



LIBRATHERMTM
INSTRUMENTS PVT LTD

Partners in Measurement & Control

PRODUCT CATALOGUE

ISO 9001 : 2015 Certified Indian Co.

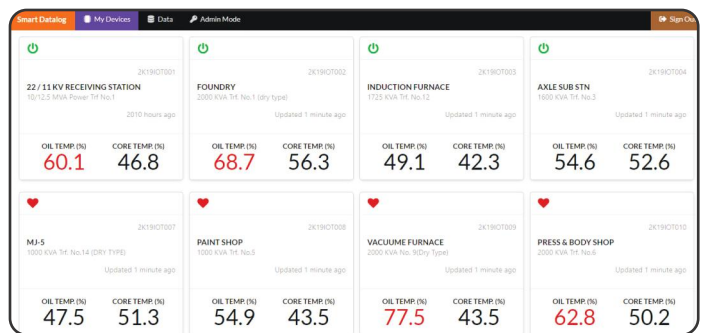
www.libratherm.com

enquiry@libratherm.com

IoT for Process Monitor, Control and Data Logging

Product Description

- Introducing Wi-Fi / Ethernet based interfaceable or stand alone IoT modules for monitoring, controlling, and Data logging industrial processes. Libratherm offers a fully managed back end service along with a customizable WebApp available on PC, Smartphones, and Tablets.
- These modules can capture data from RS-485 enabled hardware or various Analog & Digital Sources.



Applications

- Direct Interface to Internet via Wi-Fi / Ethernet. No expensive gateways required.
- Monitor and Control Devices over the Internet in near real time.
- Easy to Use customizable WebApp available on PC, Smartphone, and Tablet for viewing current and historical trends.
- SMS and Email alerts for events and fault conditions.

Data Logger and Process Scanner

Key Features

- Input : All Thermocouple, RTDs, Voltage and Current Signals.
- Input type selection through keyboard.
- Standard models of 8 and 16 channels.
- Simultaneous Process Monitoring / Data Logging of upto 64 channels.
- Log / Data Storage interval from 30 seconds to 99 minutes.
- Data Acquisition Software for Windows PC.
- 21CFR PART 11 compliant software version available.
- Built in memory for 150+ days data storage at 30 minutes log interval.
- Direct Printer Output available.
- Suitable for all Industrial and laboratory data logging applications.



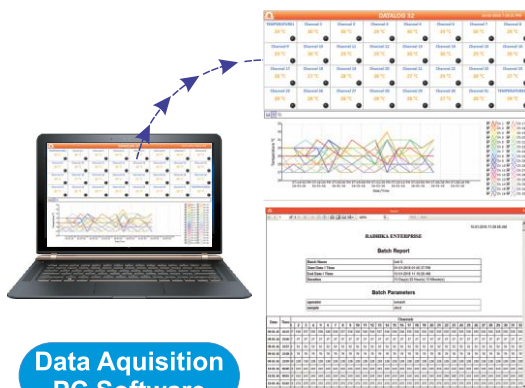
Datalog - 804



Datalog - 808



Datalog - 816



**Data Acquisition
PC Software**



**Data Logger
Panel**

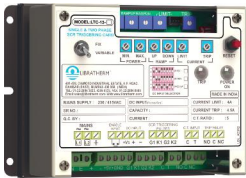
Applications

- To Monitor Bearing / Winding / Oil Temperature in Distribution Power Transformer/Generator etc.
- To Monitor and Log the temperature at various locations in Furnaces/Ovens/Engines/Heating systems like Boilers/Heat exchangers / Hot Air generators / Thermic Fluid heaters etc...
- To Monitor and Log the Pressure points at various locations in the Water/Liquid/Gas pipelines etc.
- To Monitor and Log the Temperature and/or Humidity levels at various locations in the Warehouses, Data Centre Rooms, Cold Storages, Calibration Laboratory, Green Houses etc.
- To Monitor and Log the real time values of Temperature/Current/ Voltage in the Electroplating plant, STP/ETP etc.

Thyristor Power Regulators and Triggering Cards (Phase Angle Control)

Key Features

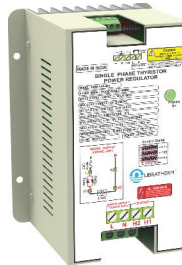
- Single phase, Two phase and Three phase SCR Triggering cards.
- Single phase, Two phase and Three phase Thyristor Power Regulators up to 500KW.
- Phase angle control action for smooth and gradual control of load Power.
- Power Regulation of Star or Delta connected Resistance Heaters and Transformer Loads.
- Synchronized triggering of SCRs with reference to Line Frequency.
- Incorporated with Current Limit, Overload trip and Over Temperature protection.
- Rugged MS enclosures to suit Industrial environment.
- Forced Air cooled construction in select models.



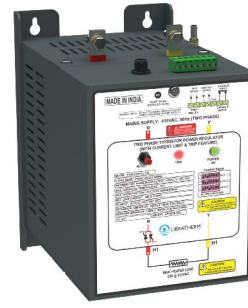
LTC - 13



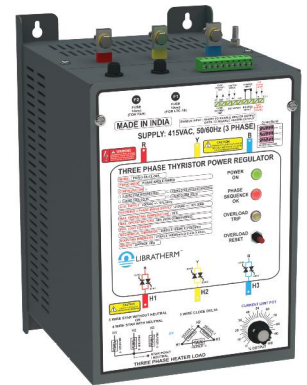
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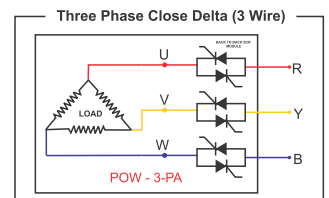
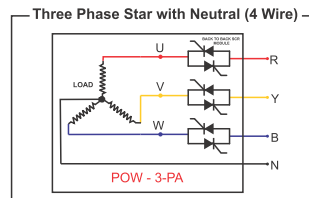
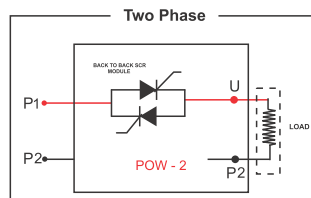
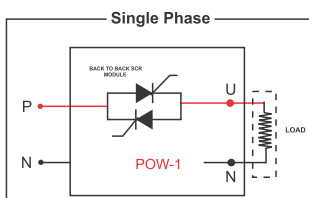
POW - 1



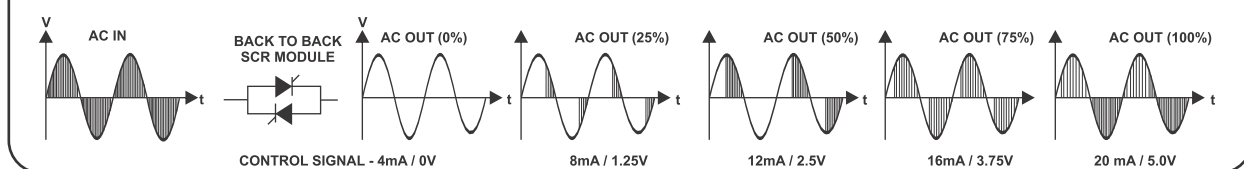
POW - 2



POW - 3



Phase Angle Control Representation



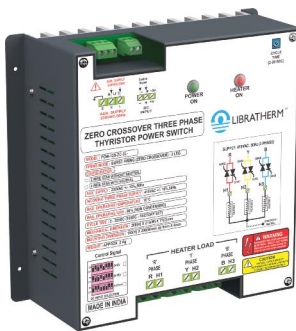
Applications

- Power Control of Electrical Furnaces / Ovens.
- Humidifiers and Dehumidifiers Heater Control.
- Furnace Oil Heating, Power Control of Aluminum Melting/Holding furnace.
- DC Rectifiers in Water Treatment Plants.
- Electromagnetic Crack Detectors, Vibrators, Upsetting Machines, Welding Transformer.

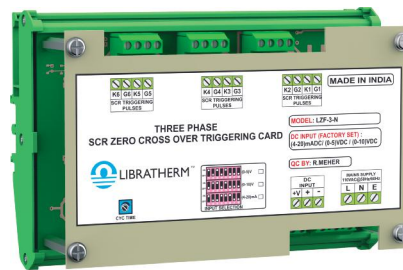
Thyristor Power Switches and Triggering Cards (Zero Crossover / Burst Firing)

Key Features

- Single phase, Two phase and Three phase Zero Crossover SCR Triggering cards.
- Single phase, Two phase and Three phase Thyristor Power Switches up to 500KW.
- Zero Crossover firing for transient and harmonics free switching.
- Suitable for Resistive, Inductive and Capacitive loads.
- Triggering Cards and Thyristor Switch Modules for RTPFC.
- Rugged MS enclosures to suit Industrial environment.
- Forced Air cooled construction in select models.



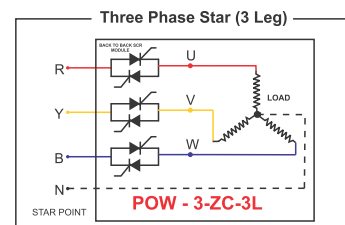
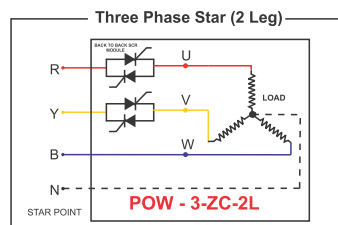
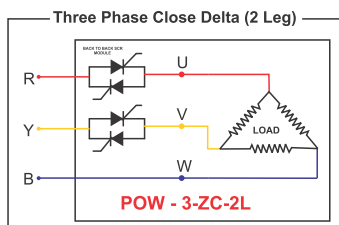
POW - 12-ZC-3L



LZF - 3



LZF - 10



Zero-Cross Over Representation

0% output

20% output

60% output

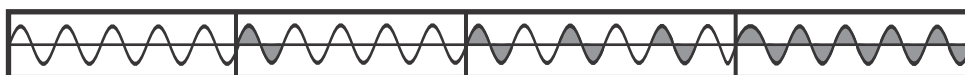
100% output

(0V/4mA)

(1V/2V/7.2mA)

(3V/6V/13.6mA)

(5V/10V/20mA)



(The filled part is the load current)

Applications

- Triggering Cards and Thyristor switch modules are suitable for RTPFC panel builders.
- 2 Leg and 3 Leg Thyristor switch modules for Temperature control of 3 phase electrical heaters.
- Build 3 phase Solid State Relays upto 500A load.
- Furnace control - built around scot winding power transformer.

Two-Wire Loop Powered Temperature Transmitters



LTX - 3000-H-1



LTX - 3000-H-2



LTX - 3000-W



LTX - 3000-D

Key Features

- Two wire loop powered design.
- Accurate long distance transmission of 4-20mA.
- Head mount compact construction.
- Simplex and Duplex head mount version.
- DIN rail and Field mount.
- Isolated output in select models.
- Suitable for thermocouple and RTD.
- Wide range Loop supply 13 to 36 VDC.

Applications

- Industrial Temperature Measurement and Control.
- Long distance temperature sensing.

Process Transmitters



PTX - 3000



HTX - 3000



FTX - 3000



TSC - 05

Key Features

- Accepts standard industrial inputs and provides 4-20mA/0-10V outputs.
- Digital Display of Process Input.
- Operates on 24VDC Isolated supply.
- Supply ground and Input/Output grounds are isolated.
- Calibration and Scaling through front panel keyboard.
- Input and Output isolation voltage > 1.5KV.
- Single Input and maximum 2 Outputs.
- Dual Inputs and Dual Outputs.
- RS-485 / Ethernet serial interface over MODBUS.
- DIN Rail / Field Mount / FLP Enclosures.

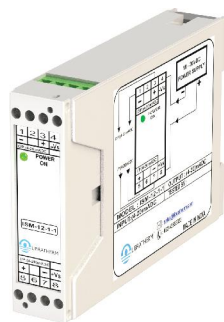
Applications

- Process & Factory automation using PLC/DCS/HMI.
- Field measurement of Temperature, Level, Pressure etc.. with local display.
- Long distance transmission of measured parameters.
- Digital transmission to capture accurate field information.

Signal Isolators and Converters



ISM - 10-1-1



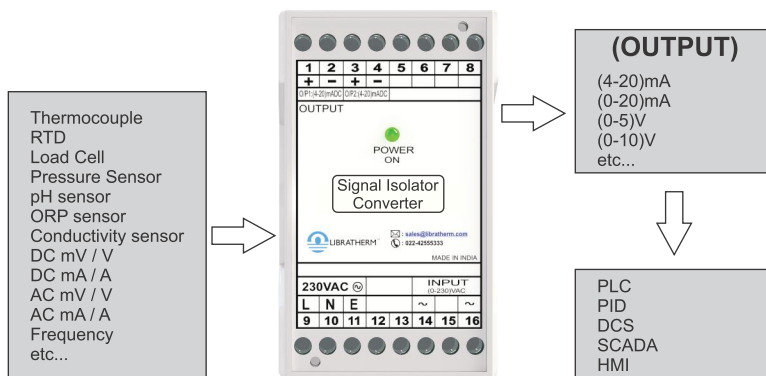
ISM - 12-1-1

Key Features

- Isolate and Convert low level analog field signal to higher level voltage and current signals.
- Independent Power Supply and Input and Output Signal Lines.
- Prevents ground line interference.
- 3 way Isolation Input to Output, Supply to Input and Supply to Output.
- Input and Output isolation > 1.5KV.
- Single Input and maximum 4 Outputs.
- Dual Inputs and Dual Outputs.
- On site field calibration through presets.
- Operates on Aux.supply of 230VAC / 24VDC (18-36)VDC.

Applications

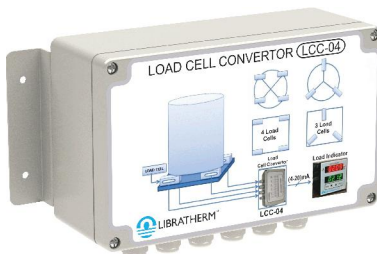
- Industrial Process Automation & Data Acquisition systems.
- Interface field signals to PLC/DCS/ HMI.



Load Cell Converters

Key Features

- Accepts 1 to 4 load cells and delivers average 4-20mA/ 0-10V output.
- Stable excitation voltage of 10 to 12VDC.
- DIN rail and Field mount IP65 enclosure.
- Tare facility through internal Preset.



LCC - 04



LCC - 10

Applications

- On-board weighing
- Platform weighing
- Hopper scale
- Weigh bridges
- Batch weighing

Process and Temperature Indicators



DPI - 902



DPI - 4000



DPI - 912



HTM - 3000

Key Features

- Accept Thermocouple, RTD, Voltage or Current Signals as input.
- Digital display in 0.33" to 8" size.
- Available in Panel mount DIN size and Jumbo display.
- Operates on 24VDC or 90-240VAC supply.
- Linearized for thermocouple / RTD input.
- Linearized retransmission output.
- RS-485 serial interface over MODBUS.

Applications

- Jumbo Display in Steel Plants to measure Temperature, Speed, Sheet Thickness etc.
- Process Automation & Allied Industries.
- Process measurement in various industries.

ON-OFF Controllers

Key Features

- Accept Thermocouple, RTD, Voltage or Current Signals as input.
- Available in all standard Panel mount DIN sizes.
- 1 to 4 programmable Set Points and Hysteresis.
- Relay contacts and SSR driver outputs.
- Operates on 24VDC or 90-240VAC supply.
- Linearized for thermocouple / RTD input.
- Linearized retransmission output.
- RS-485 serial interface over MODBUS

Applications

- Electrical heater control in Boiler, Hot Air Generator, Heat Exchanger etc.
- Precise control of Furnace and Oven Temperature.
- Deep Freezer, Chiller Compressor Control, HVAC Equipment.
- Process control of Temperature, %RH, Voltage, Current, Conductivity, Level, Pressure etc. with High/Low Alarms.



DPC - 903



DPC - 913



DPC - 966



DPC - 912

PID Controllers



PID - 480



PID - 912



PID - 913



PID - 966



PID - 903

Key Features

- Accept Thermocouple, RTD, Voltage or Current Signals as input.
- Available in standard Panel mount DIN sizes.
- PID control action - standard and customized Algorithm.
- User selectable Direct / Reverse control action.
- Single or Dual Analog / Digital control outputs.
- Relay contact and SSR driver outputs.
- Operates on 24VDC or 90-240VAC supply.

Applications

- Furnace & Oven heating control.
- Regulate temperature, pressure, flow level in the process.
- Plastic material testing equipment.
- HVAC equipment.
- Incubators and Constant Temperature Oil Bath.
- Critical close loop process control applications.

Ramp/Soak Profile Programmers

Key Features

- Accept Thermocouple, RTD, Voltage or Current Signals as input.
- PID control action - standard and customized Algorithm.
- User selectable 1 to 10 program profiles, 16 steps of Ramp/Soak profile.
- Servo start and Auto Tracking of Heating Cycle.
- Analog and Digital PID Control Output.
- Relay contact and SSR driver outputs.
- Operates on 90-240VAC supply.
- Linearized for thermocouple/RTD input.
- RS-485 serial interface over MODBUS.
- Available with computer software for real time interface.

Applications

- Heat Treatment / PWHT / Stress Relieving.
- Investment casting in Jewellery & Metal Industries.
- Environmental Test Chambers.
- Laboratory and Industrial Furnace / Oven control.
- Laboratory & Industrial furnaces high temperature heating cycle control (upto 2000 °C)



PRC - 6000



PRC - 309



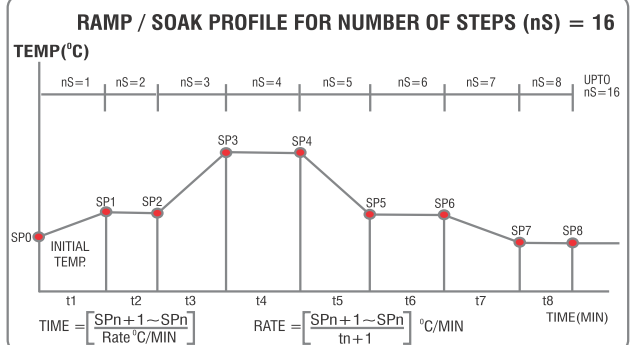
PRC - 489



PRC - 312



PRC - 8000



T + RH and Differential Pressure Transmitters



Key Features

- Incorporates accurate T + RH sensors and Pressure sensors.
- Absolute, Differential, Vacuum Pressure measurement.
- Accurate T + RH measurement and re-transmission.
- 0 to 60 °C / 0 to 80 °C / 0 to 100%RH.
- 0 to 10Bar, +/-9999pascal, +/-700 mmWC.
- Stable 4-20mA/0-10V outputs.
- Calibration through internal presets.
- SS / Metal stem for T + RH Sensing.
- Operates on 24VDC isolated from Outputs.
- Duct Mount / Wall Mount / Field Mount Enclosures.

Applications

- Medical and Pharmaceutical test equipment.
- Process control and Factory Automation.
- Hydraulic / Pneumatic Systems.
- Air Humidifier / Dehumidifier / HVAC Equipment.
- Leak Detection and Blockage Detection in AIR Filters.

T + RH Indicators / Controllers

Key Features

- Accept input from T + RH Sensors / Transmitters.
- Direct/Reverse programmable control outputs.
- Control Output compatible with Actuator valves.
- PID and On/Off control to suit control devices.
- Available in standard Panel mount DIN sizes.
- Controls Humidity by controlling Air Heaters through thyristors.
- Control temperature through cooling systems, Refrigeration or cold water.
- T+RH+DP Monitoring and Data Logging.
- Operates on 24VDC or 90-240VAC supply.
- RS-485 serial interface over MODBUS

Applications

- T + RH + DP measurement & control in AHU / DHU / Clean Room.
- Green House, Textile Industries.
- Hospitals and OT.
- Data Centre and Server Rooms.
- Warehouses, Cold Storage Rooms, Hatchery Ovens and Incubators.
- HVAC / Stability / Sterilization Chambers.



Portable Thermometer and Hygro-Thermometer



DTM - 22



DTM - 21



HTM - 22

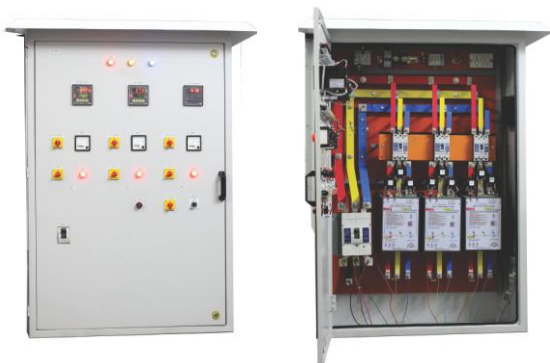
Key Features

- Portable battery operated Indispensable Instrument.
- Available with various types of interchangeable probes.
- Cross check object temperature.
- Cross check Temperature and Humidity.
- Peak Hold/MAX/MIN recording facility.
- °C / °F Selectable.
- LCD with back lit.
- Rugged, User Friendly and Economical.

Applications

- **DTM-21 / DTM-22** : Check the temperature of hot/cold liquid, gas, powder, dies, moulds, air, vibrating or rotating surfaces etc.
- **HTM-22** : Measure temperature and relative humidity values in the ambient environment, Cold storage, Stability chambers, AHU and Dehumidifiers and similar HVAC systems.

Instrumentation Control Panels



Key Features

- Customized and Application Specific control panels.
- MS Powder coated rugged construction.
- Designed for Industrial Heating Control applications.
- Incorporates high quality switch gears items.
- Incorporates PID & Program controllers & thyristor power regulators.
- Incorporated with over temperature, over current safety features.

Applications

- Oil Heating
- Annealing, Tempering, PWHT, Stress Relieving, Hardening
- Electroplating
- Jewellery casting
- HVAC panels

Our Product List

- | | |
|--|---|
| <ul style="list-style-type: none"> • Temperature & Process Indicator Controller. • Large Display Temperature/Process Indicator. (1", 2", 4" and 8") • 8/16/32 Channel Temperature / Process Scanner. • 8/16/32 Channel Temperature /Process Data Logger with Built in Memory. • Data Acquisition Software. • Temperature & Humidity (T+Rh) Sensor and Transmitter. • Temperature & Humidity (T+Rh) Indicator, Controller, Loggers. • T + RH Indicator and Data logger for Clean Room/Server Room/Data Centre/Ware Houses. • SCR Triggering (Firing) Cards for single phase, two phase and three phase. (for AC / DC / Power Factor Control) • Single / Two Phase Thyristor based Power Regulator. (for AC / DC Control) • Three Phase Thyristor based Power Regulator (Phase Angle control technique - for AC/DC control) • Three Phase Thyristor based Power Switches (Zero Crossover Control Technique.) (For AC Control and Real Time Power Factor Control) | <ul style="list-style-type: none"> • Two Wire Loop Powered Simplex / Duplex Temperature Transmitter. (Head Mount / DIN Rail Mount / Field Mount) • Signal Converter-Isolator. (DIN Rail mount Modules) • Instrumentation Control Panels. • PID Temperature / Process Controller. (Single loop / Dual loop) • Ramp / Soak Programmable & Temperature / Process Controller. • Multizone PID Ramp / Soak Programmable Temperature Controller (2 to 8 heating zones.) • One and Two Channel Temperature / Process Indicator Transmitter with RS485 interface in FLP Enclosure. • Molten Metal Temperature Measuring System. • DC Motor Speed Controller (DC Drive - 1HP to 5 HP) • Motor Soft Starter (Thyristor based - suitable for 3HP to 225HP AC Induction Motor.) • Digital Portable Thermometer and Hygro-Thermometer. • mV/mA/Pt-100 Calibrator. • RC Snubbers for Thyristor Protection. |
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Industries We Serve

- Aluminum • Automotive • Atomic Energy • Abrasives & Cutting Tools • Agriculture
- Automation System Integrators • Bakery • Copper • Chemical • Cement • Ceramic
- Diamond Tools • Engineering • Fertilizer • Food & Beverages • Forging • Galvanizing
- Glass • Heat Exchangers • Heat Treatment Plants • High Temperature Refractories
- Induction Heating • Jewellery Casting • Laboratory Equipments • Nuclear Fuel
- Oil & Gas • Pharmaceutical • Plastic • Power Generation • Power Tools • Seamless Pipes
- Steel • Screws & Fasteners • Sintering • Sponge Iron • Textile • Wire Drawing...



SCAN ME



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*Specifications and dimensions are subject to revision.