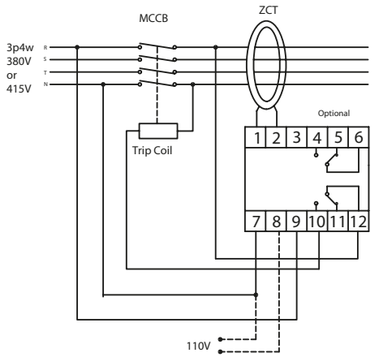
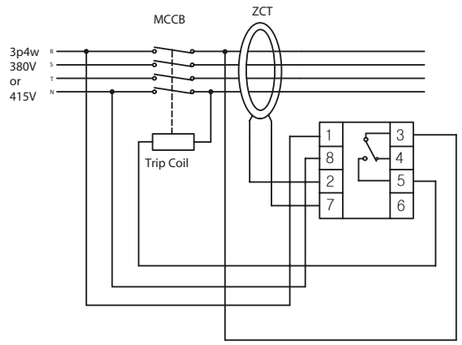
Connection Diagram

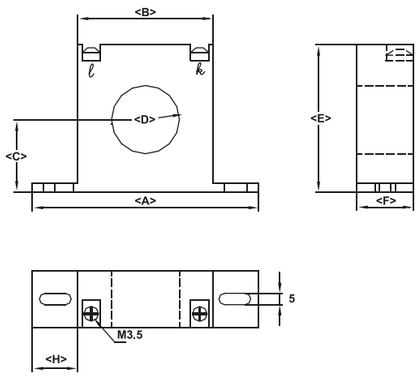


DIN rail mounting design – EL_model

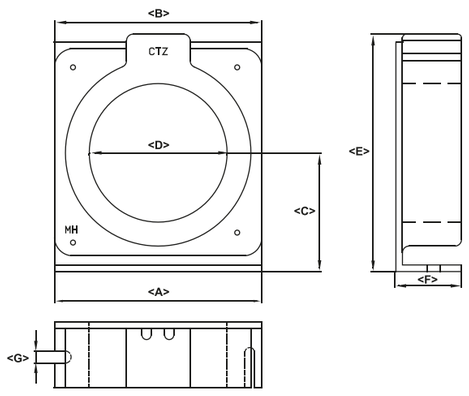


Flush mounting design – EL_P model

Dimensions *(Zero Phase Current Transformers)*



CTZ 35, 50, 70



CTZ 105, 140

Types	Rated current (Single PVC)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)
CTZ35	150A	115	75	40	Ø35	77	30	-	20
CTZ50	250A	132	92	50	Ø50	94	30	-	20
CTZ70	400A	156	116	60	Ø70	118	30	-	20
CTZ105	600A	158	158	90	Ø105	180	32	7	-
CTZ140	1000A	202	202	105	Ø140	208	32	7	-

Authorized Dealer:

Product specifications and features are subject to change without prior notice

MH Protection Relays

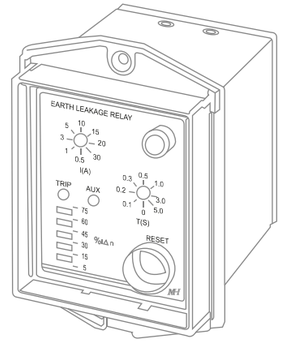
MH14/09/ELR

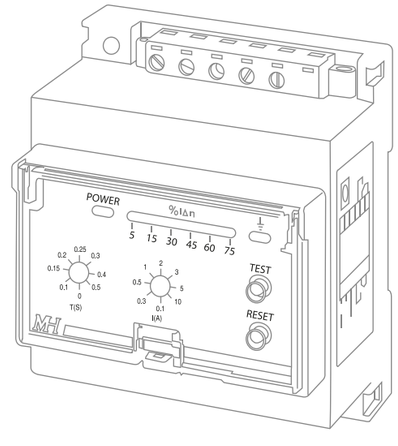
MH Protection Relays

formerly marketed as Kasuga-MH

A Protection Class of its Own

MH Earth Leakage Relay • EL Series





MH Protection Relays

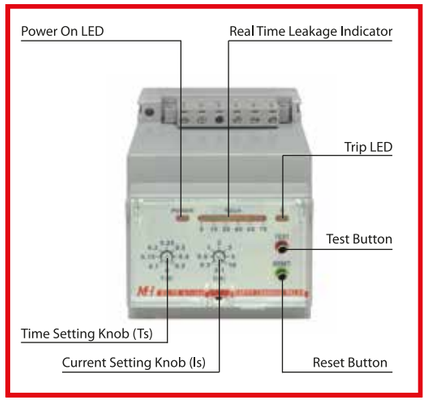
MH represents a legacy of design and development, specializing in power management and power quality solutions and its core expertise, electrical protection relays. The MH Protection Relays has its heritage dated since 1981 where, designed by Mun Hean and OEM by Kasuga of Japan, developed a range of electronic relays that dominated the market for decades. The range of relays were marketed under the brand name “Kasuga-MH”.

Today, with its own R&D wing, Mun Hean Technology Pte Ltd, MH continues this tradition. Anchored on the exclusive MTB fault indication system, we proudly bring to you this state-of-the-art protection relay series that is truly, A Protection Class of its Own.

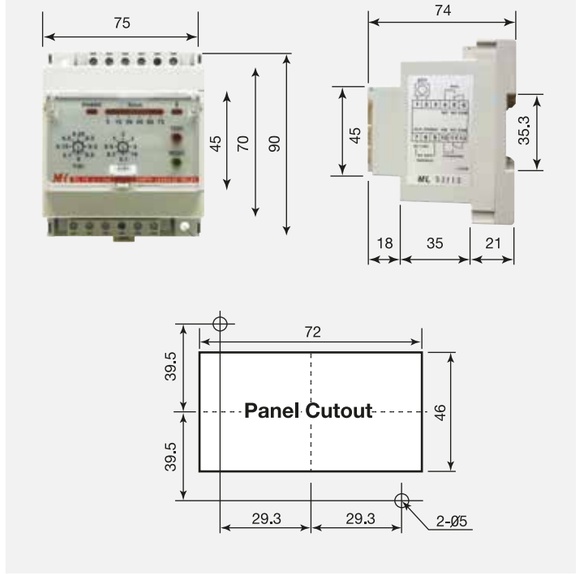
Features

- Manual test button for relay operation checking.
- Real-time monitoring of leakage current [%].
- Detection of ‘No-connection’ to ZCT (Zero Phase Current Transformer).
- Tamper-proof design for settings protection.
- Type tested* for EMC compliance in acc. with IEC 61000.
- Type tested for vibration, shock, bump tests in acc. with IEC 60255-21-1.
- High immunity to electrical interference (tested to 2.5GHz).
- Type tested for operational accuracy in acc. with IEC 60255-1*.
- Highest accuracy ZCT (> 1,000 ampere-turns transformation).
- ZCT type tested in accordance with IEC 60044.

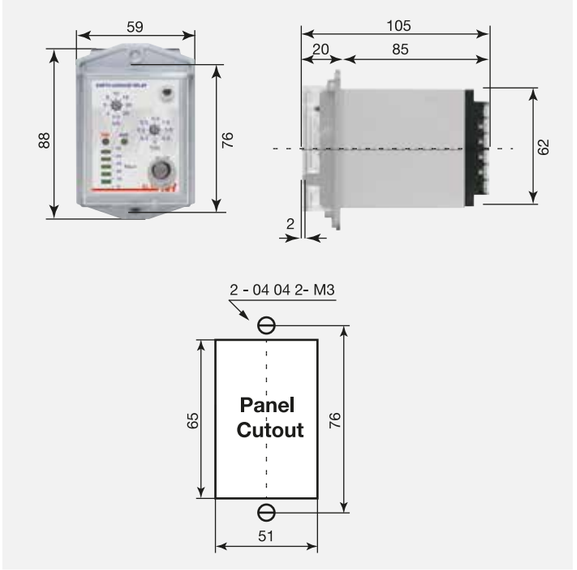
* Type test report issued by independent testing laboratory is available upon request.



Models	DIN rail mounting design			Flush mounting design		
	EL 03	EL 10	EL 30	EL 03P	EL 10P	EL 30P
Sensitivity current (A)	0.03/ 0.1/ 0.3/ 0.5/ 1/ 1.5/ 2/ 3	0.1/ 0.3/ 0.5/ 1/ 2/3/ 5/ 10	0.5/ 1/ 3/ 5/ 10/15/ 20/ 30	0.03/ 0.1/ 0.3/ 0.5/ 1/ 1.5/ 2/ 3	0.1/ 0.3/ 0.5/ 1/ 2/3/ 5/ 10	0.5/ 1/ 3/ 5/ 10/15/ 20/ 30
Operating time (sec)	0/0.1/0.15/0.2/0.25/0.3/0.4/0.5			0/0.1/0.2/0.3/0.5/1.0/3.0/5.0		



DIN rail mounting design – EL_model



Flush mounting design – EL_P model

Technical Data

Characteristics

Power supply	AC110/240V ± 15% * other voltages available on request
Operating frequency	50/ 60Hz
Operating and storage temperature range	Operating -10°C to 55°C Storage and transit -20°C to 65°C
Relative humidity (IEC 60068-2-30)	95% at +40°C
Degree of protection (IEC 60529)	IP52
Voltage withstand (IEC 60255-5)	2kVrms for 1min between all case terminals connected together and the case earth terminal. 2kVrms for 1min between independent circuit including contact circuits.
Insulation Resistance	> 1,000MΩ
Power Consumption	Approximately 2.5VA
Operational life expectancy	Electrical: > 1 x 10^5 operations Mechanical: > 5 x 10^6 operations
Output contact	AC 250V 5A
LED status indication	● (Normal operation) ● (Fault current detected / link fault to ZCT)
Housing material	ABS resin complying with UL94VO
Unit weight	Approximately 300g for all EL relay series

Compliance with standards

IEC/EN 60755	General rules for residual-current protection devices
IEC/EN 61000-4-2	Electrostatic-discharge immunity test
IEC/EN 61000-4-3	Radiated, radio-frequency, electromagnetic-field immunity test (type tested to 2.5GHz)
IEC/EN 61000-4-4	Electrical fast transient/burst immunity test
IEC/EN 61000-4-5	Surge immunity test
IEC/EN 61000-4-6	Immunity to conducted disturbances, induced by radio-frequency fields
IEC/EN 60255-1	Measuring relay and protection equipment
IEC/EN 60255-5	Insulation coordination for measuring relays and protection equipment – Requirement and tests
IEC/EN 60255-151	Measuring relay and protection equipment – Functional requirements for over/under current protection
IEC/EN 60044	Current Transformers for use with electrical protective devices
IEC/EN 60255-21-1	Vibration, shock, bump and seismic tests on measuring relays and protection equipment
IEC/EN 60947-2	Low voltage switchgear and controlgear, Part 2: Circuit breakers, Annex M and J

Characteristics Curve