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:

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
DMT-Certification body

Signed: Eickhoff
Head of special services unit

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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			16 ... 54	Hz
respectively				
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		16 ... 54	Hz
respectively			
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

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15.3.2.2 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

15.3.2.3 Headset (recognition) respectively second ear piece
(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

15.3.2.4 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

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 ≤ Ta ≤ +60 °C for the temperature class T5

15.3.3.2 -25 °C ≤ Ta ≤ +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

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