



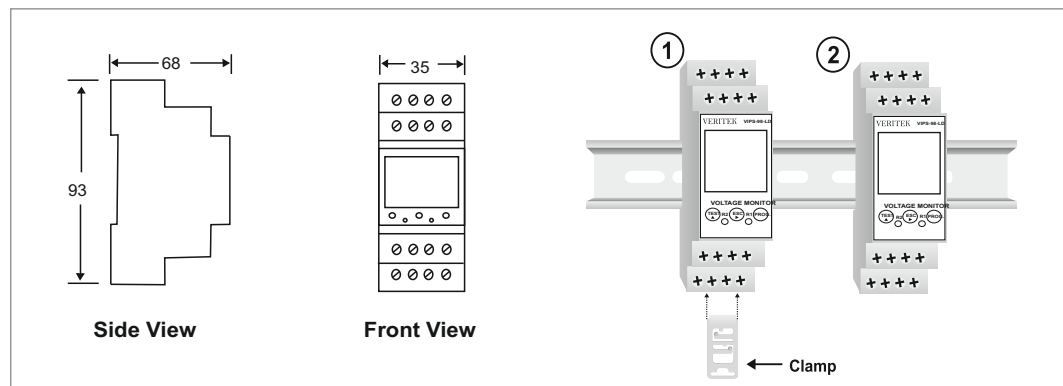
VERITEK

LCD EARTH LEAKAGE RELAY



VIPS 98LD

MECHANICAL DIMENSION



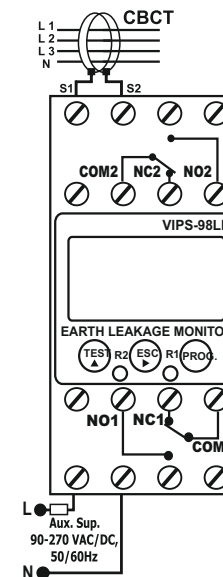
FEATURES

- (1) Leakage Current Display (Auto Ranging)
- (2) User Settable Trip Level and Time Delay
- (3) Password Protection
- (4) Bar graph display in percentage of set value
- (5) Two Relays Individually Programmable
- (6) CBCT Open Circuit Detection
- (7) Auto / Manual Reset User Programmable
- (8) Power ON Delay User Programmable
- (9) User Programmable Auto Reset Time in case of Auto Reset Mode

APPLICATION

Generator Control Panel
Distribution Control Panel
Protection Control Panel

CONNECTION DETAILS



TEST CERTIFICATE

Type : **LCD EARTH LEAKAGE RELAY**
(VIPS 98LD)

Nominal Current IN : 10mA to 30A

Accuracy : Class 1

Aux. Supply

90 / 270V AC/DC, 50/60Hz

Range : 10mA to 30A

CBCT DIA :

Accuracy Test :

Tripping Observed Between 50-90% of set value / same as trip relay

Found OK

Note :

A) For Digital Readouts the error is Computed in Counts.

- Class 1.0 = $\pm 1\%$ of Full Scale ± 1 Count

- Class 0.5 = $\pm 0.5\%$ of Full Scale ± 1 Count

Tested By : Devendra Chaurasiya

Date :

VERITEK ENGINEERING PVT. LTD.

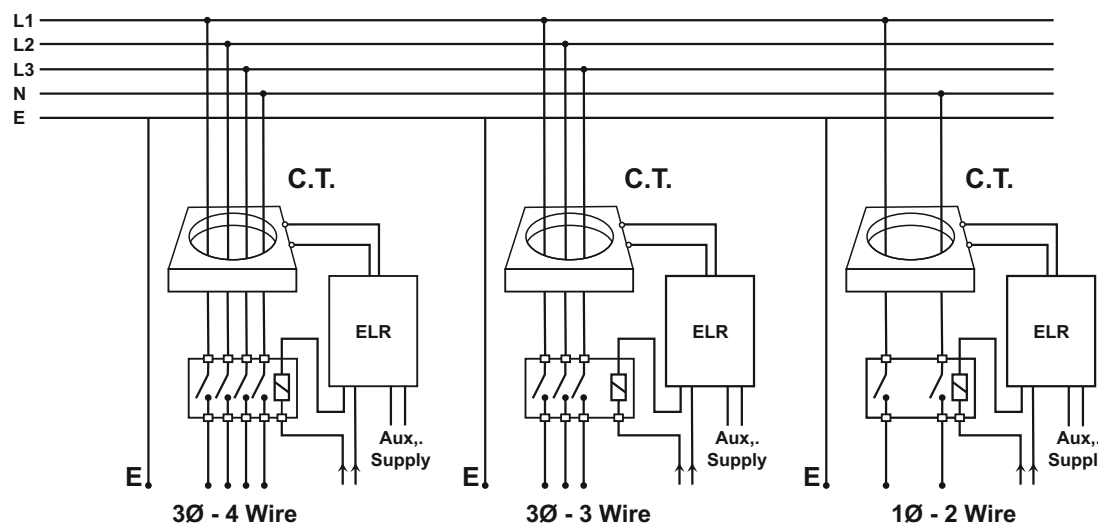
Plot No. 222, EL-Electronic Zone, MIDC, TTC Industrial Area,

Mahape, Navi Mumbai - 400701, India

Tel. : +91 86557 47987

Email : sales@veritekindia.com | Web : www.veritekindia.com

CONNECTION DETAILS (ONLY FOR CBCT)



SPECIFICATION

Sensing	: Through CBCT 35/70/120/210mm ID (any other circular & rectangular size on request)
Aux. Supply	: 90 - 270 VAC / DC, 50/60Hz
Burden on Supply	: < 3 VA
Display	: LCD display (actual value of leakage current)
Delay	: 0(<40mSec for Fault current>5xIth) to 10 sec.
Set Point	: 10mA up to 30 Amps
Accuracy	: $\pm 5\%$ of set point, ± 2 counts
Relay Contacts	: 2 Potential Free Contact (NO, C & NC), (energise or de-energise on trip programmable)
Contact Rating	: 6 Amps / 230 VAC / 28 VAC
Temperature	: Operating : - 10°C to 55°C Storage : - 20°C to + 75°C
Humidity	: < 95% RH (non condensing)
Dimension	: 93 x 35 x 68mm (L x B x H)
Mounting	: Flush Mounting with side clamps
Weight	: 228 gm
Protection Degree	: IP20(Terminals) IP54(Front of housing)

KEYPAD SETUP

Keys Description

	TEST / UP Key A) To Test Relay Contact B) To edit values C) To move in between Menus or Sub-Menus
	ESC / SIDE / RESET Key A) Escape from Sub-Menu to Menu / Menu to Operational Mode B) Move from one digit to another C) Manual Reset button in case of Trip
	PROGRAMMING Key A) To enter into programming mode B) To enter into particular Menu / Sub-Menu C) To save particular Value

MENU / SUB-MENU DESCRIPTION

MENUS	SUB-MENUS
RL 1 Setting for relay 1	ALM To set Alarm INS To select Instantaneous Trip MOD To change Relay Operation Mode Normally Energised(NC) or De-energised(NO) RST To change option for Relay Auto / Manual Reset HYS To set Hysterises Value
TM 1 Setting for Time delay of relay 1	DEL To set Delay Value REC To set Recovery Time for Auto Reset Mode POW To set Power ON Delay
RL2 Setting for relay 2	FUN To set function type for Relay 2 PRE To set Pre-Alarm Value MOD To change Relay Operation Mode Normally Energised(NC) or De-energised(NO) RST To change option for Relay Auto / Manual Reset HYS To set Hysterises Value
TM2 Setting for Time delay of relay 2	DEL To set Delay Value REC To set Recovery Time for Auto Reset Mode
PWd Setting for Password	Ed To set Enable / Disable Password SET To set New Password
RST	Reset all settings

PROGRAMMING

UST		Press Program Key
200		Set 200 Password (Default Factory Password)
		To enter into programming mode
RL 1		Press Program Key to set Relay 1 Setting
ALM		Press Program Key to set Alarm
1A/10A/30A		To select range (1A, 10A, 30A) set value * To Set Tripping Points (0-999 mA) (1-9.99 A) (10-30 A)*
INS		Press Program Key to select Instantaneous Trip
ON/OFF		To select ON or OFF
MOD		Press Program Key to set Relay Operation Mode
ON/OFF		To set ON Normally Energised or OFF Normally De-energised
RST		Press Program Key to set the option for Relay Reset
MAN/AUT		To set Manual or Auto Reset
HYS		Press Program Key to set Hysteresis Value
03		To set value (3% to 25%)
		To Switch from RL1 to TM1
TM 1		Press Program Key to set Time Setting for Relay 1
DEL		Press Program Key to set delay value
990		To set value (0.0 to 99.9 sec.)
REC		Press Program Key to set Recovery Time
005		To set value (0.0 to 99.9 sec.)
POW		Press Program Key to set Power ON Delay
990		To set value (0.0 to 99.9 sec.)
		To Switch from TM1 to RL2
RL2		Press Program Key to set Relay 2 Setting
FUN		Press Program Key to set Function Type for Relay 2
PRE/RL 1		To set from Pre-Alarm to same as Relay 1
PRE		Press Program Key to set Pre-Alarm
50		To set from 50% to 90%
MOD		Press Program Key to set Relay Operation Mode
ON/OFF		To set ON Normally Energised or OFF Normally De-energised
RST		Press Program Key to set the option for Relay Reset
MAN/AUT		To set Manual or Auto reset
HYS		Press Program Key to set Hysteresis Value
03		To set value (3% to 50%)

		To Switch from RL2 to TM2
		Press Program key to set Time Setting for Relay 2
		Press Program key to set delay value
		To set value (0.0 to 99.9 sec.)
		Press Program key to set Recovery Time
		To set value (0.0 to 99.9 sec.)
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		To Switch from TM2 to PWD
		Press Program key for Password Settings
		Press Program key to Enable or Disable Password
		To set to Enable or Disable Password
		Press Program key to set New Password
		To set Password
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		To Switch from PWD to RST
		Press Program key to Reset all Settings
		Press Program key to Reset to Factory set values

INS : When INS ON is selected the delay will become zero (irrespective of set delay) in case leakage current is x5 times of set value
FUN : In this setting the relay 2 can either be configured same as relay 1 or as PRE alarm. When FUN is set as RL1 then all setting of RL1 will be automatically copied to relay 2 & the system will be have as 2 C/O relay.

PRINCIPLE OF OPERATION

The unit employs a CBCT (Core Balance Current Transformer) to sense the Leakage Current. In a healthy system the Vector sum of the currents flowing in the 3 Phases is Zero. But in case of an Earth Fault / Leakage the vector sum is not Zero & a resultant current begins to flow. This is sensed and converted into an analog Voltage signal which is compared with a preset reference value. Incase of 3 Phase 4 Wire system Neutral also has to be passed through the CBCT.
CORE BALANCE CURRENT TRANSFORMER (CBCT)



SIZES AVAILABLE

VIPS CBCT 35, 70, 120, 210, 310 mm ID

* Note : Any other ID / rectangular CBCT available on request

SAFETY PRECAUTIONS :

All safety related codifications, symbols and instructions that appear in this operating manual or on the equipment must be strictly followed to ensure the safety of the operating personnel as well as the instrument.

If the equipment is not used in a manner specified by the manufacturer it might impair the protection provided by the equipment.

If there is physical damage to the unit then do not use it.

Read complete instruction prior to installation and operation of the unit.

WIRING GUIDELINES :

Warning

1) To Prevent the risk of electric shock power supply to the equipment must be kept OFF while doing the wiring arrangement.

2) Wiring shall be done strictly according to the terminal layout with shortest connection. Conform that all connection are correct.

CAUTION :



1) To ensure the safe operation of unit, check the wiring and connections.

The documents are subject to change without notification