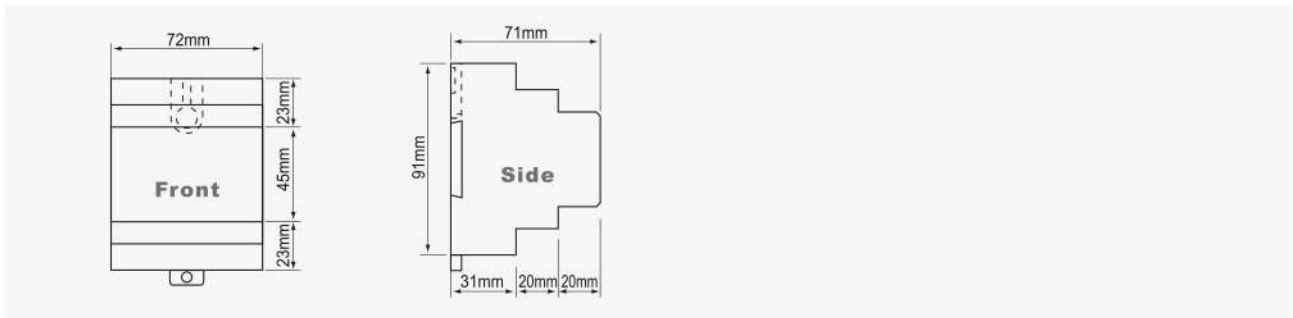
## OMELR523/623/525/625



## OMELR523E/623E/525E/625E



## Case Dimensions



## Ordering Information

Model	Description
OMELR523/623/525/625	With 240 V/110V AC, 50/60 Hz power supply
OMELR523/623/525/625-110	With 110 V/110V AC, 50/60 Hz power supply
OMELR523E/623E/525E/625E	With 240 V/110V AC, 50/60 Hz power supply
OMELR523E/623E/525E/625E-110	With 110 V/110V AC, 50/60 Hz power supply

## PCT Zero-Phase Current Transformer

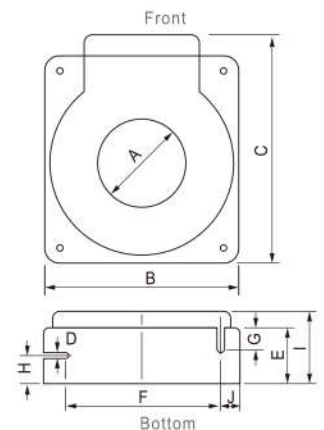
### Technical Data

Rated Frequency	50/60HZ	
Accuracy Class	5P、10P (When an external resistor in connected)	
Rated turns ratio	1/210 Can be customized	
Residual current input / output voltage sensing parameters	Zero Phase(Primary/Secondary)	Rated Resistive Burden
	300mA/80mV	Installed in PCT
	3A/80mV	External connection, installed in OMELR523
	30A/80mV	External connection, installe in OMELR523
Rated primary current	0.3A	
Rated accuracy limit primary current	3A	
Accuracy limit factor ALF	10	
Highest voltage for equipment	0.72kV	
Rated power-frequency withstand voltage	3kV	
Operating Temperature	-25 ~ +40°C	



### Dimensions

Dimension(mm)	PCT40	PCT55	PCT80
A	40	55	80
B	79	126	120.5
C	97	151	138
D	3.5	4	3.5
E	35	37	35
F	53.5	100	94.5
G	17.5	14	17.5
H	17.5	19	17.5
I	32	44	37
J	10	12.5	10



### Ordering Information

Model	Inner Dia	Maximum curent feed through cable	Mounting thread size
PCT40	40mm	250A	M3.5
PCT55	55mm	400A	M4
PCT80	80mm	630A	M3.5

## PCT Zero-Phase Current Transformer

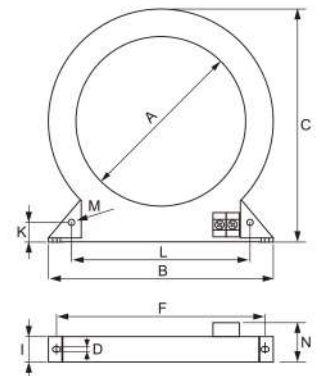


### Technical Data

Rated Frequency	50/60HZ	
Accuracy Class	5P、10P (When an external resistor in connected)	
Rated turns ratio	1/210 Can be customized	
Residual current input / output voltage sensing parameters	Zero Phase(Primary/Secondary)	Rated Resistive Burden
	300mA/80mV	Installed in PCT
	3A/80mV	External connection, installed in OMELR523
	30A/80mV	External connection, installed in OMELR523
Rated primary current	0.3A	
Rated accuracy limit primary current	3A	
Accuracy limit factor ALF	10	
Highest voltage for equipment	0.72kV	
Rated power-frequency withstand voltage	3kV	
Operating Temperature	-25 ~ +40°C	

### Dimensions

Dimension(mm)	PCT100	PCT150	PCT200
A	100	150	200
B	135	183	265
C	140	193	275
D	5	5	5
F	122	170	245
I	26	27	30
K	10	13	-
L	110	150	-
M	5	5	-
N	40	41	44



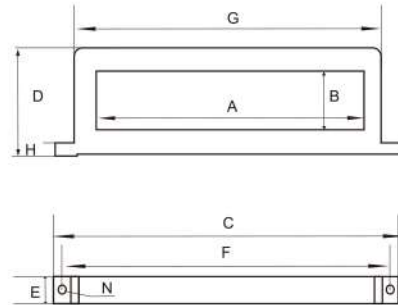
### Ordering Information

Model	Inner Dia	Maximum current feed through cable	Mounting thread size
PCT100	100mm	630A	M5
PCT150	150mm	800A	M5
PCT200	200mm	1000A	M5

## PCT Zero-Phase Current Transformer

### Technical Data

Rated Frequency	50/60HZ	
Accuracy Class	5P、10P (When an external resistor in connected)	
Rated turns ratio	1/210 Can be customized	
Residual current input / output voltage sensing parameters	Zero Phase(Primary/Secodary)	Rated Resistive Burden
	300mA/80mV	Installed in PCT
	3A/80mV	External connection, installed in OMELR523
	30A/80mV	External connection, installe in OMELR523
Rated primary current	0.3A	
Rated accuracy limit primary current	3A	
Accuracy limit factor ALF	10	
Highest voltage for equipment	0.72kV	
Rated power-frequency withstand voltage	3kV	
Operating Temperature	-25 ~ +40°C	



Model	Phase Current	A	B	C	D	E	F	G	H	N
PCT1025	100	100	25	155	50	18	138	125	7	8
PCT1432	225	140	32	203	67	23	185	173	10	8
PCT1832	400	180	32	245	67	23	227	215	10	8
PCT2245	630	220	45	280	83	23	265	250	10	8
PCT2645	800	260	45	325	83	23	310	295	10	8
PCT3045	1250	300	45	365	83	23	350	335	10	8
PCT3445	2000	340	45	405	83	23	390	395	10	8
PCT4045	3500	400	45	465	83	23	450	435	10	8
PCT5045	5000	500	45	565	83	23	550	535	10	8

## OMELR352/752 Earth Fault Relay



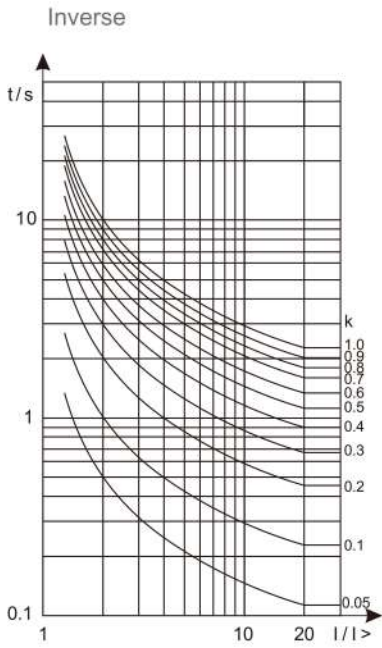
### Technical Data

Settings		
Current rating(In)	5A	
Rated frequency	50/60 Hz	
Burden	<0.3 VA at In	
Thermal withstand	4 x In continuous	
Auxiliary supply		
Supply voltage	198~265 V AC	
	90~120 V AC	
Frequency	50/60Hz	
VA rating	3 VA typical	
Contacts		
Contact arrangement	Change-over	
Contact rating	6A, 250V AC (cosφ =1) for tripping contact	
	5A, 250V AC (cosφ =1) for signaling contact tripping contact	
Contact material	Silver alloy	
Operating time	15 ms max.	
Expected electrical life	100,000 operations at rated current	
Expected mechanical life	5× 10 <sup>6</sup> operations	
Approval	UL/CSA, VDE, TUV, SEMKO	
Indicators		
Auxiliary supply	UL/CSA,VDE, TUV,SEMKO	
Pick-up	LED	
Trip indicator	7-segment display and LED	
Mechanical		
Mounting	Panel mounted, DIN rail mounted, Screws mounted	
Front panel	Standard DIN 96 mm× 96 mm	
Weight	0.9kg	
Accuracy		
Protection thresholds	± 5%	
Time delay	± 5% with a minimum of 50ms	
Setting ranges		
Low-set (I>>)	0.1A to 2.0A, step 0.01A/2% to 40%, step 0.2%	
Low-set time multiplier (kt>)	0.05 to 1.0, step 0.01	
High-set (I>>)	0.1A to 40A, step 0.01A/2% to 800%, step 0.2%	
High-set delay time (t>>)	0.05 sec to 99 sec	Step 0.01 (0.05~1.00)
		Step 0.10 (1.00~10.0)
		Step 1.00 (10.0~99.0)

### Features

- True RMS current measurement
- Low-set earth-fault
- High-set earth-fault
- Local display of measured and set values
- Fault value recording
- Programmable relay outputs
- Continuous self-supervision
- IEC normal inverse IDMT curve

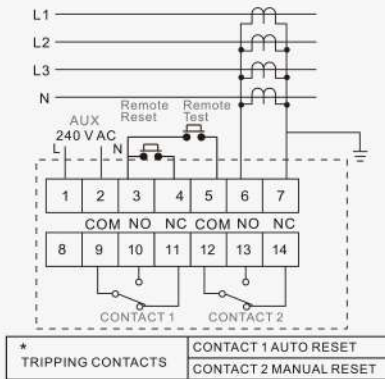
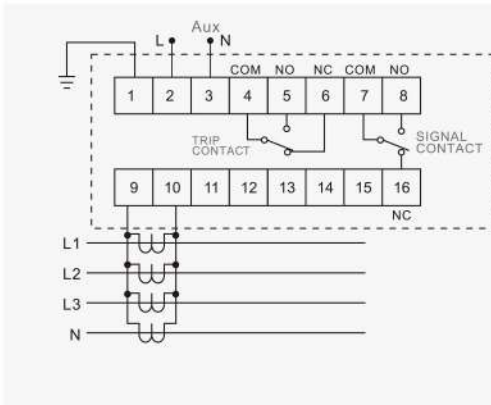
# OMELR352/752 Earth Fault Relay



Diagram

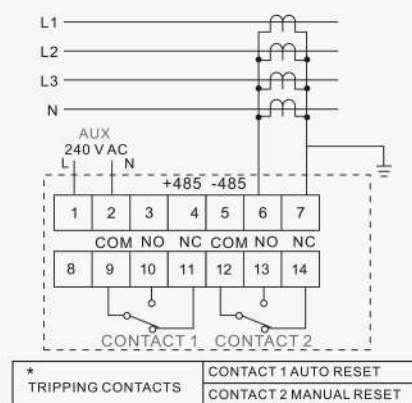
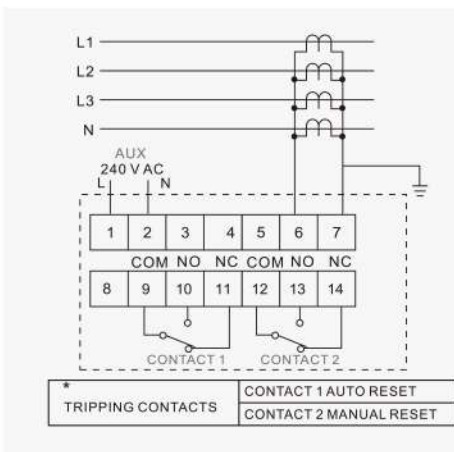
OMELR352

OMELR752E



OMELR752

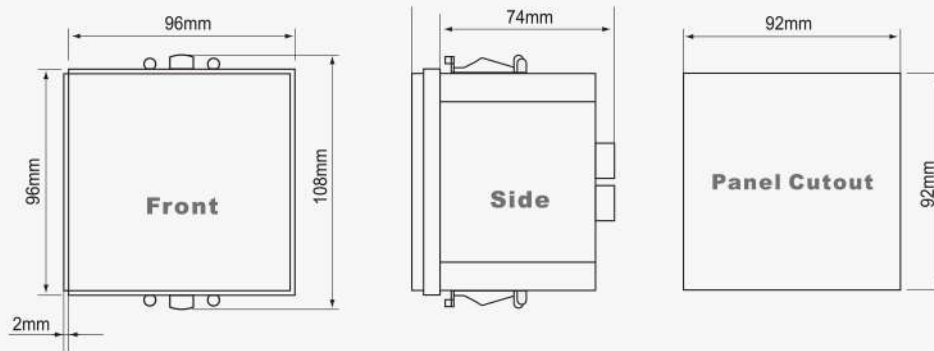
OMELR752T



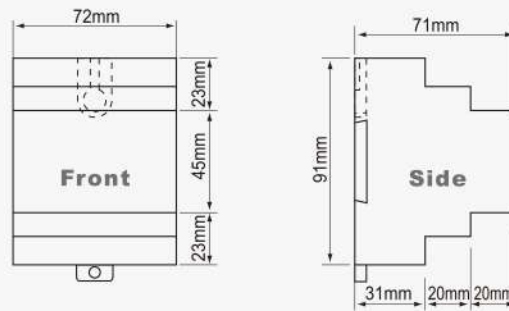
## OMELR352/752 Earth Fault Relay

### Case Dimensions

#### OMELR352



#### OMELR752



### Ordering Information

Model	Description
OMELR352/752	With 240 V AC, 50/60 Hz power supply
OMELR352/752-110	With 110 V AC, 50/60 Hz power supply
OMELR352E/752E	With 240 V AC, 50/60 Hz power supply
OMELR352E/752E-110	With 110 V AC, 50/60 Hz power supply
OMELR352T/752T	With 240 V AC, 50/60 Hz power supply
OMELR352T/752T-110	With 110 V AC, 50/60 Hz power supply

## OMELR152/652 Earth Fault Relay



### Technical Data

Settings	
Current rating(In)	5A
Rated frequency	50/60 Hz
Burden	<0.3 VA at In
Thermal withstand	4 x In continuous
Auxiliary supply	
Supply voltage	198~265 V AC
Supply frequency	50/60Hz
Contacts	
Contact arrangement	Automatic reset type
Contact rating	NC & NO contact type
	6A,250V AC (cosφ =1) contact rating
	Silver alloy contact material
	100,000 electrical operations at rated current
	UL/CSA, TUV approved
Indicators	
Trip indicator	Manual reset type
Mechanical	
Mounting	Panel mounted, DIN rail mounted, Screws mounted
Front panel	Standard DIN 96 mm × 96 mm
Weight	0.9 kg
Performance	
Adjustable accuracy	Less than ± 5%.
Repeatability	Less than 0.5% of full scale.
Setting ranges	
Low-set (I> )	0.1 A to 2.0 A, 2% to 40%
Time multiplier	0.01 to 1.0
IDMT curve	Normal Inverse
High-set (I>>)	I> to 5 I>

### Features

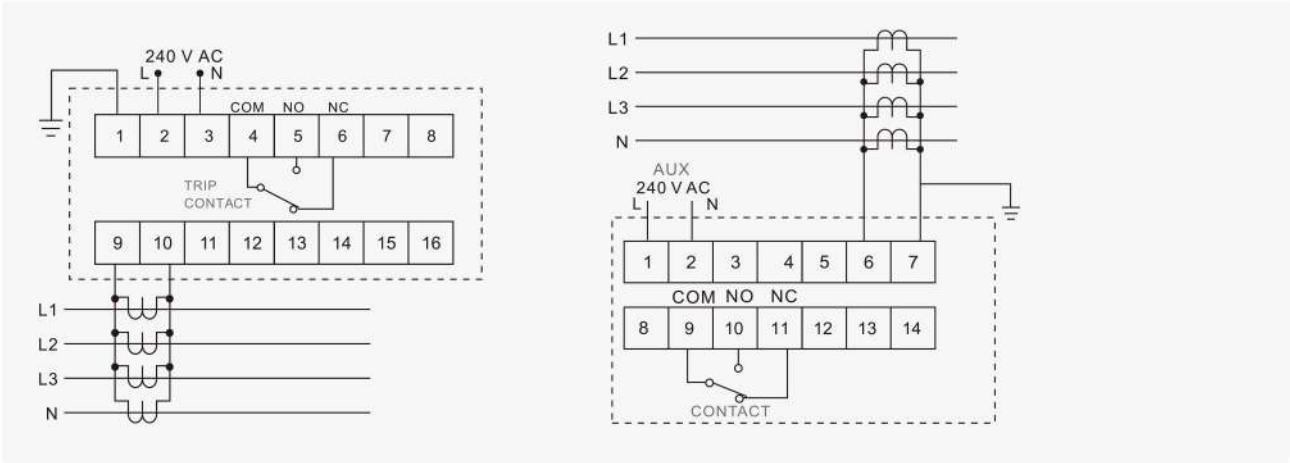
- Low-set inverse definite minimum time (IDMT) relay
- High-set instantaneous relay
- Separate low-set and high-set trip indicators
- Trip starting indication

# OMELR152/652 Earth Fault Relay

Typical application diagram

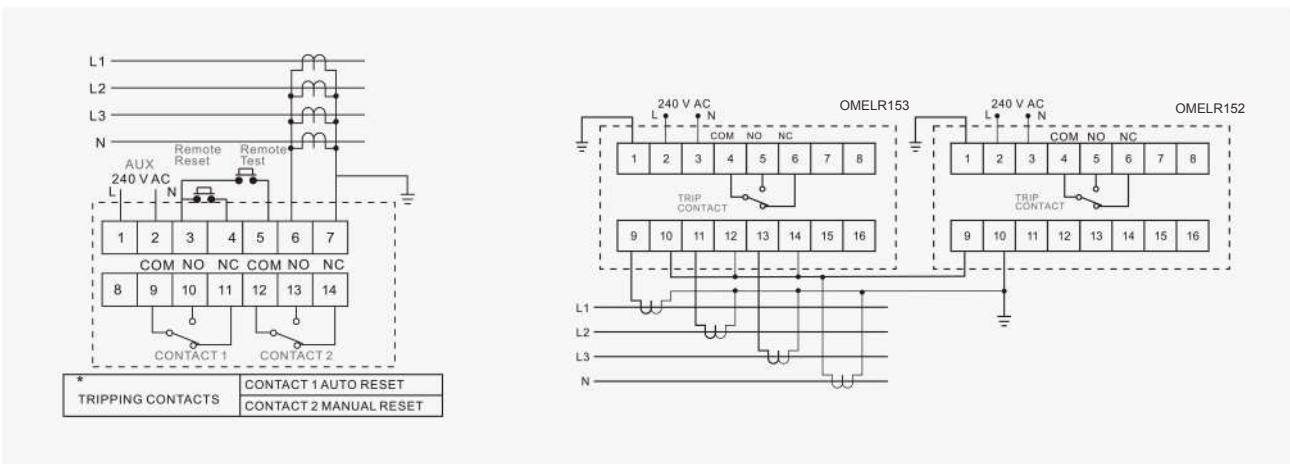
OMELR152

OMELR652



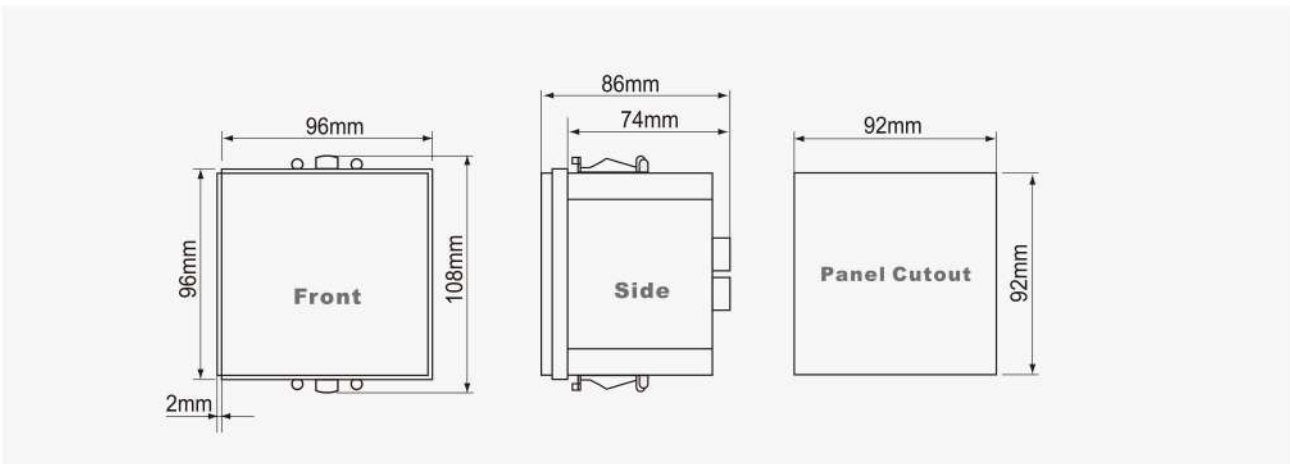
OMELR652E

Ombined IDMT overcurrent & earth fault relays



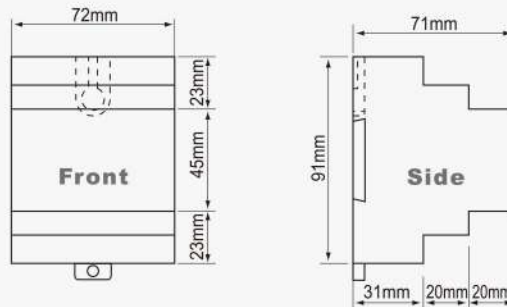
Case Dimensions

OMELR152



## OMELR 151/652 Earth Fault Relay

OMELR652



### Ordering Information

Model	Description
OMELR152/652	With 240 V AC, 50/60 Hz power supply
OMELR152/652-110	With 110 V AC, 50/60 Hz power supply
OMELR152E/652E	With 240 V AC, 50/60 Hz power supply
OMELR152E/652E-110	With 110 V AC, 50/60 Hz power supply

## OMELR141/641 Earth Fault Relay



### Technical Data

Settings	
Current rating(I <sub>n</sub> )	5A
Rated frequency	50/60 Hz
Burden	<0.3 VA at I <sub>n</sub>
Thermal withstand	4 x I <sub>n</sub> continuous
Auxiliary supply	
Supply voltage	198~265 V AC, 90~120 V AC
Supply frequency	50/60Hz
VA rating	<3VA
Contacts	
Contact arrangement	1 × latching type with manual reset
	1 × non-latching type with auto reset
	Both NC and NO contacts available
Contact rating	6A,250V AC (cosφ =1) For tripping contact
Contact material	Silver alloy
Operating time	15 ms max.
Expected electrical life	100,000 operations at rated current
Expected mechanical life	5 × 10 <sup>6</sup> operations
Approval	UL/CSA, VDE, TUV, SEMKO
Indicators	
Auxiliary supply	Green LED indicator light
Trip indicator	Manual reset type
Mechanical	
Mounting	Panel mounted, DIN rail mounted, Screws mounted
Front panel	Standard DIN 96 mm× 96 mm
Weight	0.9 kg
Performance	
Adjustable accuracy	Less than ± 5%.
Repeatability	Less than 0.5% of full scale.
Setting ranges	
Low-set (I> )	0.1 A to 2.0 A
	2% to 40%
Low-set delay time	0.01 sec to 1.0 sec
High-set(I>>)	I> to 5 x I>
High-set delay time (t >>)	Instantaneous

### Features

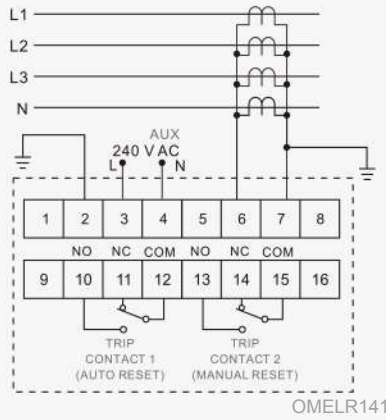
- Low-set definite time relay
- High-set instantaneous relay
- Separate low-set and high-set trip indicators
- Low-set trip and pickup indicator
- High-set trip indicator
- Auto reset and manual reset contacts available
- Option to disable the high-set relay
- Front panel access to the test function

# OMELR141/641 Earth Fault Relay

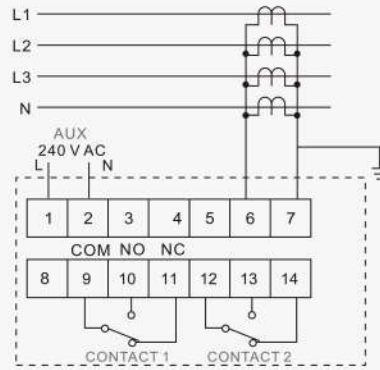
Typical application diagram

OMELR141

OMELR641

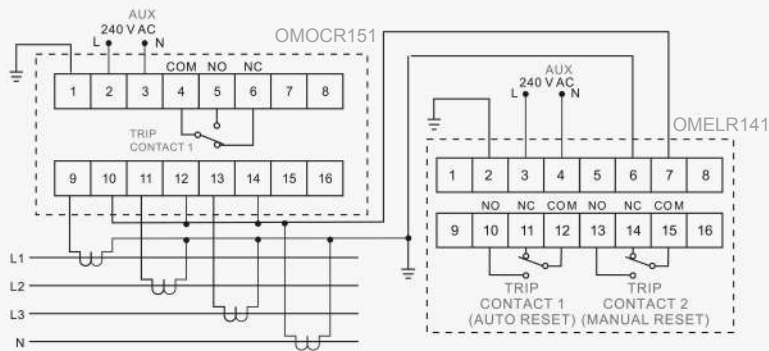


OMELR141



* TRIPPING CONTACTS	CONTACT 1 AUTO RESET
	CONTACT 2 MANUAL RESET

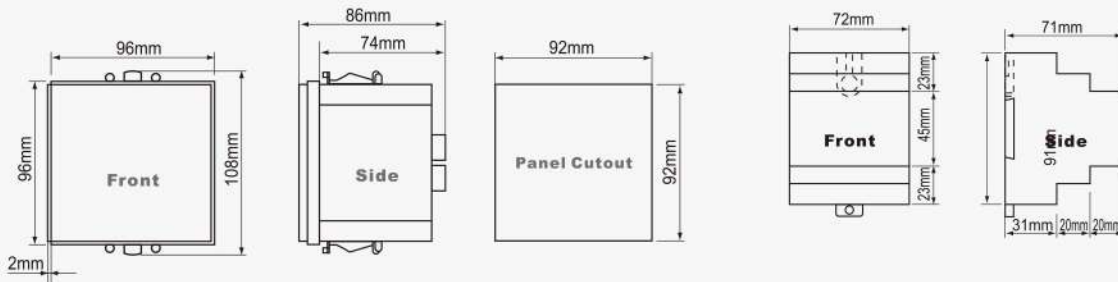
## Combined IDMT overcurrent & earth fault relays



## Case dimensions

OMELR141

OMELR641



## Ordering Information

Model	Description
OMELR141/641	With 240 V AC, 50/60 Hz power supply
OMELR141/641-110	With 110 V AC, 50/60 Hz power supply
OMELR141E/641E	With 240 V AC, 50/60 Hz power supply
OMELR141E/641E-110	With 110 V AC, 50/60 Hz power supply

## OMOCR353/753 Overcurrent Relay



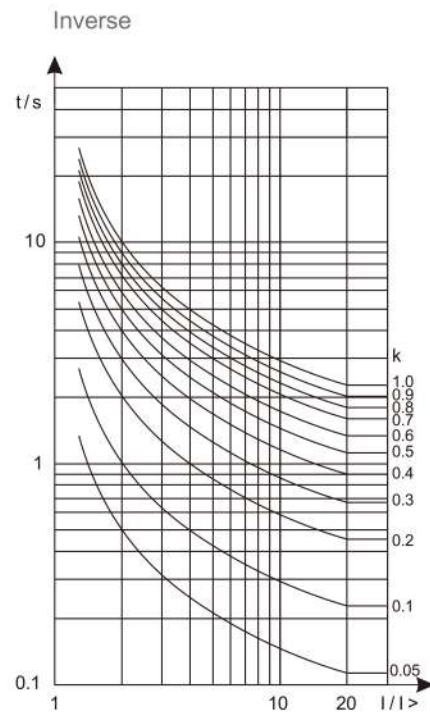
### Technical Data

Settings	
Current rating(In)	5A
Rated frequency	50/60 Hz
Burden	<0.3 VA at In
Thermal withstand	4 x In continuous
Auxiliary supply	
Supply voltage	198~265 V AC, 90~120 V AC
Supply frequency	50/60Hz
VA rating	3VA typical
Contacts	
Contact arrangement	Change-over
Contact rating	6A,250V AC (cosφ =1) For tripping contact 5A, 250V AC (cosφ=1) for signaling contact tripping 6A,250V AC (cosφ=1) For tripping contact
Contact material	Silver alloy
Operating time	15 ms max.
Expected electrical life	100,000 operations at rated current
Expected mechanical life	5 × 10 <sup>6</sup> operations
Approval	UL/CSA, VDE, TUV, SEMKO
Indicators	
Auxiliary supply	LED
Pick-up	LED
Trip indicator	7-segment display and LED
Mechanical	
Mounting	Panel mounted, DIN rail mounted, Screws mounted
Front panel	Standard DIN 96 mm × 96 mm
Weight	1.3 kg
Accuracy	
Protection thresholds	± 5%
Time delay	± 5% with a minimum of 50ms
Setting ranges	
Low-set (I> )	2.0 A to 6.0 A, step 0.05A/40% to 120%, step 1%
Low-set time multiplier (kt>)	0.05 to 1.0, step 0.01
High-set(I>>)	2.0 A to 99.9 A, step 0.10A/40% to 198%, step 2%
High-set delay time (t >>)	0.05 sec to 99sec step 0.01(0.05-1.00) step 0.10(1.00-10.0) step 1.00(10.0-99.0)

### Features

- Microprocessor based digital relay
- Three-phase, low-set overcurrent
- Three-phase, high-set overcurrent
- Low-set earth-fault
- High-set earth-fault
- Local display of measured and set values
- Fault value recording
- Programmable auto or manual reset
- IEC normal inverse or very inverse curve

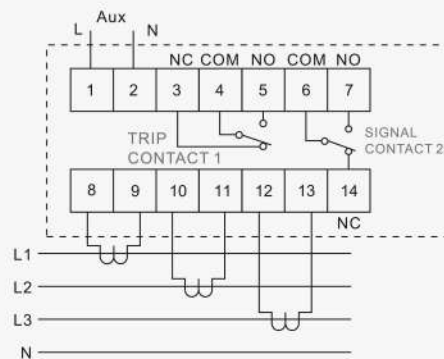
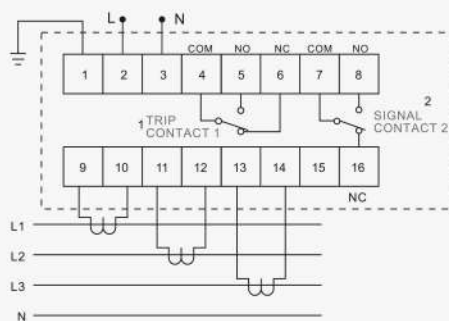
# OMOCR353/753 Overcurrent Relay



Diagram

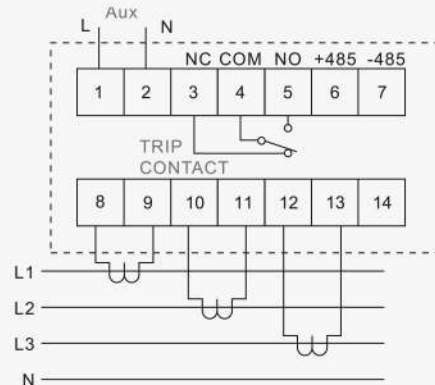
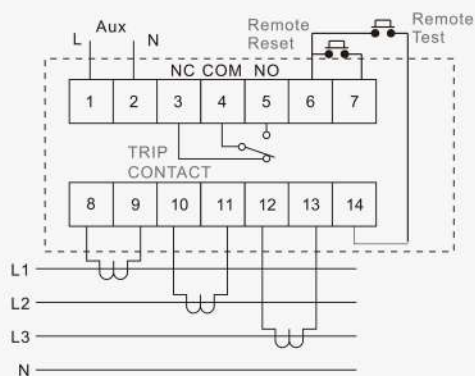
OMOCR353

OMOCR753



OMOCR753E

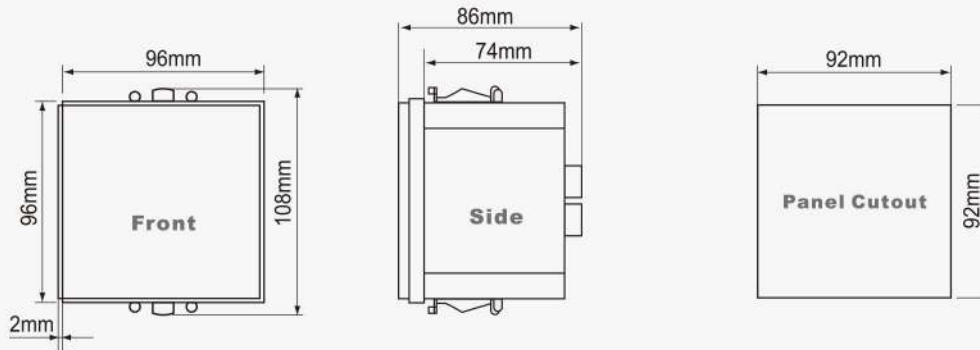
OMOCR753T



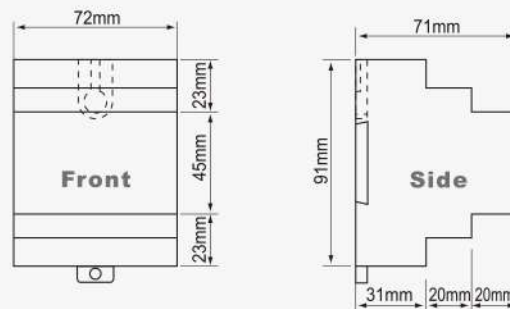
## OMOCR153/653 Overcurrent Relay

### Case Dimensions

#### OMOCR353



#### OMOCR753



### Ordering Information

Model	Description
OMOCR153/653	With 240 V AC, 50/60 Hz power supply
OMOCR153/653-110	With 110 V AC, 50/60 Hz power supply
OMOCR153D/653D	With 240 V AC, 50/60 Hz power supply
OMOCR153D/653D-110	With 110 V AC, 50/60 Hz power supply
OMOCR153E/653E	With 240 V AC, 50/60 Hz power supply
OMOCR153E/653E-110	With 110 V AC, 50/60 Hz power supply

# OMOCR153/653 Overcurrent Relay



## Technical Data

Settings	
Current rating(I <sub>n</sub> )	5A
Rated frequency	50/60 Hz
Burden	<0.3 VA at I <sub>n</sub>
Thermal withstand	4 x I <sub>n</sub> continuous
Auxiliary supply	
Supply voltage	198~265 V AC
Supply frequency	50/60Hz
Contacts	
Contact arrangement	Automatic reset type
Contact rating	NC & NO contact type
	6A,250V AC (cosφ =1) contact rating
	Silver alloy contact material
	100,000 electrical operations at rated current
	UL/CSA, TUV approved
Indicators	
Trip indicator	Manual reset type
Mechanical	
Mounting	Panel mounted, DIN rail mounted, Screws mounted
Front panel	Standard DIN 96 mm × 96 mm
Weight	1.2 kg
Performance	
Adjustable accuracy	Less than ± 5%.
Repeatability	Less than 0.5% of full scale.
Setting ranges	
Low-set (I> )	2.0 A to 6.0 A, 40% to 120%
Time multiplier	0.01 to 1.0
IDMT curve	Normal Inverse
High-set (I>>)	I> to 5 I>

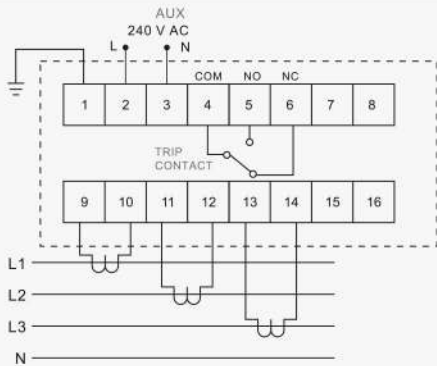
### Features

- Low-set inverse definite minimum time (IDMT) relay
- High-set instantaneous relay
- Separate low-set and high-set trip indicators
- Trip starting indication

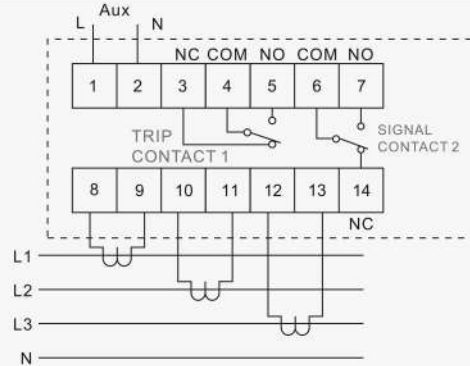
# OMOCR153/653 Overcurrent Relay

Typical application diagram

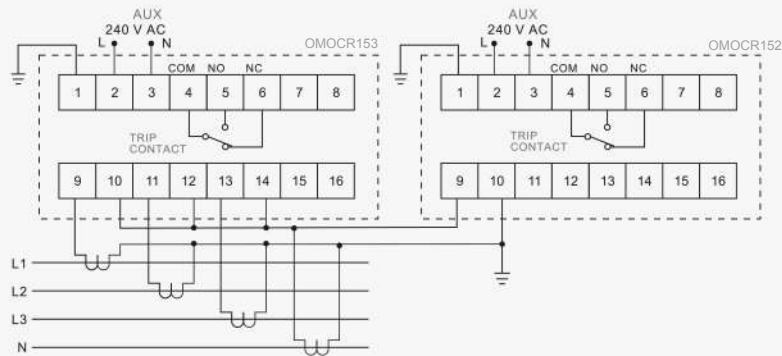
OMOCR153



OMOCR653D

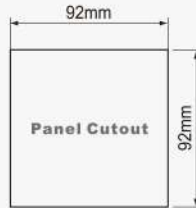
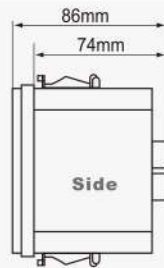
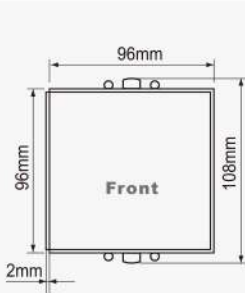


Combined IDMT overcurrent & earth fault relays

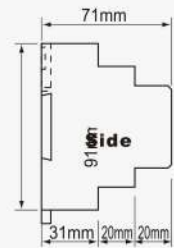
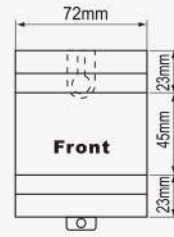


Case Dimensions

OMOCR153



OMOCR653



Ordering Information

Model	Description
OMOCR153/653	With 240 V AC, 50/60 Hz power supply
OMOCR153/653-110	With 110 V AC, 50/60 Hz power supply
OMOCR153D/653D	With 240 V AC, 50/60 Hz power supply
OMOCR153D/653D-110	With 110 V AC, 50/60 Hz power supply
OMOCR153E/653E	With 240 V AC, 50/60 Hz power supply
OMOCR153E/653E-110	With 110 V AC, 50/60 Hz power supply

# OMOCR151/651 Inverse Time Overcurrent Relay



## Technical Data

Settings	
Current rating(I <sub>n</sub> )	5A
Rated frequency	50/60 Hz
Burden	<0.3 VA at I <sub>n</sub>
Thermal withstand	4 x I <sub>n</sub> continuous
Auxiliary supply	
Supply voltage	198–265 V AC
Supply frequency	50/60Hz
Contacts	
Contact arrangement	Automatic reset type
Contact rating	NC & NO contact type
	6A,250V AC (cosφ =1) contact rating
	Silver alloy contact material
	100,000 electrical operations at rated current
	UL/CSA, TUV approved
Indicators	
Trip indicator	Manual reset type
Mechanical	
Mounting	Panel mounted, DIN rail mounted, Screws mounted
Front panel	Standard DIN 96 mm× 96 mm
Weight	1.2 kg
Performance	
Adjustable accuracy	Less than ± 5%.
Repeatability	Less than 0.5% of full scale.
Setting ranges	
Low-set (I> )	2.0 A to 6.0 A, 40% to 120%
Time multiplier	0.01 to 1.0
High-set (I>>)	I> to 5 I>

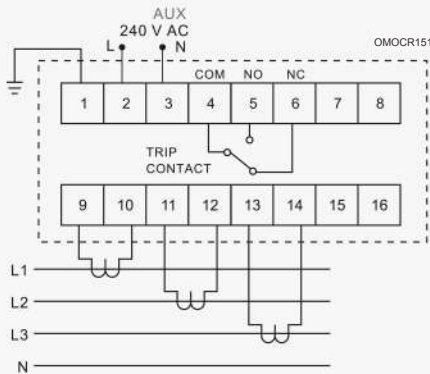
## Features

- Low-set inverse time relay
- High-set instantaneous relay
- Separate low-set and high-set trip indicators
- Trip starting indication

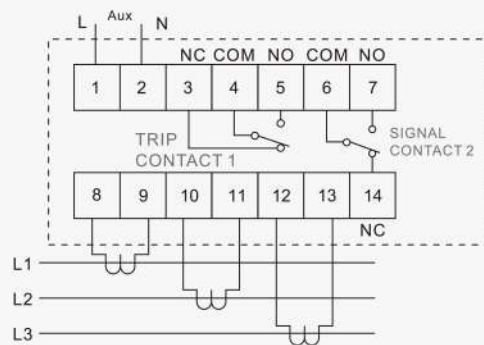
# OMOCR151/651 Inverse Time Overcurrent Relay

Diagram  
Typical application diagram

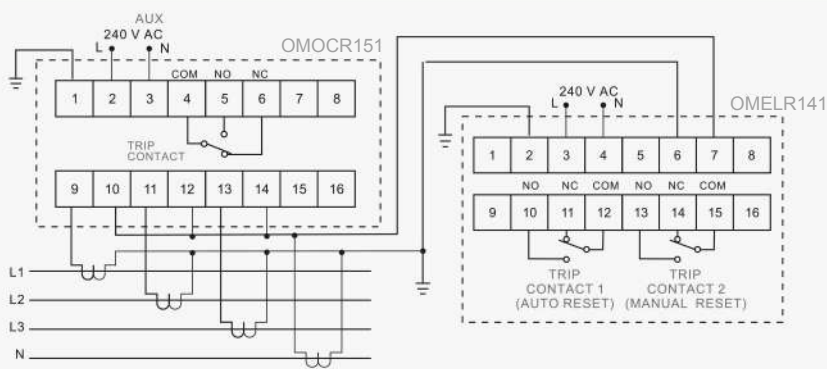
OMOCR151



OMOCR651D

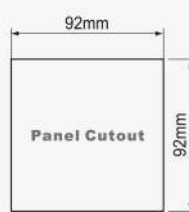
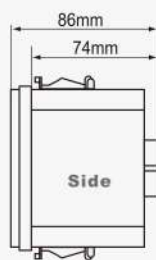
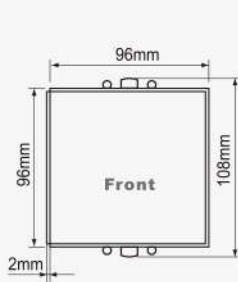


Combined IDMT overcurrent & earth fault relays

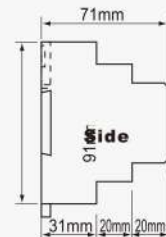
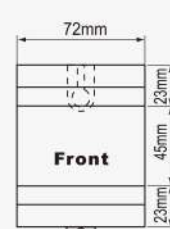


Case dimensions

OMOCR151



OMOCR651



Ordering Information

Model	Description
OMOCR151/651	With 240 V AC, 50/60 Hz power supply
OMOCR151/651-110	With 110 V AC, 50/60 Hz power supply
OMOCR151D/651D	With 240 V AC, 50/60 Hz power supply
OMOCR151D/651D-110	With 110 V AC, 50/60 Hz power supply
OMOCR151E/651E	With 240 V AC, 50/60 Hz power supply
OMOCR151E/651E-110	With 110 V AC, 50/60 Hz power supply

# OMCOE310/710 Combined Overcurrent & Earth Fault Relay



## Technical Data

Settings	
Current rating(I <sub>n</sub> )	5A
Rated frequency	50/60 Hz
Burden	<0.3 VA at I <sub>n</sub>
Thermal withstand	4 x I <sub>n</sub> continuous
Auxiliary supply	
Supply voltage	198–265 V AC, 90–120 V AC
Supply frequency	50/60Hz
VA rating	3VA typical
Contacts	
Contact arrangement	Change-over
Contact rating	6A, 250VAC (cosφ =1) for tripping contact
Contact material	Silver alloy
Operating time	15 ms max.
Expected electrical life	100,000 operations at rated current
Expected mechanical life	5 × 10 <sup>6</sup> operations
Approval	UL/CSA, VDE, TUV, SEMKO
Indicators	
Auxiliary supply	LED
Pick-up	LED
Trip indicator	7-segment display and LED
Mechanical	
Mounting	Panel mounted, DIN rail mounted, Screws mounted
Front panel	Standard DIN 96 mm× 96 mm
Weight	1.3 kg
Accuracy	
Protection thresholds	± 5%
Time delay	± 5% with a minimum of 50ms
Measurements	± 5% with a minimum of 50ms
Setting ranges	
Overcurrent elements	
Low-set (I <sub>&gt;</sub> )	2.0A to 6.0 A, step 0.05 A 40% to 120 % step 1%
Low-set time multiplier (kt <sub>&gt;</sub> )	0.05 to 1.0, step 0.01
High-set (I <sub>&gt;&gt;</sub> )	2.0A TO 99.9 A, step 0.10A 40% to 1998%, step 2%
High-set delay time (I <sub>&gt;&gt;</sub> )	0.05 sec to 2.5 sec, step 0.01
Earth-fault element	
Low-set (I <sub>o&gt;</sub> )	0.25A to 2.0 A, step 0.01A 5% to 40 % step 0.2%
Low-set time multiplier(kt <sub>&gt;</sub> )	0.05 to 1.0, step 0.01
High-set (I <sub>o&gt;&gt;</sub> )	0.25A to 30 A, step 0.10A 50% to 600%, step 2%
High-set delay time (I <sub>o&gt;&gt;</sub> )	0.05 sec to 2.5 sec, step 0.01
Time current characteristic curve	Normal inverse (Model KIR310) Very inverse (Model KIR310V)

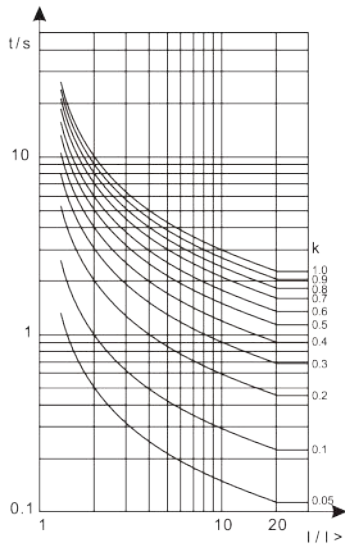
## Features

- Microprocessor based digital relay
- Three-phase, low-set overcurrent
- Three-phase, high-set overcurrent
- Low-set earth-fault
- High-set earth-fault
- Local display of measured and set values
- Fault value recording
- Programmable auto or manual reset
- IEC normal inverse or very inverse curve

# OMCOE310/710 Combined Overcurrent & Earth Fault Relay

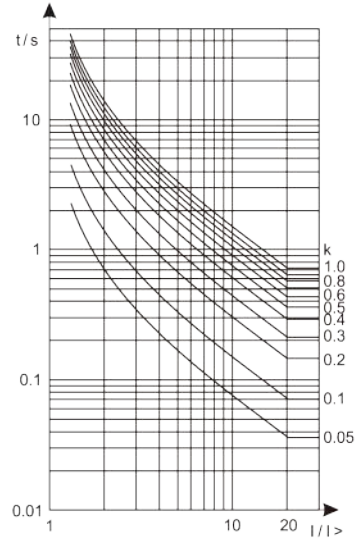
Inverse

Normal inverse

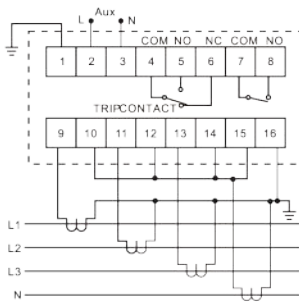


Diagram

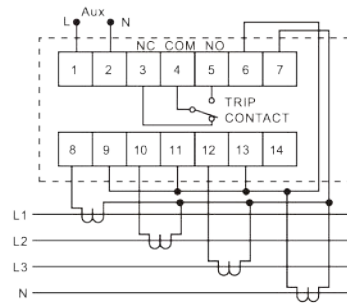
Very inverse



OMCOE310

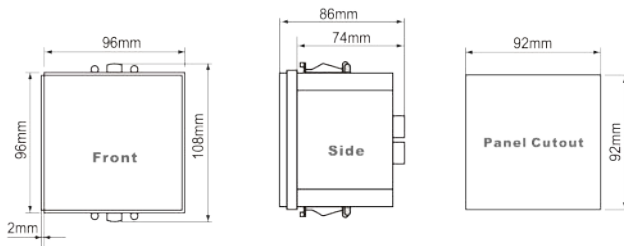


OMCOE710

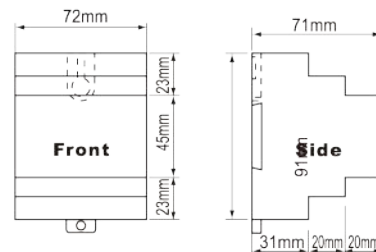


Case dimensions

OMCOE310



OMCOE710



Ordering Information

Model	Description
OMCOE310/710	With 240 V AC, 50/60 Hz power supply and normal inverse IDMT curve.
OMCOE310/710V	With 240 V AC, 50/60 Hz power supply and very inverse IDMT curve.
OMCOE310/710-110	With 110 V AC, 50/60 Hz power supply and normal inverse IDMT curve.
OMCOE310/710V-110	With 110 V AC, 50/60 Hz power supply and very inverse IDMT curve.

# OMRPR150/650 Reverse Power Relay



## Product Description

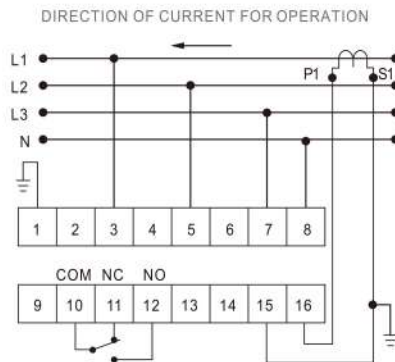
The OMRPR150 relay is a directionally controlled timing relay used to protect AC generator from motoring. When such a condition occurs and the reverse current exceeded the customer adjustable preset limit and the current persists for a predetermined delay time, the trip relay operates to disconnect the circuit.

## Technical Data

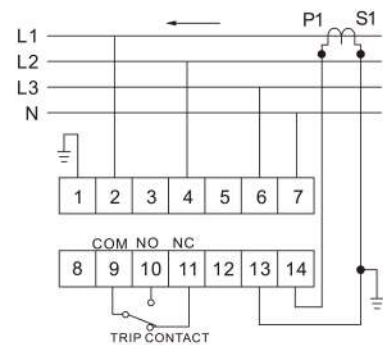
Inputs	
Voltage Un	380/440V AC
Current In	5A
Frequency	50Hz/60Hz
Overload	1.2× Un, 2× In continuous 1.2× Un, 10× In for 3 sec
Outputs	
Type	Changeover contact
Rating	5A / 240V AC cosφ = 1
Setpoint	
Range	2% to 20% reverse current
Time delay	Adjustable 0 sec to 20 sec
Hysteresis	1%
Repeatability	0.5%

## Typical Application Diagram

OMRPR150



OMRPR650



## Functions

- Reverse power monitoring
- 3-phase-4-wire system
- Adjustable reverse power setting
- Adjustable tripping time delay
- Indicators for auxiliary power, trip delay and trip status
- Test button

# OMRPR150/650 Reverse Power Relay

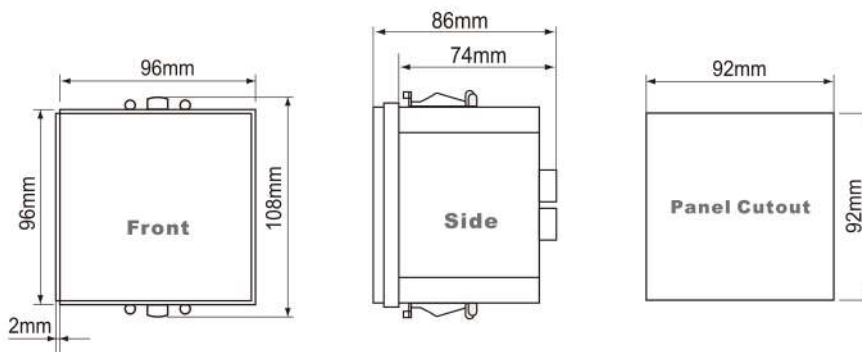
## Front Panel Description

### Light Indicators

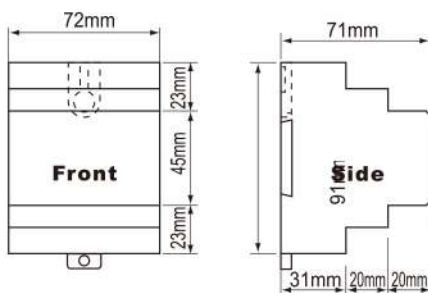
Indicator AUX	Indicator DELAY	Indicator TRIP	Status
OFF	OFF	OFF	No auxiliary power supply.
ON	OFF	OFF	System normal mode. No tripping.
ON	OFF	ON	Reverse current exceeded pre-set limit. Time delay countdown started.
OFF	ON	ON	System tripped.

## Case Dimensions

### OMRPR150



### OMRPR650



#### Reverse Current Adjustment Knob Test Button

- For setting the minimum reverse current before tripping
- Setting range from 2% to 20%

#### Delay Timing Adjustment Knob

- Trip time delay setting
- Setting range from 0 to 20 sec
- Press the test button to simulate a trip condition.

## Ordering Information

Model	Description
OMRPR150/650	With 415V AC

#### Reset Button

- The reset button is for resetting the light indicator after tripping.
- To reset, press the reset button once
- The tripping contact will be released once the reverse current fall below the pre-set limit. However, the TRIP light indicator is latched. Press the reset button to reset the light indicator to normal state.

## OMVCR560/540/520 3-Phase Voltage Control Relay



### Technical Data

Power supply input	
Phase-to-phase voltage	415V AC $\pm$ 20%
	400V AC $\pm$ 20%
	380V AC $\pm$ 20%
Frequency range	45 to 65 Hz
Max. power consumption	3VA
Input contact	Phase L1, L2, L3 respectively, received a midline received 1,3,5 plug plug 7
Setting ranges	
Lower voltage limit	78%–98%
Upper voltage limit**	102%–122%
Delay time,	0.1–10 T 0.1-10s
Hysteresis	
$\leq$ 1% of rms-value	
Contact output	
Contact arrangement	SPDT change-over contacts.
Contact rating	5A,250V AC ( $\cos \phi = 1$ )
Contact material	Silver alloy
Operating time	15 ms max
Expected electrical life	100,000 operations at rated current
Expected mechanical life	5 $\times$ 10 tions
Approval	UL/CSA, VDE, TUV, SEMKO
Indicators	
Power supply ON	Green LED
Output ON	Red LED
Under voltage limit(U<)*	Red LED
Over voltage limit(U>)*	Red LED
Mechanical	
Mounting	DIN rail mounted, Screws mounted
Applicable Weight	0.25Kg

### Features

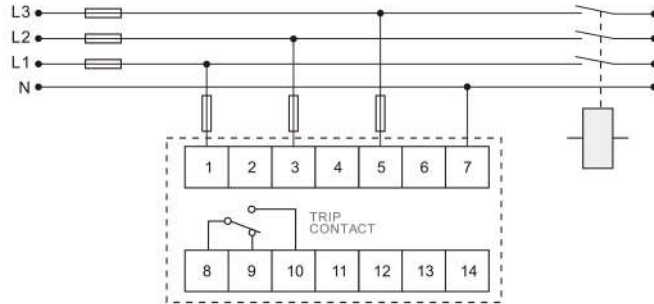
- Adjustable delay time
- Indicators for voltage fault
- Indicators for power and output ON
- Electronic monitoring relay
- Voltage monitoring for 3-phase system
- Phase failure monitoring
- Adjustable voltage limit

# OMVCR560/540/520 3-Phase Voltage Control Relay

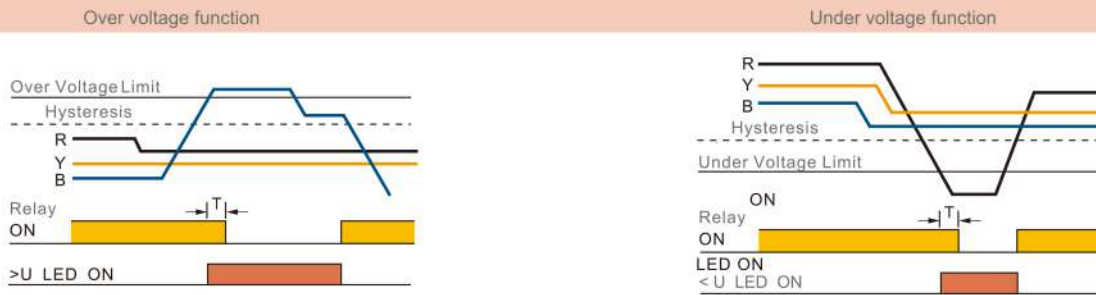
## Product Description

OMVCR560, OMVCR540 - OMVCR520 are 3-phase monitoring relays. The relays are designed for application where it is required to maintain the voltage within set limits. A built-in adjustable time delay prevent nuisance tripping.

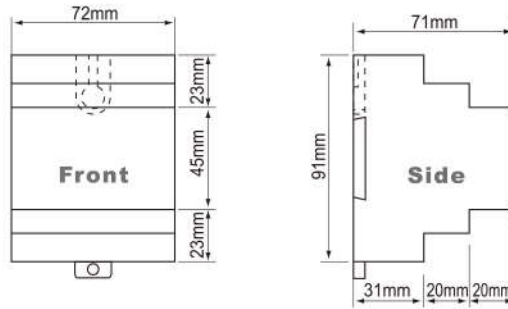
## Wiring Diagram



## Operations Diagram



## Case Dimensions



## Ordering Information

Model	Function			Supply voltage V AC
	Under voltage monitoring	Over voltage monitoring		
OMVCR520-380	YES	NO		380
OMVCR520-400	YES	NO		400
OMVCR520-415	YES	NO		415
OMVCR540-380	NO	YES		380
OMVCR540-400	NO	YES		400
OMVCR540-415	NO	YES		415
OMVCR560-380	YES	YES		380
OMVCR560-400	YES	YES		400
OMVCR560-415	YES	YES		415

# OMVCR510/500 3-Phase Voltage Sequence/Failure Control Relay



## Description

This phase sequence and phase failure relay is designed for application where the 3-phase supply needs to be continuously monitored for proper sequencing and phase loss. Commonly used to protect a 3-phase motor.

## Technical Data

Power supply input	
Phase-to-phase voltage	415V AC $\pm$ 15%
	400V AC $\pm$ 15%
	380V AC $\pm$ 15%
	220V AC $\pm$ 15%
Frequency range	45 to 65 Hz
Max. power consumption	3VA
Input contact	Plug a receiving phase L1
	L2 received a three-phase plug
	L3 received a five-phase plug
	Midline (option) received a plug 6
Contact output	
Contact arrangement	SPDT change-over contacts.
Contact rating	5A, 250V AC ( $\cos \phi = 1$ )
Contact material	Silver alloy
Expected electrical life	100,000 operations at rated current
Expected mechanical life	5x10 tions
Approval	UL/CSA, VDE, TUV, SEMKO
Indicators	
Power supply ON	Green LED
Output ON	Red LED
Mechanical	
Mounting	DIN rail mounted, Screws mounted
Applicable Weight	0.25Kg

## Features

- Electronic monitoring relay
- Phasese quence monitoring\*
- Phase failure monitoring
- Plug-in type module
- Adjustable delay
- Indicators for power and alarm status

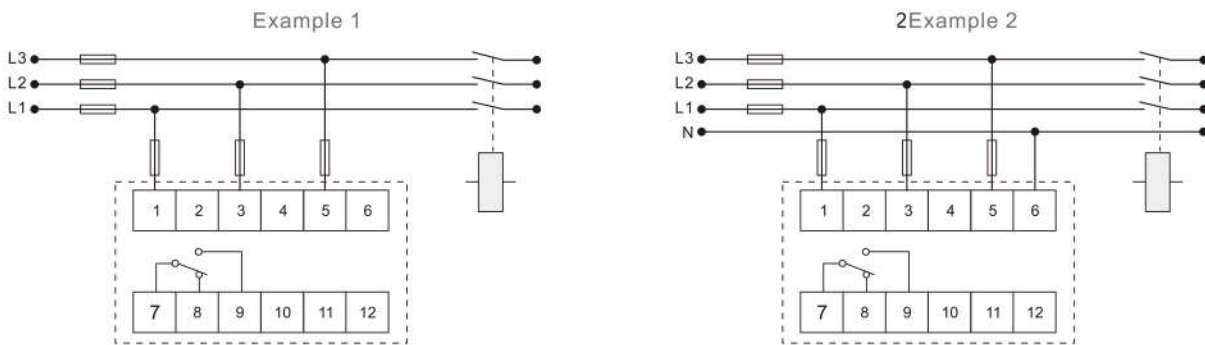
\*Applicable to OMVCR510 model only

# OMVCR510/500 3-Phase Voltage Sequence/Failure Control Relay

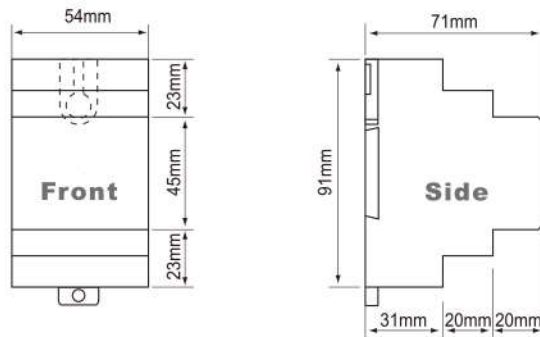
Function Table

Condition	Pin 1	Pin 3	Pin 5	Relay	Remark
1	L1	L2	L3	ON	System healthy
2	Loss	L2	L3	OFF	Phase failure
3	L1	Loss	L3	OFF	Phase failure
4	L1	L2	Loss	OFF	Phase failure
5	L2	L1	L3	OFF	System healthy*
6	L3	L2	L1	OFF	System healthy*

Wiring Diagram



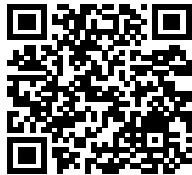
Case Dimensions



Ordering Information

Model	Description
OMVCR510-220	With 220V AC supply
OMVCR510-380	With 380V AC supply
OMVCR510-400	With 400V AC supply
OMVCR510-415	With 415V AC supply
OMVCR500-220	With 220V AC supply
OMVCR500-380	With 380V AC supply
OMVCR500-400	With 400V AC supply
OMVCR500-415	With 415V AC supply

# OMICRON



#### Safety instructions

- For your safety, please read manual thoroughly before operating.
- Contact the nearest authorized service facility for check, maintenance or adjustment.
- Please contact a qualified technician when you need maintenance.
- Any maintenance and inspection shall be performed by competent person.