**INTERNATIONAL ELECTROTECHNICAL COMMISSION SYSTEM FOR CERTIFICATION TO STANDARDS RELATING TO EQUIPMENT FOR USE IN EXPLOSIVE ATMOSPHERES (IECEx SYSTEM)**

**TITLE: Compilation of comments on ExTAG/610/CD – Assessment of devices “Ex ec” (previously “nA”) with integral plug for field wiring**

**Circulated to: ExTAG – IECEx Testing and Assessment Group**

**INTRODUCTION**

This document contains the compilation of comments, as well as observations from the originator, LCIE, FR, received on ExTAG/610/CD – Assessment of devices “Ex ec” (previously “nA”) with integral plug for field wiring.

A revised document *ExTAG/610A/CD – Assessment of devices “Ex ec” (previously “nA”) with integral plug for field wiring* has been prepared and circulated for consideration during the ExTAG 2020 Remote Meeting.

***Please inform the Secretariat immediately of any omissions or errors at-***

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***ExTAG Secretariat***

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| **ExCB/**  **ExTL** | **Clause/ Sub-clause** | **Paragraph Figure/**  **Table** | **Type of**  **comment**  **General/**  **technical/**  **editorial** | **COMMENTS** | **Proposed change** | **Observation**  **(to be completed by the originator)** |
| --- | --- | --- | --- | --- | --- | --- |
| **DEKRA / BVS**  **DE** | --- | --- | General | In principle we agree with the ExTAG/610/CD Draft ExTAG Decision Sheet. However, the paper only deals with IP protection for the special conditions.  In our opinion, the other requirements have to be considered in the special conditions as well, such as electrostatic requirements, impact resistance of the fully assembled system in this plug/socket example, clearance/creepage distances taking also into account the insulation material used in the field side element, etc.  The scope and the details of the special conditions contained therein depend strongly on the desired construction. |  | Noted.  This could be an opportunity for improvement in the future (Even if we consider the comment relevant, the current proposal is not focused on those additional considerations). |
| **FMG**  **US** |  |  | te | The bulkhead-mounted connector already serves to complete the “enclosure”, so 6.3.2 from IEC 60079-15, Ed 4, does not really apply. The question is with respect to the requirements for the user-supplied mating connector.  *from IEC 60079-15, Ed 4:* *Degree of protection provided by installation* *Where the enclosure is completed by the installation of the equipment the marking shall include the symbol "X" and the manufacturer shall provide relevant information in the documentation in accordance with Clause 25.*  Also refer to DS2015/003 that addresses the need to maintain IP54 minimum 1) within the enclosure into which the bulkhead connector is mounted, 2) within the mating connector, and 3) within the mated connector’s interface.  We support the proposal that “Specific Conditions of Use” are appropriate to clearly address this type of installation. This goes further than DS2015/003 that only required the information to be in the “Instructions”., | See proposed text below.  (Refer ANNEX A) | Accepted in principle  (Only minor editorial changes). |
| **FTZU**  **CZ** |  |  | **General** | **The suffix “X” for the degree of protection provided by the installation is not sufficient.**  **The socket with plug shall be a part of the certified Ex equipment or an independent certified Ex equipment.**  **The socket with plug shall be fully tested and shall meet requirements according to IEC 60079-0 and IEC 60079-7. It means temperature tests, endurance to heat endurance to cold, dielectric strange test, distance check, impact test, IP test, etc.** | **This DS shall be withdrawn.** | Not accepted.  According to the comments received, this draft DS appears necessary and accepted in principle by a large majority of the members. |
| **IBE**  **DE** |  |  |  | **Requirements for pluggable terminal bridging connections are already defined in IEC 60079-7, 4.2.4.** |  | Noted  (4.2.4 does not consider user-supplied mating connector). |
| **ITL**  **IL** | 20  4.2. |  |  | **Acceptable** |  | Noted |
| **NANIO CCVE (RU)**  **ExCB/**  **ExTL** |  |  | **General** | **We support this DS without comments.** |  | Noted |
| **NCC**  **BR** | **20 (79-0)**  **4.2.4 (79-7)** |  |  | **We agree. The specific condition of use shall be added.** |  | Noted |
| **NEPSI**  **CN** |  |  | **G** | **We support the draft DS ExTAG/610/CD.** |  | Noted |
| **PTB**  **DE** |  |  |  | **Accepted in general.**  **In addition, it would be useful to specify precise technical parameters in the specific condition of use of the CoC or in the installation instructions such as:**  **- thread form and quality**  **- temperature range**  **- requirements for the seal / sealing surface** |  | Noted.  This could be an opportunity for improvement in the future. |
| **Simtars**  **AU** |  |  |  | **Simtars has no comments for this DS.** |  | Noted |
| **SIQ SI** |  |  |  | **We agree with proposal.** |  | Noted |
| **TC 31** |  |  | te | The bulkhead-mounted connector already serves to complete the “enclosure”, so 6.3.2 from IEC 60079-15, Ed 4, does not really apply. The question is with respect to the requirements for the user-supplied mating connector.  from IEC 60079-15, Ed 4: Degree of protection provided by installation Where the enclosure is completed by the installation of the equipment the marking shall include the symbol "X" and the manufacturer shall provide relevant information in the documentation in accordance with Clause 25.  Also refer to DS2015/003 that addresses the need to maintain IP54 minimum 1) within the enclosure into which the bulkhead connector is mounted, 2) within the mating connector, and 3) within the mated connector’s interface.  We support the proposal that “Specific Conditions of Use” are appropriate to clearly address this type of installation. This goes further than DS2015/003 that only required the information to be in the “Instructions”., | See proposed text in ANNEX B | Accepted in principle  (Only minor editorial changes). |
| **TIIS**  **JP** |  |  | general | We support the draft DS.  Assuming many disagreeing/not-supporting comments could be raised by CBs of different viewpoints as stated in the background, solutions should be discussed with relevant MTs such as Amendment or ISH of IEC 60079-7. |  | Noted.  MT is involved in the current proposal, and would decide about further action on the standardization side. |
| **UL do BR** |  |  |  | ULBR supports this DS without any comments |  | Noted |
| **UL**  **USA** | **Heading** | **Standards** | **editorial** | **UL supports the draft DS. We suggest the following editorial improvements:**  **Add a reference to IEC 60079-15 as well.** | Standard: IEC 60079-15:2010 (4.0)  Clauses: 6.3.2, 10 | Accepted |
| **UL**  **USA** | **Answer** |  | **editorial** | **In the first sentence of the answer, Change from “socket” to mating connector,” as the same would apply to either a plug or a socket. Other editorial changes.**  **Also, modify the example wording to mention the type of connector.** | **Answer:**  Yes, considering that the mating connector is not provided by the manufacturer but by the installer at the point of installation, some requirements of the applied standards cannot be examined by the ExTL / ExCB. Nevertheless, in order to ensure the compliance of the field wiring connection, additional consideration is necessary and shall be provided to the user in the Specific Condition of Use of the CoC  (eg. “The device shall be connected in the field to an external mating (indicate an industry standard connector type, e.g. M12)(indicate a custom connector by manufacturer and part number) connector in compliance with IEC 60079-14 requirements, providing and maintaining degree of protection at least IP54 according to IEC 60079-0 requirements”) or by referring the installation instructions, where the instructions will provide the details necessary for the proper installation, including the IP54 requirement according to IEC 60079-0 requirements and are controlled in the list of schedule drawings. | Accepted in principle  (Only minor editorial changes, details added in the example seem too much specific for a general decision sheet). |

**ANNEX A**

**FMG(US) Proposed Text**

**Question:**

When a certificate is updated for such equipment from IEC 60079-15 (“Ex nA”) to IEC 60079-7(“Ex ec”), shall aSspecific Condition of Use be added to the CoC (with the suffix “X”) the applicable requirements for the user-supplied mating connector?

**Answer:**

Yes, considering that the mating connector for the bulkhead-mounted socket is not provided by the manufacturer, but by the installer at the point of installation, not all requirements of the applied standards can be examined by the ExTL / ExCB. Nevertheless, in order to ensure the compliance of the completed connection, additional considerations are necessary and shall be provided to the user in the Specific Condition of Use of the CoC (e.g. “*The device shall be connected in compliance with IEC 60079-14 requirements, providing and maintaining degree of protection at least IP54 according to IEC 60079-0 requirements”*) and shall refer to the installation instructions, where the instructions will provide the complete details necessary for the proper installation, including the specific mating connector required to comply with the IP54 requirement according to IEC 60079-0..

Rationale:

Considering the current practices for such Ex nA certified equipment, it is not recommended to modify the assessment process by requiring to include the socket in the scope of the certificate. Indeed, socket is usually externally provided, depending on the process design. If the socket is provided to the installer by the manufacturer, and included in the scope of the certificate then the specific condition of use would no longer be necessary.

**ANNEX B**

**TC31 Proposed Text**

**Question:**

When a certificate is updated for such equipment from IEC 60079-15 (“Ex nA”) to IEC 60079-7(“Ex ec”), shall aSspecific Condition of Use be added to the CoC (with the suffix “X”) providing the applicable requirements for the user-supplied mating connector?

**Answer:**

Yes, considering that the mating connector for the bulkhead-mounted socket is not provided by the manufacturer, but by the installer at the point of installation, not all requirements of the applied standards can be examined by the ExTL / ExCB. Nevertheless, in order to ensure the compliance of the completed connection, additional considerations are necessary and shall be provided to the user in the Specific Condition of Use of the CoC (e.g. “*The device shall be connected in compliance with IEC 60079-14 requirements, providing and maintaining degree of protection at least IP54 according to IEC 60079-0 requirements”*) and shall refer to the installation instructions, where the instructions will provide the complete details necessary for the proper installation, including the specific mating connector required to comply with the IP54 requirement according to IEC 60079-0..

Rationale:

Considering the current practices for such Ex nA certified equipment, it is not recommended to modify the assessment process by requiring to include the socket in the scope of the certificate. Indeed, socket is usually externally provided, depending on the process design. If the socket is provided to the installer by the manufacturer, and included in the scope of the certificate then the specific condition of use would no longer be necessary.