



working for a safer tomorrow

Karandikar Laboratories



F 08 CE Rev. 02

- 1) **Ex EQUIPMENT TYPE EXAMINATION REPORT**
- 2) TE Report Number: **KLPL/Ex/17 -069X Issue no.01** Dated: **13-10-2022**
- 3) Ex Equipment: **Flameproof Switch, Model No. : FE Series**
- 4) Manufacturer: **Kaustubha Udyog**
S. No. 36/1/1, Sinhgad Road, Vadgaon Khurd, Pune 411041
- 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 60079-1: 2014, IS/IEC 60079-31:2013
- 8) The Examination and Test results are recorded in KLPL's confidential
Report No.: KLPL/Ex/KSU-22/001 Dated: 13-10-2022
- 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 db IIC T6 Gb (-20°C ≤ Ta ≤ +60°C)

Ex tb IIIC T85°C Db

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Ravi Paranjpe
Director (Operations)

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Karandikar Laboratories Pvt. Ltd.

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Dated: 13-10-2022



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/17-069X	00	KLPL/Ex/KU-17/001	06.07.2017	Original Issue
KLPL/Ex/17-069X	01	KLPL/Ex/KSU-22/001	13.10.2022	1) Addendum for change in address of manufacturer 2) Re-validation for upgrade of standard to IS/IEC 60079-0:2017, IS/IEC 60079-1:2014 & IS/IEC 60079-31:2013

13) Description of equipment

The equipment is a FLAMEPROOF SWITCH, MODEL NO: FE SERIES. The equipment mainly consists of a top cover, body and operating rod. Top cover and body are made from aluminium alloy LM 6 material. Alternate material can be Grey cast iron (FG 260) or stainless steel. The minimum wall thickness of the equipment observed on cover is 4mm and on body it is 6mm. The main body has "O" ring of size Ø3.5mm made of viton rubber for providing weatherproofness IP66. The enclosure cover is fixed to the enclosure body through a threaded joint with threads size of M100 X 2P. The cover is secured mechanically by M3 X 4L grub screw. One pressure setting screw is provided on side wall of enclosure at bottom side which is forming threaded joint with threads size of M30 X 1.5P. One operating rod which is passing through this pressure setting screw forms cylindrical joint. The various pressure capsules are separated from vented column and flameproof enclosure by pressure tight membrane. Nameplate is screwed on cover and displays the required product information.

The internal gross volume of the equipment is 480cc (Approx.) and net volume is 300 cc (Approx.)

The equipment carries degree of protection IP66 and found to be comply with IS/IEC 60529:2001.

Cable entries:

The equipment is provided with maximum two cable entries of size M20 X 1.5P, alternatively 1/2" NPT and 3/4" NPT threads can be provided. Cable entry has a threaded axial length of 21.5mm. The cable entry port when mated with Ex db IIC certified cable gland will form flamepath meeting the requirements of the standard.





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Earthing:

Two external earth points of the size M4 X 10L is provided with clamp and lock washers on main body and one internal earth point of the size M3 X 10L is inside the main body with clamp and lock washer. The terminals re suited for conductors of a cross-section of 4mm².

14) Model Designation:

Model No.	Product	Rating
FE Series	Flameproof Switch	Voltage : 250 VAC Current : 15A

15) Drawings & Documents

Earlier approved drawings and documents are withdrawn and are replaced by following drawings and documents:

Drawing Number	Sheet Nos.	Issue & Rev.	Date	Title
A44 KL 001	01 to 03	05	07.10.2022	Flameproof Enclosure for "FE" series Pressure, pressure difference, temperature, compound and vacuum switches
CM/L-7775906	01	---	21.09.2020	BIS Endorsement Letter
---	01	---	08.01.2022	Undertaking for no design changes

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:

Considering the maximum ambient of +60 °C, the requested temperature class of "T6" is acceptable.





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17) Electrical Rating:

Voltage : 250 VAC, Current : 15Ampere

18) Specific conditions of use:

1. The manufacturer has maintained larger flamepath length ,more stringent gap and more number of threads than that required by the standard. The user must refer to manufacturer before carrying out any repairs or refurbishment to the equipment.

19) Routine test:

The equipment has not been subjected to 4 times overpressure test and hence manufacturer needs to conduct routine pressure test at **11.5bar**.

END OF DOCUMENT



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