


Report No.: 382770900

Notification No. DEKRA 20ATEXQ0070, issue 0

IECEX QAR No.: NL/DEK/QAR20.0009/00

Assessment in accordance with the requirements of:	ATEX <input checked="" type="checkbox"/> IECEx <input checked="" type="checkbox"/>
Manufacturer:	Spike Electric Controls 5914 E. Sam Houston Pwky S. Bldg. 3 Houston, TX 77034 USA
Production site: (Audited)	Spike Electric Controls 5914 E. Sam Houston Pwky S. Bldg. 3 Houston, TX 77034 USA
Number of employees:	A total of 32 employees on site, 10 involved in production of Ex products.
Type of audit:	Initial Assessment <input checked="" type="checkbox"/> Re-Assessment <input type="checkbox"/> Surveillance Assessment <input type="checkbox"/> Special Audit <input type="checkbox"/>
Electrical equipment with type(s) of protection of:	d <input checked="" type="checkbox"/> e <input checked="" type="checkbox"/> i <input type="checkbox"/> m <input type="checkbox"/> n <input type="checkbox"/> o <input type="checkbox"/> op <input type="checkbox"/> p <input type="checkbox"/> q <input type="checkbox"/> t <input checked="" type="checkbox"/> 60079-30-1 <input type="checkbox"/> ATEX 114: Protective system <input type="checkbox"/> ATEX 114: Article 1(b) Safety, controlling or regulating device <input type="checkbox"/>
solely provided by the supplier:	d <input type="checkbox"/> e <input type="checkbox"/> i <input checked="" type="checkbox"/> m <input checked="" type="checkbox"/> n <input type="checkbox"/> o <input type="checkbox"/> op <input type="checkbox"/> p <input type="checkbox"/> q <input type="checkbox"/> t <input type="checkbox"/> 60079-30-1 <input type="checkbox"/>
Ex h for Non-electrical type(s) of protection:	b <input type="checkbox"/> c <input type="checkbox"/> k <input type="checkbox"/>
Lead Assessor: (name)	Z. K. Fosse
Lead Assessor: (Signature)	

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Form 180
Version 15 (2020-03)

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1. Summary Report**Summary of observations:**

The manufacturer's production site operates an ISO 9001 : 2015 certified quality management system.

To fulfil the requirements of the international standard (EN) ISO/IEC 80079-34 : 2018 (2020) and Directive 2014/34/EU– Annex IV and VII, three items raised which are mentioned as nonconformities below.

Non-Conformities

The following three nonconformities were raised during the audit:

NCR	Standard and clause
1.	80079-34 cl 4.1 & 8.2.3
2.	80079-34 8.7 c)
3.	80079-34 8.7 f)

Individual non-conformities are recorded on the non-conformity reports

Deviation from the audit plan and reasons:

None.

Significant issues impacting on the audit program:

None.

Significant changes that affect the management system since the last audit:

None.

Statement on the conformity and the effectiveness of the management system:

The conformity and effectiveness of the Spike Electric management system, based on the results of internal audits and management reviews, is confirmed, the audit objectives have been fulfilled and the scope is sufficiently covered by the quality management system. For details, see chapter 3 "Assessor's report".

Ex production has not yet started, the products are designed and certified by Cooper Crouse-Hinds with Spike Electric acting as a manufacturing site and/or local assembler.

Disclaimer

Auditing is based on a sampling process of the available information at the time of the assessment. DEKRA Certification B.V. is not responsible nor can be held accountable for activities, conditions, operations, actions or failure of actions by facility staff that may occur or not occur after the auditor(s) leave the facility.

Audit Team Leader Recommendations

– ATEX Notification

– IECEx 02 QAR

to be issued/maintained

to be issued/maintained following receipt of satisfactory documentary evidence supporting effective corrective action. Corrective action to be verified at next audit.

- to be issued/maintained following a satisfactory follow-up visit** and verification that corrective actions have been effectively documented and implemented.
- to be refused/suspended** A further complete assessment to be conducted.
- to be refused/suspended** close the application/withdraw the notification/Report and inform other ATEX notified bodies/IECEx 02 Secretary.

Accepted by ATEX Notified Body / IECEx 02 ExCB:

DEKRA Certification B.V.

29 September 2020

R. Schuller
EX Certification Manager**2. Audit Data****2.1 Scope of Audit:**

Products certified per IECEx Certificate of conformity and/or EU- or EC-Type examination certificates as listed in the online IECEx QAR or Schedule to ATEX notification, with the types of protection as detailed therein.

- **Type A** initial assessment/~~reassessment~~ of manufacturer with a certified Quality Management System
- **Type B** initial assessment/~~reassessment~~ of manufacturer without a certified Quality Management System
- **Type C** surveillance of manufacturer with a certified Quality Management System
- **Type D** surveillance of manufacturer without a certified Quality Management System
- **Type E** integrated (NBR) ISO 9001/ EN ISO/IEC 80079-34 / ISO/IEC 80079-34 / Directive No 179 assessment, reassessment or surveillance
- **Type F** special audit : Expanding scope / Short-notice audits

The Quality Management System has been approved by DEKRA to the Quality Management System Standard ISO 9001 : 2015. The ISO 9001 : 2015 certificate 112217.00 is valid until 26 April 2023. The manufactured ATEX/IECEx products are within the scope of the ISO 9001 : 2015 certificate. Surveillance audits are carried out xx time(s) a year. The last audit was carried out on 18-20 February 2020. The audit report, including any nonconformity raised during the audit and corresponding corrective actions, has been evaluated during the audit.

- Stage 1 audit findings report sent on 25 June 2020.
- Stage 1 assessment carried out and finalized with satisfactory results.
- A digital copy of the ISO 9001 certificate issued by a body accredited by an IAF signatory organization is stored as evidence.
- A digital copy of the last ISO 9001 audit report is stored as evidence.
- A digital copy of the organization diagram is stored as evidence.
- The organization diagram has not been changed since last audit.

The (mis)use of marks and/or any other reference to certification is assessed. No discrepancy was found.

- The manufacturing does not operate in shifts.
- The manufacturing operates in shifts and each shift uses the same procedures, work instructions and qualified persons, therefore it is considered not necessary to audit each shift.
- The manufacturing operates in shifts and all shifts have been assessed during the audit.

2.2 Audit Criteria

To verify if the requirements of Directive 2014/34/EU Annex IV and/or VII and/or IECEx 02 rules in relation to existing (or shortly to be issued) ATEX Annex III or IECEx 02 certificates are met, by using the following standard(s):

(EN) ISO/IEC 80079-34 : 2018 – (2020) Explosive atmospheres – part 34: Application of quality systems for equipment manufacture

Reference documents used:

EN ISO 9001 : 2015 - Quality management systems – Requirements

Objectives of the audits:

The following audit objectives are accomplished by the audit:

- determination of the conformity of the management system (including management system requirements supporting conformity of the product), or parts of it, with the audit criteria as stated;
- determination of the ability of the management system to ensure the applicable requirements in accordance with Directive 2014/34/EU and/or IECEx 02 rules are met;
- determination of the effectiveness of the management system;
- as applicable, identification of areas for potential improvement of the management system;
- determination of the conformity of the product with the type described in the EC- or EU-Type Examination Certificate and/or IECEx Certificate of conformity and with the requirements of Directive 2014/34/EU and/or IECEx rules which apply to it;
- determination of the appropriate use of marks.

2.3 Date(s) of Audit:

Stage 1 audit 25 June 2020

Stage 2 audit: 13 August 2020

Number of man-days on-site:

1 man-day

2.4 Composition of Audit Team:

Name	Position	Role in Audit (Sole Auditor, Team Leader, Auditor, Technical Specialist, etc)
Zach Fosse	Lead Assessor	Sole Auditor / Team Leader

2.5 Interviewed representatives of manufacturer (auditees):

Name	Position	Opening meeting	Closing meeting
Marco Alanis	Quality Manager	☒	☒
Jack Bebow	Product Manager	☒	☒

2.6 Critical Suppliers: (List critical suppliers reviewed during audit of supplier evaluation)

Name	Item or Service	QMS Certificate(s)
Eaton-Crouse Hinds	Ex d, e, t enclosures	ATEX, IECEx
Others to be verified next audit		

2.7 Manufacturers Documentation: *(List manufactures documentation related to this Quality Audit Report)*

	Document No.	Document Name	Rev.	Date
<input type="checkbox"/>	QP.0100	Quality Manual	1	2020-05-20
<input type="checkbox"/>	QP.0715	Calibration	1	2020-05-20
<input type="checkbox"/>	QP.0720	Competence and Awareness	1	2020-05-20
<input type="checkbox"/>	QP.0740	Communication, Participation, Consultation	1	2020-05-20
<input type="checkbox"/>	QP.0750	Documented Information	1	2020-05-20
<input type="checkbox"/>	QP.0750-S1	ATEX Documented Information Supplement	0	2020-05-20
<input type="checkbox"/>	QP.0820	Sales Order Entry	1	2020-05-20
<input type="checkbox"/>	QP.0840	Purchasing	1	2020-05-20
<input type="checkbox"/>	QP.0840-S1	ATEX Purchasing Supplement	0	2020-05-20
<input type="checkbox"/>	QP.0850	Operational Control	0	2020-05-20
<input type="checkbox"/>	QP.0853	Customer Property	1	2020-05-20
<input type="checkbox"/>	QP.0860	Inspection and Testing	1	2020-05-20
<input type="checkbox"/>	QP.0870	Control of Nonconforming Product	1	2020-05-20
<input type="checkbox"/>	QP.0870-S1	Product Recall	0	2020-05-20
<input type="checkbox"/>	QP.0870-S2	Concessions and Waivers	0	2020-05-20
<input type="checkbox"/>	QP.0920	Internal Audits	1	2020-05-20
<input type="checkbox"/>	QP.0930	Management Review	1	2020-05-20
<input type="checkbox"/>	PL.0520	Quality Policy	0	-

Note: An is included before the title of documents that are new or revised at an up- issue of the report.

2.8 Manufacturers Ex Certificates of Conformity:

Ex Certificate No.	Short description of Ex equipment	Ex protection	Routine test required	Certificate checked
ITS 14ATEX18073 X IECEx ETL 14.0021X	ECP and EJB enclosures	Ex db IIB+H ₂ Gb Ex tb IIIC Db	Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/>
BVS 16ATEXE096 X IECEx BVS 16.0062X	S-TB-T	Ex eb IIC Gb Ex tb IIIC Db	Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/>
BVS 16ATEXE099 X IECEx BVS 16.0065X	N-TB-T	Ex eb IIC Gb Ex tb IIIC Db	Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/>
BVS 16ATEXE115 X IECEx BVS 16.0080X	Ex-Cell-T & XL-T	Ex eb IIC Gb Ex tb IIIC Db	Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/>
IECEx BVS 20.0029X	S-TB	Ex eb IIC Gb Ex tb IIIC Db	Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/>
PTB 02ATEX1014	Ex-Cell, XCL	Ex eb IIC Gb Ex tb IIIC Db	Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/>
PTB 04ATEX1015	STB & NXT	Ex eb IIC Gb Ex tb IIIC Db	Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/>

*Others as listed on the QAR

3. Assessor's Report

(EN) ISO/IEC 80079-34 requirements:

Clause 4 - Context of the organization

Clause	Description	Reference documents	Audit findings	NCR
4.1	Understanding the organization and its context	DEKRA ISO 9001 Certificate: 112217.00 DEKRA ISO Stage 2 Audit report PL.0520 QP.0100	The context of the organization is to ensure that any Ex Product is in accordance with its certificate and technical documentation. Ex Certificates are held by Eaton Crouse-Hinds, Spike Electrical acts as a local assembler and manufacturing site. The quality system is certified to ISO 9001 : 2015 by DEKRA, who is accredited by an IAF signatory. There were no non-conformances issued during the last ISO audit. At the time of audit, Spike did not have the full list of Ex certificates, assembly manuals or critical Ex documents from Crouse-Hinds. Ex production had not yet begun. Spike received the list of certificates and assembly instructions, NC closed.	1
4.2	Understanding the needs and expectations of interested parties		Manufacturers ISO 9001 QMS complies.	
4.3	Determining the scope of the quality management system		Manufacturers ISO 9001 QMS complies.	
4.4	Quality management system and its processes	QP.0100	The quality management system ensures that the Ex Product conforms to the type described in the certificate and the technical documentation. Compliance to the requirements of ISO/IEC 80079-34 is defined.	

Clause 5 - Leadership

Clause	Description	Reference documents	Audit findings	NCR
5.1	Leadership and commitment		Manufacturers ISO 9001 QMS complies.	
5.1.1	General		Manufacturers ISO 9001 QMS complies.	
5.1.2	Customer focus		Manufacturers ISO 9001 QMS complies.	
5.2	Policy			
5.2.1	Establishing the quality policy		Manufacturers ISO 9001 QMS complies.	

Clause	Description	Reference documents	Audit findings	NCR
5.2.2	Communicating the quality policy		Manufacturers ISO 9001 QMS complies.	
5.3	Organizational roles, responsibilities and authorities	QP.0100 Memo – Ex Authorized Person Appointment.	The Ex-authorized persons are Product Manager [Jack Bebow] and Quality Manager [Marco Alanis]. All required responsibilities and authorities are defined and have been verified with satisfactory results.	

Clause 6 - Planning

Clause	Description	Reference documents	Audit findings	NCR
6.1	Actions to address risks and opportunities		Manufacturers ISO 9001 QMS complies.	
6.2	Quality objectives and planning to achieve them		Manufacturers ISO 9001 QMS complies.	
6.3	Planning of changes		Manufacturers ISO 9001 QMS complies.	

Clause 7 - Support

Clause	Description	Reference documents	Audit findings	NCR
7.1	Resources			
7.1.1	General		Manufacturers ISO 9001 QMS complies.	
7.1.2	People		Manufacturers ISO 9001 QMS complies.	
7.1.3	Infrastructure		Manufacturers ISO 9001 QMS complies.	
7.1.4	Environment for the operation of processes		Manufacturers ISO 9001 QMS complies.	
7.1.5	Monitoring and measuring resources	QP.0715 Calibration log Gulf Coast accreditation certificate: 3898.01, valid until April 30, 2020 Calibration Certs: 41711: S-011 (thread gauge), 46948: S-10 (Hi-Pot), 42095: S-020 (Ruler)	The calibration certificates have been verified with satisfactory results. The calibration certificates bear the accreditation logo issued by an accredited calibration laboratory (some of the items do not bear the accreditation mark at this time, but are calibrated by the same 3 rd party laboratory). 3 rd party laboratory accreditation is being updated but is delayed due to COVID-19.	

7.1.6	Organizational knowledge		Manufacturers ISO 9001 QMS complies.	
7.2	Competence	QP.0100 QP.0720 Ex training 11 August 2020 with Crouse-Hinds	All persons having an impact on Ex compliance received appropriate training. Ex training is conducted with Eaton, future trainings are being planned.	
7.3	Awareness		Manufacturers ISO 9001 QMS complies.	
7.4	Communication	QP.0100 QP.0740	Internal and external communication relating to Ex Products is controlled.	
7.5	Documented information			
7.5.1	General	QP.0100 QP.0750 QP.0750-S1	Appropriate means (e.g. manuals, policies, procedures, instructions) ensure compliance, of Ex Products with their certificates and technical documentation.	
7.5.2	Creating and updating	QP.0750 QP.0750-S1	Manufacturers ISO 9001 QMS complies.	
7.5.3	Control of documented Information	QP.0100 QP.0750 QP.0750-S1 DWG: 31857-1-002, schematic DWG: 31857-2-001, layout	It is correctly defined that any changes to Ex-related drawings require the approval of the Ex-authorized person prior to release. The annual check of the validity of all Ex related certificates, standards, regulations and other external specifications is correctly defined. All required quality records will be retained for at least 10 years after each Ex Product (batch) has been placed on the market.	

Clause 8 - Operation

Clause	Description	Reference documents	Audit findings	NCR
8.1	General	QP.0100	Control and acceptance of processes for Ex Products ensure compliance with the requirements of the certificate, see Annex A.	
8.2	Requirements for products and services			

Clause	Description	Reference documents	Audit findings	NCR
8.2.1	Customer communication	QP.0740 QP.0820 CAR: C-20031, complaint about incorrect wiring CAR: C-20028, incorrect shipping address CAR: C-20030, incorrect qty shipped (SO 31667)	Manufacturers ISO 9001 QMS complies. There is a suitable customer complaints procedure in place, which is sufficiently covered by the ISO 9001 assessment.	
8.2.2	Determining the requirements for products and services		Manufacturers ISO 9001 QMS complies.	
8.2.3	Review of the requirements for products and services	QP.0820 SO: 31857 SO: 31570	The product category, marking and ambient temperature range will be included in the order confirmation. At the time of audit, Spike did not have the full list of Ex certificates, assembly manuals or critical Ex documents from Crouse-Hinds. Ex production had not yet begun. Spike received the list of certificates and assembly instructions, NC closed.	1
8.2.4	Changes to requirements for products and services	QP.0100 QP.0820 QP.0750-S1	The Ex authorized person(s) is/are involved in any changes (e.g. changes to the manufacturer's documentation, quality management system or marketing documents) that could affect Ex Product compliance.	
8.3	Design and development of products and services			
8.3.1	General		8.3.1 - 8.3.5 of ISO 9001:2015 are not within the scope of this document.	
8.3.2	Design and development planning			
8.3.3	Design and development Inputs			
8.3.4	Design and development controls			
8.3.5	Design and development outputs			

Clause	Description	Reference documents	Audit findings	NCR
8.3.6	Design and development changes	QP.0100 QP.0750-S1	The Ex authorized person(s) is/are involved in the approval process of any substantial modification or change (e.g. changes to the manufacturer's documentation, quality management system or marketing documents) that could affect Ex Product compliance.	
8.4	Control of externally provided processes, products and services			
8.4.1	General	QP.0100 QP.0840 QP.0840-S1 Approved Vendor Registry Cooper Crouse-Hinds ISO cert Wholesale Electric evaluation	Supplier selection criteria are correctly defined. The ongoing ability of the suppliers to provide conforming products, processes or services for all Ex-suppliers are evaluated on an annual basis. The supplier evaluation process has just started in 2020, all suppliers will be treated as new in 2021.	
8.4.2	Type and extent of control	QP.0840 QP.0840-S1 QP.0870 PO: 31857-01 Vendor: Wholesale Electric PO: 4512154293 Vendor: Crouse-Hinds	No Ex production started at this time, North American certified product used as example. All Ex-relevant parts will be verified for compliance at incoming inspections.	
8.4.3	Information for external providers	QP.0840-S1 PO: 31857-01 Vendor: Wholesale Electric PO: 4512154293 Vendor: Crouse-Hinds	No Ex parts ordered at the time of audit.	

8.5	Production and service provision			
8.5.1 / B.5	Control of production and service provision	QP.0100 QP.0850	Procedures, production equipment, working environments and inspection/testing facilities are sufficiently in place and together assurance with respect to the compliance of the Ex Product with its technical documentation is provided. Eaton Crouse-Hinds will provide assembly manuals and drawings for Ex product. Spike may create internal production drawings or use the Crouse-Hinds drawings.	
8.5.2	Identification and traceability	Product serialization WO: 31857 WO: 31570	No Ex production started at this time, North American certified product used as example. Product identification during all production stages until placing on the market is sufficient.	
8.5.3	Property belonging to customers or external providers		Manufacturers ISO 9001 QMS complies.	
8.5.4	Preservation		Manufacturers ISO 9001 QMS complies.	
8.5.5	Post-delivery activities		Manufacturers ISO 9001 QMS complies.	
8.5.6	Control of changes	QP.0100 QP.0850 QP.0750-S1	The Ex authorized person(s) are involved in any changes that could affect Ex Product compliance.	
8.6	Release of products and services	QP.0100 QP.0860	No Ex production started at this time, North American certified product used as example. Required routine tests will be carried out on a 100 % basis.	
8.7	Control of nonconforming outputs	QP.0100 QP.0870 QP.0870-S1 QP.0750	All required actions are documented and all records will be retained for at least 10 years. QP.0870-S1 R0 dos not include notifying the Ex body issuing the quality system notification. NC response received with updated procedure, NC closed.	2
			QP.0870-S2 does not specify concessions for Ex product. NC response received with updated procedure, NC closed.	3

Clause 9 - Performance evaluation

Clause	Description	Reference documents	Audit findings	NCR
9.1	Monitoring, measurement, analysis and evaluation			
9.1.1	General		Manufacturers ISO 9001 QMS complies.	
9.1.2	Customer satisfaction		Manufacturers ISO 9001 QMS complies.	
9.1.3	Analysis and evaluation		Manufacturers ISO 9001 QMS complies.	
9.2	Internal audit	QP.0100 QP.0920 Internal Audit Report 12/05/2019 Internal Audit Schedule 2020	Internal audits are carried out on an annual basis with an interval not exceeding 14 months. The procedure specifies the internal auditor experience and training requirements. The internal audits are conducted by a 3 rd party, MAS solutions LLC. There were several NC's issued in the last internal audit which are actively being addressed. The content of the latest internal audit has been verified, it was conducted prior to ATEX/IECEx activity. The next internal audit is to include Ex requirements.	
9.3	Management review			
9.3.1	General	QP.0100 QP.0930 Management Review Minutes January 17, 2020	It is correctly defined that the management review will be held on an annual basis and that the Ex-authorized person shall participate. The interval between the management reviews does not exceed 14 months. Results of internal and external audits and the overall effectiveness of the quality management system with respect to equipment intended for use in explosive atmospheres are included in the review. The content of the latest management review has been verified, it was conducted prior to ATEX/IECEx activity. The next management review is to include Ex requirements.	
9.3.2	Management review inputs		Manufacturers ISO 9001 QMS complies.	
9.3.3	Management review outputs		Manufacturers ISO 9001 QMS complies.	

Clause 10 - Improvement

Clause	Description	Reference documents	Audit findings	NCR
10.1	General		Manufacturers ISO 9001 QMS complies.	
10.2	Nonconformity and corrective action		Manufacturers ISO 9001 QMS complies.	
10.3	Continual improvement	QP.0100 Management Review Minutes January 17, 2020	The process for Continual improvement is sufficiently covered by the ISO 9001 assessment.	

Annex A: Information relevant to particular types of protection and specific products

Clause	Description	Reference documents	Audit findings	NCR
A.2	Enclosures – General remark	PO: 4512154293 Vendor: Crouse-Hinds	Enclosures are visually inspected at receiving and are supplied with material certificates and CoC's, from Crouse-Hinds with flange joint machined and inspected.	

A.3 / B.3.1 Ex d - flameproof enclosures covered by IEC 60079-1

Clause	Description	Reference documents	Audit findings	NCR
A.3.1	Verification	WO: 31857 WO: 31570	No ATEX/IECEx production, North American certified unit used as an example. Enclosures are visually inspected at receiving and are supplied with material certificates and CoC's.	
A.3.2	Castings	PO: 4512154293 Vendor: Crouse-Hinds	Cast enclosures will be received as Ex Components from Crouse-Hinds with a CoC and material certificate.	
ExTAG DS 2012/004	Verification Requirements for Flameproof Castings	PO: 4512154293 Vendor: Crouse-Hinds	Enclosures are received as Ex Components from Crouse-Hinds with flange joint machined and inspected. Machined entries are inspected by Spike after machining.	
A.3.3	Machining	WO: 31857 WO: 31570	Spike machines cable entries and operator entries on the enclosures and enclosure covers according to the Crouse-Hinds drawings.	
A.3.4	Cemented joints and potted assemblies		N/A – No potting or cement used.	
A.3.5	Routine pressure testing		N/A – No routine tests called out on Ex certificates.	
A.3.6	Flanged joints	WO: 31857 WO: 31570	Enclosures are received as Ex Components from Crouse-Hinds with flange joint machined and inspected. Spike places protective film over the flange joints for assembly process.	
ExTAG DS 2015/018	Verification requirements for Spigot joints/Conical joint		N/A – No spigot or cylindrical joints.	
A.3.7 / Annex B	Elements, with non-measurable paths, of breathing and draining devices			

A.4 / B.3.2 Ex i – intrinsic safety covered by IEC 60079-11

This type of protection is aspect of a supplier-provided Ex component/ equipment and not designed or produced by the OEM themselves, and instead is solely provided by the supplier.

A.5 / B.3.3 Ex e – increased safety covered by IEC 60079-7

Clause	Description	Reference documents	Audit findings	NCR
A.5.1	Ingress protection (IP)		No production at the time of audit. Sheet metal enclosures will be received as Ex certified. Terminals and internal components are set by the Crouse Hinds Ex certificates, specifications and vendors set by Crouse Hinds.	
ExTAG DS 2013/005	Production control of non-metallic seal material for Sealed devices			
A.5.2	Internal wiring and contact integrity		Terminals and internal components are set by the Crouse Hinds Ex certificates, specifications and vendors set by Crouse Hinds. 100% routine Hi-Pot test is in place and currently performed on CI Div equipment.	
A.5.3	Rotating machines		N/A	
A.5.4	Windings		N/A	
A.5.5	Terminal boxes		Enclosures, Terminals and internal components are set by the Crouse Hinds Ex certificates, specifications and vendors set by Crouse Hinds. 100% routine Hi-Pot test is in place and currently performed on CI Div equipment.	
A.5.6	Cable glands, terminals and other accessories		Enclosures, Terminals and internal components are set by the Crouse Hinds Ex certificates, specifications and vendors set by Crouse Hinds.	
A.5.7	Routine verifications and tests		100% routine Hi-Pot test is in place and currently performed on CI Div equipment.	

A.7 / B.3.5 Ex m – Encapsulation covered by IEC 60079-18

This type of protection is aspect of a supplier-provided Ex component/ equipment and not designed or produced by the OEM themselves, and instead is solely provided by the supplier.

A.11 Ex t – Dust ignition protection by enclosure covered by IEC 60079-31

Clause	Description	Reference documents	Audit findings	NCR
A.11.1	Casting	PO: 4512154293 Vendor: Crouse-Hinds	Cast enclosures will be received as Ex Components from Crouse-Hinds with a CoC and material certificate. Spike machines cable entries and operator entries on the enclosures and enclosure covers according to the Crouse-Hinds drawings.	
A.11.2	Enclosure parts	WO: 31857 WO: 31570		
A.11.3	Gaskets	WO: 31857 WO: 31570		
A.11.4	Protection devices			
A.11.5	Cemented and cast enclosure parts		N/A- No potting or cement used.	
A.11.6	Ingress protection (IP)			
A.11.7	Routine verifications and tests		N/A – No routine tests called out on Ex certificates.	

4. Observations

Obs.	Standard and clause	Description of Observation
1.	General	Ex production has not yet started, the products are designed and certified by Eaton Crouse-Hinds with Spike Electric acting as a manufacturing site and/or local assembler. Spike Electric may design and certify their own designs in the future.
2.	80079-34 cl 7.5.3 a) to f)	The relation between related drawings to the relevant schedule drawings shall be clearly documented. Currently the drawings are not fully established.
3.	80079-34 cl 7.5.3 i)	There may be challenges with the annual review since Crouse-Hinds controls the certificates and schedule drawings.
4.	ISO 9001 8.2.1	The hand-off for customer complaints between Spike and Crouse-Hinds needs to be defined.
5.	80079-34 8.4.1	At the time of audit parts are not designated as Ex critical and suppliers were not designated as approved for Ex parts. Currently no orders have been placed.
6.	80079-34 8.4.2	At the time of audit parts are not designated as Ex critical, A declaration of conformity according to ISO/IEC 80079-34 annex C or receiving inspection will need to be supplied with each batch or Product. Currently no parts or suppliers are set to 'approved' for Ex.
7.	80079-34 8.4.3	At the time of audit, the purchase documents do not clearly describe the specific part requirements or require a CoC/DoC to be supplied in all cases. Currently no parts or suppliers are set to 'approved' for Ex.
8.	80079-34 8.5.2 b)	At the time of audit it was not clear how, all Ex-relevant parts will be linked to the end product by the use of serial or batch numbers.
9.	80079-34 8.6	Eaton Crouse-Hinds control the installation instructions and EU-declaration of conformities. The documents were not available at the time of audit.