



# CUSTOMS UNION CERTIFICATE OF CONFORMITY

№ EAEU RU C-US.AA87.B.00421/20  
Series RU # 0230831 (number of certificate blank)

**Registering Authority:** Explosive and mine equipment certification authority (OC CSVE) Limited Liability Company “Center for the Certification of Explosive and Mine Equipment” (LLC NANIO CSVE). Legal Location Address: Russia, 140004, Moscow Metro, Luyberski County, Luybersk City, Vuugi Town, Stock Company «Plant «EcoMash», litera B, Object 6, floor 3, office 26. Address of the place of accreditation activities: Russia, 140004, Moscow Metro, Luyberski County, Luybersk City, Vuugi Town, Stock Company «Plant «EcoMash», litera B, Object 6, floor 3, offices 26/3, 26/4, 26/5, 27/6, 30/1, 32. Accreditation № RA.RU.11AA87 from 20.07.2015 Telephone: +7 (495) 558-83-53, +7 (495) 558-82-44.  
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**Applicant:** Limited Liability Company “ITC”

Registered office address: 423809, Russia, Republic of Tatarstan, city of Naberezhnye Chelny, prospect Mira, building 49Б, office 11(33), Place of business: 423809, Russia, Republic of Tatarstan, city of Naberezhnye Chelny, prospect Mira, building 49Б, office 11(33). Primary State Registration Number: 10316116004595, telephone: 78552205741, email: [aneil@rcsint.com](mailto:aneil@rcsint.com)

**Manufacturer:** "Amphenol Industrial Operation"

Legal Location Address and Addresses of the place of production activities -branches of the manufacturer: 40 60 Delaware Avenue, Sidney, New York 13838 1395 USA (see attachment page blank number 0736522)

**Production:** Connector Assemblies Series Starline-EX, Amphe-EX with Ex-marking per the attachment (see blank # 0736524, 0736525, 0736527, 0736528, 0736529)

Documents according to which products are made – see blank № 0736523.

Serial Production.

**CU Foreign Trade Commodity List (TN VED TS) Code 8536 69 1000**

**Conforms to the requirements of Customs Union Technical Regulation** “On safety of equipment intended for use in explosive atmospheres” TRCU 012/2011

**The certificate of conformity has been adopted on the basis of:** Test Report № 125.2020-T dated 08.06.2020 EX-proof testing laboratory community autonomous non-profit organization «National Testing and Science-Testing Institute of Explosion Proof Equipment» IL Ex Tu (Accreditation № ROCC.RU.0001.21MIII19 from 16.10.2015); Manufacturer audit report # 109-A/19 dated 21.11.2019 from certification body OC CSVE (LLC NANIO CSVE) Documents submitted by the applicant as proof of product compliance to TRCU 012/2011 (see attachment, blank № 0736523).

**Certification Scheme – 1c.**

**Supplementary Information:** List of voluntary standards to meet requirements of TRCU 012/2011 (see attachment, blank № 0736523). Terms and conditions of storage are listed in the operating documentation. Service Life – 20 years.

**The Certificate of Conformity is valid from 09.06.2020 to 08.06.2025, inclusive.**

**Director of Registering Authority: Zalogin Alexander Sergeevich**

**Expert: Pridatko Andrei Vladimirovich**

## CUSTOMS UNION ATTACHMENT

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### List of enterprises of manufacturers of products subject to the validity of the certificate of conformity included in the transnational company

<b>Full name manufacturing company</b>	<b>Address (location)</b>
«Amphenol Fiber Systems International»	1300 Central Expressway North, Suite 100 Allen, Texas, 75013
«Amphenol Industrial- Nogales Operations»	Plant 4 "Tolteca", Los Gavilanes 51 Parque Industrial, San Ramon Sonora, Nogales, 84090, MEXICO
«Amphenol Nelson Dunn Technologies»	17719 Valley View Avenue Cerritos, California 90703 USA
«Amphenol Middle East»	P.O. Box 21107 C1-16 Warehouses Ajman Free Zone, UAE
«PEI-Genesis UK Ltd.»	George Curl Way Southampton S018 2RZ, UK

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### I. LIST OF STANDARDS, USED ON A VOLUNTARY BASIS FOR COMPLIANCE WITH THE REQUIREMENTS OF TRCU 012/2011 "ON SAFETY OF EQUIPMENT INTENDED FOR USE IN EXPLOSIVE ATMOSPHERES"

Designation of National Standard or Code of Practice	Name of National Standard or Code of Practice
ГОСТ 31610.0-2014 (IEC 60079-0:2011)	Explosive atmospheres. Part 0. Equipment. General requirements
ГОСТ IEC 60079-1-2013	Explosive atmospheres. Part 1. Equipment Protection by flameproof enclosures "d"
ГОСТ Р МЭК 60079-7-2012	Explosive atmospheres. Part 7. Equipment. Protection by increased safety "e"
ГОСТ 31610.15-2014/IEC 60079-15:2010	Explosive atmospheres. Part 15: Equipment protection by type of protection "n"
ГОСТ 31610.28-2012/IEC 60079-28:2006	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
ГОСТ IEC 60079-31-2013	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

### II. DOCUMENTS SUBMITTED BY THE APPLICANT AS PROOF OF PRODUCT COMPLIANCE TO TRCU 012/2011

Amphenol Amphe-Ex IOM L-2124 Rev. K dated 27.01.2020;  
Amphenol Starline-Ex IOM L-2120-3 Rev. K dated 27.01.2020;  
Drawings №№10-838357 rev. L dated 08.05.2020, 10-838431 rev. A dated 29.07.2008, 10-838439 rev E dated 14.03.2006, 10-838477 rev B dated 05.05.2006, 10-838478 rev B dated 19.03.2015, 300011 dated 18.06.1997, 300011-XXAR rev. B dated 04.08.2015, AOGT-2T01 rev. P12 dated 07.05.2015, ZP-W-5324-H412 rev. D dated 08.07.2014;  
Nameplate Drawings and Warning Labels 10-838356-003 Rev C dated 04.06.2020, 10-838527 Rev. B dated 13.02.2012, 10-838528-003 Rev. B dated 28.02.2020  
Hazard Analysis № RRA-0038 Rev. A dated 03.17.2020;  
List of Standards, see section I.

### III. DOCUMENTS ACCORDING TO WHICH PRODUCTS ARE MADE

Drawings №№10-838357 rev. L dated 08.05.2020, 10-838431 rev. A dated 29.07.2008, 10-838439 rev E dated 14.03.2006, 10-838477 rev B dated 05.05.2006, 10-838478 rev B dated 19.03.2015, 300011 dated 18.06.1997, 300011-XXAR rev. B dated 04.08.2015, AOGT-2T01 rev. P12 dated 07.05.2015, ZP-W-5324-H412 rev. D dated 08.07.2014;  
Nameplate Drawings and Warning Labels 10-838356-003 Rev C dated 04.06.2020, 10-838527 Rev. B dated 13.02.2012, 10-838528-003 Rev. B dated 28.02.2020

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## CUSTOMS UNION ATTACHMENT

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Series RU # 0736524 (number of attachment blank)

### 1. PURPOSE AND RANGE OF APPLICATION

Connector Assemblies Series Starline-EX, Amphe-EX (connectors in further text), are designed to connect explosive-proof equipment with electrical and optical circuits.

Range of Application – explosive zones of external installations according to Ex-marking, requirements of GOST IEC 60079-14-2013, regulating the use of electrical equipment in explosive gaseous zones and protection against combustible dust.

### 2. MAIN TECHNICAL DATA

Details on the designation and type of connectors series Starline-EX, Amphe-EX is shown in the following documents:

Amphenol Amphe-Ex IOM L-2124 Rev. K dated 27.01.2020;

Amphenol Starline-Ex IOM L-2120-3 Rev. K dated 27.01.2020;

2.1. Starline EX Parameters

2.2. Electrical Parameters of Starline-Ex Connectors (couplers) see table 1

Table 1

Shell Size	Maximum current, A	Pin Size	Maximum current, A
12	210	Area 0,75 mm <sup>2</sup> (18 AWG)	9
16	570	Area 1,5 mm <sup>2</sup> (16 AWG)	16
20	1110	Area 4,0 mm <sup>2</sup> (12 AWG)	30
24	1740	Area 6,0 mm <sup>2</sup> (10 AWG)	40
28	1420	Area 10,0 mm <sup>2</sup> (8 AWG)	50
		Area 25,0 mm <sup>2</sup> (4 AWG)	90
		Area 50,0 mm <sup>2</sup> (1/0 AWG)	155
		Area 120,0 mm <sup>2</sup> (4/0 AWG)	225
		Area 160,0 mm <sup>2</sup> (313 MCM)	300
		Area 175,0 mm <sup>2</sup> (350 MCM)	325
		Area 185,0 mm <sup>2</sup> (365 MCM)	350
		Area 255,0 mm <sup>2</sup> (535 MCM)	750
		Area 325,0 mm <sup>2</sup> (646 MCM)	940
		Area 400,0 mm <sup>2</sup> (777 MCM)	1135 alternatively > 1135 A to 1490 A

2.2.1. Connector Sealing (couplers) see table 2

Table 2

Cement compound	Sealing devices	Minimum ambient temperature, °C
Resin 50-3150FR/Cat 190	Fluorosilicone O-rings and Silicone gaskets	-60
Resin 50-3150FR/Cat 190	Buna (nitrile) rubber O-rings and gaskets	-40

2.3. Amphe-EX parameters

2.3.1. Maximum current is dependent on housing size and maximum current on contact size, see table 3

Maximum voltage dependent on contact pattern, see table 4

Table 3

Housing size	Maximum current, A	Contact Size	Maximum current, A
9	48	Diameter 0,34 (22D AWG)	5
11	64	Diameter 0,50 (20 AWG)	7,5
13	90	Diameter 4,0 (12 AWG)	13
15	125	Diameter 6,0 (10 AWG)	23
17	154	Diameter 4,0 (12 coaxial)	1 (for internal and intermediate contacts) 12 (for external contact)
19	191	Diameter 10 (8 coaxial)	
21	217	Diameter 10 (8 twinaxial)	

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Table 4

Maximum voltage	Contact location (pattern)
500 Vrms	9-5, 17-22, 21-75
550 V DC / 400 V AC	9-35, 9-94, 11-35, 13-35, 15-35, 15-AC, 17-31, 17-35, 19-35, 21-35
550 V DC / 400 V AC 500 V rms (8 contacts, coaxial) 500 V rms (twinaxial)	17-2, 19-31
850 V DC / 600 V AC	9-98, 11-2, 11-5, 11-98, 11-99, 13-4, 13-8, 13-13, 13-98, 15-15, 15-18, 15-19, 15-97, 17-6, 17-26, 17-99, 19-32, 21-11, 21-39, 21-41
1250 V DC / 900 V AC	15-5, 17-8, 19-11, 21-16
Rms (Rated Maximum Sinusoidal)	

2.4. Protection class per GOST 14254 IP66/68

2.5. Ex-marking and technical characteristics of connectors are in tables 5, 6 and 7.

Table 5 Starline-Ex

Connector (coupler)	Marking of explosion protection and protection against explosion of combustible dust	Tamb (°C)*	Current strength/ limitation	Temperature of cable use (°C)
13-2, 15-2, 17-2, 13-4, 5-4, 17-4	1Ex db IIC T6 Gb X, Ex tb IIIC T80°C Db X	from -60 (-40) to +40	0-259A, SEE NOTE A	90
	1Ex db IIC T5 Gb X, Ex tb IIIC T95°C Db X	from -60 (-40) до +55	0-408A, SEE NOTE A	90
	1Ex db IIC T4 Gb X, Ex tb IIIC T130°C Db X	from -60 (-40) to +55	0-1135A, SEE NOTE A	135
13-3, 15-3, 17-3	1Ex db IIC T6 Gb X, Ex tb IIIC T80°C Db X	from -60 (-40) to +40	0-259A, SEE NOTE A	90
	1Ex db IIC T5 Gb X, Ex tb IIIC T95°C Db X	from -60 (-40) to +55	0-408A, SEE NOTE A	90
	1Ex db IIC T4 Gb X, Ex tb IIIC T130°C Db X	from -60 (-40) to +55	0-1135A, SEE NOTE A	135
17-1	1Ex db IIC T6 Gb X, Ex tb IIIC T80°C Db X	from -60 (-40) to +40	0-259A, SEE NOTE A	90
	1Ex db IIC T5 Gb X, Ex tb IIIC T95°C Db X	from -60 (-40) to +55	0-408A, SEE NOTE A	90
	1Ex db IIC T4 Gb X, Ex tb IIIC T130°C Db X	from -60 (-40) to +55	0-1135A, SEE NOTE A	135
18-1	1Ex db IIC T6 Gb X, Ex tb IIIC T80°C Db X	from -60 (-40) to +40	0-259A, SEE NOTE A	90
	1Ex db IIC T5 Gb X, Ex tb IIIC T95°C Db X	from -60 (-40) to +55	0-408A, SEE NOTE A	90
	1Ex db IIC T4 Gb X, Ex tb IIIC T130°C Db X	from -60 (-40) to +55	0-1135A, SEE NOTE A	135
17-H	1Ex db IIC T6 Gb X, Ex tb IIIC T80°C Db X	from -60 (-40) to +40	0-259A, SEE NOTE A	90
	1Ex db IIC T5 Gb X, Ex tb IIIC T95°C Db X	from -60 (-40) to +55	0-408A, SEE NOTE A	90
	1Ex db IIC T4 Gb X, Ex tb IIIC T130°C Db X	from -60 (-40) to +55	0-1135A, SEE NOTE A	135
18-H	1Ex db IIC T6 Gb X, Ex tb IIIC T80°C Db X	from -60 (-40) to +40	0-259A, SEE NOTE A	90
	1Ex db IIC T5 Gb X, Ex tb IIIC T95°C Db X	from -60 (-40) to +55	0-408A, SEE NOTE A	90
	1Ex db IIC T4 Gb X, Ex tb IIIC T130°C Db X	from -60 (-40) to +55	0-1135A, SEE NOTE A	135
Note A: Current strength is always limited by the enclosure size and in all cases shall not exceed 1135 A.				
* - The lower range of ambient temperatures during operation depends on the sealing compound and device see table 2				

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Table 6 Ex-Marking Amphe-Ex For Zone 1, 2 and 21, 22:

Configuration	Ex-marking	
	$-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +40^{\circ}\text{C}$	$-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +55^{\circ}\text{C}$
Configuration 06	1Ex db IIC T6 Gb X Ex op pr IIC T6 Gb X <sup>1)</sup> Ex op is IIC T6 X Gb <sup>1)</sup> Ex tb IIIC T80°C Db X	1Ex db IIC T5 Gb X Ex op pr IIC T5 GbX <sup>1)</sup> Ex op is IIC T4 Gb X <sup>1)</sup> Ex tb IIIC T95°C Db X
Configuration я 01	1Ex db IIC T6 Gb X Ex op pr IIC T6 Gb X <sup>1)</sup> Ex op is IIC T6 Gb X <sup>1)</sup> Ex tb IIIC T80°C Db X	1Ex db IIC T5 Gb X Ex op pr IIC T5 Gb X <sup>1)</sup> Ex op is IIC T4 Gb X <sup>1)</sup> Ex tb IIIC T95°C Db X
Configuration 02	1Ex db e IIC T6 Gb X Ex op pr IIC T6 Gb X <sup>1)</sup> Ex op is IIC T6 Gb X <sup>1)</sup> Ex tb IIIC T80°C Db X	1Ex db e IIC T5 Gb X Ex op pr IIC T5 Gb X <sup>1)</sup> Ex op is IIC T4 Gb X <sup>1)</sup> Ex tb IIIC T95°C Db X

Note 1: if standard inserts are used which allow application of fiber optic contacts.

Table 7 Ex-Marking Amphe-Ex For Zone 2

Types	Ex-Marking	Tamb (°C)	Protection level
15-5	2Ex nA IIB+ H2 T3 Gc X	-40 through +100	IP65
21-16	2Ex nA IIB+H2 T3 Gc X	-40 through +100	IP65

2.5.2 When connecting equipment and transmission systems for Starline-EX series using optical radiation, the following parameters should be followed in Table 8 for fiber optic models that use standard inserts that allow fiber optic contacts to be used.

Table 8 Options for connecting equipment and transmitting systems that use optical radiation "op is" for the Starline-EX series

Connector (coupler)	Marking of explosion protection and protection against explosion of combustible dust	Tamb (°C)*	Optical channel power
13-2, 15-2, 17-2, 13-4, 15-4, 17-4	Ex op pr IIC T6 Gb X Ex op is IIC T6 Gb X	from -60 (-20, -40) to +40	Fiber optic source is limited by the maximum signal strength up to 15 MW and maximum radiation of 5 MW/mm <sup>2</sup> (surface area not exceeding 400 mm <sup>2</sup> ).
	Ex op pr IIC T5 Gb X Ex op is IIC T4 Gb X	from -60 (-20, -40) to +55	Fiber optic source is limited by the maximum signal strength up to 35 MW and maximum radiation of 5 MW/mm <sup>2</sup> (surface area not exceeding 400 mm <sup>2</sup> ).
13-3, 15-3, 17-3	Ex op pr IIC T6 Gb X Ex op is IIC T6 Gb X	from -60 (-20, -40) to +40	Fiber optic source is limited by the maximum signal strength up to 15 MW and maximum radiation of 5 MW/mm <sup>2</sup> (surface area not exceeding 400 mm <sup>2</sup> ).
	Ex op pr IIC T5 Gb X Ex op is IIC T4 Gb X	from -60 (-20, -40) to +55	Fiber optic source is limited by the maximum signal strength up to 35 MW and maximum radiation of 5 MW/mm <sup>2</sup> (surface area not exceeding 400 mm <sup>2</sup> ).
17-1	Ex op pr IIC T6 Gb X Ex op is IIC T6 Gb X	from -60 (-20, -40) to +40	Fiber optic source is limited by the maximum signal strength up to 15 MW and maximum radiation of 5 MW/mm <sup>2</sup> (surface area not exceeding 400 mm <sup>2</sup> ).
	Ex op pr IIC T5 Gb X Ex op is IIC T4 Gb X	from -60 (-20, -40) to +55	Fiber optic source is limited by the maximum signal strength up to 35 MW and maximum radiation of 5 MW/mm <sup>2</sup> (surface area not exceeding 400 mm <sup>2</sup> ).
18-1	Ex op pr IIC T6 Gb X Ex op is IIC T6 Gb X	from -60 (-20, -40) to +40	Fiber optic source is limited by the maximum signal strength up to 15 MW and maximum radiation of 5 MW/mm <sup>2</sup> (surface area not exceeding 400 mm <sup>2</sup> ).
	Ex op pr IIC T5 Gb X Ex op is IIC T4 Gb X	from -60 (-20, -40) to +55	Fiber optic source is limited by the maximum signal strength up to 35 MW and maximum radiation of 5 MW/mm <sup>2</sup> (surface area not exceeding 400 mm <sup>2</sup> ).

\* - The lower range of ambient temperatures during operation depends on the sealing compound and device see table 2

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Series RU # 0736527 (number of attachment blank)

### 3. DESCRIPTION OF DESIGN AND EXPLOSION PROTECTION MEANS

Connectors (couplers) are made as a male and female connector assembly. Each connector housing is provided with an insert and a contact block (contact pin and elastic contact plates). The male connector inserted into the female connector together form a connection which is safe for use in hazardous areas as per the assigned marking of explosion protection.

The use of the connectors for optical radiation is distinguished by the insertion configuration, which allows the use of fiber optic contacts.

Design options:

1. Standard design – ASTM B211 or B221 alloy 6061-T6, aluminum (<7%Mg, <7%Ti);
2. Optional design – ASTM 5640, alloy 303, stainless steel;
3. Optional design – ASTM B455, alloy C38500, brass.

Seals – rubber with hardness 70 (Shore).

Detailed description of the connector assembly design series Starline-EX, Amphe-EX is found in Instruction Operation Manuals Amphenol AMPHE-EX IOM L-2124 Rev. K dated 27.01.2020 and Amphenol® Star-line Ex® IOM L-2120-3 Rev. K dated 27.01.2020.

**Explosion Protection** is ensured by compliance with standards: ГОСТ 31610.0-2014 (IEC 60079-0:2011), ГОСТ IEC 60079-1-2013, ГОСТ Р МЭК 60079-7-2012, ГОСТ 31610.15-2014/IEC 60079-15:2010, ГОСТ 31610.28-2012/IEC 60079-28:2006, ГОСТ IEC 60079-31-2013.

### 4. MARKING

**Marking** applied to Ex-proof connectors Starline-EX, Amphe-EX, shall include the following data:

- the name of the manufacturer or his registered trade mark;
- designation of the equipment type (product type), serial number and year of production;
- Ex-marking;
- special explosion safety mark (Ex symbol);
- number of certificate of compliance and issuing body;
- and other data, which have to be provided by manufacturer, if it is required by technical documentation.

### 5. SPECIAL CONDITIONS OF USE

The X sign following the explosive protection marking means that the following special conditions of use must be observed when operating connector assembly series Starline-EX, Amphe-EX:

#### 5.1. Starline EX

5.1.1. When the male connector is not inserted into the female connector, or a plug is missing, respective actions shall be taken to avoid voltage supply to the connectors.

5.1.2. The male, female connectors and plugs being used shall have appropriate location of pins and receptacles, and shall be fit for each other as per the technical documentation.

5.1.3. If connections are to be made in the housing (panel) which is certified as an ex-proof enclosure, respective parameters of (ex-proof) connections shall be observed.

5.1.4. Ex-18 (see table 5) is suitable for groups IIA, IIB or IIC subject to the following:

Enclosure size	Diameter (mm)	Length (mm)
12	39.90/39.85	46 (±1)
16	49.90/49.85	46 (±1)
20	62.90/62.85	46 (±1)
24	74.90/74.85	46 (±1)
28	89.90/89.85	46 (±1)

5.1.5. In the housing of increased safety ("e" protection type), when the free internal space is filled with epoxy resin a respective voltage-breakdown test as per GOST R MEK 60079-7-2012 shall be made for each block after epoxy injection. When connecting equipment and transmitting systems that use optical radiation, the " op pr " should be connected, only to the body with the kind of protection of the explosive "d" shell.

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5.1.6. The following temperature conditions shall be maintained depending on sealing materials of connectors Starline-Ex:

Connector (coupler)	Bonding material	Color	Temperature range, °C
13-2, 15-2, 17-2, 13-4, 15-4, 17-4, 17-1, 18-1, 17-H	Resin 50-3150FR/Cat 190	Black	from -40 through +135

5.1.7. If Ex-18 is used, a high-quality earthing system shall be provided per Amphenol Starline-Ex IOM L-2120-3 Rev. K dated 27.01.2020.

5.1.8. If the "op pr" connector with the "Gb" level of protection connects to the body with the kind of protection of the explosively resistant "d" shell, and when using optical equipment with the kind of explosive protection "op is", the power restrictions for optical sources do not apply.

5.1.9. In case two "op pr" connectors with protection level "Gb" are interconnected for making connection between units (equipment), and if equipment of "op is" ex-proof type is used in these units (equipment), then no fiber optic source power limitations shall be applied.

5.1.10. The "tb" connectors with protection level "Db" in all cases shall correspond in power to "op is" connectors (power limitation to parameters corresponding to "op is").

### 5.2. Amphe-EX

#### 5.2.1. For Zone 1

5.2.1.1. When the male connector is not inserted into the female connector, or a plug is missing, respective actions shall be taken to avoid voltage supply to the connectors (couplers).

5.2.1.2. The male, female connectors and plugs being used shall have appropriate location of pins and receptacles, and shall be fit for each other as per the technical documentation, see Amphenol Amphe-Ex IOM L-2124 Rev. K dated 27.01.2020.

5.2.1.3. A high-quality earthing system shall be provided per Amphenol Amphe-Ex IOM L-2124 Rev. K dated 27.01.2020.

5.2.1.4. Conductors (cables) installed by the user shall be suitable for continuous operation at the least temperature of 84°C with the maximum design ambient temperature of 40°C, and at the least temperature of 99°C with the maximum design ambient temperature of 55°C (see table 5).

5.2.1.5. Temperature at the point of connection shall be within the range of -40°C through +135°C.

5.2.1.6. The user shall make sure that at the point of connection of a connector an appropriate level of protection of the housing (panel) is maintained.

5.2.1.7. In case equipment is marked as "op pr" with protection level "Gb" it shall be connected only to a housing with protection by flameproof enclosure "d".

5.2.1.8. In case equipment is marked as "op pr" with protection level "Gb" special attention shall be drawn to ensuring protection of the fiber optic cable from any damages.

#### 5.2.2. For Zone 2

5.2.2.1. Cables shall be terminated in a non-hazardous area, or within an appropriate explosion protection terminal enclosure/junction box.

5.2.2.2. It is the responsibility of the user/installer to ensure appropriate measures are taken to ensure the equipment is adequately protected from transient over voltages.

5.2.2.3. User must provide earthing hardware and ensure adequate protection against corrosion.

5.2.2.4. Wiring is completed in accordance with Amphenol Amphe-Ex IOM L-2124 Rev. K dated 27.01.2020.

5.2.2.5. The user/installer shall ensure that the wiring fitted to the panel mount receptacles shall be suitable for a continuous operating temperature of at least 135°C when rated for a maximum temperature of 120°C (in other words with enough to spare).

5.2.2.6. Conductors installed by the user shall be insulated while being connected.

5.2.2.7. The user/installer should make sure that the connector installation does not violate the explosive protection.

**Changes to the design, which affects ex-protection, of connector assemblies series Starline-EX, Amphe-EX are possible only in agreement with NANIO CSVE in accordance with the requirements of TR CU 012/2011.**

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