DNV·GL

Certificate No:
MRE0000003
File No:
MR-E011
Job Id:
262.4-000021-3

EU RO MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

This Certificate is issued to
SOLCO PYROELEC CO., LTD.
Anseong-si Gyeonggi-do, Republic of Korea

for
Electric Cables - Heating Cables

with type designation(s)
FBH self-regulating heating cable

The product is found to comply with
EU RO Mutual Recognition Technical Requirements for Electric Cables – Heating Cables

Intended service
IECEx type self-regulating heating cable system. Anti-icing system and De-icing system onboard ships and offshore vessels.

Voltage (V)	**100- 120 VAC, 200-277 VAC**
Temp. class	**T4 (135°C)**
Power [W/m] @ref. temp.	**15, 30, 45, 60W/m @10°C**
Ex area	**Yes**

This Certificate is valid until **2021-09-20**.

Issued at **Høvik** on **2016-09-21**

for **DNV GL**

DNV GL local station: **Seoul**

Approval Engineer: **Ivar Bull**

Trond Sjåvåg
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Certificate No: **MRE0000003**
File No: **MR-E011**
Job Id: **262.4-000021-3**

Product description

FBH IECEx type self-regulating heating cable

-Conductor:	1.1mm2stranded nickel plated copper
-Heating element	Self-regulating conductive core
-Inner jacket	Modified polyolefin
-Metal covering	Tinned copper
-Outer jacket*)	Fluoropolymer

*) Mandatory in Gas dangerous areas

Type designation	Temperature class	P Nominal [W/m]	Un [V]
FBH151	T4 (135°C)	15W/m@10	100-120
FBH301	T4 (135°C)	30W/m@10	100-120
FBH451	T4 (135°C)	45W/m@10	100-120
FBH601	T4 (135°C)	60W/m@10	100-120

Type designation	Temperature class	P Nominal [W/m]	Un [V]
FBH152	T4 (135°C)	15W/m@10	200-277
FBH302	T4 (135°C)	30W/m@10	200-277
FBH452	T4 (135°C)	45W/m@10	200-277
FBH602	T4 (135°C)	60W/m@10	200-277

Connection kit : PYEX-AE-P
PYEX-AE-E
PYEX-AE-TC

Manufactured by

SOLCO PYROELEC CO., LTD.
Gyeonggi-do, Republic of Korea

Application/Limitation

1. The T-code rating for the cables is as follows: T4 for the FBH Series.
2. The cable has a minimum installation temperature of -55°C.
3. The FBH Series cables have a maximum maintain temperature (power on) 110°C and a maximum exposure temperature (power off) of 135°C.
4. The FBH Series cables are designed for use with the PYEX Series Connection kits (PYEX-AE-P power connection kit, PYEX-AE-TC RTD temperature sensor connection kit, PYEX-AE-E end termination kit).
5. Follow the manufacturer's instructions to reduce the potential of an electrostatic charging hazard.

IECEx test reports are taken for information only.

Type Approval documentation

Marking of product

SOLCO PYROELEC CO. -Parallel Self-Regulating Heating Cable FBH xxx-CTxx W/m@10°C
277V T4 135°C Ex e IIC Gb –serial number

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or materials.

The main elements of the assessment are:
• Ensure that type approved documentation is available
• Inspection of factory samples, selected at random from the production line (where practicable)
• Review of production and inspection routines, including test records from product sample tests and control routines
• Ensuring that design and materials used comply with type approved documents
• Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed annually and at renewal of this certificate.

END OF CERTIFICATE