



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx KLCS 24.0012X	Page 1 of 3	Certificate history:
Status:	Current	Issue No: 0	
Date of Issue:	2024-08-10		
Applicant:	Duncan Engineering Limited F-33, MIDC, Ranjangaon, Karegaon, Tal-Shirur, Pune Maharashtra Pune 412220 India		
Equipment:	Explosion Proof Solenoid Coil With Terminal Box Assembly, Model: E50N DS1EX X X X XX XXX XX X		
Optional accessory:			
Type of Protection:	Protection by flameproof enclosure "d", protection by encapsulation "m" and dust ignition protection by enclosure "t",		
Marking:	Ex db mb IIC T* Gb Ex tb IIIC T**°C Db IP66/67 (-40°C ≤ Ta ≤ +XX°C) */** - Refer Table B for applicable temperature class/max. surface temperature details in the product description. XX - Refer Table A for applicable higher ambient temperature details in the product description.		

Approved for issue on behalf of the IECEx
Certification Body:

Ravi Paranjpe

Position:

Director (Operations)

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

Karandikar Laboratories Certification Services
Gat No. 142, Boisar Chillar Rd.,
Opp. Union Park, At Betegaon,
Boisar (E), Tal- Palghar
Maharashtra 401501
India





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Page 2 of 3

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Manufacturer: **Duncan Engineering Limited**
F-33, MIDC, Ranjangaon, Karegaon,
Tal-Shirur, Pune
Maharashtra
Pune 412220
India

Manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-1:2014](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-18:2017](#) Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

[IEC 60079-31:2022](#) Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[IN/KLCS/ExTR24.0012/00](#)

Quality Assessment Report:

[IN/KLCS/QAR24.0010/00](#)



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Certificate No.: **IECEx KLCS 24.0012X**

Page 3 of 3

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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Explosion Proof Solenoid Coil With Terminal Box Assembly comprises a cast housing with an integral terminal enclosure and a cover. The enclosure constructed in aluminium cast alloy ADC12, alternate material can be stainless steel casting CF8 or CF8M. The cover on the enclosure provides access to the terminal compartment and is fitted with an O ring and flat gasket to provide ingress protection IP66/67. The cover is secured on the integral terminal enclosure with 4 nos. of M6 X 15L socket head cap screws. Two way terminal blocks are fitted within the terminal enclosure.

Explosion Proof Solenoid Coil With Terminal Box Assembly has a single cable entry. It can be either M20X1.5 P or 1/2" NPT. Coil is wound on a non-metallic bobbin and is fully encapsulated with a thermal fuse within a metallic case. Solenoid coil actuates a mechanical solenoid valve mechanism.

Electrical Rating 110 / 230 VAC, 50 Hz. Or 24 / 48 / 110 VDC.

For Temperature Rating & Model Designation refer to the annex to the IECEx KLCS 24.0012X

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The fastening screws for the cover with spigot joint shall be carbon steel socket head cap screws of property class A2-70 and yield stress of 450 N/mm².
2. The manufacturer has maintained more stringent gaps, larger flamepath length and more number of threads engaged than those specified in the standard IEC 60079-1. The user must refer to manufacturer before carrying out any repairs or refurbishment to the equipment.

Annex:

[ANNEX to IECEx KLCS 24.0012X.pdf](#)



ANNEX to IECEx KLCS 24.0012X, Issue No. 00

Date: 10.08.2024

Temperature rating:

The maximum ambient temperature depends on the maximum power and supply voltage as detailed in table A below;

Table A: Relation between Temperature class / Max. surface temperature and ambient temperature range

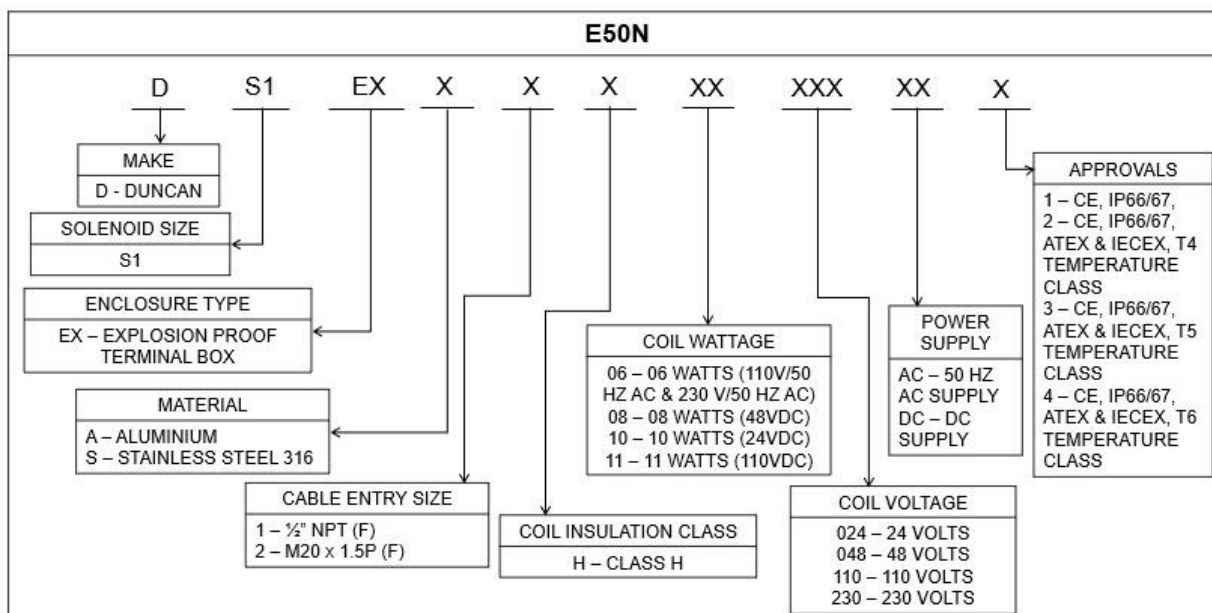
Solenoid Size	Voltage (Max.)	Max. Power (Watts)	Maximum Ambient temperature W.r.t. Temp class / Max. Surface temperature			Use cable and cable glands suitable for below temperatures
			T6 / T85°C	T5 / T100°C	T4 / T125°C	
E50N	110VAC, 230VAC	6W	61°C	76°C	77°C	90°C
	48VDC	8W	49°C	64°C	67°C	90°C
	24VDC	10W	50°C	65°C	66°C	90°C
	110VDC	11W	49°C	64°C	67°C	90°C

The Temp class / Max. Surface temperature depends on the safety fuse installed as detailed in table B below;

Table B: Relation between fuse model and Temp class / Max. Surface temperature

Solenoid Size	Voltage (Max.)	Max. Power (Watts)	Relation between fuse model and Temp class / Max. Surface temperature		
			T6 / T85°C	T5 / T100°C	T4 / T125°C
E50N	110VAC, 230VAC	6W	8085	8103	8103
	48VDC	8W	8098	8115	8115
	24VDC	10W	8085	8103	8103
	110VDC	11W	8098	8115	8115

Model Designation: E50N DS1EX X X X XX XXX XX X



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