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Karandikar Laboratories



F 08 CE Rev. 02

Ex EQUIPMENT TYPE EXAMINATION REPORT

- 2) TE Report Number: **KLPL/Ex/19-015X Issue no.01** Dated: **30.03.2023**
- 3) **Ex Equipment:** **10 Channel Earth Monitoring System Interface Unit**
Model: 'Decalock-DL0317_ Interface Unit'
- 4) **Manufacturer:** **M/s ESD Control Systems**
Plot No. 41, Venkateswara Enclave,
Suchitra 'x' Roads, Jeedimetla,
Hyderabad-500055, Telangana.
- 5) This equipment and any acceptable variation thereto are specified in the schedule to this report and the documents therein referred to
- 6) Karandikar Laboratories Pvt. Ltd. reports that this equipment has been found to comply with requirements of the following standards relating to the design and construction of equipment for explosive gas/dust atmospheres as applicable.
- 7) This TE Report was issued as verification that a sample, was assessed, tested and found to comply with the IS / IEC standards listed below.
IS/IEC 60079-0: 2017 & IS/IEC 60079-11: 2011
- 8) The Examination and Test results are recorded in KLPL's confidential
Report No.: KLPL/Ex/ ESD-23/001 Dated: 30.03.2023
- 9) The sign X if placed after the TE report number; it indicates that the equipment is subject to specific conditions of use specified in the schedule to this TE Report.
- 10) This Report does not indicate compliance with electrical safety and performance requirements other than those expressly included in the above listed standards.
- 11) The marking of the Equipment shall include the following:

Ex Code:

[Ex ib Gb] IIB (-10 °C ≤ Ta ≤ +50 °C)

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A. V. Karandikar
Ajit Karandikar
CEO

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Karandikar Laboratories Pvt. Ltd.

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SCHEDULE



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12) Details of Type Examination Reports Issued: -

TE Report No.	Issue No.	Report No.	Date	Reason for Issue
KLPL/Ex/19-015X	00	KLPL/Ex/ESD-19/001	27.01.2019	Original test report.
KLPL/Ex/19-015X	01	KLPL/Ex/ESD-23/001	30.03.2023	Revalidation: No design change, Evaluation as per new standard IS/IEC 60079-0: 2017 and IS/IEC 60079-11:2011

13) Description of equipment

The 'Decalock-DL0317_Interface Unit' herewith designated as (EUT) Equipment under test, is part of the 'DECALOCK MODEL DL0317 ten channel earth monitoring system with interlock', which ensures truthful functioning of temporary earthing of mobile material handling used in pharmacy and chemical industries.

The 'Decalock-DL0317_Interface Unit' consists of power supply and fault latching relay logic circuitry. It is placed in safe area. It provides intrinsically safe power supply and control signals routed through certified cable glands leading to 'Decalock-DL0317_Main Unit' which is placed in hazardous area. It provides 10 no. potential free relay contacts as fault interlock for the respective field equipment. The circuitry is enclosed in a 1.2 mm thick MS box with cover fitted with four screws. The enclosure is wall mounted type with 4no. of screw fitting eyelets fitted outside the box.

The degree of ingress protection of IP 66 as per IS/IEC 60529:2001 achieved by enclosure.

14) Model Designation:

Model No.	Product	Rating
'Decalock-DL0317_Interface Unit	10 Channel Earth Monitoring System Interface Unit	Refer Point 17



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15) Drawings & Documents

Document No.	Sheet	Issue	Date	Document Title
ESDCS-317-0110-DOC-01	2	01	20.11.2017	Decalock application & Working
ESDCS-317-0110-DOC-02	3	01	20.11.2017	Decalock technical specifications
ESDCS-317-0110-CD01	1	02	04.04.2018	Schematic circuit diagram – Mains Input Protection PCB ESDCS DL0317-01
ESDCS-317-0110-BoM01	1	02	08.06.2018	DECALOCK BoM for PCB 01
ESDCS-317-0110-CD02	1	04	04.04.2018	Schematic circuit diagram 12 V DC Regulated Power Supply PCB ESDCS DL0317-02
ESDCS-317-0110- BoM02	2	02	08.06.2018	DECALOCK BoM for PCB 02
ESDCS-317-0110-CD03	1	01	01.11.2017	Schematic circuit diagram 8 V DC Regulated Power Supply PCB ESDCS DL0317-03
ESDCS-317-0110- BoM03	2	02	08.05.2018	DECALOCK BoM for PCB 03
ESDCS-317-0110-CD04	1	02	26.07.2018	Schematic circuit diagram Interface Relay Board PCB ESDCS DL0317-04
ESDCS-317-0110- BoM04	5	02	08.06.2018	DECALOCK BoM for PCB 04
ESDCS-317-0110-EL05	5	01	12.02.2018	Safe Area Unit Cable, Wire Harnessed Wire Bunches Chart
ESDCS-317-0110- BoM03	3+6	02	08.06.2018	Safe Area Unit Cable, Wire Harnessed Wire Bunches BOM with datasheets (Finolex, Finecab)
18/447	1	-	03.03.2018	Test Report for Transformers
ESDCS-317-0110-DOC-13	3	01	20.11.2017	DECALOCK Details of conformal coating

Drawings listed above are finally accepted as accurately representing the product for which this evaluation report has been prepared. These drawings provide necessary information as required by the above referred standards.

16) Temperature Class:

Equipment is an associated apparatus which will be placed in a non-Hazardous area and does not require a temperature class.

17) Electrical Rating:

Input Supply:

$U_m = 253 \text{ Vrms}$

Output Supply:

$U_o = 9.4 \text{ Vdc}$, $I_o = 319 \text{ mA}$, $P_o = 3 \text{ W}$, $L_o = 1 \text{ mH}$, $C_o = 5 \mu\text{F}$



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18) Specific conditions of use:

Equipment shall be used with 10 Channel Earth Monitoring System main Unit apparatus only.

19) Routine test:

- Dielectric strength test, in accordance with IS/IEC 60079-11 Clause 10.3, conducted on insulation between intrinsic safe circuit and the frame of the equipment at gradual application of test voltage at 500 Vrms for one minute. No evidence of flashover or breakdown shall be observed, the maximum current flowing do not exceed 5.0 mA.
- Dielectric strength test, in accordance with IS/IEC 60079-11 Clause 10.3, conducted on insulation between intrinsic safe circuit and non-intrinsic safe circuit of the equipment at gradual application of test voltage at 1500 Vrms for one minute. No evidence of flashover or breakdown shall be observed, the maximum current flowing do not exceed 5.0 mA.

END OF DOCUMENT



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