DNV·GL

TYPE EXAMINATION CERTIFICATE

[2] EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 2014/34/EU

[3] Type Examination Certificate Number: **Presafe 15 ATEX 7059X** **Issue 1**

[4] Product: **TNHV2**

[5] Manufacturer: **Bartec Technor AS**

[6] Address: **Vestre Svanholmen 24, Sandnes, Norway**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] DNV GL Presafe AS certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.

The examination and test results are recorded in confidential reports listed in section 16.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012/A11:2013, EN 60079-1:2014, EN 60079-7:2015, EN 60079-15: 2010 & EN 60079-28:2015

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

[11] This TYPE EXAMINATION CERTIFICATE relates only to the design of the specified equipment and not to specific items of equipment subsequently manufactured.

[12] The marking of the product shall include the following:

II 3 G Ex Refer description

Date of issue:
2020-11-06

Bjørn Spongsveen
For DNV GL Presafe AS
The Certificate has been digitally signed.
See www.dnvgl.com/digitalsignatures for info

[13] **Schedule**

[14] **Type Examination Certificate No:** Presafe 15 ATEX 7059X Issue 1

[15] **Description of Product**

The TNHV2 Junction box comprises a component certified Ex e enclosure up to four(3 phase+N) high voltage connection facilities supported by ceramic insulators. Optionally, additional junction box is attached to the main enclosure for the connection of fiber optic cables. The method of connecting the enclosures together is described in the component certificate DNV-2008-OSL-ATEX-42438U.

Optical fibre cable is not part of the assessment. Relevant requirements IEC 60079-28 shall be considered when choosing the optical fibre. The assessment to op pr covers only the provision made for fibre optic termination within enclosure. The optical source is not part of the assessment. This provision is intended to be used with Ex certified "op is" source, or as "op pr" when terminating according to the manufacturer's instructions.

The junction box may be equipped with optional components such as anti-condensation heater (Ex d), thermostat (Ex d), fuse (Ex d), low voltage terminals (Ex e) or switch (Ex d).
A cover made of Lexan 9030 is provided to cover the high voltage terminals to avoid direct contact uninsulated parts for the operator as the door is opened.

The size of the junction box may be in the range of (W/H/D) 90 cm x 125 cm x 40 cm up to 100cm x 200cm x 60 cm, with the layout of the internal connections as described in the manufacturer's documentation.

The TNHV2 has two configurations for internal mounting of components. The difference is the placement of HV terminals and cable clamps.

Type designation
TNHV2

Electrical Data
15kV Max. 630A /1000A Max.

Ex Marking with variants:

High voltage part: Ex nA IIC T3 Gc
High voltage part with heater/thermostat/switch module:Ex db eb nA IIC T3 Gc
High voltage part with Ex nA connection box for fiber: Ex nA op pr IIC T3 Gc
High voltage part with Ex nA connection box for fiber, heater and thermostat: Ex db eb nA op pr IIC T3 Gc
The op pr protection may be replaced by op is signals, and the Ex-code will then be modified, and op pr replaced by [op is].

Ambient temperature:

650A	**-50 ºC ≤Ta≤ 60ºC**	
	-50 ºC ≤Ta≤ 40ºC	**When Ex d switch module is used**
	-25 ºC ≤Ta≤ 40ºC	**When Ex d control module is used**
1000A	**-50 ºC ≤Ta≤ 40ºC**	
	-25 ºC ≤Ta≤ 40ºC	**When Ex d control module is used**

Routine tests
Dielectric strength test according to clause 6.5.1, EN 60079-15:2010 shall be performed. Test voltage shall be at least 2xU + 1000V for 60s

[16] **Report No**.: D0002052 **Presafe 15 ATEX 7059X Issue 1**

[17] **Specific Conditions of Use**

- The cable & cable gland selected that shall be able to withstand a service temperature range of at least 100°C. Cable gland shall have at least IP66 to comply IP66 for the complete assembly.
- The cable through the cable glands shall be effectively clamped to prevent pulling from cable gland.
- Optical fiber shall comply with relevant industrial standards when used.
- The enclosure can be delivered with an additional Ex e enclosure as an option for splicing of optical fibre, according to the manufacturer's instructions. The marking must reflect this by adding "[op is]" or "op pr" in the Ex-code.
- The optical source is not part of the assessment. This provision is intended to be used with Ex certified "op is" source, or as "op pr" when terminating according to the manufacturer's instructions.

[18] **Essential Health and Safety Requirements**

Essential Health and Safety Requirements (EHSRs) are covered by the standards listed at item 9

[19] **Drawings and documents**

Number	Title	Rev.	Date
HVX-06-5	Ex e Enclosure, Zone 2 TNHV 12512540	C	2020-10-20
HVX-07-5	Partlist Ex e Enclosure, Zone 2 TNHV 12512540	D	2020-10-20
HVX-08-5	Ex e Enclosure, Zone 2 TNHV 12512540	C	2020-10-20
HVX-09-5	Partlist Ex e Enclosure, Zone 2 TNHV 12512540	D	2020-10-20
HVX-16-4	Optional Heater Solution	A	2020-08-20
HVX-17-5	Type label for TNHV 2	A	2020-09-30

[20] **Certificate History**

Issue	Description	Issue date	Report no.
0	Original issue	2015-09-11	D0002052
1	Assessment for optional components	2020-11-06	D0002052

END OF CERTIFICATE