

Earth Leakage Relay Series CMR

- Monitors, Detects and Protects Power systems from Earth Leakage Faults
- Wide range of selectable Earth Leakage Current: 30 mA - 30 A
- Configurable Earth Leakage Trip time: 0 - 10 s
- Wide Auxiliary Supply Range:
110 - 240 V AC / 110 V DC,
220 - 415 V AC / 220 V DC
- Instantaneous Trip for 5 times of set value of Leakage current
- Test feature to check complete product functionality
- LED Indication for Relay status, CT open, Earth Leakage fault & Test/Reset switch feature
- Manual / Remote Reset feature
- 1 C/O + 1 NO Relay Output




Ordering Information

Cat. No.	Description
17G715GF2	110-240V AC / 110 V DC, Current Range 30 mA - 30 A, 1 C/O + 1 NO, Manual Reset
17G715KF2	110-240V AC / 110 V DC, Current Range 30 mA - 30 A, 1 C/O + 1 NO, Auto Reset
17G745GF2	220-415V AC / 220 V DC, Current Range 30 mA - 30 A, 1 C/O + 1 NO, Manual Reset
17G745KF2	220-415V AC / 220 V DC, Current Range 30 mA - 30 A, 1 C/O + 1 NO, Auto Reset
17G755GF2	15V DC, Current Range 30 mA - 30 A, 1 C/O + 1 NO, Manual Reset
17G755KF2	15V DC, Current Range 30 mA - 30 A, 1 C/O + 1 NO, Auto Reset
17G815GF2	110-240V AC / 110 V DC, Current Range 30 mA - 10 A, 1 C/O + 1 NO, Manual Reset
17G815KF2	110-240V AC / 110 V DC, Current Range 30 mA - 10 A, 1 C/O + 1 NO, Auto Reset
17G845GF2	220-415V AC / 220 V DC, Current Range 30 mA - 10 A, 1 C/O + 1 NO, Manual Reset
17G845KF2	220-415V AC / 220 V DC, Current Range 30 mA - 10 A, 1 C/O + 1 NO, Auto Reset
17H7NNHN3	CBCT 38mm, 30 mA - 30A
17H7NNIN3	CBCT 57mm, 30 mA - 30A
17H7NNJN3	CBCT 92mm, 30 mA - 30A
17H7NNLN3	CBCT 120mm, 30 mA - 30A
17H7NNKN3	CBCT 210mm, 30 mA - 30A



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Cat. No.		17G715GF2	17G715KF2	17G745GF2	17G745KF2
Parameters					
Supply Voltage (≡)		110 - 240 V AC / 110 V DC		220 - 415 V AC / 220 V DC	
Supply Variation		-20 to +20%			
Frequency		50/60Hz			
Power Consumption (Max.)		5 VA		10 VA	
Leakage Current Range (I _{Δn})		30 mA to 30 A			
Threshold	For '17G7' Devices	0.03 - 0.1 - 0.3 - 0.5 - 1 - 3 - 5 - 10 - 20 - 30			
I _{Δn} (A)	For '17G8' Devices	0.03 - 0.05 - 0.1 - 0.3 - 0.5 - 0.75 - 1 - 3 - 5 - 10			
Type Class		'A' True RMS measurement (As per IEC 60947-2 appendix M)			
Max. Crest Factor		5 (for 30 mA to 30 A)			
Reset Mode		Manual Reset	Auto Reset	Manual Reset	Auto Reset
No. of Resets		N A	4	N A	4
Clear Auto Reset		After 1 hour of healthy condition or supply interruption			
Reset Enable & Reset Time		Below 50% on current threshold set by potentiometer & in presence of CBCT (< 1 s)			
Trip Time (Δt in sec)		0 - 0.06 - 0.15 - 0.25 - 0.5 - 0.8 - 1 - 2.5 - 5 - 10			
Test / Reset		Local & Remote (Non Potential free contacts, upto 10 m)			
Setting Accuracy		-20% (Including CBCT Accuracy)			
Repeat Accuracy		± 2%			
Output	Relay Output	1 C/O + 1 NO			
	Contact Rating	5A (Resistive) @ 240 VAC / 30 VDC			
	Electrical Life	1 x 10 ⁵			
	Mechanical Life	1 x 10 ⁷			
Utilization Category	AC - 15	Rated Voltage (U _e): 120/240 V, Rated Current (I _e): 3.0/1.5 A			
	DC - 13	Rated Voltage (U _e): 24/125/250 V, Rated Current (I _e): 2.0/0.22/0.1 A			
LED Indication	Power	Green LED (ON)			
	EL / CT	Red LED (ON) → Relay Trip / Red LED (Blinking) → CT Open			
	Leakage Current / TST	By Bar Graph: 30% (Green), 45% (Green), 60% (Yellow), 75% (Red), Blink Test / Reset Switch is pressed			
Operating Temperature		- 15° C to +60° C			
Storage Temperature		- 25° C to +80° C			
Humidity (Non Condensing)		95% (Rh)			
Enclosure		Flame Retardant UL94-V0			
Dimension (W x H x D) (in mm)		36 X 90 X 65			
Weight (unpacked) Approx.		150 g			
Mounting		Base / DIN rail			
Certification					
Degree of Protection		IP 20 for Terminals, IP 40 for Enclosure			

EMI / EMC

Harmonic Current Emissions	IEC 61000-3-2
ESD	IEC 61000-4-2
Radiated Susceptibility	IEC 61000-4-3
Electrical Fast Transients	IEC 61000-4-4
Surges	IEC 61000-4-5
Conducted Susceptibility	IEC 61000-4-6
Voltage Dips & Interruptions (AC)	IEC 61000-4-11
Conducted Emission	CISPR 14-1
Radiated Emission	CISPR 14-1

Environmental

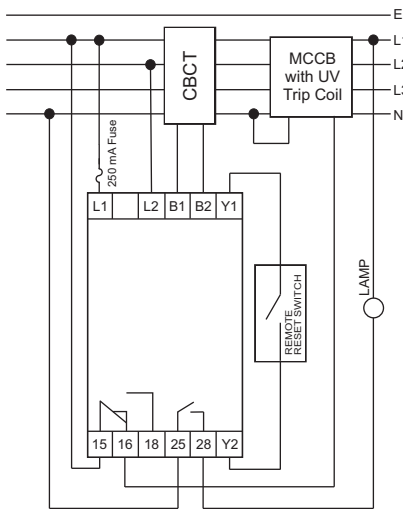
Cold Heat	IEC 60068-2-1
Dry Heat	IEC 60068-2-2
Vibration	IEC 60068-2-6
Repetitive Shock	IEC 60068-2-27
Non-Repetitive Shock	IEC 60068-2-27

Earth Leakage Relay Series CMR

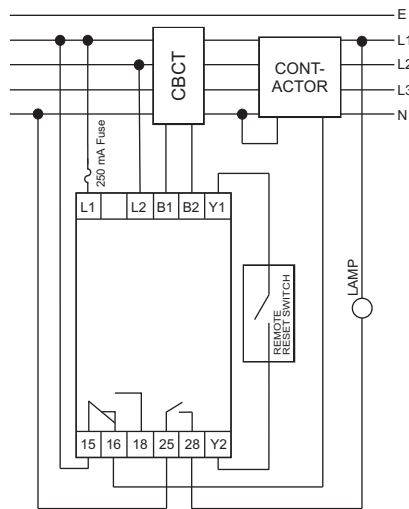


CONNECTION DIAGRAM

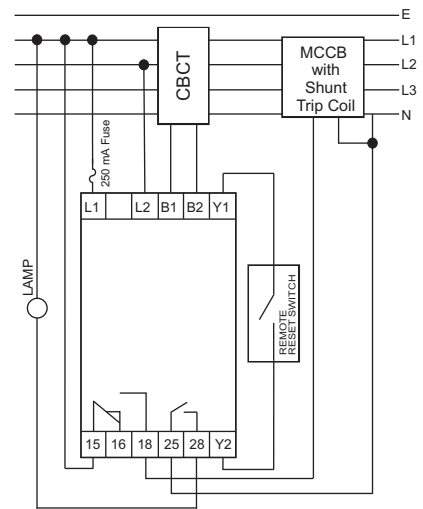
NON-FAIL SAFE MODE WITH UV TRIP COIL



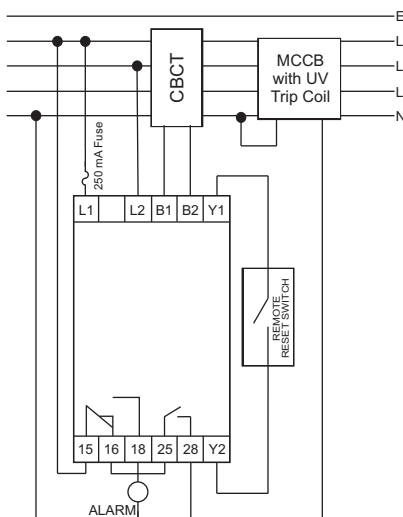
NON-FAIL SAFE MODE WITH CONTACTOR



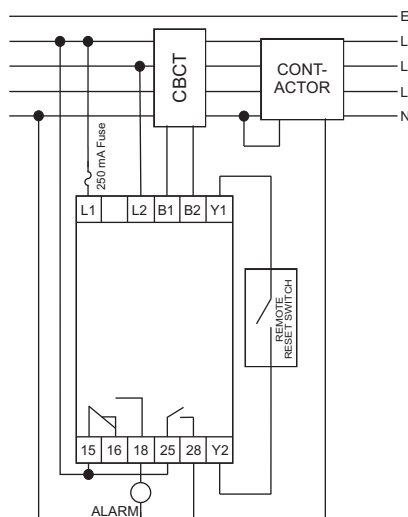
NON-FAIL SAFE MODE WITH SHUNT TRIP COIL



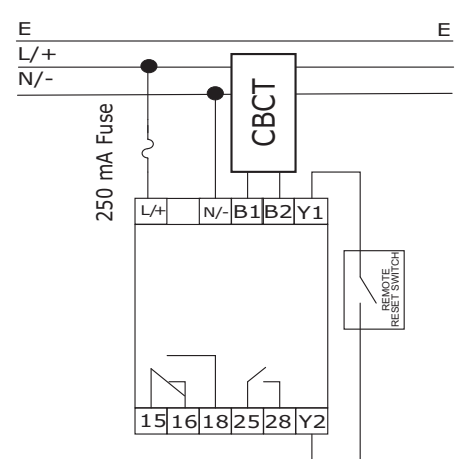
FAIL SAFE MODE WITH UV TRIP COIL



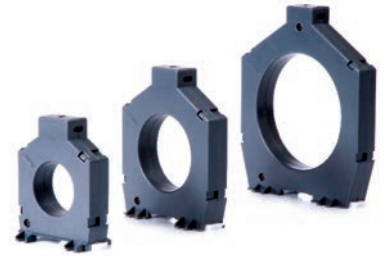
FAIL SAFE MODE WITH CONTACTOR



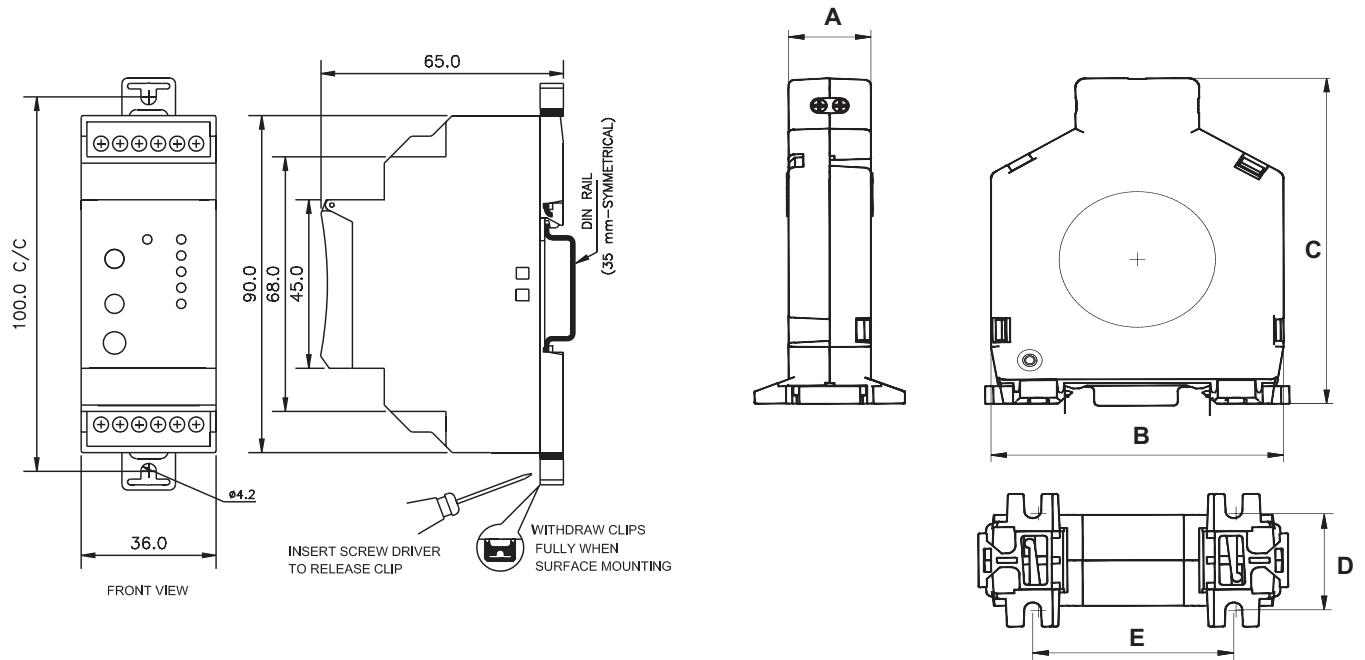
SINGLE PHASE APPLICATION



Earth Leakage Relay Series CMR





MOUNTING DIMENSIONS



CBCT	SIZE	WEIGHT (in gms)	A	B	C	D	E
17H7NNHN3	38	110	20	71	91	27	48
17H7NNIN3	57	185	20	97	117	27	55
17H7NNJN3	92	250	20	132	155	27	73
17H7NNLN3	120	255	20	153	176	27	73
17H7NNKN3	210	280	20.5	250	282	28	128

Dimensions in mm

TERMINAL TORQUE & CAPACITY

 Ø 3.5 mm	Torque - 0.54 N.m (5 Lb.in) Terminal screw - M2.6
	Solid Wire - 1 X 0.2...3.3 mm ²
AWG	1 X 24 to 12

Earth Leakage Relay Series CMR

- Monitors, Detects and Protects Power systems from Leakage faults
- Wide Auxiliary Supply range: 110 - 240 VAC, 220 - 415 VAC
- Wide Range of selectable Earth Leakage Current: 60 mA - 300 mA, 0.2A - 1.2A
- Configurable Earth Leakage Trip time: 100 ms - 5 s
- Easily configurable operating modes
- Test feature to check complete product functionality
- Manual / Remote reset feature
- LED indication for Relay status, CT open, Earth leakage fault & Test/Reset switch feature






Ordering Information

Cat. No.	Description
17G514FF1	110 - 240V AC, Earth Leakage Relay, Current Range 60 mA - 300 mA, 1 C/O
17G614FF1	110 - 240V AC, Earth Leakage Relay, Current Range 0.2 A-1.2 A, 1 C/O
17G544FF1	220 - 415V AC, Earth Leakage Relay, Current Range 60 mA - 300 mA, 1 C/O
17G644FF1	220 - 415V AC, Earth Leakage Relay, Current Range 0.2 A-1.2 A, 1 C/O
17H5NNHL3	CBCT (tape wound), 35mm, 60 mA - 300 mA
17H5NNIL3	CBCT (tape wound), 65mm, 60 mA - 300 mA
17H5NNJL3	CBCT (tape wound), 100mm, 60 mA - 300 mA
17H6NNHL3	CBCT (tape wound), 35mm, 0.2 A - 1.2 A
17H6NNIL3	CBCT (tape wound), 65mm, 0.2 A - 1.2 A
17H6NNJL3	CBCT (tape wound), 100mm, 0.2 A - 1.2 A



Earth Leakage Relay Series CMR

Cat. No.	17G514FF1	17G614FF1	17G544FF1	17G644FF1
Parameters				
Supply Voltage (Φ)	110 - 240 VAC		220 - 415 VAC	
Supply Variation	-20 to +10%			
Frequency	50/60Hz			
Power Consumption (Max.)	5 VA		10 VA	
Leakage Current Range	60 mA to 300 mA	0.2 A to 1.2 A	60 mA to 300 mA	0.2 A to 1.2 A
Mode	Fail Safe Latch (FSL), Fail Safe Non Latch (FSNL), Non Fail Safe Non Latch (NFSNL)			
Trip Time (Δt in sec)	0.1 - 0.2 - 0.4 - 2 - 5			
Trip Time (For 5 In)	100 ms (Irrespective of the Set Trip Time)			
Test / Reset	Local & Remote (For Fail Safe Latch mode only)			
Reset Enabled	Below 85% of Current sensitivity level and in presence of CBCT			
Reset Time	< 100 ms			
ON Delay	50 ms (± 20 ms)			
Setting Accuracy	-10% (85ms to 100 ms trip time for 100 ms setting in NFSL)			
Repeat Accuracy	± 2%			
Output	Relay Output	1 C/O		
	Contact Rating	5A (Resistive) @ 240 VAC / 30 VDC		
	Electrical Life	1 x 10 ⁵		
	Mechanical Life	1 x 10 ⁷		
Utilization Category	AC - 15	Rated Voltage (Ue): 120/240 V, Rated Current (Ie): 3.0/1.5 A		
	DC - 13	Rated Voltage (Ue): 24/125/250 V, Rated Current (Ie): 2.0/0.22/0.1 A		
LED Indication	Power ON	Green LED (ON)		
	CT Open / SW Short	Red LED: ON → CT Open, Blink → TST / RST Switch short		
	Earth Leakage	Red LED: ON		
Operating Temperature	- 15° C to +60° C			
Storage Temperature	- 20° C to +80° C			
Humidity (Non Condensing)	95% (Rh)			
Enclosure	Flame Retardant UL94V0			
Dimension (W x H x D) (in mm)	22.5 X 83 X 100.5			
Weight (unpacked)	110 g			
Mounting	Base / DIN rail			
Certification	  			
Degree of Protection	IP 20 for Terminals, IP 40 for Enclosure			

EMI / EMC

Harmonic Current Emissions	IEC 61000-3-2
ESD	IEC 61000-4-2
Radiated Susceptibility	IEC 61000-4-3
Electrical Fast Transients	IEC 61000-4-4
Surges	IEC 61000-4-5
Conducted Susceptibility	IEC 61000-4-6
Voltage Dips & Interruptions (AC)	IEC 61000-4-11
Conducted Emission	CISPR 14-1
Radiated Emission	CISPR 14-1

Environmental

Cold Heat	IEC 60068-2-1
Dry Heat	IEC 60068-2-2
Vibration	IEC 60068-2-6
Repetitive Shock	IEC 60068-2-27
Non-Repetitive Shock	IEC 60068-2-27

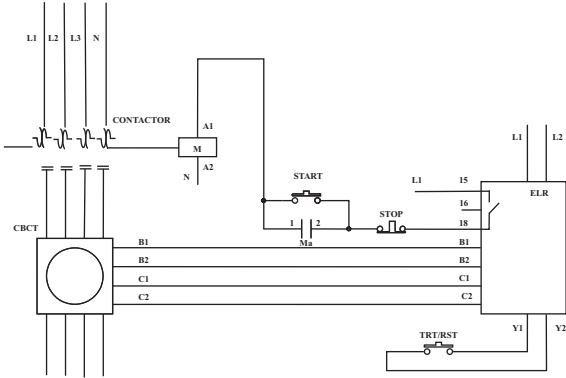
UL Approval for Cat. Nos. 17G514FF1 & 17G614FF1 only.

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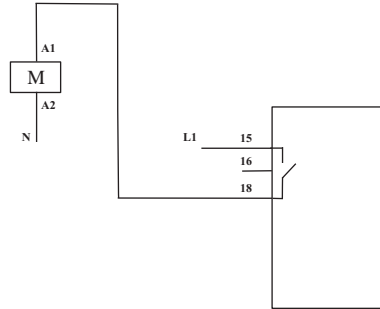


CONNECTION DIAGRAM

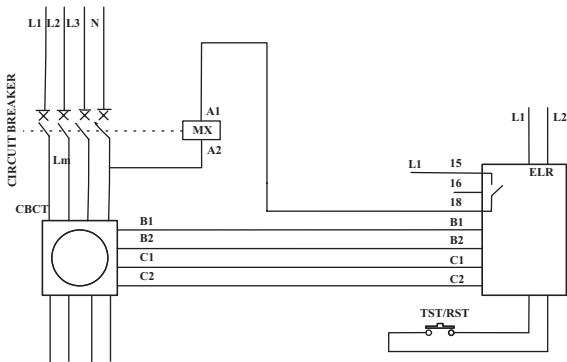
1) EARTH LEAKAGE RELAY WITH CONTACTOR FAILSAFE NON LATCH MODE



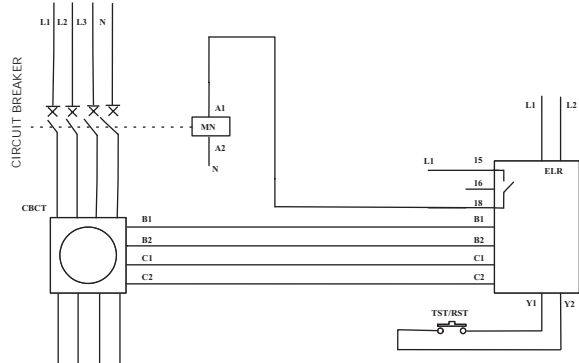
2) EARTH LEAKAGE RELAY WITH CONTACTOR FAIL SAFE LATCH MODE



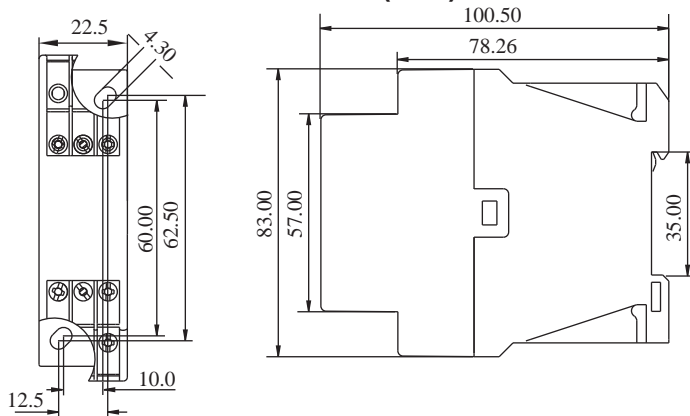
3) EARTH LEAKAGE RELAY WITH MCCB AND SHUNT TRIP COIL NON FAIL SAFE NON LATCH MODE



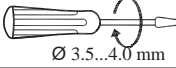

4) EARTH LEAKAGE RELAY WITH MCCB & UNDER VOLTAGE TRIP COIL FAIL SAFE LATCH MODE
5) EARTH LEAKAGE RELAY WITH MCCB & UNDER VOLTAGE TRIP COIL FAIL SAFE NON-LATCH MODE



MOUNTING DIMENSION (mm)



TERMINAL TORQUE & CAPACITY

 Ø 3.5...4.0 mm	Torque - 0.6 N.m (6 Lb.in) Terminal screw - M3
	Solid Wire - 1 X 1...6 mm ²
AWG	1 X 20 to 12