

EARTH LEAKAGE FIRE ALARM & RELAY [ELR]- 5C,10C



Flush mounted type



Socket type

Features

This earth leakage relay have same function with earth leakage detector and is more developed relay that is able to use the external terminal

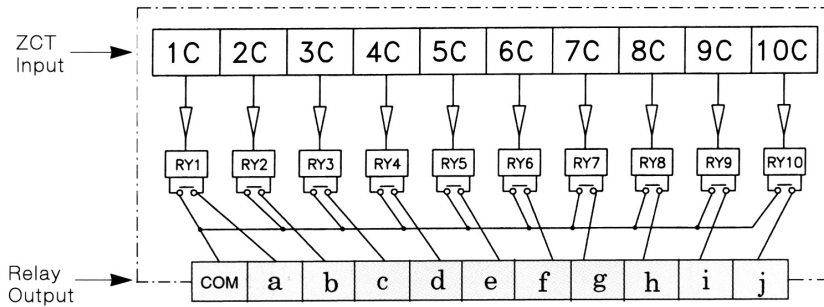
※How to use the external terminal.

- 1) control at same time trip equipment and earth indicator & detector at same time.
- 2) Using for leakage fault indicator of central control board
- 3) Use timer for delaying the trip time of C · B on leakage fault

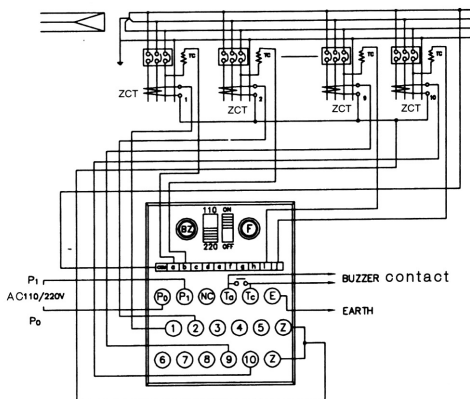
Specification

Description		Micom type	Analog type						
Model No		DER-M10/M05	DER-A10/A05	DER-F03	DER-F11	DER-F12	DER-P03	DER-P11	DER-P12
Type approval No		07-9 07-3	07-8 07-7		07-21	07-22	07-15	07-6	07-11
Installation		10c Flush mounted		1c Flush mounted			1c Socket type		
Auxiliary voltage		AC110/220V							
Frequency		50/60Hz							
Nominal operating current(A)		0.2-0.5-1.0		0.03-0.05-0.07-0.1	0.1-0.2-0.3-0.5	0.2-0.5-0.7-1.0	0.03-0.05-0.07-0.1	0.1-0.2-0.3-0.5	0.2-0.5-0.7-1.0
Current	Operating	53%~75% of nominal operating current less than 1sec							
	Non operating	52% nominal operating current less than 30sec							
Allowable supply voltage fluctuation		80%~120% of Rated Voltage							
Reset		Manual/Auto(Multi type)				manual			
Warning circuit voltage		Less than AC 600V							
LED indicator		Leakage indicator : Digital Leaking circuit indicator:Digital LED(Red color) Detector indicator:LED(Red color) Power indicator:LED(Green color) ZCT penetrationindicator:LED(Yellow color) Continue/Auto-alarm:LED(Yellow color) Buzzer alarm:LED(Yellow color) Detector alarm indicato:LED(Red color)				Buzzer alarm indicator : LED(Red color) Power indicator:LED(Green color) ZCT penetration indicator:LED(Yellow color) Continue/Auto-alarm:LED(Yellow color) Buzzer alarm:LED(Yellow color)			
Power consumption	Non operating	4.5VA/4VA		9VA/7VA			2.5VA		
	Operating	7VA/6.5VA		10VA/8VA			3VA		
ZCT(Input)		200mA/100mV							
Ambient temperature		-10°C+ 50°C							
Sound level		Buzzer(more than 75dB)							
Insulation resistance		Primary-case } Secondary-case } more than 100MΩ (DC 500V megger) Primary-Secondary }							
Dielectric strength		Primary-case:1500V } Secondary-case:500V } AC 60Hz, 1minute Primary-Secondary:1500V }							
Impulse wave withstand voltage		Between-terminal } Power terminals-case } Peak value : 6.0kV, 1.2/50μs							
Vibration strength		On duty:Full wave width 1mm, 1000rpm, 10min, Not on duty:Full wave width 4mm, 1000rpm, 60min							
Mechanical shock resistance		On duty:Natural drop 15times Not on duty:Accelebration of 50g Max force in any direction for 5 times							
Contact capacity		AC 250V 3A, DC 30V 5A							
Rate of fuse		0.2A		0.1A					
Weight		2.0/1.8kg	2.1kg/2.0kg	0.7kg	0.7kg	0.7kg	0.5kg	0.5kg	0.5kg
Casing		ABS Resin/Black N1,5(Non-flammable)							

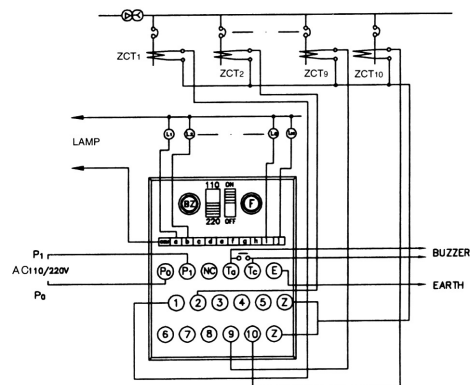
Internal wiring connections



External wiring of circuit breaking for leakage on load side

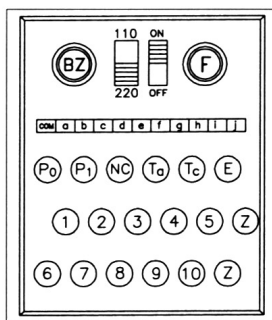


External wiring of central control board leakage fault indicator

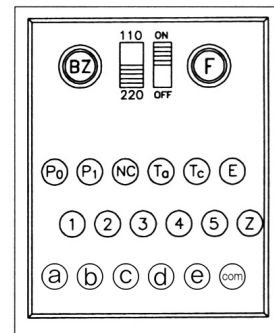


External terminal arrangement

10C : DER M10, A10



5C : DER M05, A05



ⓑ : BUZZER



: AC 110/220V S/W



: Power ON/OFF S/W

F : FUSE

[a - j] : External relay contact(a-contact)
com : External out let relay common contact (a-contact)

P1, P0 : AC 110/220v(Common)

Ta Tc : Relay contact alarm

1-10 : ZCT 2ry circuit terminal

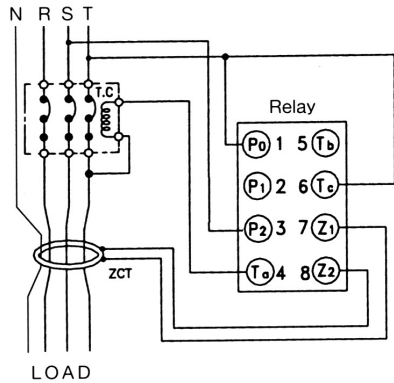
Z : ZCT 2ry circuit common terminal

E : earth

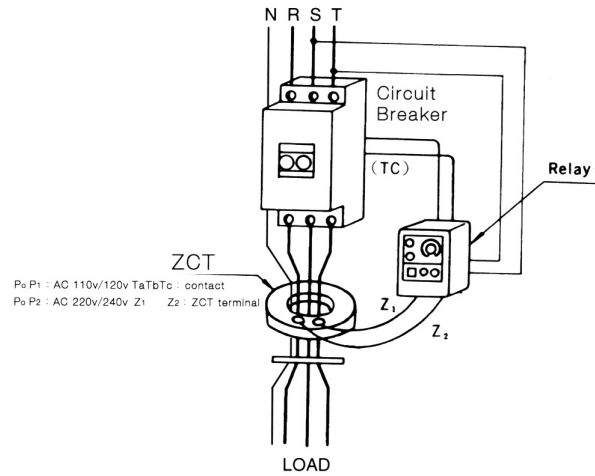
NC : Non connection

EARTH LEAKAGE RELAY [ELR]-1C

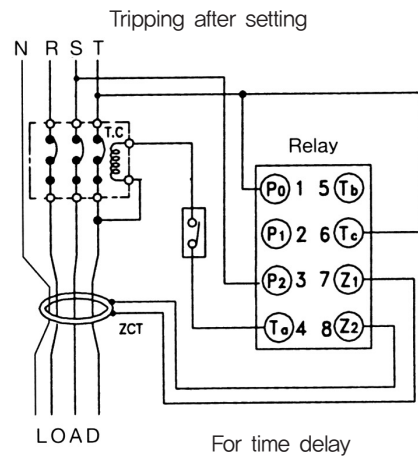
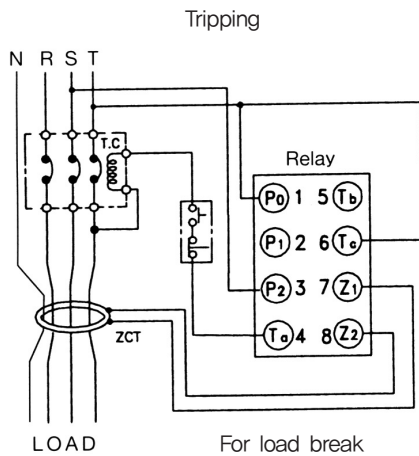
External wiring diagram



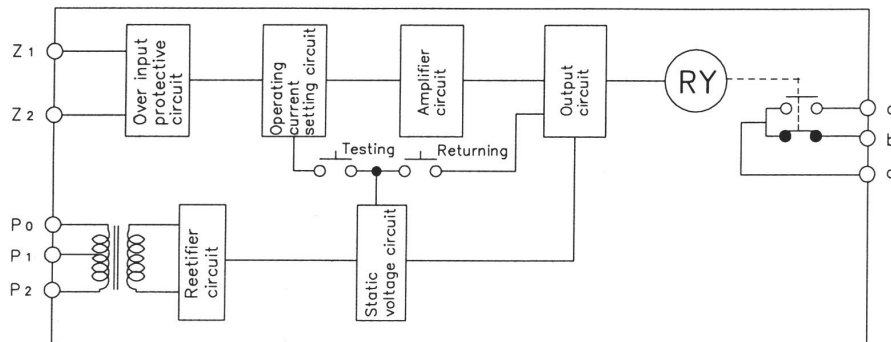
Installation diagram



Example for usage (leakage)



Internal block diagram



Cutting Size : 56 X 94mm