



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx ITS 13.0036X Issue No: 1 Certificate history:
Issue No. 1 (2015-06-10)
Status: **Current** Page 1 of 5 Issue No. 0 (2014-06-03)
Date of Issue: **2015-06-10**
Applicant: **STS Motors**
Doulton Road
Cradley Heath
West Midlands
B64 5QB
United Kingdom
Electrical Apparatus: **DC Motor Type E225**
Optional accessory:
Type of Protection: **Flameproof**
Marking:
Ex d I Mb
Ex d IIB T4 Gb
Tamb -40°C to +60°C or +80°C
IECEX ITS 13.0036X

Approved for issue on behalf of the IECEx
Certification Body:

P Moss

Position:

Certification Officer

Signature:
(for printed version)

Date:

10th June 2015

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 the Official IECEx Website.

Certificate issued by:

Intertek Testing & Certification Limited
ITS House, Cleeve Road,
Leatherhead,
Surrey, KT22 7SB
United Kingdom





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Manufacturer: **STS Motors**
Doulton Road
Cradley Heath
West Midlands
B64 5QB
United Kingdom

Additional Manufacturing
location(s):

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 electrical apparatus 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 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0
IEC 60079-1 : 2007-04 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:6

*This Certificate **does not** indicate compliance with electrical 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:

GB/ITS/ExTR13.0039/00 GB/ITS/ExTR13.0039/01

Quality Assessment Report:

GB/ITS/QAR14.0003/00



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The E225 is a flameproof DC Motor that can be supplied in various sizes dependant on rating (voltage/output power/duty cycle).

The motor comprises of motor frame, C.E (Comm End) cover and terminal box manufactured from cast iron to BS EN 1563 grade EN-GJS-500-7, D.E (Drive End) cover and comm inspection doors manufactured from cast iron to BS EN 1561 grade EN-GJL-250, terminal box lid manufactured from S275JR steel to BS EN 10025 and a D.E inside cap manufactured from EN3 steel. The enclosure comprises of the following flamepaths:

D.E inside cap to D.E cover – flange with interrupted holes.

D.E cover to frame – flange with interrupted holes.

C.E cover to frame – flange with interrupted holes.

Terminal box to C.E cover – flange with interrupted holes.

Terminal box lid to terminal box – flange with interrupted holes.

Comm inspection door to C.E cover – flange with interrupted holes.

Shaft to D.E inside cap – cylindrical (with rolling element bearings).

Pole and Interpole Securing holes (32 max) – threaded.

Cable entries (3 max) – threaded.

The motor has the following overall dimensions: Overall Length – 660mm to 720mm (dependant on armature core length), Overall Width – 440mm, Overall Height – 575mm.

Both internal and external earthing points are provided and must be connected.

Variants covered by this certificate are rated as follows:

Type	Voltage	Output (kW)	Duty	Ambient temperature range
E225	110-130Vdc	6.5kW	S2 60m	-40°C to +60°C
E225	110-130Vdc	4.5kW	S1	-40°C to +60°C
E225	110-130Vdc	3.0kW	S1	-40°C to +80°C

Motors have been certified for a maximum ambient temperature range of -40°C to +80°C. Motors may be marked with any minimum and maximum ambient temperature providing it falls within this range.



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CONDITIONS OF CERTIFICATION: YES as shown below:

1. Temperatures at the cable entry or branching point could reach +93.86°C or +109.76°C respectively – suitably rated cable must be utilized.
2. No modifications must be made to the flamepaths of the unit without consultation of the manufacturers drawing.
3. Any fasteners used to maintain the type of protection (Ex d) must be of property class 8.8 with minimum tensile strength of 800MPa.
4. Motors marked with a duty cycle must be operated in accordance with the requirements of IEC 60034-1 (Rotating Electrical Machines, Part 1: Rating and Performance).
5. Motors marked with a lower ambient of $\leq -30^{\circ}\text{C}$ must use L627 grease (or equivalent to cover the operating temperature range of the motor).

Routine Test:

A routine overpressure test in accordance with IEC 60079-1:2007 Clause 16.1 shall be carried out on all motors, including shaft assembly, at a pressure of 494.85psi (34.13bar) for a period of between 10 and 60 seconds and must be recorded. There shall be no deformation or damage to the enclosures.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1 Increase in upper ambient temperature range from +60°C to +80°C

Annex:

Annex to IECEx ITS 13.0036X issue 1.pdf