



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 SIR 10.0009X** issue No.:2

Status: **Current**

Certificate history:
Issue No. 2 (2016-12-12)
Issue No. 1 (2013-9-10)
Issue No. 0 (2010-7-13)

Date of Issue: **2016-12-12** Page 1 of 4

Applicant: **ITT Aerospace Controls**
28150 Industry Drive
Valencia
CA 91355
United States of America

Equipment: **057-07** Range of Electrical Snap-Switch Assemblies**
Optional accessory:


Type of Protection: **Flameproof and Dust**

Marking: Ex db IIC T* Gb
Ex tb IIIC T*°C Db IP6X
(Ta = -40°C to +**°C) (* A Max)
* These values are dependent upon the Type of Electrical Snap-Switch Assembly

Approved for issue on behalf of the IECEx Certification Body: N Jones

Position: Certification Manager

Signature:
(for printed version)



Date: 2016-12-12

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](http://www.iecex.com).

Certificate issued by:

SIRA Certification Service
CSA Group
Unit 6, Hawarden Industrial Park
Hawarden, Deeside, CH5 3US
United Kingdom

sira
CERTIFICATION





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Manufacturer: **ITT Aerospace Controls**
28150 Industry Drive
Valencia
CA 91355
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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 : 2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition: 7.0
IEC 60079-31 : 2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition: 2

*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/SIR/ExTR10.0163/00](#)

[GB/SIR/ExTR13.0247/00](#)

[GB/SIR/ExTR16.0304/00](#)

Quality Assessment Report:

[GB/SIR/QAR10.0016/00](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

057-07 Range of Electrical Snap-Switch Assemblies**

For complete description and marking requirements for the 057-07** Range of Electrical Snap-Switch Assemblies, see attached annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- 1 Each Electrical Snap-Switch Assembly shall be installed such that the equipment wiring is protected from mechanical damage. The equipment wiring must not be subjected to tension or torque. If it is to be terminated within a potentially explosive atmosphere, a suitably certified termination facility must be used.



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

Issue 1 – this Issue introduced the following changes:

1. The introduction of a new model, the 057-0917 Electrical Snap-Switch Assembly, this model is similar to the 057-0772 Electrical Snap-Switch Assembly.

Markings applicable to gas

Part No.	Description	Applicable marking
057-0917	Single Pole Double Throw, 1 Amp, Free leads	Ex db IIC T6 (Ta = -40°C to +75°C) (1 A Max)

Markings applicable to dust

Part No.	Description	Applicable marking
057-0917	Single Pole Double Throw, 1 Amp, Free leads	Ex tb IIIC T85°C Db IP6X (Ta = -40°C to +75°C) (1 A Max)

2. The drawings associated with the previous Issues were rationalised to form a new, definitive list.

Issue 2 – this Issue introduced the following changes:

1. The reference to ITT Aerospace Controls, 242 Building, Ave Washington No 3701, Edif. 8, Parque Industrial Las Americas, Chihuahua, Mexico was removed from the Addition Manufacturing location(s).
2. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-0:2007, IEC 60079-1:2007 and IEC 60079-31:2008 were replaced by IEC 60079-0:2011, IEC 60079-1:2014 and IEC 60079-31:2013, the markings and those applicable to Issue 2 were updated accordingly and the Condition of Manufacture was amended to recognise the new standard.

Annexe to: IECEx SIR 10.0009X Issue 2

Applicant: ITT Aerospace Controls

Apparatus: 057-07** Range of Electrical Snap-Switch Assemblies



The 057-07** Range of Electrical Snap-Switch Assemblies as detailed in Figures 1 and 2, are hermetically sealed pressure or temperature switches that are activated by a Belleville spring that snaps at a pre-determined force. They are manufactured from stainless steel and are of basic cylindrical shape with a hexagonal section in the middle. One end contains the actuator assembly and the other end has a 1/2"-14 NPT threaded portion that contains an encapsulant through which the wiring for connection to external circuits passes.



Figure 1:
057-076* Electrical Snap-Switch

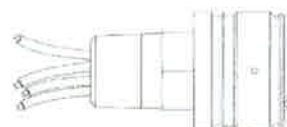


Figure 2:
057-077* Electrical Snap-Switch

Markings applicable to gas		
Part No.	Description	Applicable marking
057-0760	Single Pole Double Throw, 5 Amp or 11 Amp, Halogen-free cable	Ex db IIC T6 Gb (Ta = -40°C to +70°C) (5 A Max) Ex db IIC T6 Gb (Ta = -40°C to +60°C) (11 A Max)
057-0761	Double Pole Double Throw, 5 Amp or 11 Amp, Halogen-free cable	Ex db IIC T6 Gb (Ta = -40°C to +70°C) (5 A Max) Ex db IIC T6 Gb (Ta = -40°C to +45°C) (11 A Max)
057-0762	Single Pole Double Throw, 1 Amp, Halogen-free cable	Ex db IIC T6 Gb (Ta = -40°C to +70°C) (1 A Max)
057-0763	Double Pole Double Throw, 1 Amp, Halogen-free cable	Ex db IIC T6 Gb (Ta = -40°C to +70°C) (1 A Max)
057-0770	Single Pole Double Throw, 5 Amp or 11 Amp, Free leads	Ex db IIC T6 Gb (Ta = -40°C to +70°C) (5 A Max) Ex db IIC T5 Gb (Ta = -40°C to +75°C) (11 A Max)
057-0771	Double Pole Double Throw, 5 Amp or 11 Amps, Free leads	Ex db IIC T6 Gb (Ta = -40°C to +70°C) (5 A Max) Ex db IIC T4 Gb (Ta = -40°C to +65°C) (11 A Max)
057-0772	Single Pole Double Throw, 1 Amp, Free leads	Ex db IIC T6 Gb (Ta = -40°C to +70°C) (1 A Max)
057-0773	Double Pole Double Throw, 1 Amp, Free leads	Ex db IIC T6 Gb (Ta = -40°C to +70°C) (1 A Max)
Markings applicable to dust		
Part No.	Description	Applicable marking
057-0760	Single Pole Double Throw, 5 Amp or 11 Amp, Halogen-free cable	Ex tb IIIC T85°C Db IP6X (Ta = -40°C to +70°C) (5 A Max) Ex tb IIIC T85°C Db IP6X (Ta = -40°C to +60°C) (11 A Max)
057-0761	Double Pole Double Throw, 5 Amp or 11 Amp, Halogen-free cable	Ex tb IIIC T85°C Db IP6X (Ta = -40°C to +70°C) (5 A Max) Ex tb IIIC T85°C Db IP6X (Ta = -40°C to +45°C) (11 A Max)
057-0762	Single Pole Double Throw, 1 Amp, Halogen-free cable	Ex tb IIIC T85°C Db IP6X (Ta = -40°C to +70°C) (1 A Max)
057-0763	Double Pole Double Throw, 1 Amp, Halogen-free cable	Ex tb IIIC T85°C Db IP6X (Ta = -40°C to +70°C) (1 A Max)
057-0770	Single Pole Double Throw, 5 Amp or 11 Amp, Free leads	Ex tb IIIC T85°C Db IP6X (Ta = -40°C to +70°C) (5 A Max) Ex tb IIIC T100°C Db IP6X (Ta = -40°C to +75°C) (11 A Max)
057-0771	Double Pole Double Throw, 5 Amp or 11 Amps, Free leads	Ex tb IIIC T85°C Db IP6X (Ta = -40°C to +70°C) (5 A Max) Ex tb IIIC T135°C Db IP6X (Ta = -40°C to +65°C) (11 A Max)
057-0772	Single Pole Double Throw, 1 Amp, Free leads	Ex tb IIIC T85°C Db IP6X (Ta = -40°C to +70°C) (1 A Max)
057-0773	Double Pole Double Throw, 1 Amp, Free leads	Ex tb IIIC T85°C Db IP6X (Ta = -40°C to +70°C) (1 A Max)

The Manufacturer shall comply with the following condition of manufacture:

- i. Each Electrical Snap-Switch Assembly enclosure shall be subjected to a routine overpressure test of at least 9.3 bar for a period of at least 10 s as required by IEC 60079-1:2014 Clause 16. There shall be no permanent deformation or damage to the enclosure.