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 BAS 17.0032X

Issue No: 1

Certificate history:
Issue No. 1 (2018-02-01)
Issue No. 0 (2017-10-31)

Status: **Current**

Date of Issue: **2018-02-01**

Applicant: **Don Electronics Limited**
Westfield Industrial Estate
Kirk Lane
Yeadon
Leeds
LS19 7LX
United Kingdom

Equipment: **Range of TS Touch Switches**
Optional accessory:

Type of Protection: **Protection by Enclosure**

Marking:
Ex ta IIIC T(see schedule)°C Da

Approved for issue on behalf of the IECEx Certification Body: R S Sinclair

Position: Technical Manager

Signature:
(for printed version)

Date:

P.P. M Powney 2/2/18

M Powney
Certification Manager

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:

SGS Baseefa Limited
Rockhead Business Park
Staden Lane
Buxton, Derbyshire, SK17 9RZ
United Kingdom

IECEx Certificate of Conformity

Certificate No: IECEx BAS 17.0032X Issue No: 1

Date of Issue: **2018-02-01** Page 2 of 4

Manufacturer: **Don Electronics Limited**
Westfield Industrial Estate
Kirk Lane
Yeadon
Leeds
LS19 7LX
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 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*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/BAS/ExTR17.0077/00 GB/BAS/ExTR18.0025/00

Quality Assessment Report:

GB/BAS/QAR07.0005/10

IECEx Certificate of Conformity

Certificate No: IECEx BAS 17.0032X Issue No: 1

Date of Issue: 2018-02-01 Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The TS Touch Switch sensors consist of a metal enclosure complete with switch circuit with an internal cavity with a strain gauge located in the centre of the enclosure, and a solid state relay that allows the switch to operate an external circuit, an LED and internal potentiometer.

The TS circuits are mounted inside a 2mm thick painted steel enclosure. The enclosure is in the form of a small cylinder, approximately 52mm diameter by 33mm deep, open at one end. The open end has an 86mm diameter external flange with four equally spaced 6.5mm (approx) holes on a 73.54mm PCD to allow the enclosure to be mounted in position.

The open end of the enclosure is sealed with a cover as follows:

TS cover is a ø86mm x 2mm thick stainless steel plate with fixing holes aligned with the enclosure flange that is secured to the enclosure flange using rivets. The cover is sealed to the enclosure flange with silicone sealant. The cover also includes a ø50mm x 19mm thick stainless steel button that is secured to the cover by a circlip and sealed by an internal ø34mm va38 viton or NBR 'v' seal.

Cable entry point into the enclosure:

Electrical connection to the TS is via an integral cable/flying lead which enters the enclosure through a hole in the side fitted with a rubber gland or alternatively the enclosure can be supplied with an integral ½"NPT threaded conduit entry connection so that the flying leads can be mechanically protected using suitable conduit. The integral cable passes through either a tapered rubber bung seal that is moulded on to the cable or through a grommet style rubber bung seal. The bung is pressed in to the hole and further sealed with silicone sealant. The plain hole entry is ø11.5mm for the tapered bung seal or ø8mm for the grommet seal. The bung is secured in place to prevent cable movement by the epoxy resin used to seal other holes in the enclosure. The optional conduit entry is press fitted to the outside of the enclosure wall without affecting the sealing method.

The holes in the closed end of the enclosure are sealed as follows:

The closed end of the TS enclosure has two small holes to allow access to a sealed potentiometer for the adjustment of the sensitivity of the device and a sealed LED which indicates pressure detection on the button. The base of the enclosure is filled with epoxy resin to seal around the label fixing and LED. The enclosure also has a small hole that the button fixing shaft passes through via a tube and this shaft is secured by a stainless steel knob and silicone grease.

Circuits & earth connections:

The circuits in the TS are protected two Zener diodes, fuse and 76°C or 102°C thermal fuse protection in the main circuit, and the circuit input is via a self-resetting 150mA trip and a varister device.

An internal earth connection is via one of the conductors in the integral cable, and the conductor is soldered to one of the PCB's fixing screws. An external earth facility is provided via one of the M5 or M6 flange mounting screws and suitable ring crimp lug and accessories.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The supply circuit of the system where the equipment is connected shall be protected by a suitably rated fuse capable of interrupting a prospective short circuit current of 10 kA.
2. The Touch Switch shall be connected to a suitable external earth via the mounting arrangement or via the flange mounting screws and a suitable ring crimp and accessories.
3. The integral flying lead/cable shall be terminated in a suitably certified enclosure or in a safe area.

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Certificate No: IECEx BAS 17.0032X Issue No: 1

Date of Issue: **2018-02-01**

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

Variation 1.1

To include a minor drawing modification to the label drawings.

ExTR: **GB/BAS/ExTR18.0025/00**	File Reference: **18/0097**

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Certificate No.: IECEx BAS 17.0032X

Issue No: 0

Certificate history:
Issue No. 0 (2017-10-31)

Status: **Current**

Date of Issue: **2017-10-31**

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Westfield Industrial Estate
Kirk Lane
Yeadon
Leeds
LS19 7LX
United Kingdom

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Optional accessory:

Type of Protection: **Protection by Enclosure**

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Ex ta IIIC T(see schedule)°C Da

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Position: Technical Manager

Signature:
(for printed version)

Date: 31-10-17

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