

Translation

(1) EC-Type Examination Certificate

(2) Equipment and protective systems intended for use
in potentially explosive atmospheres - Directive 94/9/EC

(3) No. of EC-Type Examination Certificate: **BVS 12 ATEX E 041 U**

(4) Component: **Mineral insulated heating cables type ISOHEAT-MI-FHC**

(5) Manufacturer: **Mil Heating Systems GmbH**

(6) Address: **Großer Sand 4, 76698 Ubstadt-Weiher, Germany**

(7) The design and construction of this component and any acceptable variation thereto are specified in the appendix to this Type Examination Certificate.

(8) The certification body of DEKRA EXAM GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive. The examination and test results are recorded in the test and assessment report BVS PP 12.2054 EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:

EN 60079-0:2009	General requirements
EN 60079-7:2007	Increased Safety
EN 60079-30-1:2007	Electrical resistance trace heating
EN 60079-31:2009	Protection by enclosures (dust)

(10) The sign "U" placed after the certificate number indicates that the certificate must not be mistaken for a certificate for equipment or a protective system. This certificate may only be used as the basis for the certification of equipment or a protective system.

(11) This supplement of the EC-Type Examination Certificate relates only to the design, examination and tests of the specified component in accordance to Directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this component. These are not covered by this supplement.

(12) The marking of the component shall include the following:

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

DEKRA EXAM GmbH
Bochum, 19th April 2012

Signed: Dr. Franz Eickhoff

Certification body

Signed: Schumann

Special services unit

- (13) Appendix to
- (14) **EC-Type Examination Certificate
BVS 12 ATEX E 041 U**
- (15) 15.1 Subject and type

Mineral insulated heating cables of type ISOHEAT-MI-FHC

15.2 Description

The mineral insulated heating cables of type ISOHEAT-MI-FHC are cables ready for connection. At both ends, cold lead are connected by means of welded or soldered bushings.

Both ends of the cold lead are equipped with sealing ends which not only seal the mineral insulated cables, but also serve as cable entries. By these cable entries the ends of the heating cable are inserted into either an enclosure of the type of protection Increased Safety 'e' (for Gb) or an enclosure of the type of protection Protection by Enclosures 't' (for Db).

The mineral insulated heating cables are manufactured in different lengths featuring different diameters, jacket materials and values of electrical resistance.

The temperature control and temperature monitoring are not subject of this EC-Type Examination Certificate for the heating cable.

15.3 Parameters

Operating voltage		up to	AC 500	V
Nominal current				
using PTC thermistor 2.5 mm ²		up to	30	A
using PTC thermistor 6 mm ²		up to	55	A
Resistance of heating cable	0.16	up to	10	Ω/m
Resistance of cold lead	0.003	or	0.007	Ω/m
Minimum bending radius			5 x cable diameter	
Permitted operating temperature at the sealing ends			-55 to	70 °C
Permitted operating temperature at the cables			-70 to	650 °C
Minimum installation temperature			-55	°C

(16) Test and assessment report

BVS PP 12.2054 EG, as of 19.04.2012

(17) Special conditions for safe use

When installing the component the parameters listed in 15.3 (minimum bending radius, minimum installation temperature) have to be observed.

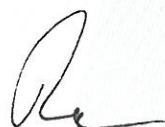
The cold lead of the heating cable are to be inserted into either an enclosure of the type of protection Increased Safety 'e' (for Gb) or an enclosure of the type of protection Protection by Enclosures 't' (for Db).

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

DEKRA EXAM GmbH
44809 Bochum, 22.01.2013
BVS-Ru/Ar E 2194/13



Certification body



Special services unit