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TECHNOLOGY PVT. LTD

CATALOGUE

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Earth Fault Detection System

MODEL : LT-Ex-EMUDS-HB










Oil & Gas Industry | Sugar Industry | Paint | Chemical & Pharmaceutical | Cement | Distillery Industry

Earth Fault Detection System

About the Product

i) Product Name :- LT-EX-EMUDS-L/PL/PLT/PLM/HB

ii) General :-

The product **"LT-EX-EMUDS-L/PL/PLT/PLM/HB"** is a highly reliable safety device certified by **CSIR-CIMFR Dhanbad** and **BIS Ghaziabad,** in compliance with Indian standards **IS/IEC 60079-0:2017 and IS/IEC 60079-11:2011** and approved by **PESO Nagpur** under the name **"Earth Fault Detection System."**

This product was conceived and developed with the primary goal of enhancing operational safety in **hazardous environments where flammable gases, vapors or dust may be present.** Its core functionality revolves around **monitoring the buildup of static charge** and ensuring **safe dissipation through a controlled discharge path,** thereby reducing the risk of accidental ignition caused by electrostatic discharge or spark.

Understanding the diverse safety needs across different industries and applications, we have engineered multiple models **L, PL, PLT, PLM, and HB** each tailored with specific features, use-case compatibility, and cost considerations. These variations allow end users to select the most suitable model based on their operational environment, budget constraints, and safety requirements.

The **LT-EX-EMUDS** range not only complies with stringent safety standards but also offers easy installation and maintenance making it an ideal solution for industries such as petrochemicals, pharmaceuticals, paint manufacturing and any other sector where explosive atmospheres are a concern.

Note :- The product **"LT-EX-EMUDS-L/PL/PLT/PLM/HB"** is available in multiple models, each designed for specific application and features. End users are advised to select the appropriate model based on their application requirements and desired features.

Models : -

1. LT-EX-EMUDS-L

2. LT-EX-EMUDS-PL

3. LT-EX-EMUDS-PLT

4. LT-EX-EMUDS-PLM

5. LT-EX-EMUDS-HB

About the Model

i) Model Name :- LT-EX-EMUDS-HB

ii) General :-

The Model **LT-EX-EMUDS-HB,** developed by **Linphase Technology,** is designed for monitoring the dissipation of static charge from the human body through a grounding point. When the human body is statically charged, its resistance typically exceeds **1 mega ohm.** In a static-free or discharged condition, the resistance drops below **1 mega ohm.**

To ensure safety before entering hazardous areas, it is essential that personnel are fully discharged. **Static discharge monitoring** is a standard feature of the LT-EX-EMUDS-HB model.

Based on its features and applications, this model is further classified into the following four sub-models:

LT-EX-EMUDS-HB

LT-EX-EMUDS-HB/VC

LT-EX-EMUDS-HB/RL

LT-EX-EMUDS-HB (RL-VC)

Specification :-

The Model LT-EX-EMUDS-HB is a ground-sensing device designed to enhance the reliability and effectiveness of static discharge from the human body. It requires only a single-wire earth connection, eliminating the need for loop wiring, which simplifies installation and reduces costs.

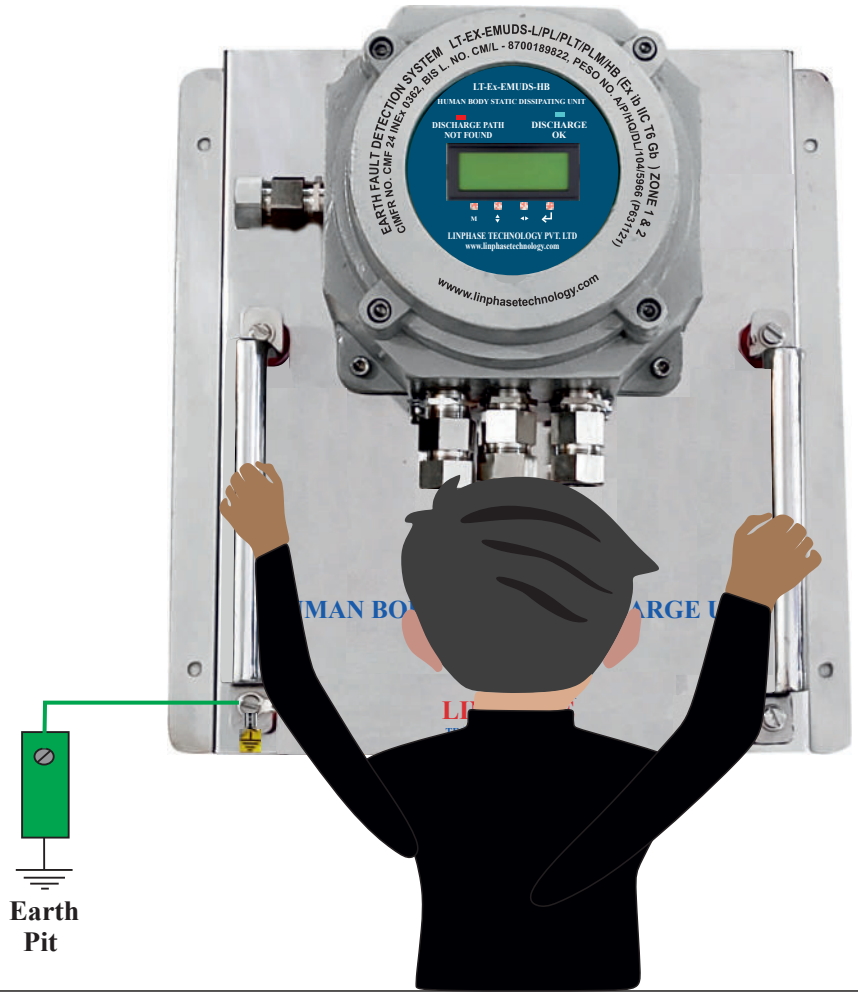
When the unit detects that the human body is fully discharged, it activates a relay. The relay holding time can be configured by the user via a keypad. If the holding time is set to 0, the relay will release upon pressing the push switch or triggered by a two-wire NAMUR sensor.

LT-EX-EMUDS-HB

iv) Key Features:-

- Threshold value of resistance is 900 KΩ to 1 MΩ .
- Dual potential-free relay outputs (2 x [NC, C, NO], 2A @ 250 VAC) .
- Switch or Namur sensor facility for relay deactivation
- Certified for Zone 1 hazardous area, suitable for Gas Groups IIA/IIB/IIC, Protection level "ib"
- This model is especially designed for hazardous zones in process industries, where entry is restricted until static discharge has been safely completed.

APPLICATION



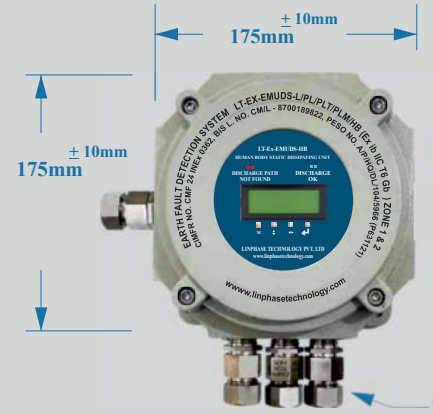


v) Technical Data : LT-Ex-EMUDS-HB	
Electrical	
Operating Power Supply	110-265 V AC
Power consumption (V x I)	5W max
Open circuit voltage (w.r.t Terminal 3)	≤ 5 VDC.
Short circuit current (w.r.t Terminal 3)	≤ 1mA
Threshold resistance	900 KΩ to 1 MΩ
O/p Relay contact Rating	2A @ 250VAC
Isolation	3 port (input, output and Power Supply)
Isolation Level	1500 V AC / 50-60 Hz
Discharging Time	5 Sec. approx (Human Body)
Operating Temperature	0 to 85°C.
Open Circuit Voltage (Switch or Sensor)	5 V DC approx
Short Circuit Current (Switch or Sensor)	5 mA approx
Display and LED Indication	
Display	LCD Display (16 x 2), Discharging symbol
RED	Discharge Path Not Found
GREEN	Discharge OK.
Mechanical Data	
Enclosure Dimensions	175 x 175 x 140 mm ± 10mm
MOC	LM-6
CERTIFICATION AND APPROVALS	
Bureau Of Indian Standard (BIS)	
Standard	IS IEC 60079 : Part 11:2011
Licence No.	CM/L - 8700189822
SCOPE	Intrinsically Safe Associated Apparatus.
CIMFR (Central Institute of Mining and Fuel Research)	
Type of protection & EPL	Ex ib for Gas Group IIC, EPL Gb
Marking	(Ex ib IIC T6) Zone 1 & 2
Standard	IS/IEC 60079-0:2017 (Explosive atmosphere- Part 0
	General Requirement)
	IS/IEC 60097-11:2011 (Explosive atmosphere Part 11
	Equipment Protection Intrinsically Safety “i”
	IS/IEC 60529:2001 (Degree of Ingress Protection
	IP-66) Reaffirmed 2014
Certificate No.	**CMF 24 INEx 0362**
PESO /CCOE Petroleum & Explosives Safety Organization	
Approval No.	A/P/HQ/DL/104/5966 (P631121)

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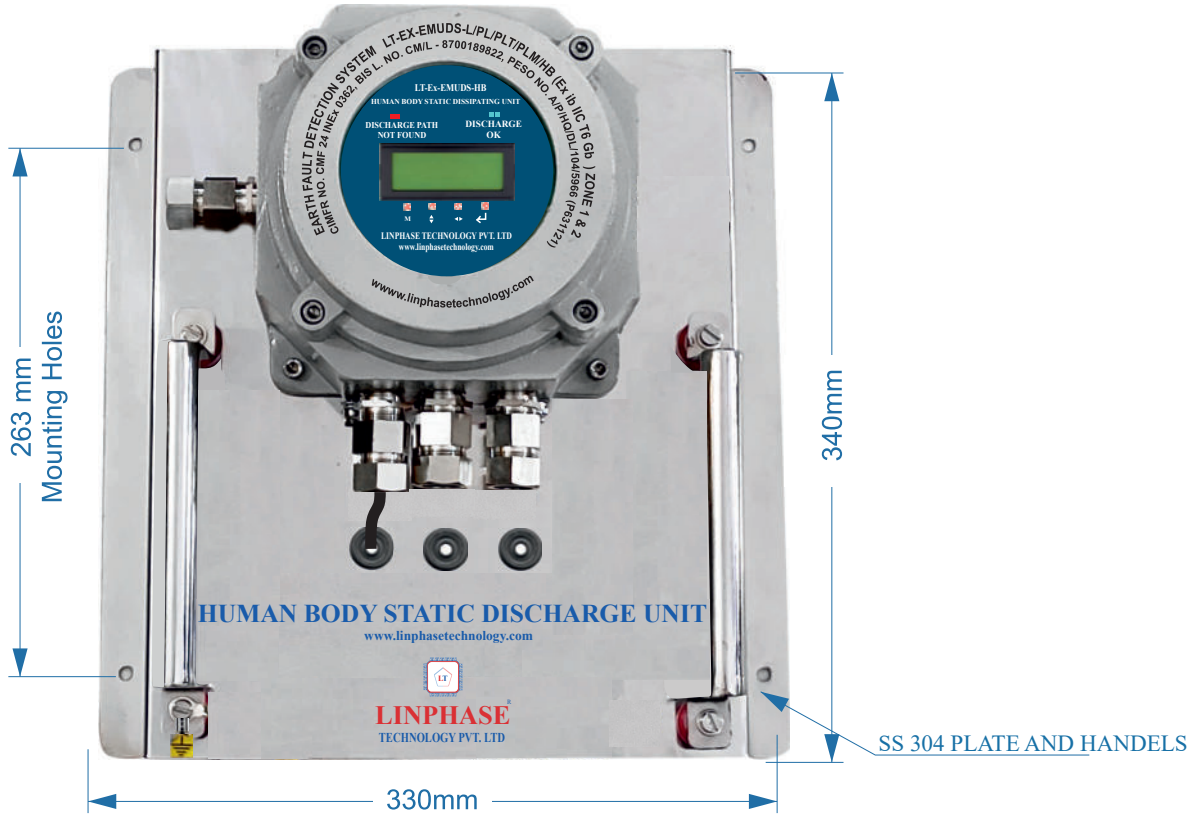
LT-Ex-EMUDS-HB

Enclosure and Mounting Plate Specification



Encl. Dimensions 175 x 175 x 140 mm ± 10 mm

Flame Proof Enclosure	:	Ex d IIC T6 according to IS/IES 60079-0:2017& IS/IEC 60079-1:2014
Ingress protection	:	IS/IEC 60529:2001
Dust ignition protection:		IS/IEC 60079-31:2013
MOC	:	LM-6
Area of Classification	:	Zone 1 & 2
Testing Lab	:	CSIR / CIMFR
Certification	:	CIMFR & BIS
Approval	:	CCOE / PESO



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