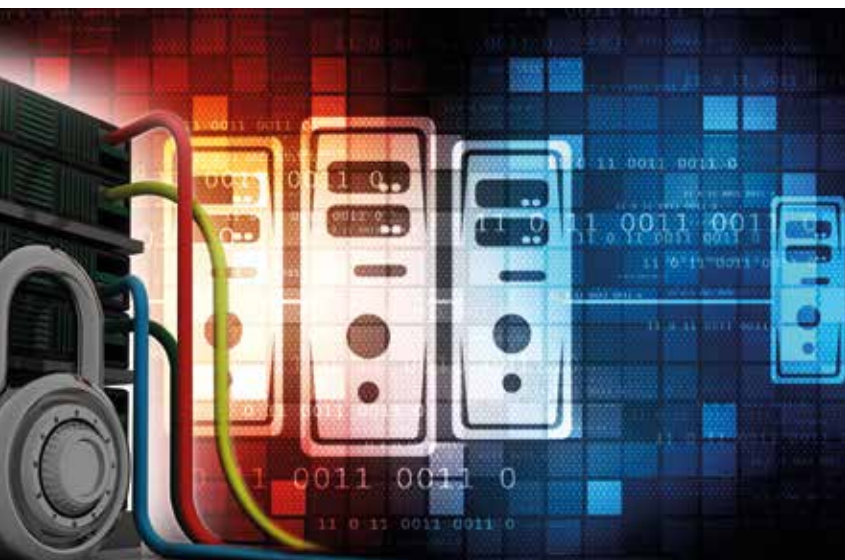
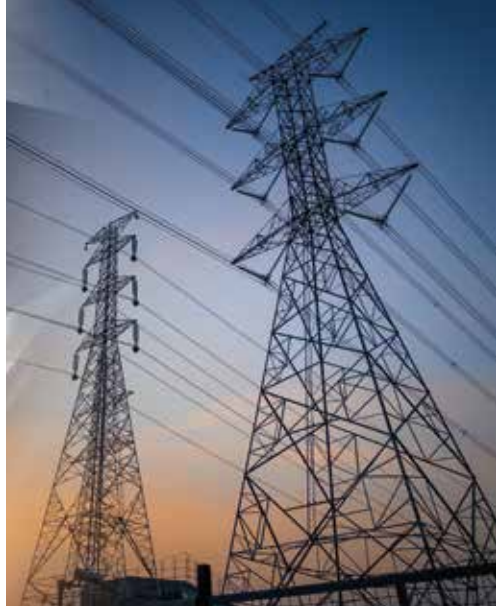




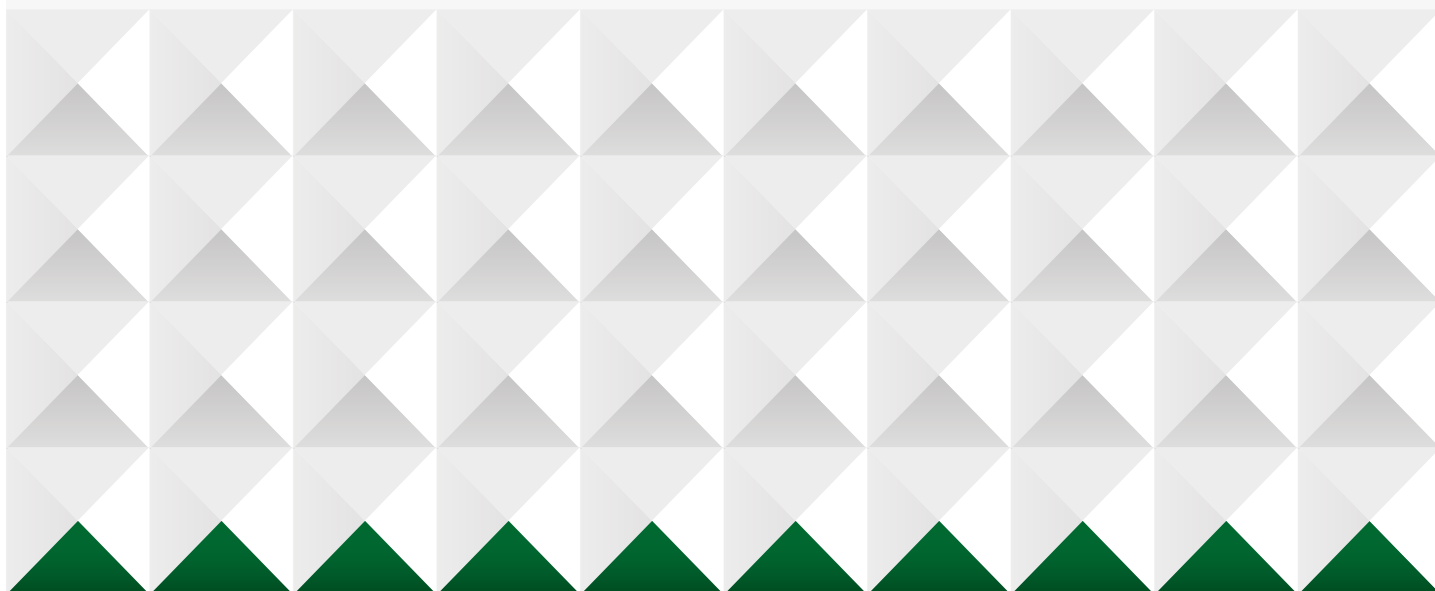
EARTH LEAKAGE RELAY FOR MONITORING AND PROTECTION OF THE LOW VOLTAGE DISTRIBUTION NETWORK



The electronic residual current relays allow monitoring and protection of the low voltage distribution network

- Modular, flush and internal panel mount version, with or without flag indicator, configurable prealarm indication and fail safe operation.
- Versions with automatic toroid connection control.
- Choice of supply voltage ranges.
- Adjustable fault current $I_{\Delta n}$.
- Adjustment and choice of tripping range for both fault current and delay time.
- Versions with display LCD and communication port.

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EARTH LEAKAGE RELAYS | WITH 1 OPERATION THRESHOLD

Certification obtained: EAC | Compliant with standards: IEC/EN 60947-2 Annex M

See dimensions and wiring diagrams at the end of chapter

ELR-7



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS	WT
ELR-7	• Flush mount 48x48 mm • External CT • Configurable fail safe • 3rd harmonic filtering (F option)	110 VAC/DC-240-415 VAC	3EL50W	2	1	0,112
		24-48 VAC/DC	3EL50N			
		220 VDC	3EL50H			

GENERAL CHARACTERISTICS

- Earth leakage relay type A
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Flush mount 48x48mm housing with transparent cover
- Degree of protection: IP20 terminals, IP40 on front with cover

ADJUSTMENTS

Configurable tripping set-point (IΔn):
0,025...0,25A | 0,25...2,5A | 2,5...25A | 5...250A (with external multiplier).
Configurable tripping delay time (t): 0,02...0,5s | 0,2...5s.

EARTH LEAKAGE RELAYS | WITH 1 OPERATION THRESHOLD

Certification obtained: EAC | Compliant with standards: IEC/EN 60947-2 Annex M

See dimensions and wiring diagrams at the end of chapter

ELR-1E



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS	WT
ELR -1E	• Flush mount 96x96 mm • External CT	110 VAC/DC-240-415 VAC	3EL60Q	2	1	0,395
		24-48 VAC/DC	3EL60N			

GENERAL CHARACTERISTICS

- Earth leakage relay type A
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Flush mount 96x96mm housing with transparent cover
- Degree of protection: IP20 terminals, IP40 on front with cover

ADJUSTMENTS

Configurable tripping set-point (IΔn):
0,025...0,25A | 0,25...2,5A | 2,5...25A | 5...250A (with external multiplier).
Configurable tripping delay time (t): 0,02...0,5s | 0,2...5s.

EARTH LEAKAGE RELAYS | WITH 1 OPERATION THRESHOLD

Certification obtained: **EAC** | Compliant with standards: IEC/EN 60947-2 Annex M

 See dimensions and wiring diagrams at the end of chapter

ELR-3F



ELR-3C



ELRC-B



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS 	WT 
ELR-3F	- Modular 3 DIN rail mounting - External CT - Fixed tripping set point and time	110 VAC/DC-240-415 VAC	3EL16Q	1	1	0,190
		24-48 VAC/DC	3EL16N			
ELR-3C	- Modular 3 DIN rail mounting - External CT 3rd harmonic filtering (F option)	110 VAC/DC-240-415 VAC	3EL10Q	1	1	0,190
		24-48 VAC/DC	3EL10N			
		12 VAC/DC	3EL10I			
ELRC-B	- Modular 6 DIN rail mounting - Ø28mm incorporated CT. - Configurable fail safe.	110 VAC/DC-240-415 VAC	3EL35Q	1	1	0,375
		24-48 VAC/DC	3EL35N			

GENERAL CHARACTERISTICS

- Earth leakage relay type A
- Configurable fail safe operation for ELRC-B type only
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Modular DIN module, with transparent cover
- Degree of protection: IP20 terminals, IP40 on front with cover.

ADJUSTMENTS

ELR-3F

Configurable tripping set-point (**I_{Δn}**): 0,3A o 0,5A fisso

Configurable tripping delay time (**t**): 0,02...0,5s

ELR-3C - ELRC-B

Configurable tripping set-point (**I_{Δn}**):

0,025...0,25A | 0,25...2,5A | 2,5...25A | 25...250A (with external multiplier)

Configurable tripping delay time (**t**): 0,02...0,5s | 0,2...5s

EARTH LEAKAGE RELAYS | WITH 1 OPERATION THRESHOLD

Certification obtained: **EAC** | Compliant with standards: IEC/EN 60947-2 Annex M

 See dimensions and wiring diagrams at the end of chapter

ELR-3E



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS 	WT 
ELR-3E	- Modular 3 DIN rail mounting - External CT - Fixed tripping set point and time	110 VAC/DC-240-415 VAC	3EL82Q	1	1	0,190
		24-48 VAC/DC	3EL82N			

GENERAL CHARACTERISTICS

- Earth leakage relay type A
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Manual resetting
- Modular DIN module, with transparent cover
- Degree of protection: IP20 terminals, IP40 on front with cover

ADJUSTMENTS

Configurable tripping set-point (**I_{Δn}**): 0,03A | 0,1A | 0,3A | 0,5A | 1A

Configurable tripping delay time (**t**): 0,02s | 0,2s | 0,5s | 1s | 5s

EARTH LEAKAGE RELAYS | WITH 1 OPERATION THRESHOLD

Certification obtained: EAC | Compliant with standards: IEC/EN 60947-2 Annex M

See dimensions and wiring diagrams at the end of chapter



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS	WT
ELR-4v	• Flush mount 48x96 mm • External CT	110 VAC/DC-240-415 VAC	3EL05Q	2	1	0,390
ELR-4v		24-48 VAC/DC	3EL05N			
ELR-4o		110 VAC/DC-240-415 VAC	3EL07Q			
ELR-4o		24-48 VA/DC	3EL07N			
ELR-4mv	• Flush mount 48x96 mm • External CT • Flag indicator (TRIP MEMORY)	110 VAC/DC-240-415 VAC	3EL06Q	2	1	0,390
ELR-4mv		24-48 VAC/DC	3EL06N			
ELR-4mo		110 VAC/DC-240-415 VAC	3EL08Q			
ELR-4mo		24-48 VAC/DC	3EL08N			
ELR-91	• Flush mount 72x72 mm • External CT	110 VAC/DC-240 VAC	3EL71W	1	1	0,322
		24-48 VAC/DC	3EL71N			

GENERAL CHARACTERISTICS

- Earth leakage relay type A
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Flag indicator (TRIP MEMORY) (ELR-4m only)
- Flush mount 48x96mm (ELR-4o)
- Flush mount 96x48mm (ELR-4v)
- Flush mount 72x72mm (ELR-91)
- Degree of protection: IP20 terminals, IP40 on front with cover

ADJUSTMENTS

ELR-4
Selectable tripping set-point (**IΔn**):
0,025...0,25A | 0,25...2,5A | 2,5...25A | 25...250A (with external multiplier)
Configurable tripping delay time (**t**): 0,02...0,5s | 0,2...5s.

ELR-91
Selectable tripping set-point (**IΔn**):
0,025...0,25A | 0,25...2,5A | 2,5...25A | 25...250A (with external multiplier)
Configurable tripping delay time (**t**): 0,02...0,5s | 0,2...5s.

EARTH LEAKAGE RELAYS | WITH 1 OPERATION THRESHOLD

Certification obtained: EAC | Compliant with standards: IEC/EN 60947-2 Annex M

See dimensions and wiring diagrams at the end of chapter



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS	WT
ELR-1D	• Modular 1 DIN rail mounting • External CT	230 VAC	3EL18G	1	1	0,190
		110 VAC	3EL18E	1		
		48 VAC/DC	3EL18K	1		
		24 VAC/DC	3EL18N	1		

GENERAL CHARACTERISTICS

- Earth leakage relay type A
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Manual resetting
- Modular DIN module, with transparent cover
- Degree of protection: IP20 terminals, IP40 on front with cover.

ADJUSTMENTS

Selectable tripping set-point (**IΔn**): 0,03...0,30A | 0,3...3,0A | 3...30A
Configurable tripping delay time (**t**): 0,02...0,5s | 0,2...5s

EARTH LEAKAGE RELAYS | WITH 1 OPERATION THRESHOLD

Certification obtained: **EAC** | Compliant with standards: **IEC/EN 60947-2 Annex M**

 See dimensions and wiring diagrams at the end of chapter

ELRC-1



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS 	WT 
ELRC-1 35	1 operation threshold - Compact panel mount - CT incorporated Ø 35 mm	110 VAC/DC-240-415 VAC	3EL31Q	1	1	0,485
		24-48 VAC/DC	3EL31N			
ELRC-1 60	1 operation threshold - Compact panel mount - CT incorporated Ø 60 mm	110 VAC/DC-240-415 VAC	3EL32Q	1	1	0,485
		24-48 VAC/DC	3EL32N			
ELRC-1 80	1 operation threshold - Compact panel mount - CT incorporated Ø 80 mm	110 VAC/DC-240-415 VAC	3EL33Q	1	1	0,485
		24-48 VAC/DC	3EL33N			
ELRC-1 110	1 operation threshold - Compact panel mount - CT incorporated Ø 110 mm	110 VAC/DC-240-415 VAC	3EL34Q	1	1	0,485
		24-48 VAC/DC	3EL34N			

GENERAL CHARACTERISTICS

- Earth leakage relay type A
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Degree of protection: IP20 terminals
- 3rd harmonic filtering (F option)

ADJUSTMENTS

Selectable tripping set-point (**I_{Δn}**):

0,025...0,25A | 0,25...2,5A | 2,5...25A | 25...250A (with external multiplier)

Configurable tripping delay time (**t**): 0,02...0,5s | 0,2...5s.

EARTH LEAKAGE RELAYS | WITH 1 OPERATION THRESHOLD

Certification obtained: **EAC** | Compliant with standards: **IEC/EN 60947-2 Annex M**

 See dimensions and wiring diagrams at the end of chapter

ELRC-2



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS 	WT 
ELRC-2 35	1 operation threshold • 2 output relays - Compact panel mount - CT incorporated Ø 35 mm	240 VAC	3EL36G	2	1	0,485
		24-48 VAC/DC	3EL36N			
ELRC-2 60	1 operation threshold • 2 output relays - Compact panel mount - CT incorporated Ø 60 mm	240 VAC	3EL36G	2	1	0,485
		24-48 VAC/DC	3EL36N			
ELRC-2 80	1 operation threshold • 2 output relays - Compact panel mount - CT incorporated Ø 80 mm.	240 VAC	3EL33G	2	1	0,485
		24-48 VAC/DC	3EL33N			
ELRC-2 110	1 operation threshold • 2 output relays - Compact panel mount - CT incorporated Ø 110 mm	240 VAC	3EL39G	2	1	0,485
		24-48 VAC/DC	3EL39N			

GENERAL CHARACTERISTICS

- Earth leakage relay type A
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Degree of protection: IP20 terminals

ADJUSTMENTS

Selectable tripping set-point (**I_{Δn}**):

0,025...0,25A | 0,25...2,5A | 2,5...25A | 25...250A (with external multiplier)

Configurable tripping delay time (**t**): 0,02...0,5s | 0,2...5s.

EARTH LEAKAGE RELAYS | WITH 1 OPERATION THRESHOLD

Certification obtained: EAC | Compliant with standards: IEC/EN 60947-2 Annex M

See dimensions and wiring diagrams at the end of chapter

ELR-61



ELR-m61



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS	WT
ELR-61	• 1 operation threshold • Modular 6 DIN rail mounting • External CT • 3rd harmonic filtering (F option) • Configurable fail safe operation (SP option)	110-240-415 VAC	3EL11P	2	1	0,390
		24-48 VAC/DC	3EL11N			
ELR-m61	• 1 operation threshold • Modular 6 DIN rail mounting • External CT • Flag indicator (TRIP MEMORY) • 3rd harmonic filtering (F option)	110-240-415 VAC	3EL12P	2	1	0,390
		24-48 VAC/DC	3EL12N			
ELR-61-10	• 1 operation threshold • Modular 6 DIN rail mounting. • External CT • Selectable tripping set-point (IΔn): 0,01...10A • 3rd harmonic filtering (F option) • Configurable fail safe operation (SP option)	110-240-415 VAC	3EL15P	2	1	0,390
		24-48 VAC/DC	3EL15N			

GENERAL CHARACTERISTICS

- Earth leakage relay type A
- Relay outputs each with 2 changeover contacts, both for trip
- Automatic toroid connection control
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting

- Flag indicator (TRIP MEMORY) (ELR-m61 only)
- Modular DIN module, with transparent cover
- Degree of protection: IP20 terminals, IP40 on front with cover

ADJUSTMENTS

Selectable tripping set-point (IΔn):
0,025...0,25A | 0,25...2,5A | 2,5...25A | 25...250A (with external multiplier)
Configurable tripping delay time (t): 0,02...0,5s | 0,2...5s

EARTH LEAKAGE RELAYS | WITH 1 OPERATION THRESHOLD

Certification obtained: EAC | Compliant with standards: IEC/EN 60947-2 Annex M

See dimensions and wiring diagrams at the end of chapter

FOR LIGHTING SYSTEM
UNATTENDED SITES

ELRD-L



ELRC-BL



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS	WT
ELRD-L	• Modular 6 DIN rail mounting. • External CT • Nr. reclosures	240 VAC	3EL42G	2	1	0,370
ELRC-BL	• Modular 6 DIN rail mounting. • CT incorporated Ø 28 mm • Nr. reclosures	240 VAC	3EL45G	2	1	0,370

GENERAL CHARACTERISTICS

- Earth leakage relay type A
- Output relay with changeover contact
- Automatic toroid connection control
- Green power LED indicator (ON)
- Red tripping pre-alarm LED indicator (ALARM)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting

- Automatic nr. reclosures
- Modular DIN module, with transparent cover
- Degree of protection: IP20 terminals, IP40 on front with cover
- For lighting system and unattended sites

ADJUSTMENTS

Selectable tripping set-point (IΔn):
0,025...0,25A | 0,25...2,5A | 2,5...25A | 25...250A (with external multiplier)
Configurable tripping delay time (t): 0,02...0,5s | 0,2...5s

EARTH LEAKAGE RELAYS | WITH 2 OPERATION THRESHOLD

Certification obtained: **EAC** | Compliant with standards: **IEC/EN 60947-2 Annex M**

See dimensions and wiring diagrams
at the end of chapter

ELR-2



ELR-2M



ELR-8V
ELR-8tcs
ELR-8mVtcs



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS	WT
ELR-2	- Flush mount 96x96 mm - External CT 3rd harmonic filtering (F option) - Configurable fail safe operation	110 VAC/DC-240-415 VAC	3EL65P	2	1	0,395
		24-48 VAC/DC	3EL65N			
		110 VDC	3EL65L			
ELR-2M	- Flush mount 96x96 mm - External CT 3rd harmonic filtering (F option) - Configurable fail safe operation - Flag indicator (TRIP MEMORY)	110 VAC/DC-240-415 VAC	3EL66P	2	1	0,405
		24-48 VAC/DC	3EL66N			
		24-48 VAC/DC	3EL66I			
ELR-8V	- Flush mount 96x96 mm - External CT - Configurable fail safe operation - Digital fault current measurement and display with configurable tripping value memory 3rd harmonic filtering (F option)	110 VDC	3EL91P	2	1	0,570
		24-48 VAC/DC	3EL91L			
		110 VDC	3EL91N			
ELR-8tcs	- Flush mount 96x96 mm - External CT - Configurable fail safe operation - Digital fault current measurement and display with configurable tripping value memory 3rd harmonic filtering (F option) - Shunt tripping circuit operating test (TCS)	110-240-415 VAC	3EL94P	3	1	0,570
		24-48 VAC/DC	3EL94L			
		110 VDC	3EL94N			
ELR-8m-Vtcs	- Flush mount 96x96 mm - External CT - Flag indicator (TRIP MEMORY) - Configurable fail safe operation - Digital fault current measurement and display with configurable tripping value memory 3rd harmonic filtering (F option) - Shunt tripping circuit operating test (TCS)	110-240-415 VAC	3EL93P	3	1	0,570
		24-48 VAC/DC	3EL93L			
		110 VDC	3EL93N			

GENERAL CHARACTERISTICS

- Earth leakage relay type A
- 2 output relays each with changeover contact, configurable as 2 tripping or 1 tripping and 1 alarm
- Configurable fail safe pre-alarm and operation
- Automatic toroid connection control
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Red tripping pre-alarm LED indicator (ALARM)
- Front TEST button
- Manual resetting by front RESET button or remote contact closing
- Automatic resetting by remote contact closing or rear jumper connection
- Constant toroid-relay circuit control
- Flag indicator (TRIP MEMORY) (ELR-2M, ELR-8mVtcs only)
- Digital fault current measurement and display with configurable tripping value memory (ELR-8 serie only)
- Shunt tripping circuit operating test (TCS) (ELR-8Vtcs, ELR-8mVtcs only)
- Flush mount 96x96mm housing with transparent cover
- Degree of protection: IP20 terminals, IP40 on front with cover.

ADJUSTMENTS

ELR-2 e ELR-2M

Selectable tripping set-point ($I_{\Delta n}$):

0,025...0,25A | 0,25...2,5A | 2,5...25A | 25...250A (with external multiplier)

Pre-alarm set-point: 70% fixed

Configurable tripping delay time (t): 0,02...0,5s | 0,2...5s.

ELR-8V - ELR-8tcs - ELR-8mVtcs

Selectable tripping set-point ($I_{\Delta n}$):

0,03...0,30A | 0,30...3,0A | 3...30A | 30...300A (with external multiplier)

Pre-alarm set-point: 70% fixed

Configurable tripping delay time (t): 0,03...0,5s | 0,3...5s.

EARTH LEAKAGE RELAYS | WITH 2 OPERATION THRESHOLD

Certification obtained: EAC | Compliant with standards: IEC/EN 60947-2 Annex M

See dimensions and wiring diagrams at the end of chapter

ELR-92



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS	WT
ELR-92	• Flush mount 72x72 mm • External CT • Configurable fail safe operation • 3rd harmonic filtering (F option)	110-240-415 VAC	3EL72P	2	1	0,322
		24-48 VAC/DC	3EL72N			
		110 VDC	3EL72L			

GENERAL CHARACTERISTICS

- Earth leakage relay type A
- Output relays each with changeover contact, 1 tripping and 1 alarm
- Configurable fail safe pre-alarm and operation
- Automatic toroid connection control
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Red tripping pre-alarm LED indicator (ALARM)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Flush mount 72x72mm housing with transparent cover

ADJUSTMENTS

ELR-92
Selectable tripping set-point (**IΔn**):
0,025...0,25A | 0,25...2,5A | 2,5...25A | 25...250A (with external multiplier)
Pre-alarm set-point: 70% fixed
Configurable tripping delay time (**t**): 0,02...0,5s | 0,2...5s.

EARTH LEAKAGE RELAYS | WITH 2 OPERATION THRESHOLD

Certification obtained: EAC | Compliant with standards: IEC/EN 60947-2 Annex M

See dimensions and wiring diagrams at the end of chapter

ELR-62



ELRD-L2m



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS	WT
ELR-62	• Modular 6 DIN • External CT • Flag indicator (ELR-m62 only) • 3rd harmonic filtering (F option)	110-240-415 VAC	3EL13P	2	1	0,390
		110 VDC	3EL13L			
		24-48 VAC/DC	3EL13N			
ELRD-L2m	• Modular 6 DIN • External CT • Flag indicator • Nr. reclosures • For lighting system and unattended sites	240 VAC	3EL43G	2	1	0,370

GENERAL CHARACTERISTICS

- Earth leakage relay type A
- Output relays each with changeover contact, 1 tripping and 1 alarm
- Automatic toroid connection control
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Red tripping pre-alarm LED indicator (ALARM)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Nr. reclosures (ELRD-L2m only)
- Flag indicator (TRIP MEMORY) (ELR-m62 only)

- Modular DIN, 6 modules, with transparent cover
- Degree of protection: IP20 terminals, IP40 on front with cover
- For lighting system and unattended sites

ADJUSTMENTS

ELR-62 e ELR-m62 e ELR-L2m
Selectable tripping set-point (**IΔn**):
0,025...0,25A | 0,25...2,5A | 2,5...25A | 25...250A (with external multiplier)
Pre-alarm set-point: 70% fixed
Configurable tripping delay time (**t**): 0,02...0,5s | 0,2...5s.

EARTH LEAKAGE RELAYS | WITH 2 OPERATION THRESHOLD

Certification obtained: **EAC** | Compliant with standards: IEC/EN 60947-2 Annex M

 See dimensions and wiring diagrams at the end of chapter

ELR-D2



ELR-D2-V



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS 	WT 
ELR-D2	- Modular 2 DIN - External CT - Configurable fail safe operation	230 VAC	3ED05G	1	1	0,200
		110 VAC	3ED05E			
ELR-D2-V	- Modular 2 DIN - External CT - Fault current measurement. Digital display	230 VAC	3EL06G	1	1	0,200
		110 VAC	3EL06E			
ELR-D2-V-485	- Modular 2 DIN - External CT - Fault current measurement. Digital display - Configurable fail safe operation - Isolated RS485 interface	230 VAC	3ED07G	1	1	0,200
		110 VAC	3ED07E			

GENERAL CHARACTERISTICS

- Earth leakage relay type A
- Automatic toroid connection control
- Green power LED indicator (ON)
- Yellow tripping pre-alarm LED indicator (ALARM) (ELR-D2 only)
- Yellow tripping pre-alarm LCD indicator (ALARM) (ELR-D2-V only)
- Red tripping alarm LCD indicator (TRIP) (ELR-D2-V only)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Modbus-RTU communication protocol
- Modular DIN housing, 2 modules
- Degree of protection: IP20 terminals, IP40 on front with cover
- Grado di protezione: IP20 morsetti; IP40 frontale

ADJUSTMENTS

ELR-D2

Selectable tripping set-point ($I_{\Delta n}$): 0,03...30A | 30...300A (with external multiplier)

Pre-alarm set-point: 50...90%

Configurable tripping delay time (t): 0,02...10s.

ELR-D2-V

Selectable tripping set-point ($I_{\Delta n}$): 0,03...30A | 30...300A (with external multiplier)

Pre-alarm set-point: 50...90%

Configurable tripping delay time (t): 0,02...10s.

EARTH LEAKAGE RELAYS | WITH 2 OPERATION THRESHOLD

Certification obtained: **EAC** | Compliant with standards: IEC/EN 60947-2 Annex M

 See dimensions and wiring diagrams at the end of chapter

ELR-3AN



3EDA02
Flush mount
72x72mm
adapter



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS 	WT 
ELR-3AN	- Modular 3 DIN - External CT - Fault current measurement. Digital display - Configurable fail safe operation	230 VAC	3ELR3A200010000	2	1	0,210
		110 VAC	3ELR3A210010000			
		24-48 VAC/DC	3ELR3A240010000			
		24-250 VAC/DC	3ELR3A220010000			
ELR-3AN-485	- Modular 3 DIN - External CT - Fault current measurement. Digital display - Configurable fail safe operation - Isolated RS485 interface	230 VAC	3ELR3A200011000	2	1	0,210
		110 VAC	3ELR3A210011000			
		24-48 VAC/DC	3ELR3A240011000			
		24-250 VAC/DC	3ELR3A220011000			

GENERAL CHARACTERISTICS

- Earth leakage relay type A
- 2 output relays each with changeover contact, configurable as 2 tripping or 1 tripping and 1 alarm
- Configurable fail safe pre-alarm and operation
- Automatic toroid connection control
- Green power LED indicator (ON)
- Yellow tripping pre-alarm LED and LCD indicator (ALARM)
- Red tripping alarm LED and LCD indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Configurable 3rd harmonic filtering

- Digital fault current measurement and display
- Modbus-RTU communication protocol
- Configurable nr. reclosures
- Modular DIN housing, 3 modules
- Degree of protection: IP20 terminals, IP40 on front with cover

ADJUSTMENTS

ELR-3AN

Configurable tripping set-point ($I_{\Delta n}$): 0,03...30A | 30...300A (with external multiplier)

Pre-alarm set-point: 50...90%

Configurable tripping delay time (t): 0,02...10s.

EARTH LEAKAGE RELAYS | WITH 2 OPERATION THRESHOLD

Certification obtained: EAC | Compliant with standards: IEC/EN 60947-2 Annex M

See dimensions and wiring diagrams at the end of chapter



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS	WT
ELR-51AS	• Modular 3 DIN • External CT • Fault current measurement. Digital display • 2 bistable output relays	110-240 VAC	3ED10V	2	1	0,210
		24-48 VAC/DC	3ED10N			
ELR-51AS-485	• Modular 3 DIN • External CT • Fault current measurement. Digital display • 2 bistable output relays • Isolated RS485 interface	110-240 VAC	3ED12V	2	1	0,210
		24-48 VAC/DC	3ED12N			
ELR-52AS	• Modular 3 DIN • 2 External CT • Fault current measurement. Digital display • 2 bistable output relays	110-240 VAC	3ED11V	2	1	0,210
		24-48 VAC/DC	3ED11N			
ELR-52AS-485	• Modular 3 DIN • 2 External CT • Fault current measurement. Digital display • 2 bistable output relays • Isolated RS485 interface	110-240 VAC	3ED13V	2	1	0,210
		24-48 VAC/DC	3ED13N			

GENERAL CHARACTERISTICS

- Earth leakage relay type A
 - 2 bistable output relays each with changeover contact, configurable as 2 tripping or 1 tripping and 1 alarm
 - Configurable fail safe pre-alarm and operation
 - Automatic toroid connection control
 - Green power LED indicator (ON)
 - Green LED indicating safe system (OK)
 - Red tripping alarm LED and LCD indicator (TRIP)
 - Front TEST and RESET buttons
 - Configurable automatic or manual resetting
 - Configurable 3rd harmonic filtering
- TRIP MEMORY function
 - Digital fault current measurement and display
 - Modbus-RTU communication protocol
 - Modular DIN housing, 3 modules
 - Degree of protection: IP20 terminals, IP40 on front with cover

ADJUSTMENTS

ELR-51AS - ELR-52AS
Selectable tripping set-point (**IΔn**): 0.03...5A
Pre-alarm set-point: 50...90%
Configurable tripping delay time (**t**): 20...500ms

EARTH LEAKAGE RELAYS | MULTICHANNEL WITH 4 INPUTS

Certification obtained: EAC | Compliant with standards: IEC/EN 60947-2 Annex M

See dimensions and wiring diagrams at the end of chapter



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS	WT
ELR-4C	• Modular 3 DIN • 4 inputs external CT • Fault current measurement. Digital display • Configurable fail safe operation • Configurable nr. reclosures	230 VAC	3ELR4C000000000	4	1	0,210
		110 VAC	3ELR4C010000000			
		24-48 VAC/DC	3ELR4C020000000			
ELR-4C-485	• Modular 3 DIN • 4 inputs external CT • Fault current measurement. Digital display • Configurable fail safe operation • Configurable nr. reclosures • Isolated RS485 interface	230 VAC	3ELR4C000001000	4	1	0,210
		110 VAC	3ELR4C010001000			
		24-48 VAC/DC	3ELR4C020001000			

GENERAL CHARACTERISTICS

- Earth leakage relay type A
 - Output relay for each input channel
 - Configurable fail safe pre-alarm and operation
 - Automatic toroid connection control
 - Green power LED indicator (ON)
 - Yellow tripping pre-alarm LED and LCD indicator (ALARM)
 - Red tripping alarm LED and LCD indicator (TRIP)
 - Front TEST and RESET buttons
 - Configurable automatic or manual resetting
 - Configurable 3rd harmonic filtering
- Digital fault current measurement and display with memorization
 - Modbus-RTU communication protocol
 - Configurable nr. reclosures
 - Modular DIN housing, 3 modules
 - Degree of protection: IP20 terminals, IP40 on front with cover

ADJUSTMENTS

ELR-4C
Selectable tripping set-point (**IΔn**): 0,03...30A
Pre-alarm set-point: 50...90%
Configurable tripping delay time (**t**): 0,02...10s

TYPE B EARTH LEAKAGE RELAYS | WITH 2 OPERATION THRESHOLD

Certification obtained: EAC | Compliant with standards: IEC/EN 60947-2 Annex M

 See dimensions and wiring diagrams at the end of chapter

ELR-3B



3EDA02
Flush mount
72x72mm
adapter



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	OUTPUT CONTACTS	PCS 	WT 
ELR-3B	- Modular 3 DIN - External CT - Selectable tripping set-point ($I\Delta n$) 0,03...3A - Fault current measurement. Digital display - Configurable fail safe operation	230 VAC	3ED36G	2	1	0,168
		24-110 VAC/DC	3ED36T			
ELR-3B-10	- Modular 3 DIN - External CT - Selectable tripping set-point (Δn) 0,3...10A - Fault current measurement. Digital display - Configurable fail safe operation	230 VAC	3ED37G	2	1	0,210
		24-110 VAC/DC	3ED37T			

GENERAL CHARACTERISTICS

- Earth leakage relay type B
- Uscite a relè ciascuna con 1 contatto in scambio, 1 per intervento e 1 per preallarme
- Configurable fail safe pre-alarm and operation
- Automatic toroid connection control
- Green power LED indicator (ON)
- Yellow tripping pre-alarm LED indicator (ALARM)
- Red tripping alarm LED and LCD indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Modular DIN housing, 3 modules
- Degree of protection: IP20 terminals, IP40 on front with cover .

ADJUSTMENTS

ELR-3B

Selectable tripping set-point ($I\Delta n$): 0,03A | 0,1A | 0,3A | 0,5A | 1A | 3A

Pre-alarm set-point: 50...80%

Configurable tripping delay time (t): 0,1...10s

ELR-3B-10

Selectable tripping set-point ($I\Delta n$): 0,3A | 0,5A | 1A | 3A | 5A | 10A

Pre-alarm set-point: 50...80%

Configurable tripping delay time (t): 0,1...10s

STATIC RELAY FOR AUTOMATIC MOTORS RESTART AND RE-ACCELERATION

Certification obtained: EAC | CCompliant with standards: CEI 41.1, IEC 60255-1, EN 61000-6-4

i See dimensions and wiring diagrams at the end of chapter



TYPE		RATED AUXILIARY SUPPLY VOLTAGE	ORDER CODE	PCS	WT
RSR-72	For applications with the control device of the contactor with contact impulsive position	230 VAC	3RR01G	1	0,350
		110 VAC	3RR01E		
		110 VDC	3RR01L		
RSR-72A	For applications with device contactor control with a maintained contact	230 VAC	3RR02G	1	0,350
		110 VAC	3RR02E		
		110 VDC	3RR02L		
RSR-72B	For applications with the control device of the contactor with contact impulsive position with special mode of the memory count.	230 VAC	3RR03G	1	0,350
		110 VAC	3RR03E		
		110 VDC	3RR03L		
ACCESSORIES	Undecal support		3RRA01	1	0,100
	Restraint spring for fixing undecal support		3RRA02	1	0,050

GENERAL CHARACTERISTICS

The RSR-72 type restart and re-acceleration relay has the function of carrying out the automatic restarting of the motors, after the opening of the control and protection devices caused by the lack or transient decrease of the mains voltage. After the motors have stopped, the RSR-72 relays allow an automatic restart with a correct sequence based on the needs of the manufacturing processes.

The RSR-72 relays are manufactured in a case for panel or projecting recessed mounting or on a 35mm DIN rail on an undecal extractable socket.

On the front there are potentiometers and microswitches for settings and a LED for indicating functional status.

OPERATING

- The RSR-72** relay is used in the event that the contactor command must be directly controlled by the RSR-72 output contact. Unlike the RSR-72 model, the RSR-72A type keeps the contact closed after restarting the motor/contactor.
- A memory time from 0.2 to 60 seconds and a delay time from 0.2 to 1000 seconds can be set on the relay.
 - In the event of a power failure (or a value below 70% of the rated voltage) and subsequent voltage recovery (at least 90% of the rated voltage) within the set memory time, the motor restart output will be activated after the set delay time.
 - If the voltage returns after the memory time, there will be no automatic restart.
 - With the F2 function activated, if the voltage returns in less than 0.2 seconds (minimum memory time), the motor will still be accelerated immediately.
 - If the F1 re-acceleration function is not activated, automatic restart will occur after the set delay time even if the voltage interruption time is less than 0.2 seconds.

TOROIDAL CURRENT TRANSFORMERS

Certification obtained: EAC | Compliant with standards: IEC/EN 60947-2 Annex M

 See dimensions and wiring diagrams at the end of chapter

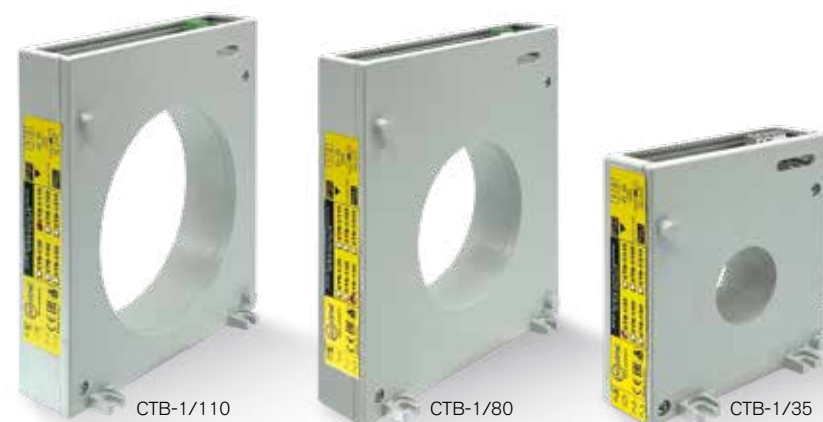


ORDER CODE	Ø [mm]	OPENABLE	PCS 	WT 
CTD-1/28	28	NO	1	0,200
CTD-2/29	29	NO	1	0,200
CT-1/22	22	NO	1	0,150
CT-1/35	35	NO	1	0,200
CT-1/60	60	NO	1	0,245
CT-1/80	80	NO	1	0,410
CT-1/110	110	NO	1	0,400
CT-1/160	160	NO	1	1,350
CT-1/210	210	NO	1	1,200
CT-1/300	300	NO	1	2,100
CTA-1/110	110	SI	1	0,540
CTA-1/160	160	SI	1	1,600
CTA-1/210	210	SI	1	1,820
CTA-1/300	300	SI	1	2,300
CT-1/280R	280	NO	1	1,700
CT-1/350R	350	NO	1	2,100
CT-1/415R	400	NO	1	8,300

TOROIDAL CURRENT TRANSFORMERS | TYPE B

Certification obtained: EAC | Compliant with standards: IEC/EN 60947-2 Annex M

 See dimensions and wiring diagrams at the end of chapter

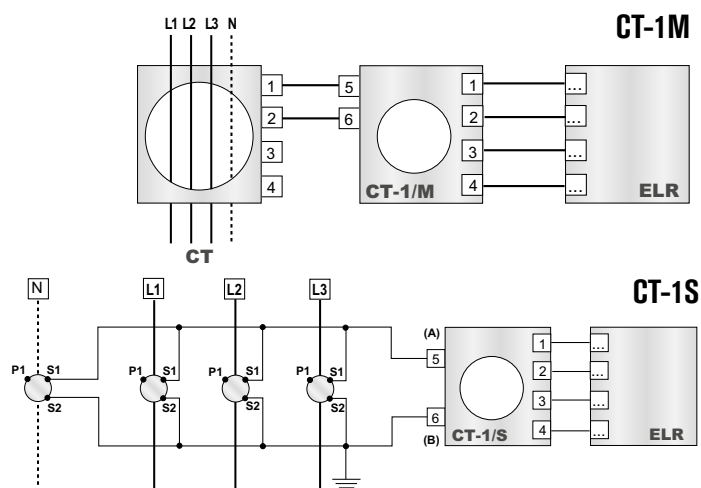


ORDER CODE	Ø [mm]	OPENABLE	PCS 	WT 
CTB-1/22	22	NO	1	0,150
CTB-1/35	35	NO	1	0,200
CTB-1/60	60	NO	1	0,245
CTB-1/80	80	NO	1	0,410
CTB-1/110	110	NO	1	0,400
CTB-1/160	160	NO	1	1,350
CTB-1/210	210	NO	1	1,200
CTB-1/300	300	NO	1	2,100

EXTERNAL MULTIPLIER | EXTERNAL ADDER

Certification obtained: EAC | Compliant with standards: IEC/EN 60947-2 Annex M

 See dimensions and wiring diagrams at the end of chapter



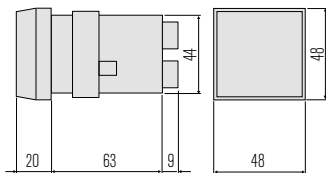
ORDER CODE	OPENABLE	PCS 	WT 
CT-1M	NO	1	0,150
CT-1S	NO	1	0,200

- **CT-1M** - External multiplier suitable for the whole ELR series to be connected between toroid and relay (multiplies the setting x10)
- **CT-1S** - External adder to be used in cases where the conductors of the system to be protected exceed the internal diameter of the reducer

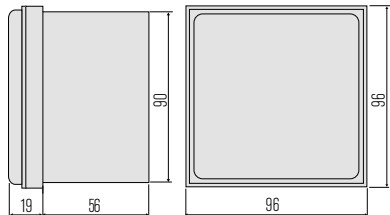
EARTH LEAKAGE RELAYS | dimensions (mm)

Certification obtained: EAC | Compliant with standards: IEC/EN 60947-2 Annex M

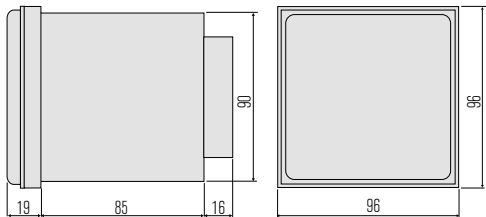
ELR-7



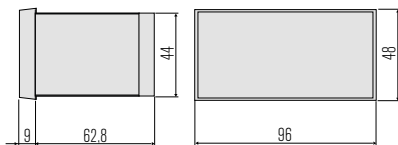
ELR-1E | ELR-2E | ELR-2M



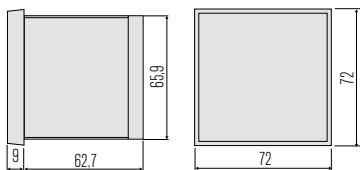
ELR-8v | ELR-8Mtcs | ELR-8tcs



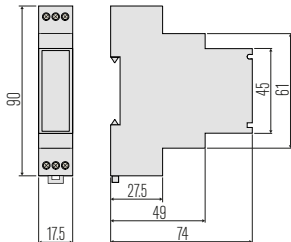
ELR-4v | ELR-4o | ELR-4mv | ELR-4mo



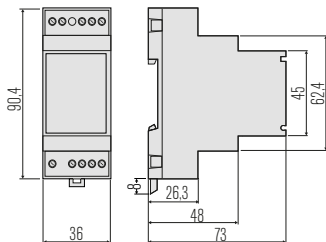
ELR-91 | ELR-92



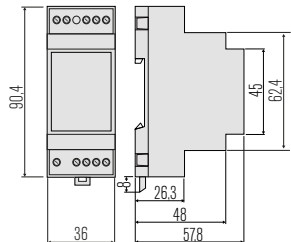
ELR-1D



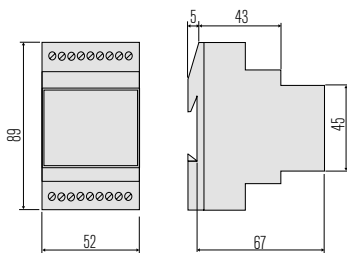
ELR-D2



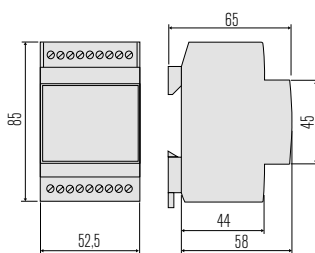
ELR-D2-V



ELR-3C | ELR-3F



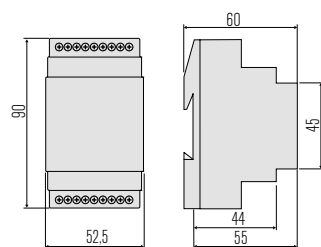
ELR-3E



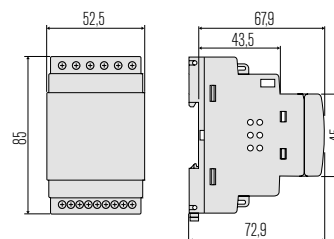
EARTH LEAKAGE RELAYS | dimensions (mm)

Certification obtained: **EAC** | Compliant with standards: IEC/EN 60947-2 Annex M

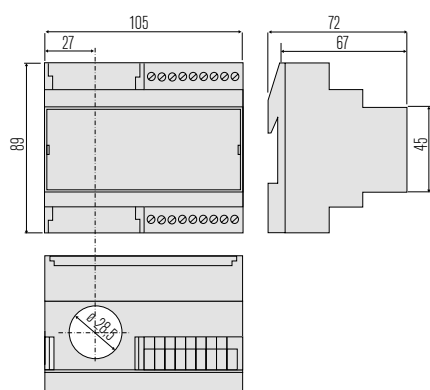
ELR-3AN | ELR-51AS | ELR-52AS | ELR-4C



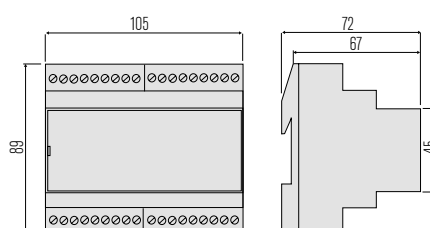
ELR-3B



ELRC-B | ELRC-BL

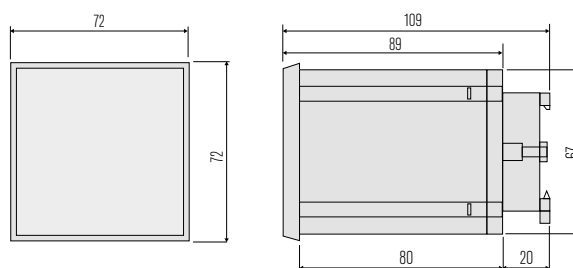


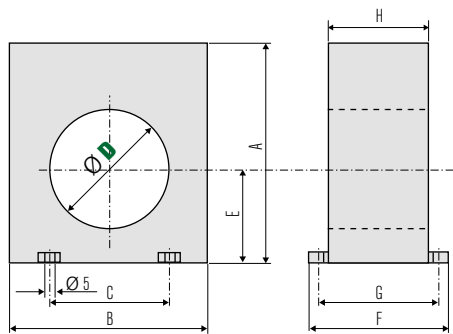
ELR-61 | ELR-62 | ELRD-L | ELRD-L2M



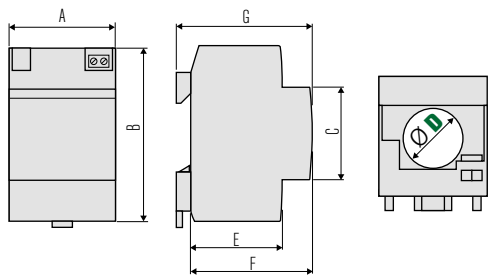
STATIC RELAY FOR AUTOMATIC MOTORS RESTART AND RE-ACCELERATION

RSR-72 | RSR-72A | RSR-72B

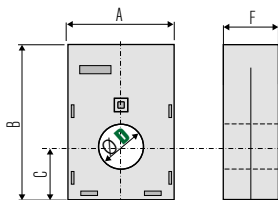




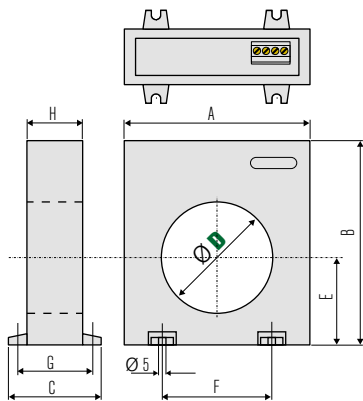
TYPE	A	B	C	D	E	F	G	H
ELRC-1/35 ELRC-2/35	110	100	60	35	47	70	60	50
ELRC-1/60 ELRC-2/60	110	100	60	60	47	70	60	50
ELRC-1/80 ELRC-2/80	160	150	110	80	70	70	60	50
ELRC-1/110 ELRC-2/110	160	150	110	110	70	70	60	50



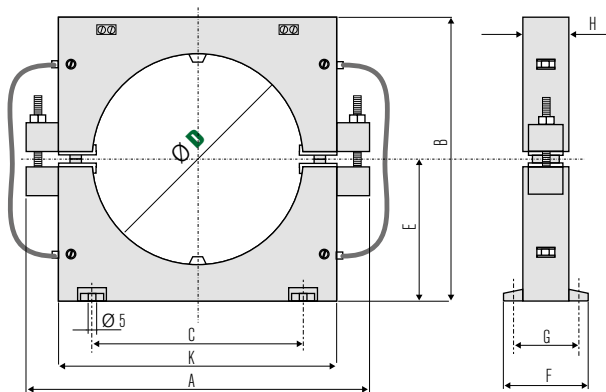
TYPE	A	B	C	D	E	F	G
CTD-1/28	52,5	85,5	45	28	44	58	54



TYPE	A	B	C	D	F
CT-1/22 CTB-1/22	52	65	26	22	27



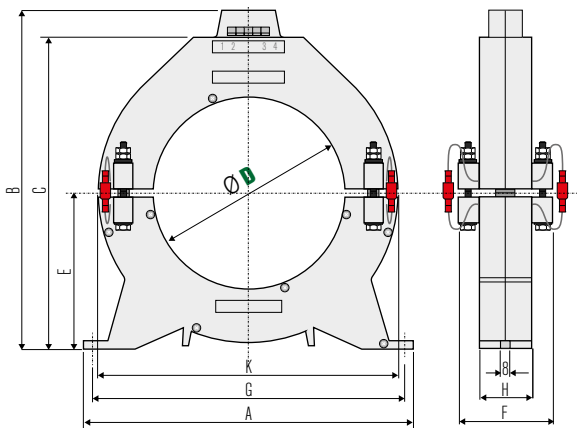
TYPE	A	B	C	D	E	F	G	H
CT-1/35 CTB-1/35	100	110	50	35	47	60	43	30
CT-1/60 CTB-1/60	100	110	50	60	47	60	43	30
CT-1/80 CTB-1/80	150	160	50	80	70	110	43	30
CT-1/110 CTB-1/110	150	160	50	110	70	110	43	30
CT-1/160 CTB-1/160	220	236	64	160	110	156	50	34



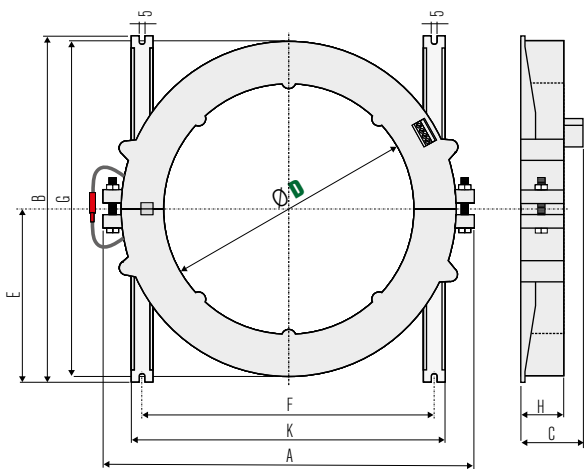
TYPE	A	B	C	D	E	F	G	H	K
CTA-1/110	180	150	110	110	75	45	38	25	145

TOROIDAL | dimensions (mm)

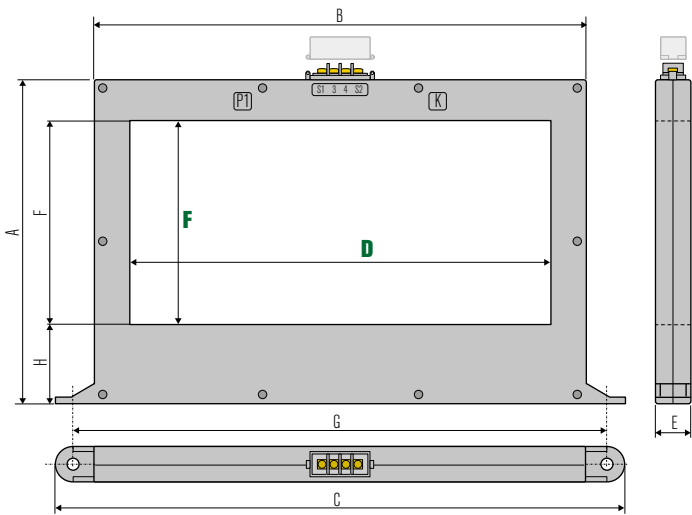
Certification obtained: EAC | Compliant with standards: IEC/EN 60947-2 Annex M



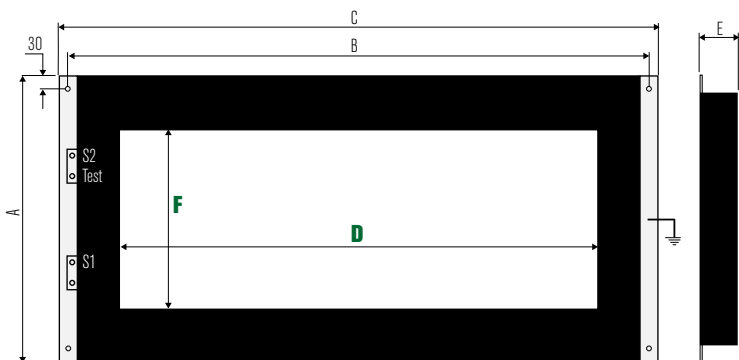
TYPE	A	B	C	D	E	F	G	H	K
CTA-1/160	275	280	260	160	129	75	260	43,5	250



TYPE	A	B	C	D	E	F	G	H	K
CT-1/210 CTB-1/210	310	290	54	210	145	240	280	36	258
CT-1/300 CTB-1/300	416	385	60	300	190	350	365	42	366
CTA-1/210	310	290	54	210	145	240	280	36	258
CTA-1/300	416	385	60	300	190	350	365	42	366



TYPE	A	B	C	D	E	F	G	H
CT-1/280R	223	338	404	281	28	156	370	29
CT-1/350R	270	410	475	351	28	170	463	66

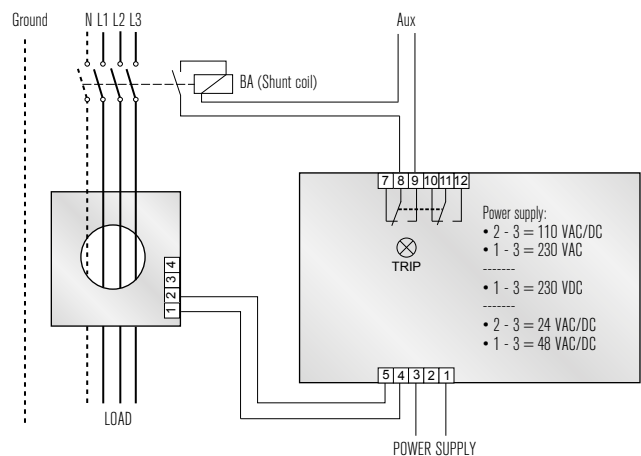


TYPE	A	B	C	D	E	F	G
CT-1/415R	240	520	550	400	50	150	400

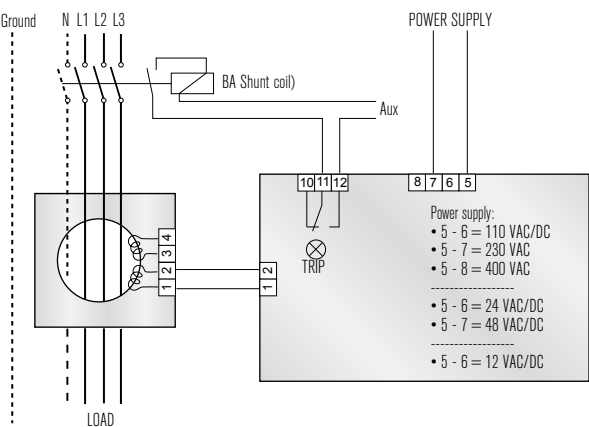
EARTH LEAKAGE RELAYS | wiring diagrams

Certification obtained: **EAC** | Compliant with standards: IEC/EN 60947-2 Annex M

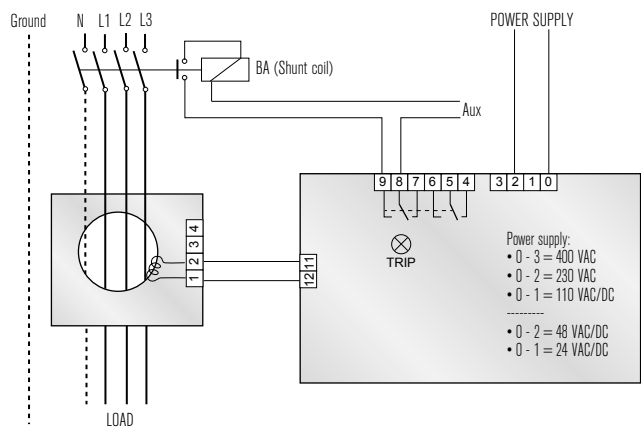
ELR-7



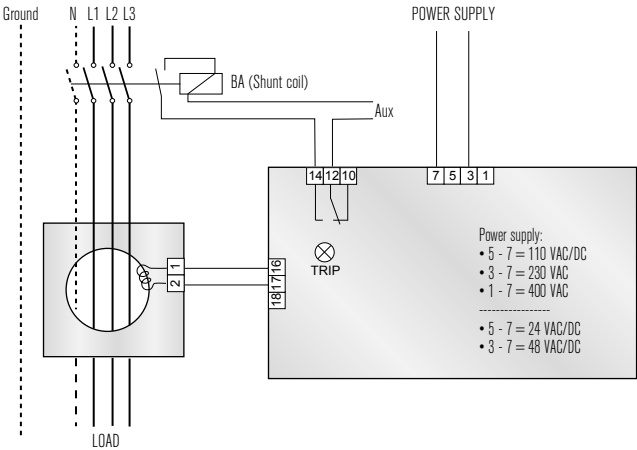
ELR-1E



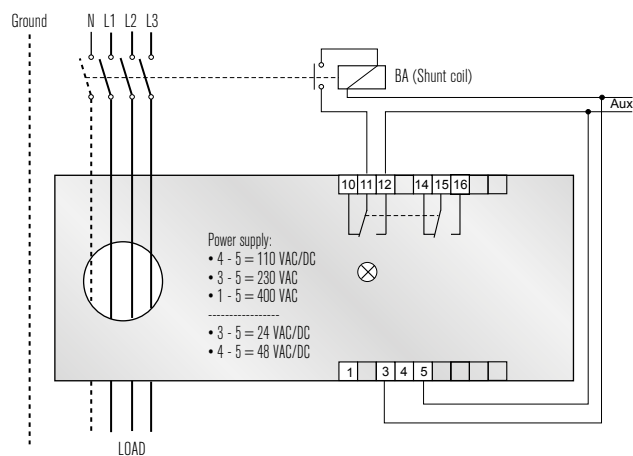
ELR-4v | ELR-4o | ELR-4mv | ELR-4mo



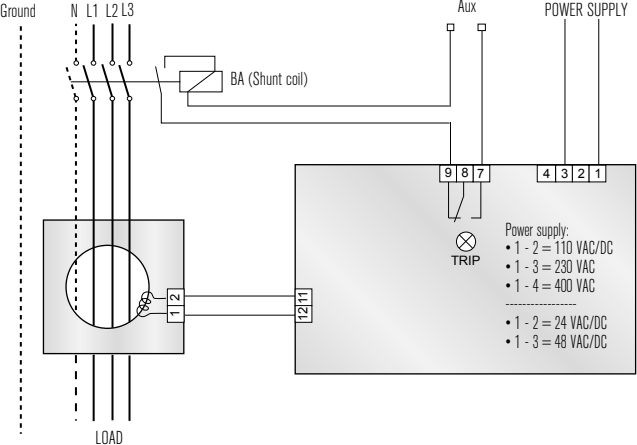
ELR-3C | ELR-3F



ELRC-B

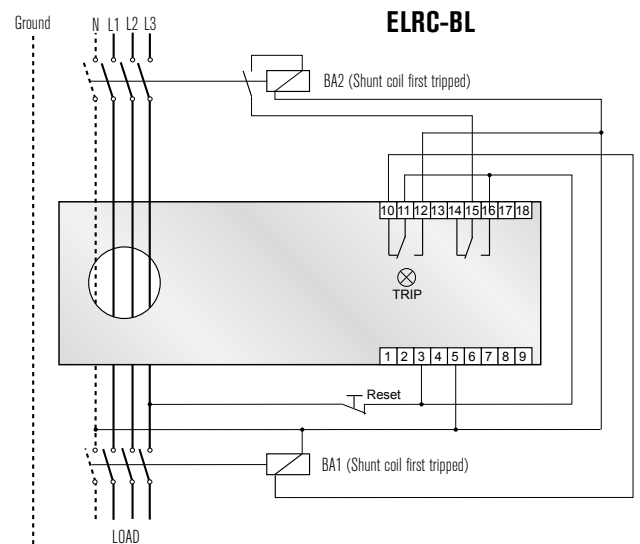
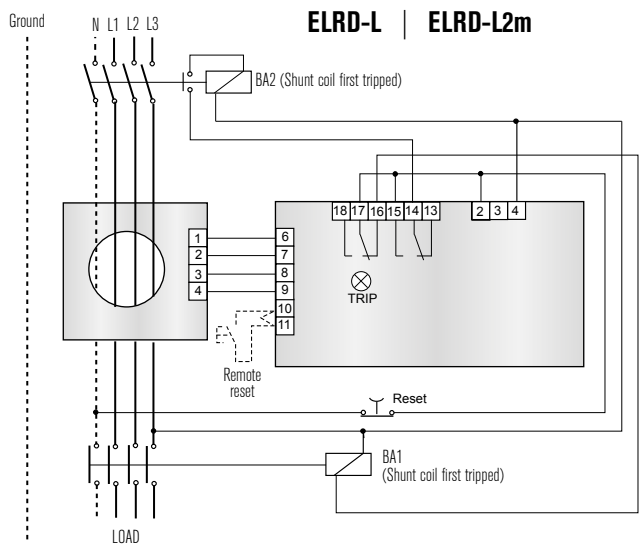
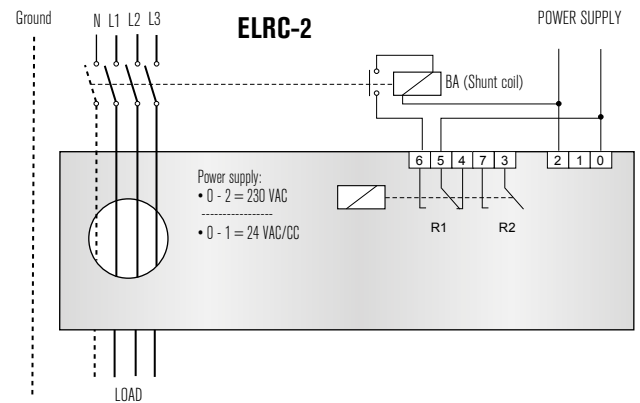
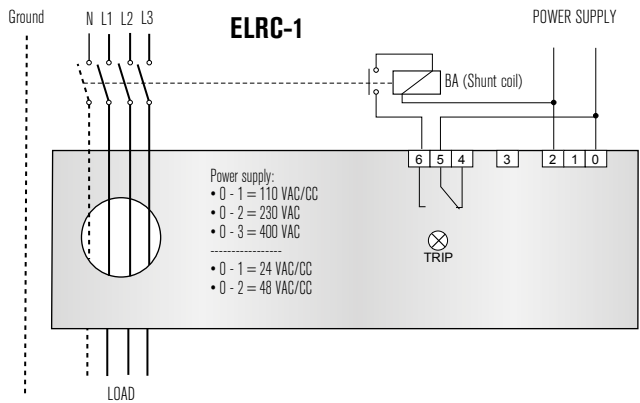
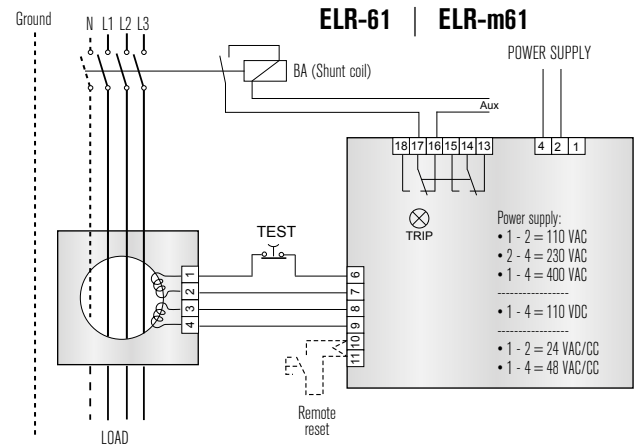
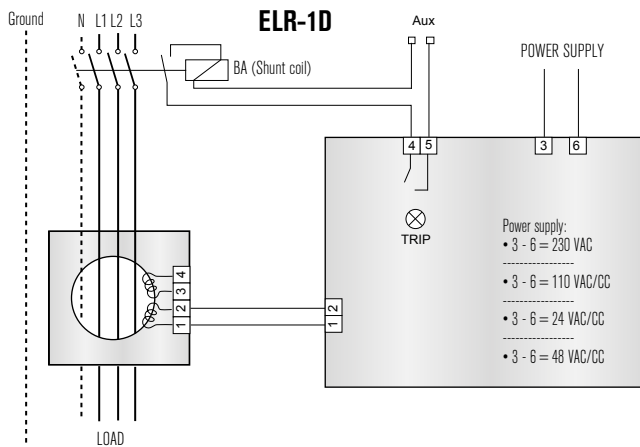
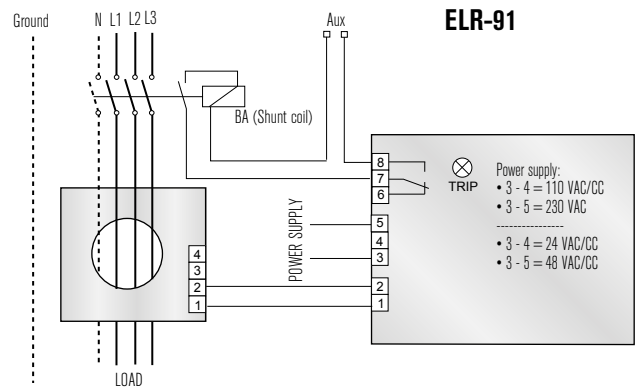
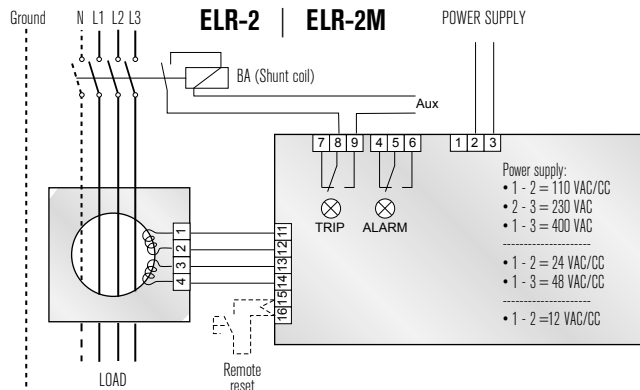


ELR-3E



EARTH LEAKAGE RELAYS | wiring diagrams

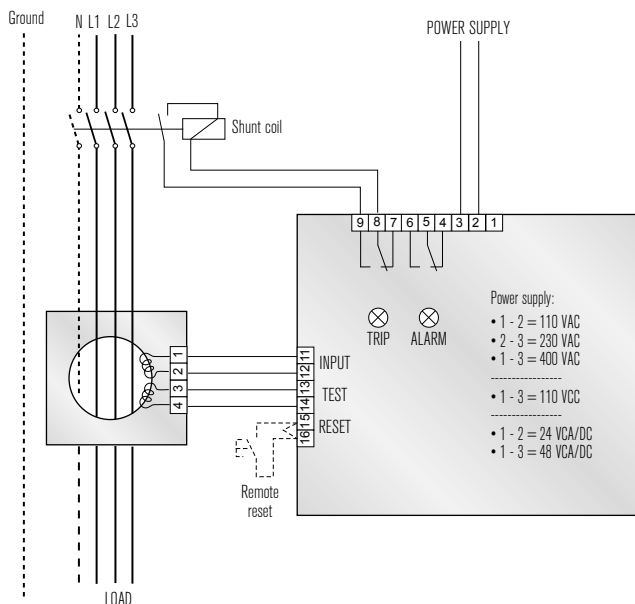
Certification obtained: **EAC** | Compliant with standards: **IEC/EN 60947-2 Annex M**



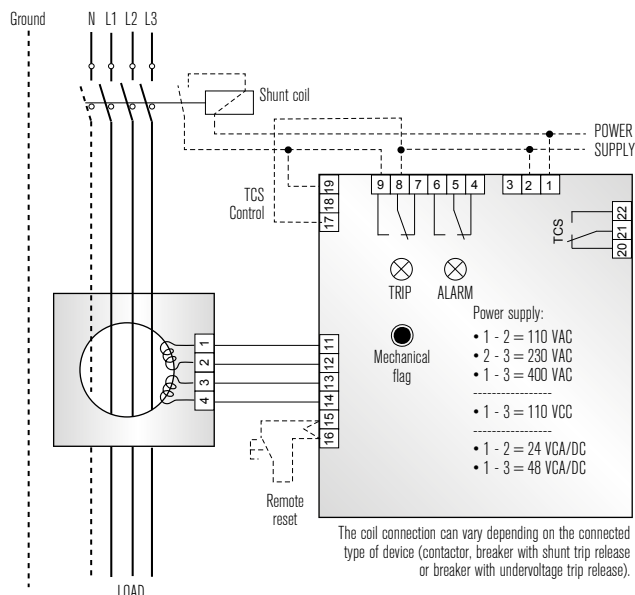
EARTH LEAKAGE RELAYS | wiring diagrams

Certification obtained: **EAC** | Compliant with standards: IEC/EN 60947-2 Annex M

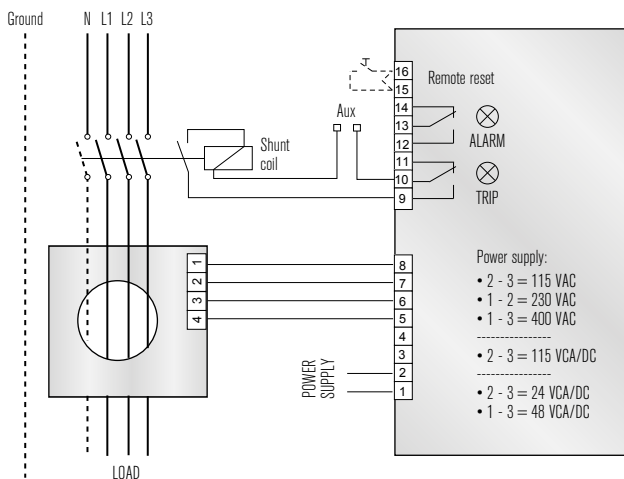
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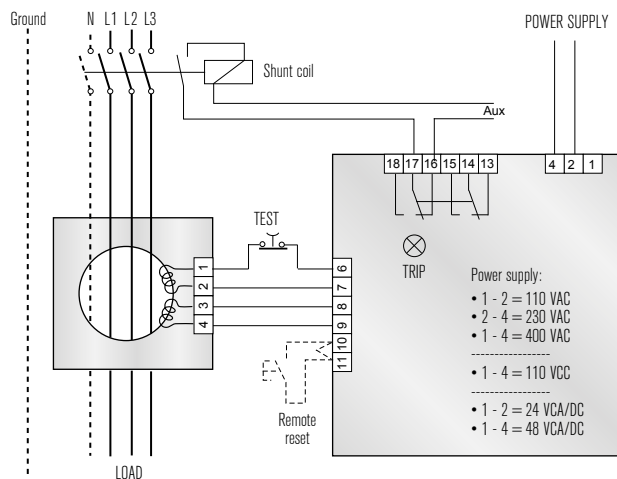
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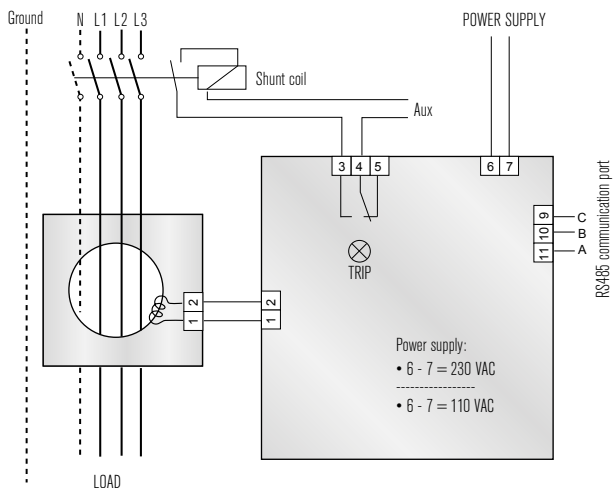
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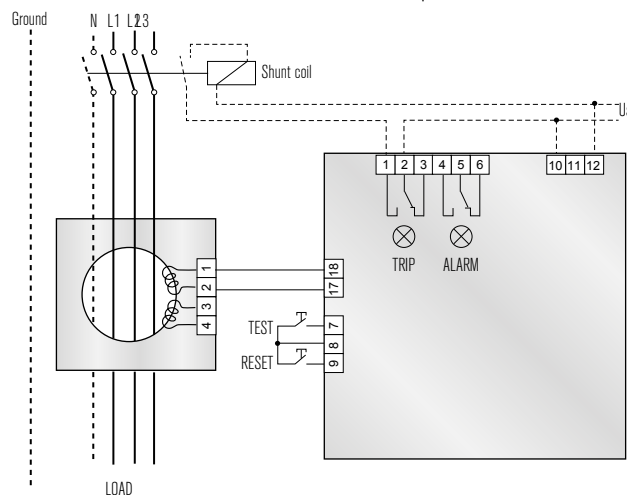
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ELR-D2 | ELR-D2-V



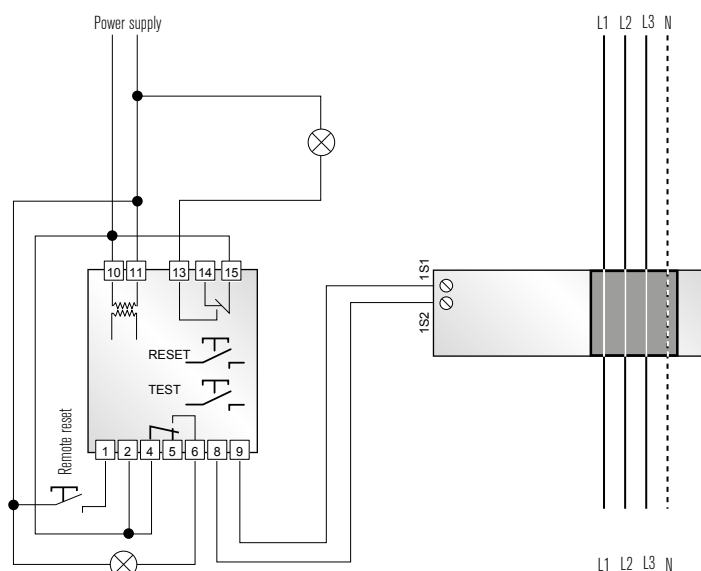
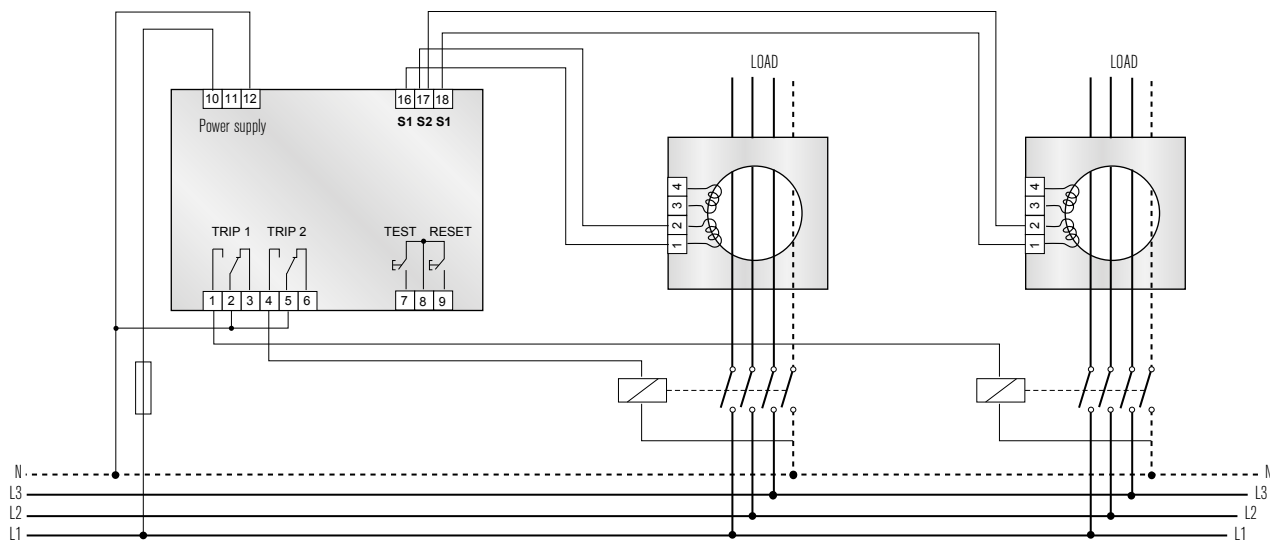
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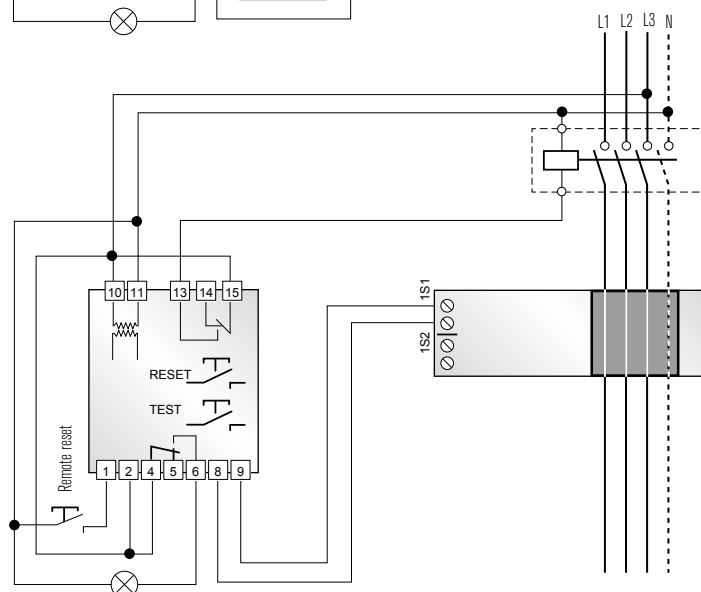
EARTH LEAKAGE RELAYS | wiring diagrams

Certification obtained: **EAC** | Compliant with standards: **IEC/EN 60947-2 Annex M**

ELR-52AS



ELR-3B | ELR-3B-10

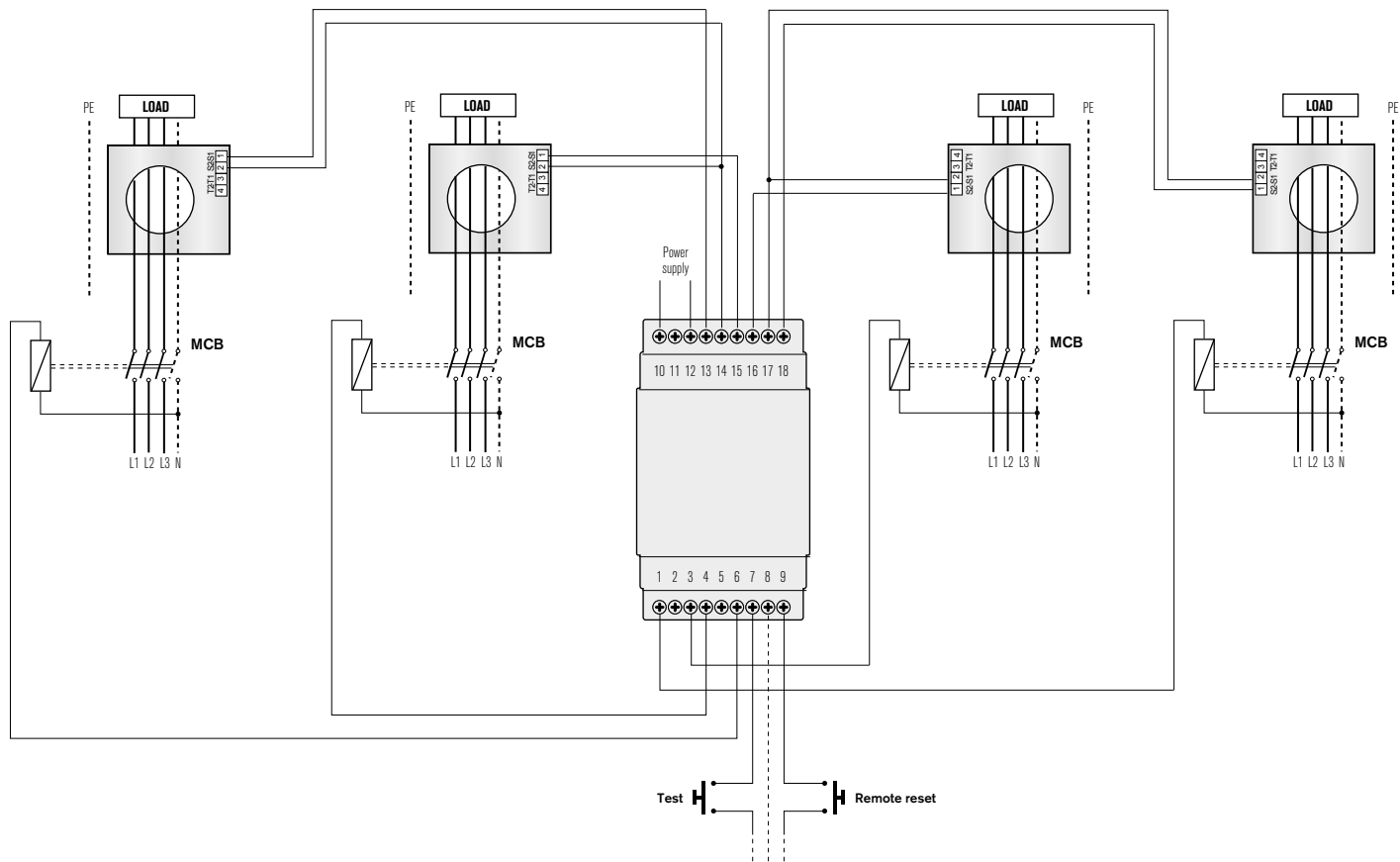


ELR-3B | ELR-3B-10

EARTH LEAKAGE RELAYS | wiring diagrams

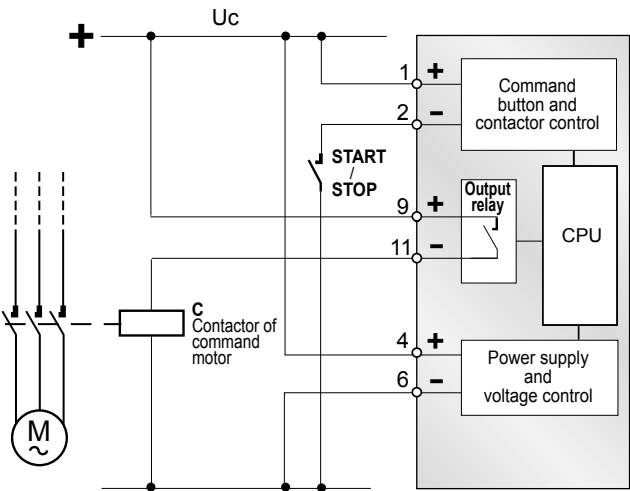
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ELR-4C

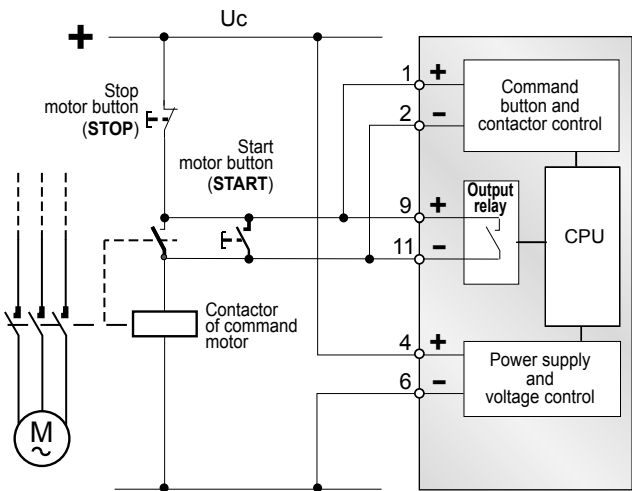


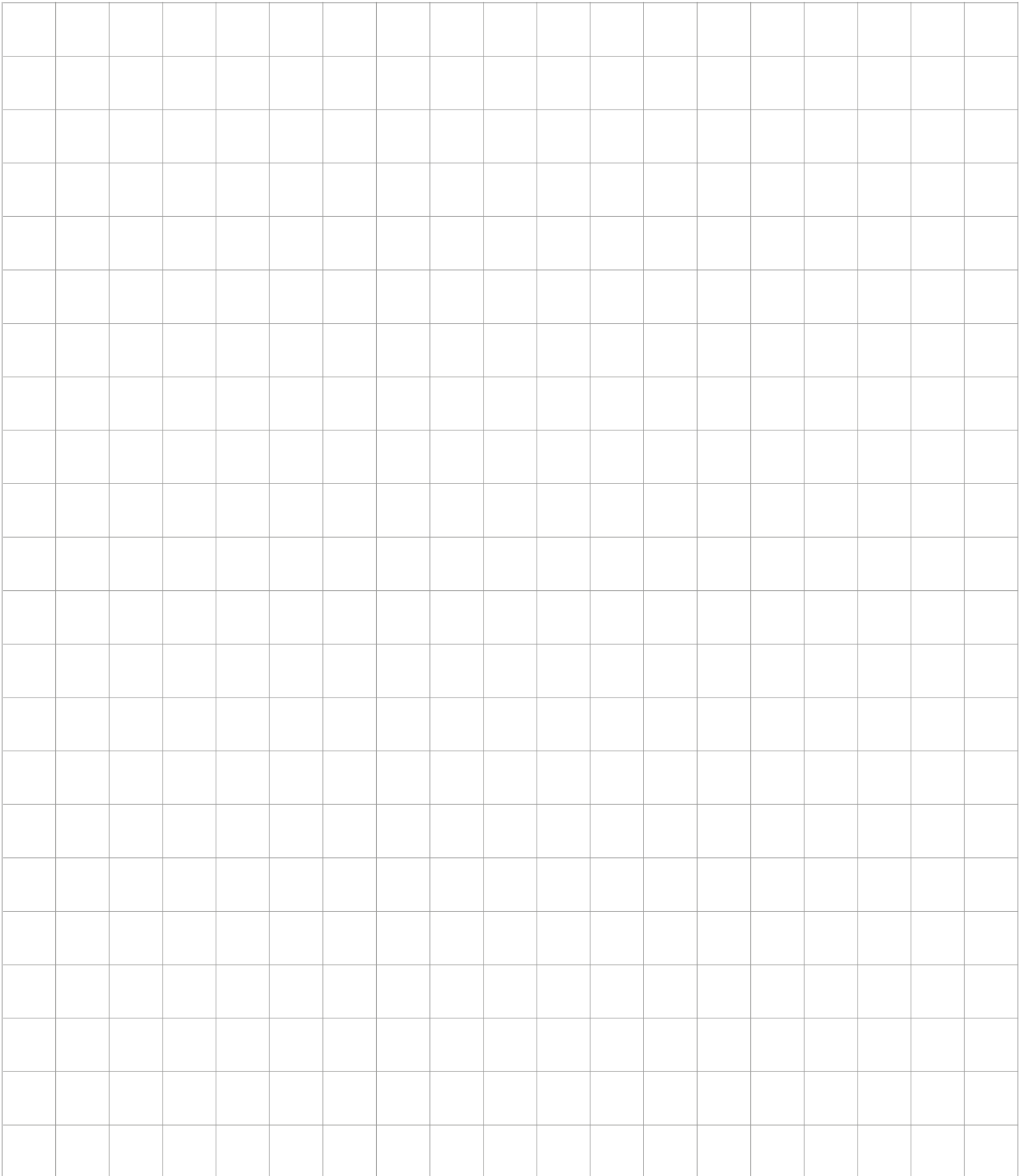
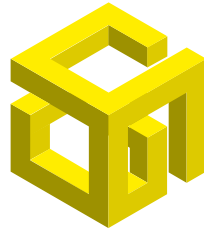
STATIC RELAY FOR AUTOMATIC MOTORS RESTART AND RE-ACCELERATION

RSR-72A



RSR-72 | RSR-72B





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