

TDDTM

THEFT DETECTION DEVICE

TDD aims to identify theft at LT pillars (Junction Boxes used for underground power distribution lines) under different tamper conditions. It continuously monitors energy and sends IP (instantaneous parameters) like voltages, currents, power etc. to the base station. It also Detects tamper conditions and sends the alerts to Base station(Control Room) as well as concerned officials. In addition, it initiates the local audio alarm.



ICSA

An ISO 9001:2008 Company

Empowering Energy Sector



Application Areas:

- Power distribution segment
- Distribution Companies (DISCOM's)

Features:

- Alert message based on the principle of change in Phase voltage
- Alert message based on the principle of change in over load condition
- TDD unit health status
- SMS message flashed to the base station for occurrence / restoration of abnormality
- Alert message & Audio alarm generation on unauthorized opening / closing of LT pillar/underground cable box

General Features:

- Message transmission to the Base station may be established using latest communication technologies including GSM /GPRS/ CDMA / RF / PLCC / PSTN
- TDD is equipped with Compact, Slim SMPS having wide operating window.
- Unit operates even with missing of 1 / 2 Phases or Neutral.
- Unit operates with the minimum burden on the PT
- Battery backup provided for adequate time
- Temperature sensor provided to monitor internal temperature of pillar / underground box
- By-pass feature provided for maintenance purpose

Technical specifications:

- Input: 3 phase, 4 wire, 230 V + / - 30%.
- Memory capacity:
- GSM module is capable of sending and receiving SMS only from or to the control station.
- Operating temperature : 0 to 65 deg C
- Relative humidity : max 98% without condensation
- Idle mode power consumption : less than 1 Watt
- Audio alarm: min magnitude of 80 db
- Temperature monitoring sensor range : -20 deg C to 90 deg C
- Door open / close sensor : available using push button switches
- Delay for actuating the alarms : available (Factory set for 5 seconds)
- Auxiliary CTs for sensing the Currents : available
- Battery low voltage monitoring : Available
- Type of battery used for back up : Sealed maintenance free(SMF) lead acid
- Life of battery : min 3 years

Base station operational functionality:

The work stations loaded with custom built data Acquisition and control software (base station software) and meter specific dial-up software act as base station and has the following operational functionalities.

- Data acquisition
- Control function
- Report generation
- Integration and interface with existing system
- End user access
- GSM data transfer specifications
- Data transfer rate 14.4 kbps or higher.

- Circuit asynchronous transparent and non transparent mode.
- GSM modem has auto baud rate facility-300 To 38,400 bps.
- Baud rate from 300 to 115,200 bps.
- Indicator: For data transmission, data retrieval, carrier detection and power ON' position – available.
- dBi antenna with wall mount.
- SIM Holder : plastic SIM card cover with interlocking screws.

Electrical Specifications:

- Input: 3 phase, 4 wire, 80 - 300V AC(P-N) and 80 - 480V AC(P-P)
- Device operates even with missing of 1 / 2 Phases or Neutral.
- Current consumption: upto 250mA (typical)

Software Specifications:

- Windows operating system support
- International standards user friendly GUI
- Configurable manual Query
- Data call establishment
- Any RDBMS compatibility

Service Condition:

- (a) Ambient temperature : Varying for -2 deg C to 55 deg C
- (b) Relative Humidity : Varying 40% to 100%
- (c) Rainfall in a year : Varying 1800mm to 3480mm
- (d) Operating Condition : i)Normal -2 deg C to 55 deg C
ii)Storage -25 deg C to 85 deg C

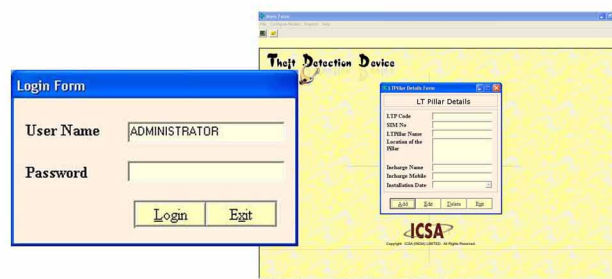
Mechanical specifications:

- Material : Metal body with powder coating
- Color : Red
- Dimensions : 9"x7"x2

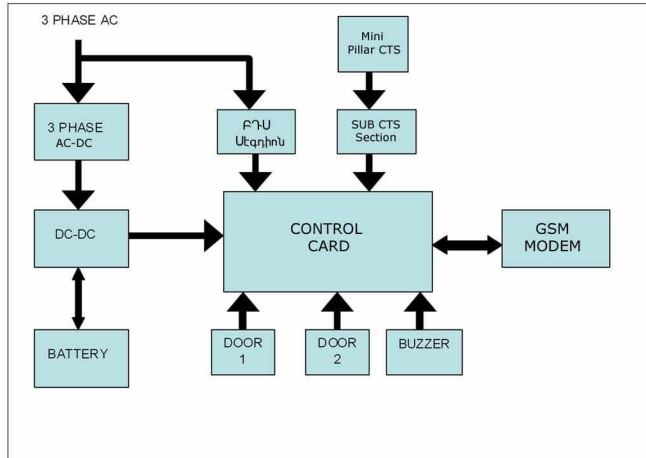
Benifits:

- Alerts the officials on possible power thefts on real-time
- Gives information on the load levels on each node
- Loud Audio alarm to dissuade any attempt for theft.

Software Screen Shots:



Block Diagram:



Field Photograph :



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