



EU-TYPE EXAMINATION CERTIFICATE

Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

Certificate Number: **Sira 10ATEX1017X** Issue: **6**

Equipment: **057-07** Range of Electrical Snap-Switch Assemblies
057-0917 Electrical Snap-Switch Assembly**

Applicant: **ITT Aerospace Controls**

Address: **28150 Industry Drive
Valencia
California 91355
USA**

This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN IEC 60079-0:2018/AC:2020 EN 60079-1:2014/AC:2018 EN 60079-31:2014

If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

The marking of the equipment shall include the following:



II 2 G D

Ex db IIC T* Gb (Ta = -40°C to +*°C) (* A Max)

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, refer to Certificate Schedule

Signed: J A May

Title: Director of Operations



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13 DESCRIPTION OF EQUIPMENT

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
Drawing of a 057-076*
Electrical Snap-Switch

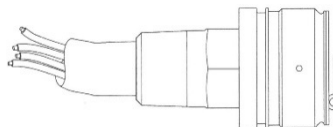
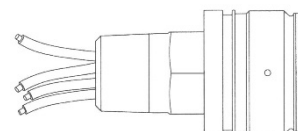


Figure 2
Drawing of a 057-077*
Electrical Snap-Switch



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)



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Part No.	Description	Applicable marking
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)

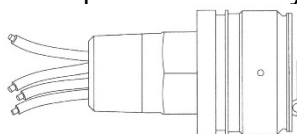
Variation 1 - This variation introduced the following change:

- The recognition of the correct status of eight previously certified drawings; this amendment is administrative and no technical modifications are involved.

Variation 2 - This variation introduced the following changes:

- 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.

Figure 3
Drawing of a 057-0917
Electrical Snap-Switch



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)

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

Variation 3 - This variation introduced the following changes:

- The applicant's name was changed from ITT Control Technologies to ITT Aerospace Controls.
- The marking on the certificate was modified to correct typographical oversights related to the EPLs.
- The overall length of the main body was increased from 58.42 mm up to a maximum of 64 mm.
- The thread length on the external mounting thread of the body was increased from 20.7 mm to 22.8 mm.
- Minor editorial changes to the certification drawings were recognised, these do not affect the type of protection provided by the equipment and include the rearrangement of the Notified Bodies/Agencies Logos.
- The reference to ITT Control Technologies, 242 Building, Ave Washington No 3701, Edif. 8, Parque Industrial Las Americas, Chihuahua, Mexico was removed from the Applicant on page 1.



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Variation 4 - This variation introduced the following change:

- i. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2009, EN 60079-1:2007 and EN 60079-31:2008 were replaced by EN 60079-0:2012/A11:2013, EN 60079-1:2014 and EN 60079-31:2014; the markings in section 12 and those applicable to Variation 2 were updated accordingly and the Condition of Manufacture was amended to recognise the new standards.

Variation 5 - This variation introduced the following changes:

- i. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, the standards previously listed, EN 60079-0:2012/A11:2013 and EN 60079-1:2014, are replaced by EN IEC 60079-0:2018/CORR1:2020 and EN 60079-1:2014/CORR1:2018.
- ii. To recognize minor drawing modifications. These amendments are administrative or involve changes to the design that do not affect the aspects of the product that are relevant to explosion safety.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated CSA Group Reports and Certificate History

Issue	Date	Report number	Comment
0	28 June 2010	R18834A/00	The release of prime certificate.
1	6 January 2011	R23968A/00	The introduction of Variation 1.
2	10 September 2013	R30672A/00	This Issue covers the following changes: <ul style="list-style-type: none">• The date associated with Issue 1 was corrected. The introduction of Variation 2.
3	13 August 2015	R70040099A	The introduction of Variation 3.
4	12 December 2016	R70041483A	This Issue covers the following changes: <ul style="list-style-type: none">• EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i>• The introduction of Variation 4.



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Issue	Date	Report number	Comment
5	18 December 2020	R80066626A	Transfer of certificate Sira 10ATEX1017X from Sira Certification Service to CSA Group Netherlands B.V.
6	17 March 2022	R80056845A	The introduction of Variation 5

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

- 15.1 Each 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.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 CONDITIONS OF MANUFACTURE

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Group Netherlands B.V. certificates.
- 17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.
- 17.3 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 EN 60079-1:2014 Clause 16. There shall be no permanent deformation or damage to the enclosure.



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Certificate Annexe



Certificate Number: Sira 10ATEX1017X

Equipment: 057-07** Range of Electrical Snap-Switch Assemblies
057-0917 Electrical Snap-Switch Assembly

Applicant: ITT Aerospace Controls

Issues 0 & 1 (For clarity, the drawing lists that were associated with these Issues were replaced by the rationalised version in Issue 2)

Issue 2

Drawing	Sheets	Rev.	Date (Stamp)	Title
057-0760	1 of 1	C	15 Jan 10	Electrical Assy
057-0761	1 of 1	C	15 Jan 10	Electrical Assy
057-0762	1 of 1	C	15 Jan 10	Electrical Assy M-Option
057-0763	1 of 1	C	15 Jan 10	Electrical Assy M-Option
057-0770	1 of 1	C	20 Dec 10	Electrical Assy
057-0771	1 of 1	D	15 Jan 10	Electrical Assy
057-0772	1 of 1	C	15 Jan 10	Electrical Assy M-Option
057-0773	1 of 1	C	15 Jan 10	Electrical Assy M-Option
058-0157	1 of 2	J	20 Dec 10	Electrical Caps
058-0157	2 of 2	J	20 Dec 10	Electrical Caps
S057-0760	1 of 1	E	05 Jul 10	Electrical Assy
S057-0761	1 of 1	E	05 Jul 10	Electrical Assy
S057-0762	1 of 1	E	05 Jul 10	Electrical Assy
S057-0763	1 of 1	E	05 Jul 10	Electrical Assy
S057-0770	1 of 1	E	05 Jul 10	Electrical Assy
S057-0771	1 of 1	F	05 Jul 10	Electrical Assy
S057-0772	1 of 1	F	05 Jul 10	Electrical Assy
S057-0773	1 of 1	F	05 Jul 10	Electrical Assy
057-0917	1 of 1	B	22 Jul 13	Electrical Assembly

Issue 3

Drawing	Sheets	Rev.	Date (Stamp)	Title
057-0760	1 of 1	D	06 Aug 15	Electrical Assy
057-0761	1 of 1	D	06 Aug 15	Electrical Assy
057-0762	1 of 1	D	06 Aug 15	Electrical Assy M-Option
057-0763	1 of 1	D	06 Aug 15	Electrical Assy M-Option
057-0770	1 of 1	D	06 Aug 15	Electrical Assy
057-0771	1 of 1	E	06 Aug 15	Electrical Assy
057-0772	1 of 1	D	06 Aug 15	Electrical Assy M-Option
057-0773	1 of 1	D	06 Aug 15	Electrical Assy M-Option
058-0157	1 to 2	M	06 Aug 15	Electrical Caps

Issue 4

Drawing	Sheets	Rev.	Date (Stamp)	Title
058-0157	1 of 2	P	18 Sep 16	Electrical Caps
058-0157	2 of 2	P	18 Sep 16	Electrical Caps

Issue 5 – No new drawings were introduced.



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Certificate Number: Sira 10ATEX1017X

Equipment: 057-07** Range of Electrical Snap-Switch Assemblies
057-0917 Electrical Snap-Switch Assembly

Applicant: ITT Aerospace Controls

Issue 6

Drawing	Sheets	Rev.	Date (Stamp)	Title
058-0157	1 to 2	R	21 Apr 21	Electrical caps
057-0760	1 of 1	E	21 Apr 21	Electrical Assy
057-0761	1 of 1	E	21 Apr 21	Electrical Assy
057-0762	1 of 1	E	21 Apr 21	Electrical Assy M-Option
057-0763	1 of 1	E	21 Apr 21	Electrical Assy M-Option
057-0770	1 of 1	E	21 Apr 21	Electrical Assy
057-0771	1 of 1	F	21 Apr 21	Electrical Assy
057-0772	1 of 1	E	21 Apr 21	Electrical Assy M-Option
057-0773	1 of 1	E	21 Apr 21	Electrical Assy M-Option
S057-0760	1 of 1	F	21 Apr 21	Electrical Assy
S057-0761	1 of 1	F	21 Apr 21	Electrical Assy
S057-0762	1 of 1	F	21 Apr 21	Electrical Assy
S057-0763	1 of 1	F	21 Apr 21	Electrical Assy
S057-0770	1 of 1	F	21 Apr 21	Electrical Assy
S057-0771	1 of 1	G	14 May 21	Electrical Assy
S057-0772	1 of 1	G	21 Apr 21	Electrical Assy
S057-0773	1 of 1	G	14 May 21	Electrical Assy



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