



Translation

(1) EC-Type Examination Certificate

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

(3) **DMT 02 ATEX E 183**

(4) **Equipment:** Ruggedized ExII-telephone Type ExResistTel

(5) **Manufacturer:** FHF Funke + Huster Fernsig GmbH

(6) **Address:** D 42503 Velbert

(7) The design and construction of this equipment and any acceptable variation thereto are specified in the schedule to this type examination certificate.

(8) The certification body of Deutsche Montan Technologie 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 equipment 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 02.2081 EG.

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

EN 50014:1997 + A1 – A2	General requirements
EN 50019:2000	Increased safety
EN 50020:1994	Intrinsic safety
EN 50028:1987	Encapsulation
EN 50281-1-1:1998	Dust protection

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.

Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate

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

Ex II 2G EEx em [ib] IIC T5
II 2D IP66 T 100 °C
-25 °C ≤ Ta ≤ +60 °C

II 2G EEx em [ib] IIC T6
II 2D IP66 T 80 °C
-25 °C ≤ Ta ≤ +40 °C

Deutsche Montan Technologie GmbH

Essen, dated 30. September 2002

Signed: Jockers

Signed: Eickhoff

DMT-Certification body

Head of special services unit

Page 1 of 3 to DMT 02 ATEX E 183

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Am Technologiepark 1, 45307 Essen, Telefon (0201)172-1416, Telefax (0201)172-1716



(13) Appendix to

(14) **EC-Type Examination Certificate**

DMT 02 ATEX E 183

(15) 15.1 Subject and type

Ruggedized ExII-telephone type ExResistTel

15.2 Description

The Ruggedized EExII-telephone type ExResistTel are designed for use in potentially explosive areas.

The vertical-suspended position of normal use of the telephone is permitted.

The handset and optionally a keyboard and a LC-Display are designed in the protection type "i" (intrinsically safe).

The electrical connection for the telephone is made by means of terminals in the protection type "e" (increased safety).

15.3 Parameters

15.3.1 Non intrinsically circuits

15.3.1.1 Telephone-network lines
(Terminals La / Lb No.: 13 – 14)

Maximum input voltage	Um (dialling voltage)	AC	90	V
Permitted frequency range respectively			16 ... 54	Hz
Maximum input voltage	Um (supply voltage)	DC	66	V
Maximum input nominal current			100	mA
Maximum input short-circuit current I_k			35	A
(There is a fuse with the breaking capacity of 35 A in the input-circuit of this apparatus.)				

15.3.1.2 External second ringer: only for connection to passive consumers
(Terminals W1/W No.: 15 – 16)

Maximum dialling voltage	AC	90	V
Frequency range respectively		16 ... 54	Hz
Maximum supply voltage	DC	66	V

15.3.2 Intrinsically safe circuits

15.3.2.1 Headset (Microphone)
(Terminals pair KGM No.: 5 – 6)

Maximum output voltage	Uo	17	V
Maximum output current	Io	90	mA
Maximum output power	Po	80	mW
Maximum external capacitance	Co	375	nF
Maximum external inductance	Lo	1	mH

15.3.2.2 Headset (ear piece)
(Terminals pair KGH No.: 7 – 8)

Maximum output voltage	U _o	17	V
Maximum output current	I _o	110	mA
Maximum output power	P _o	190	mW
Maximum external capacitance	C _o	375	nF
Maximum external inductance	L _o	1,2	mH

15.3.2.3 Headset (recognition) respectively second ear piece
(Terminals pair KGS No.: 9 – 10)

Maximum output voltage	U _o	17	V
Maximum output current	I _o	8	mA
Maximum output power	P _o	33	mW
Maximum external capacitance	C _o	375	nF
Maximum external inductance	L _o	100	mH

15.3.2.4 External loudspeaker
(Terminals pair LSP No.: 11 – 12)

Maximum output voltage	U _o	6,6	V
Maximum output current	I _o	250	mA
Maximum output power	P _o	370	mW
Maximum external capacitance	C _o	22	µF
Maximum external inductance	L _o	0,3	mH

15.3.2.5 All intrinsically safe output-Circuits have a linear characteristic.

15.3.3 Ambient temperature range

15.3.3.1 -25 °C ≤ T_a ≤ +60 °C for the temperature class T5

15.3.3.2 -25 °C ≤ T_a ≤ +40 °C for the temperature class T6

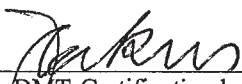
(16) Test and assessment report
BVS PP 02.2081 EG as of 30.09.2002

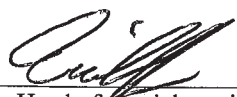
(17) Special conditions for safe use
none

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.

45307 Essen, 30.09.2002
BVS-Kan/Ld/Mi A 20000510

Deutsche Montan Technologie GmbH


DMT-Certification body


Head of special services unit



Translation



1. Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the EC-Type Examination Certificate DMT 02 ATEX E 183

Equipment: Ruggedized ExII-telephone Type ExResistTel
Manufacturer: FHF Funke + Huster Fernsig GmbH
Address: D - 42503 Velbert

Description

The telephone can be modified according to the descriptive documents as mentioned in the pertinent test and assessment report and include a breathing device.

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

EN 50014:1997 + A1 – A2	General requirements
EN 50019:2000	Increased safety
EN 50020:1994	Intrinsic safety
EN 50028:1987	Encapsulation
EN 50281-1-1:1998	Dust protection

Test and assessment report

BVS PP 02.2081 EG as of 12.11.2002

Deutsche Montan Technologie GmbH

Essen, dated 12. November 2002

signed: Jockers
DMT-Certification body

signed: Eickhoff
Head of special services unit



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.

45307 Essen, 12.11.2002
BVS-Ld/Mi A 20020507

Deutsche Montan Technologie GmbH


DMT-Certification body


Head of special services unit



Translation

2nd Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the EC-Type Examination Certificate DMT 02 ATEX E 183

Equipment: Ruggedized ExII-Telephone type ExResistTel

Manufacturer: FHF Funke + Huster Fernsig GmbH

Address: D - 45478 Mülheim an der Ruhr

Subject and type

Ruggedized ExII-Telephone type ExResistTel

Description

The electrical modified Ruggedized ExII-telephone type ExResistTel is designed for use in potentially explosive areas. The vertical-suspended position of normal use of the telephone is permitted. The handset and optionally a keyboard and a LC-Display are designed in the protection type "i" (intrinsically safe). The electrical connection for the telephone is made by means of terminals in the protection type "e".

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with

EN 50014:1997+A1-A2	General requirements
EN 50019:2000	Increased safety
EN 50020:2002	Intrinsic safety
EN 50028:1987	Encapsulation
EN 50281-1-1:1998	Dust explosion protection

Parameters

1	Non-intrinsically safe circuits		
1.1	Telephone-network lines (terminals La / Lb no.: 13 – 14)		
	Maximum input voltage	Um (dialling voltage)	AC 150 V
	Permitted frequency range respectively		15 ... 68 Hz
	Maximum input voltage	Um (supply voltage)	DC 56,5 V
	Maximum input nominal current		110 mA
	Maximum input short-circuit current I _K		35 A
	(There is a fuse with the breaking capacity of 35 A in the input-circuit of this apparatus.)		
1.2	External second ringer: only for connection to passive consumers (terminals W1 / W no.: 15 – 16)		
	Maximum input voltage	Um (dialling voltage)	AC 150 V
	Frequency range		15 ... 68 Hz
	or		
	Maximum input voltage	Um (supply voltage)	DC 56,5 V

2	Intrinsically safe circuits			
2.1	Headset (Microphone)			
	(terminals pair KGM no.: 5 – 6)			
	Maximum output voltage	Uo	17	V
	Maximum output current	Io	90	mA
	Maximum output power	Po	80	mW
	Maximum external capacitance	Co	375	nF
	Maximum external inductance	Lo	1,2	mH
2.2	Headset (ear piece)			
	(terminals pair KGH no.: 7 – 8)			
	Maximum output voltage	Uo	17	V
	Maximum output current	Io	110	mA
	Maximum output power	Po	190	mW
	Maximum external capacitance	Co	375	nF
	Maximum external inductance	Lo	1,2	mH
2.3	Headset (recognition)			
	(terminals pair KGS no.: 9 – 10)			
	Maximum output voltage	Uo	17	V
	Maximum output current	Io	8	mA
	Maximum output power	Po	33	mW
	Maximum external capacitance	Co	375	nF
	Maximum external inductance	Lo	100	mH
2.4	External loudspeaker			
	(terminals pair LSP no.: 11 – 12)			
	Maximum output voltage	Uo	6,6	V
	Maximum output current	Io	250	mA
	Maximum output power	Po	370	mW
	Maximum external capacitance	Co	22	µF
	Maximum external inductance	Lo	0,3	mH
2.5	All intrinsically safe output circuits have a linear characteristic			
3	Operating temperature range			
	-20 °C ≤ Ta ≤ +60 °C for the temperature class T5			
3.2	-20 °C ≤ Ta ≤ +40 °C for the temperature class T6			

Test and assessment report

BVS PP 02.2081 EG as of Stand 06.01.2005

Special conditions for safe use

Not applicable

EXAM BBG Prüf- und Zertifizier GmbH

Bochum, dated 06. January 2005

Signed: Dr. Jockers

Signed: Dr. Eickhoff

Certification body

Special services unit

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.

44809 Bochum, 06.01.2005
BVS-Kan/Mi A 20040801

EXAM BBG Prüf- und Zertifizier GmbH


Certification body


Special services unit



Translation

3rd Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the EC-Type Examination Certificate DMT 02 ATEX E 183

Equipment: Ruggedized ExII-telephone Type ExResistTel

Manufacturer: FHF Funke + Huster Fernsig GmbH

Address: 45478 Mülheim an der Ruhr, Germany

Description

A different sealing compound may be used for ExII-telephone type ExResistTel.

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

EN 50014:1997 + A1 – A2 General requirements
EN 50019:2000 Increased safety
EN 50020:2002 Intrinsic safety
EN 50028:1987 Encapsulation
EN 50281-1-1:1998 + A1 Dust explosion protection

The marking of the equipment shall include the following:



II 2G EEx em [ib] IIC T5
II 2D IP66 T100 °C
-25 °C ≤ Ta ≤ +60 °C

II 2G EEx em [ib] IIC T6
II 2D IP66 T80 °C
-25 °C ≤ Ta ≤ +40 °C

Special conditions for safe use

Unchanged

Test and assessment report

BVS PP 02.2081 EG as of 02.02.2006

EXAM BBG Prüf- und Zertifizier GmbH

Bochum, dated 02nd February 2006

Signed: Dr. Eickhoff

Signed: Dr. Arnold

Certification body

Special services unit

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.

44809 Bochum, 20.01.2010
BVS-Kr/Ld/Ar E 0043/10

DEKRA EXAM GmbH

Certification body

Special services unit



Translation

4th Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the EC-Type Examination Certificate DMT 02 ATEX E 183

Equipment: Ruggedized ExII-telephone type ExResistTel

Manufacturer: FHF Funke + Huster Fernsig GmbH

Address: 45478 Mülheim an der Ruhr, Germany

Description

The ruggedized ExII-telephone type ExResistTel may now also be equipped with the modified cable entries and blanks as listed in the documents provided with the pertinent Test and Assessment Report.

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

EN 50014:1997 + A1 – A2 General requirements
EN 50019:2000 Increased safety
EN 50020:2002 Intrinsic safety
EN 50028:1987 Encapsulation
EN 50281-1-1:1998 +A1 Dust explosion protection

The marking of the equipment shall include the following:

	II 2G EEx em [ib] IIC T5	II 2G EEx em [ib] IIC T6
	II 2D IP66 T100 °C	II 2D IP66 T80 °C
	-25 °C ≤ Ta ≤ +60 °C	-25 °C ≤ Ta ≤ +40 °C

Special conditions for safe use
Unchanged

Test and assessment report
BVS PP 02.2081 EG as of 09.03.2006

EXAM BBG Prüf- und Zertifizier GmbH

Bochum, dated 09th March 2006

Signed: Dr. Jockers

Signed: Dr. Eickhoff

Certification body

Special services unit

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.

44809 Bochum, 20.01.2010
BVS-Kr/Ld/Ar E 0043/10

DEKRA EXAM GmbH

Certification body

Special services unit



Translation

5th Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the EC-Type Examination Certificate DMT 02 ATEX E 183

Equipment: Ruggedized ExII-telephone type ExResistTel
Manufacturer: FHF Funke + Huster Fernsig GmbH
Address: 45478 Mülheim an der Ruhr, Germany

Description

The Ruggedized ExII-telephone type ExResistTel can be modified according to the descriptive documents as mentioned in the pertinent test and assessment report.

The Ruggedized ExII-telephone type ExResistTel is designed for use in potentially explosive areas.

The vertical-suspended position of normal use of the telephone is permitted.

The handset and optionally a keyboard and a LC-Display are designed in the protection type "i" (intrinsically safe).

The electrical connection for the telephone is made by means of terminals in the protection type "e".

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

EN 60079-0:2004	General requirements
EN 60079-7:2003	Increased safety
EN 60079-11:2007	Intrinsic safety
EN 60079-18:2004	Encapsulation
IEC 61241-0:2004	General requirements
EN 61241-1:2004	Protection by enclosure

The marking of the equipment shall include the following:



II 2G Ex emb[ib] IIC T6

II 2D Ex tD A21 IP66 T80°C
-25°C ≤ Ta ≤ + 40°C

II 2G Ex emb[ib] IIC T5

II 2D Ex tD A21 IP66 T100°C
-25°C ≤ Ta ≤ + 60°C

Parameters

1	Non-intrinsically safe circuits			
1.1	Telephone-network lines (terminals La / Lb no.: 13 – 14)			
	Maximum input voltage	Um	(dialling voltage)	AC 90 V
	Permitted frequency range respectively			16 ... 54 Hz
	Maximum input voltage	Um	(dialling voltage)	AC 150 V
	Permitted frequency range respectively			15 ... 68 Hz
	Maximum input voltage	Um	(supply voltage)	DC 66 V
	Maximum input nominal current respectively			100 mA
	Maximum input voltage	Um	(supply voltage)	DC 56.5 V
	Maximum input nominal current			110 mA
	Maximum input short-circuit current I_K (There is a fuse with the breaking capacity of 35 A in the input-circuit of this apparatus.)			35 A
1.2	External second ringer: only for connection to passive consumers (terminals W1 / W no.: 15 – 16)			
	Maximum input voltage	Um	(dialling voltage)	AC 90 V
	Permitted frequency range respectively			16 ... 54 Hz
	Maximum input voltage	Um	(dialling voltage)	AC 150 V
	Permitted frequency range respectively			15 ... 68 Hz
	Maximum input voltage	Um	(supply voltage)	DC 66 V
	Maximum input voltage	Um	(supply voltage)	DC 56.5 V
2	Intrinsically safe circuits All intrinsically safe output circuits have a linear characteristic			
2.1	Headset (Microphone) (terminals pair KGM no.: 5 – 6)			
	Maximum output voltage	Uo		17 V
	Maximum output current	Io		90 mA
	Maximum output power	Po		80 mW
	Maximum external capacitance	Co		375 nF
	Maximum external inductance	Lo		1.2 mH
2.2	Headset (ear piece) (terminals pair KGH no.: 7 – 8)			
	Maximum output voltage	Uo		17 V
	Maximum output current	Io		110 mA
	Maximum output power	Po		190 mW
	Maximum external capacitance	Co		375 nF
	Maximum external inductance	Lo		1.2 mH
2.3	Headset (recognition) (terminals pair KGS no.: 9 – 10)			
	Maximum output voltage	Uo		17 V
	Maximum output current	Io		8 mA
	Maximum output power	Po		33 mW
	Maximum external capacitance	Co		375 nF

	Maximum external inductance	Lo	100	mH
2.4	External loudspeaker (terminals pair LSP no.: 11 – 12)			
	Maximum output voltage	Uo	6.6	V
	Maximum output current	Io	250	mA
	Maximum output power	Po	370	mW
	Maximum external capacitance	Co	22	µF
	Maximum external inductance	Lo	0.3	mH
3	Operating temperature range			
3.1	-25 °C ≤ Ta ≤ +60 °C for the temperature class T5			
3.2	-25 °C ≤ Ta ≤ +40 °C for the temperature class T6			

Special conditions for safe use

Not applicable

Test and assessment report

BVS PP 02.2081 EG as of 29.06.2007

EXAM BBG Prüf- und Zertifizier GmbH

Bochum, dated 29. June 2007

Signed: Migenda

Certification body

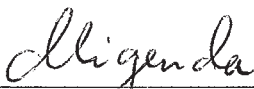
Signed: Dr. Eickhoff

Special services unit

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.

44809 Bochum, 29.06.2007
BVS-Kan/Mi A 20070006

EXAM BBG Prüf- und Zertifizier GmbH



Certification body



Special services unit



Translation

6th Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the EC-Type Examination Certificate DMT 02 ATEX E 183

Equipment: Ruggedized ExII-telephone Type ExResistTel
Manufacturer: FHF Funke + Huster Fernsig GmbH
Address: 45478 Mülheim an der Ruhr, Germany

Description

The ruggedized EExII-telephone type ExResistTel is intended for use in potentially explosive atmospheres. It is permitted to use or install the telephone in a vertical or hanging position.

A hand-held device as well as the optionally provided keyboard and LCD-display are manufactured to meet the requirements of the type of protection Intrinsic Safety 'i'.

The electrical connection of the telephone is provided by terminals that meet the requirements of the type of protection Increased Safety 'e'.

The ambient temperature range lies between -25°C and +40°C or +60°C, respectively. The temperature class and the surface temperature may vary depending on the ambient temperature range in place.

The ruggedized EExII-telephone type ExResistTel is equipped with a breathing apparatus.

This supplement describes the modifications of the material used for the display window as well as the modification of the number and size of the drill holes for the cable entries.

Additionally, the ruggedized ExII-telephone type ExResistTel complies with the current status of the standard.

The ruggedized EExII-telephone type ExResistTel may now also be modified according to the documents provided in the pertinent Test and Assessment Report.

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

EN 60079-0:2006	General requirements
EN 60079-7:2007	Increased safety
EN 60079-11:2007	Intrinsic safety
EN 60079-18:2004	Encapsulation
EN 61241-0:2006	General requirements
EN 61241-1:2004	Protection by enclosures

The marking of the equipment shall include the following:



II 2G Ex emb [ib] IIC T6/T5
II 2D Ex tD A21 IP66 T80°C/T100°C

Special conditions for safe use

Still not relevant

Test and assessment report

BVS PP 02.2081 EG as of 10.12.2009

DEKRA EXAM GmbH

Bochum, dated 10th December 2009

Signed: Simanski

Signed: Dr. Eickhoff

Certification body

Special services unit

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.

44809 Bochum, 20.01.2010

BVS-Kr/Ld/Ar E 0043/10

DEKRA EXAM GmbH



Certification body



Special services unit

Translation

(1) 7. Supplement to the EC-Type Examination Certificate

- (2) Equipment and protective systems intended for use
in potentially explosive atmospheres - Directive 94/9/EC
Supplement accordant with Annex III number 6
- (3) No. of EC-Type Examination Certificate: **DMT 02 ATEX E 183**
- (4) Equipment: **Ruggedized ExII-telephone Type ExResistTel**
- (5) Manufacturer: **FHF Funke + Huster Fernsig GmbH**
- (6) Address: **45478 Mülheim an der Ruhr, Germany**
- (7) The design and construction of this equipment and any acceptable variation thereto are specified in
the appendix to this supplement.
- (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
equipment 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 02.2081 EG.
- (9) The Essential Health and Safety Requirements are assured by compliance with:
- EN 60079-0:2006 General requirements**
EN 60079-7:2007 Increased safety
EN 60079-11:2007 Intrinsic safety
EN 60079-18:2004 Encapsulation
EN 61241-0:2006 General requirements
EN 61241-1:2004 Protection by enclosures
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special
conditions for safe use specified in the appendix to this certificate.
- (11) This supplement to the EC-Type Examination Certificate relates only to the design, examination and
tests of the specified equipment in accordance to Directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this
equipment. These are not covered by this certificate.
- (12) The marking of the equipment shall include the following:

 **II 2G Ex emb [ib] IIC T6/T5**
II 2D Ex tD A21 IP66 T80°C/T100°C

DEKRA EXAM GmbH
Bochum, dated 17. December 2010

Signed: Simanski

Certification body

Signed: Dr. Eickhoff

Special services unit

(13) Appendix to

(14) **7. Supplement to the EC-Type Examination Certificate
DMT 02 ATEX E 183**

(15) Description

The ruggedized EExII-telephone type ExResistTel is intended for use in potentially explosive atmospheres. It is permitted to use or install the telephone in a vertical or hanging position.

A hand-held device as well as the optionally provided keyboard and LCD-display are manufactured to meet the requirements of the type of protection Intrinsic Safety 'i'.

The electrical connection of the telephone is provided by terminals that meet the requirements of the type of protection Increased Safety 'e'.

The ambient temperature range lies between -25 °C and +40 °C or +60 °C, respectively. The temperature class and the surface temperature may vary depending on the ambient temperature range in place.

The ruggedized EExII-telephone type ExResistTel may now also be modified according to the documents provided in the pertinent Test and Assessment Report; optional it can be assembled with a changed breathing and draining device.

(16) Test and assessment report

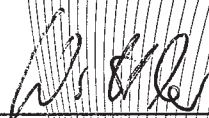
BVS PP 02.2081 EG as of 17.12.2010

(17) Special conditions for safe use

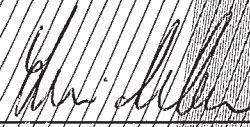
Still not relevant

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, 20.01.2011
BVS-Ld/Ar E 0023/11



Certification body



Special services unit

Translation

(1) 8. Supplement to the EC-Type Examination Certificate

- (2) Equipment and protective systems intended for use
in potentially explosive atmospheres - Directive 94/9/EC
Supplement accordant with Annex III number 6
- (3) No. of EC-Type Examination Certificate: **DMT 02 ATEX E 183**
- (4) Equipment : **Ruggedized ExII telephone type ExResistTel**
- (5) Manufacturer: **FHF Funke + Huster Fernsig GmbH**
- (6) Address: **Gewerbeallee 15-19, 45478 Mülheim an der Ruhr, Germany**
- (7) The design and construction of this equipment and any acceptable variation thereto are specified in
the appendix to this supplement.
- (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
equipment 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 02.2081 EG.
- (9) The Essential Health and Safety Requirements are assured by compliance with:
- EN 60079-0:2012 General requirements**
EN 60079-7:2007 Increased safety "e"
EN 60079-11:2012 Intrinsic safety "i"
EN 60079-18:2009 Encapsulation "m"
EN 60079-31:2009 Protection by enclosure "t"
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special
conditions for safe use specified in the appendix to this certificate.
- (11) This supplement to the EC-Type Examination Certificate relates only to the design, examination and
tests of the specified equipment in accordance to Directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this
equipment. These are not covered by this certificate.
- (12) The marking of the equipment shall include the following:

 **II 2G Ex e mb [ib] IIC T6/T5 Gb**
II 2D Ex tb [ib] IIC T80°C/T100°C Db

DEKRA EXAM GmbH
Bochum, dated 05th March 2013

Signed: Hans-Christian Simanski

Certification body

Signed: Dr. Franz Eickhoff

Special services unit

(13) Appendix to

(14) **8. Supplement to the EC-Type Examination Certificate
DMT 02 ATEX E 183**

(15) 15.1 Subject and type

Ruggedized ExII telephone type ExResistTel

15.2 Description

The Ruggedized ExII telephone type ExResistTel is suitable for use in areas endangered by an explosive atmosphere. The vertical mounting is permitted.

The handset, the keyboard and the display are designed in type of protection intrinsic safety.

The electrical connection of the Ruggedized ExII telephone type ExResistTel is realised by terminals in type of protection increased safety "e".

The ambient temperature range is -25 °C up to +40 °C respectively +60 °C. Depending on the upper ambient temperature the temperature class and the surface temperature will change.

A breathing and draining device is part of the Ruggedized ExII telephone type ExResistTel.

The reason for this supplement is the updating to the current standards.

15.3 Parameters

15.3.1 Non intrinsically safe circuits

15.34.1.1 Phone line (Terminal La / Lb No.: 13 – 14)

Maximum voltage (calling)	U_m (calling)	AC	90	V
Permitted frequency range			16 up to 54	Hz

or

Maximum voltage (calling)	U_m (calling)	AC	150	V
Permitted frequency range			15 up to 68	Hz

or

Maximum rated voltage	U_m (supply voltage)	DC	66	V
Maximum rated current			100	mA

or

Maximum rated voltage	U_m (supply voltage)	DC	56.5	V
Maximum rated current			110	mA

Maximum short circuit current I_k			35	A
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15.3.1.2 Additional external alarm: only for connection to passiv load (Terminal W1 / W No.: 15 – 16)

Maximum voltage (calling)	U_m (calling)	AC	90	V
Permitted frequency range			16 up to 54	Hz

or

Maximum voltage (calling)	U_m (calling)	AC	150	V
Permitted frequency range			15 up to 68	Hz

or

Maximum rated voltage	U_m (supply voltage)	DC	66	V
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or

Maximum rated voltage	U_m (supply voltage)	DC	56.5	V
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15.3.2 Intrinsically safe circuits

15.3.2.1 Headset (Microphone) (Terminal KGM No.: 5 – 6)

Maximum output voltage	U_o	17	V
Maximum output current	I_o	90	mA
Maximum output power	P_o	80	mW
Maximum external capacitance	C_o	375	nF
Maximum external inductance	L_o	12	mH

15.3.2.2 Headset (Speaker) (Terminal KGH No.: 7 – 8)

Maximum output voltage	U_o	17	V
Maximum output current	I_o	110	mA
Maximum output power	P_o	190	mW
Maximum external capacitance	C_o	375	nF
Maximum external inductance	L_o	12	mH

15.3.2.3 Headset (Signaling) (Terminal KGS No.: 9 – 10)

Maximum output voltage	U_o	17	V
Maximum output current	I_o	8	mA
Maximum output power	P_o	38	mW
Maximum external capacitance	C_o	375	nF
Maximum external inductance	L_o	100	mH

15.3.2.4 External speaker (Terminal LSP No.: 11 – 12)

Maximum output voltage	U_o	6.6	V
Maximum output current	I_o	250	mA
Maximum output power	P_o	370	mW
Maximum external capacitance	C_o	22	μ F
Maximum external inductance	L_o	0.3	mH

15.3.3 Ambient temperature range

15.3.3.1 Temperature class T6 -25 °C up to +40 °C

15.3.3.2 Temperature class T5 -25 °C up to +60 °C

(16) Test and assessment report

BVS PP 02.2081 EG as of 05.03.2013

(17) Special conditions for safe use

none

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, 05th March 2013
BVS-Hk/Mu A 20120549



Certification body



Special services unit

Translation

(1) 9th Supplement to the EC-Type Examination Certificate

- (2) Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC Supplement accordant with Annex III number 6
- (3) No. of EC-Type Examination Certificate: **DMT 02 ATEX E 183**
- (4) Equipment: **Ruggedized ExII telephone type ExResistTel**
- (5) Manufacturer: **FHF Funke + Huster Fernsig GmbH**
- (6) Address: **Gewerbeallee 15-19, 45478 Mülheim an der Ruhr, Germany**
- (7) The design and construction of this equipment and any acceptable variation thereto are specified in the appendix to this supplement.
- (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 equipment 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 02.2081 EG.
- (9) The Essential Health and Safety Requirements are assured by compliance with:
- | | |
|----------------------------|------------------------------|
| EN 60079-0:2012 + A11:2013 | General requirements |
| EN 60079-7:2007 | Increased safety "e" |
| EN 60079-11:2012 | Intrinsic safety "i" |
| EN 60079-18:2009 | Encapsulation "m" |
| EN 60079-31:2014 | Protection by enclosures "t" |
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the appendix to this certificate.
- (11) This supplement to the EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.
- (12) The marking of the equipment shall include the following:



II 2G Ex e mb [ib] IIC T6/T5 Gb
II 2D Ex tb [ib] IIIC T80°C/T100°C Db

DEKRA EXAM GmbH
 Bochum, dated 2015-07-16

Signed: Simanski

Certification body

Signed: Dr. Eickhoff

Special services unit

(13) Appendix to

(14) **9th Supplement to the EC-Type Examination Certificate**
DMT 02 ATEX E 183

(15) 15.1 Subject and type

Ruggedized ExII telephone type ExResistTel

15.2 Description

The Ruggedized ExII telephone type ExResistTel can be modified according to the descriptive documents below.

Previous interface for interconnection of external loudspeaker waived.

The device is mechanically and electrically unchanged.

15.3 Parameters

15.3.1 Non intrinsically safe circuits

15.3.1.1 Phone line
(Terminal La / Lb No.: 13 – 14)

Maximum voltage (calling)	U_m (calling)	AC	90 V
Permitted frequency range		16 up to 54 Hz	
or			
Maximum voltage (calling)	U_m (calling)	AC	150 V
Permitted frequency range		15 up to 68 Hz	
or			
Maximum rated voltage	U_m (supply voltage)	DC	66 V
Maximum rated current			100 mA
or			
Maximum rated voltage	U_m (supply voltage)	DC	56.5 V
Maximum rated current			110 mA
Maximum short circuit current I_K			35 A

15.3.1.1 Additional external alarm: only for connection to passive load (Terminal W1 / W No.: 15 – 16)

Maximum voltage (calling)	U_m (calling)	AC	90 V
Permitted frequency range		16 up to 54 Hz	
or			
Maximum voltage (calling)	U_m (calling)	AC	150 V
Permitted frequency range		15 up to 68 Hz	
or			
Maximum rated voltage	U_m (supply voltage)	DC	66 V
or			
Maximum rated voltage	U_m (supply voltage)	DC	56.5 V

15.3.2 Intrinsically safe circuits

15.3.2.1 Headset (Microphone) (Terminal KGM No.: 5 – 6)

Maximum output voltage	U_o	17 V
Maximum output current	I_o	90 mA
Maximum output power	P_o	80 mW
Maximum external capacitance	C_o	375 nF
Maximum external inductance	L_o	1.2 mH

15.3.2.2 Headset (Speaker) (Terminal KGH No.: 7 – 8)

Maximum output voltage	U_o	17	V
Maximum output current	I_o	110	mA
Maximum output power	P_o	190	mW
Maximum external capacitance	C_o	375	nF
Maximum external inductance	L_o	1.2	mH

15.3.2.3 Headset (Signaling) (Terminal KGS No.: 9 – 10)

Maximum output voltage	U_o	17	V
Maximum output current	I_o	8	mA
Maximum output power	P_o	33	mW
Maximum external capacitance	C_o	375	nF
Maximum external inductance	L_o	100	mH

15.3.3 Ambient temperature range

15.3.3.1 Temperature class T6

-25 °C up to +40 °C

15.3.3.2 Temperature class T5

-25 °C up to +60 °C

(16) Test and Assessment Report

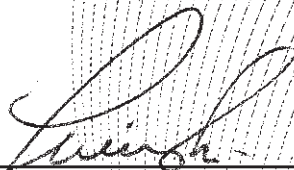
BVS PP 02.2081 EG as of 2015-07-16

(17) Special conditions for safe use

Not applicable

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, 2015-07-16
BVS-Bou/Schu/Ma A 20150558



Certification body



Special services unit