

[1] EC-TYPE EXAMINATION CERTIFICATE
[2] Ex component intended for use on/in equipment or protected system
intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC

- [3] **EC-Type Examination Certificate Number:** Nemko 12ATEX1279U Issue 02
- [4] **Ex component:** Cable Transit Devices
- [5] **Applicant/ Manufacturer:** Roxtec International AB
- [6] **Address:** Box 540
SE-371 23 Karlskrona
Sweden
- [7] **This Ex component and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.**
- [8] **Nemko AS, notified body number 0470 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that the Ex component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of Ex components intended for use in potentially explosive atmospheres given in Annex II to the Directive.**
- The examination and test results are recorded in confidential report no. D0000831 Issue 2**
- [9] **Compliance with the Essential Health and Safety Requirements has been assured by compliance with:** EN 60079-0:2012 (IEC 60079-0:2011), EN 60079-7:2007 (IEC 60079-7:2006) and EN 60079-31:2009 (IEC 60079-7:2008). All applicable sub-clauses are listed in clause [18] below.
- [10] **The sign “U” placed after the certificate number indicates that this certificate must not be mistaken with a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.**
- [11] **This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified Ex component in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this Ex component. These are not covered by this certificate.**
- [12] **The marking of the Ex component shall include the following:**



II 2G Ex e IIC Gb
II 2D Ex tb IIIC Db

Oslo, 2015-03-18

Asle Kaastad
Certification Manager

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[13] Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE No.** Nemko 12ATEX1279U Issue 02

[15] **Description of Ex Components**

The Cable Transit Devices 'CTDs' (see Type Designation below), for use with circular cables both armoured and non-armoured or corrugated cables (see Corrugated cables below) of non-interrupted and non-metallic outer jacket type or conduits. The CTDs consists of multi diameter sealing modules (type RM Ex and CM Ex as standard or with EMC properties) that depending on each individual size, accepts a limited number of cable diameters in applicable types of frames or sleeves and shall be marked with the Ex symbol.

The modules are made of mirrored rubber profiles and each part has a number of thin rubber layers that are ending up with a solid rubber core. The layers are made with two different colours to make the adaption to a cable exactly same on both halves and are allowed to differ one layer at most. To achieve appropriate sealing and mechanical properties to prevent the cables from slippage there shall always be a visible separation between the sealing module halves.

The modules made of EPDM are available with layers and core, but some greater sizes are also available without the core. In addition there are also single diameter- and solid modules.

The correct sizes and procedure of assembling the cables to the modules are described in detail in the enclosed installation instructions. Ex Compression devices are used to achieve appropriate compression of the modules and solids some CTDs uses compression units that expands inside the CTDs and some others have incorporated solid rubber profiles that achieve the expansion.

There are also two types of CTDs that incorporates both the compression device and multi diameter modules as a single unit, but still with two halves. The method to assemble the compression devices etc. and to achieve sealing of the CTDs is described in detail in the enclosed installation instructions.

The Ex components does not have a defined and incorporated sealing against the final enclosure wall and there are needs for supplementary type examinations and certification. Applicable sub-clauses for the Ex components are listed in clause [18] below, which also give guidance for additional examination regarding type of protection when fully assembled.

Most CTDs that has a rectangular opening with or without rounded corners with modules of type RM Ex are all available for different combinations with several openings in width and/or in high. CTDs for use with rectangular openings with CM Ex modules (one type with dual opening) and round sleeves are only available with single openings. The CTDs installation instructions listed in this report will define each variant in detail and all applicable parts that are approved for use within that variant.

Type Designations:

S...-, S...S0...-, S...WM-, SRC...-, SK...-, SBTB...-, SF...W-, G...W-, B...C-, R...W-, RO...W- and RS...W Ex

Temperature Range:

-60°C to +80°C

Corrugated cables for use with: S...-, S...S0...-, G...W- and SF...W Ex

ACIC (Armoured Control and Instrumentation Cable) according to C22.1-06 CEC,

ACWU (Armoured Cable for Wet locations) according to UL4,

TECK90 according to C22.2 No. 131-07

MC (Metal Clad) according to UL1569.

[16] **Report No.**

D0000831 issue 2

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[17] Schedule of Limitations

1. For maintaining the explosion protection, the installation instructions that accompany the products shall be considered.
2. Only cable for fixed installation is permitted for the cable transit device.
3. For optimum reliability wait 24 hours or longer after installation before exposing the cables/pipes to strain or pressure.
4. For cable transit devices certified as an Ex component and marked with the symbol U (cable transit device of types S...-, S...S0...-, S...WM-, SRC...-, SK...-, SBTB...-, SF...W-, G...W-, B...C-, R...W-, RO...W- and RS...W Ex), compliance with applicable requirements not covered by sub-clauses stated in clause [18] below, shall be verified. This includes mechanical test (if applicable) and test of degree of protection IP, which shall be carried out on the frame of the cable transit device (excluding modules and compression unit) after it has been mounted on the enclosure of the apparatus subjected to test and certification.

[18] Essential Health and Safety Requirements

List of sub-clauses that has been applied for the Ex components:

EN 60079-0:2012; {ZA, 1 – 4, 5.2 (with respect of temperature limits), 6.1, 6.2, 7.1.1, 7.1.2.3, 7.2.1, 7.2.2, 7.5, 8.1, 8.3, 8.4, 13.1, 13.2, 13.4, 13.5, 16.3, 24, 25, 26.1, 26.2, (with respect of internal ingress protection), 26.4.1.1, 26.4.1.2, 26.4.1.2.2, 26.4.2, 26.4.4, 26.4.5.1 (with respect of internal ingress protection), 26.4.5.2, 26.7.1, 26.7.2, 26., 26.9, 29.1, 29.2, 29.4, 29.5, 29.9, 30.1, A.1, A.2.1, A.2.3, A.2.4.1, A.2.5, A.2.6, A.2.7, A.3.1.1, A.3.1.4, A.3.1.5, A.3.2.2, A.3.3, A.3.4 (with respect of internal ingress protection), A.41, A.4., and B.1}.

EN 60079-31:2009; {ZA, 1 – 4, 4.1, 5.2.1, 6.1.1 (with respect of internal ingress protection) and 7}.

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[19] Drawings and Documents

According to the specification; Descriptive Documents D0000831 rev. 3 including applicable installation instructions;

Table of descriptive documents.

	Installation instruction for cable transit devices	Number	Rev.
1	Installation Instructions for Ex Frames	ASS2004000301	D
2	Additional installation instructions S4x1 S01, S6x1 S02, S8x1 S03, S8x1 S04 & S3x1 S05+20	ASS2007006801	B
3	Installation instructions Roxtec SRC Ex frames	ASS2012003301	D
4	Installation instructions Roxtec RM Ex and Roxtec RM Ex EMC modules	ASS2014009901	C
5	Installation instructions Cable transit device SK Ex	ASS2014005201	B
6	Installation instructions Cable transit device SBTB Ex	ASS2014000201	B
7	Installation instructions Cable Transit Device R Ex and RO Ex type	ASS2005002601	E
8	Installation instructions Roxtec R EMC Ex	ASS2012004501	C
9	Installation instructions CF 16 Ex frame	ASS2004000501	C
10	Installation instructions Roxtec CF 16 EMC Ex with CM ES Ex modules or CM PE Ex modules	ASS2012003901	C
11	Installation instructions CF 8-, CF 32 Ex frames	ASS2004000401	B
12	Installation instructions Roxtec CF 8EMC Ex / CF 32 EMC Ex for Roxtec CM BG Ex and CM BG B Ex modules	ASS2011003401	C
13	Installation instructions Roxtec CF 8 EMC Ex and Roxtec CF 32 EMC Ex with ES or PE modules	ASS2012004001	B
14	Installation instructions RS Ex seal	ASS2005002801	C
15	Installation instructions Roxtec RS PE Ex	ASS2012004601	B
16	Installation instructions Roxtec RS ES Ex	ASS2012004701	C
17	Installation instructions C RS T Ex seals	ASS2005002401	C

[20] Certificate History and Associated Nemko Reports.

Issue	Description	Report	Issue
00	Prime Certificate released.	207896	0
01	New variant of BG modules added.	D0000831	1
02	Additional variants of frames included; RO...W, SK..., SBTB... and S...WM. Additional EMC Wedge, welding instructions changed and marking of EMC modules added.	D0000831	2

END OF CERTIFICATE

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