Physikalisch-Technische Bundesanstalt PTB

Braunschweig und Berlin

(1) # EC-TYPE-EXAMINATION CERTIFICATE

(Inofficial Translation)

(2) Equipment and Protective Systems Indend for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 05 ATEX 2055

(4) Equipment: Mobile computer MC9000ex / MC9060ex type 17-A11*-0**0/H*******

(5) Manufacturer: BARTEC GmbH

(6) Address: Max-Eyth-Strasse 16, 97980 Bad Mergentheim, Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC 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 confidential report PTB Ex 06-24330.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014:1977+A1+A2 **EN 50017:1998** **EN 50020:2002**

(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 the 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 2 G EEx q [ib] IIC T4

Zertifizierungsstelle Explosionsschutz
By order

Braunschweig, February 15, 2006

(Signed for the PTB)

Dr.-Ing. U. Johannsmeyer
Direktor und Professor

(13) # SCHEDULE

(14) ## EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2055

(15) Description of equipment

The mobile computers MC 9000ex / MC9060ex types 17-A11*-0**0/H******* are hand-operated electrical equipment. They serve the mobile collection, processing and wireless transmission of data within the potentially explosive atmosphere.

Electrical data

Power supply	type of protection Intrinsic Safety EEx ib IIC: only by the associated battery type 17-A1Z0-0001 7.4 V, 2200 mAh
Headset-connection	type of protection Intrinsic Safety EEx ib IIC: U_o = 8.6 V I_o = 37 mA P_o = 68 mW C_o 400 nF L_o = 34 mH
WLAN Bluetooth	radiated transmission power maximum 100 mW radiated transmission power maximum 10 mW

The battery type 17-A1Z0-0001 may be charged only outside of the potentially explosive atmosphere.

(16) Test report PTB Ex 06-24330

(17) Special conditions for use
None

(18) Essential health and safety requirements
met by compliance with the standards mentioned above

Zertifizierungsstelle Explosionsschutz
By order

(Signed for the PTB)

Dr.-Ing. U. Johannsmeyer
Direktor und Professor

Braunschweig, February 15, 2006

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2055

(Translation)

Equipment: Mobile computer MC 9000ex / MC9060ex
type 17-A11*-0**0/H*******

Marking:  **II 2 G EEx q [ib] IIC T4**

Manufacturer: BARTEC GmbH

Address: Max-Eyth-Straße 16
97980 Bad Mergentheim, Germany

Description of supplements and modifications

The mobile computers MC 9000ex / MC9060ex of types 17-A11*-0**0/H******* are hand-held electrical apparatus. They are used for the mobile acquisition, processing and radio transmission of data inside the hazardous area. They are extended by the mobile computers MC9090ex, types 17-A119-0**0/H******* . The mobile computers may be operated optionally with belt case and case accessory kit , order No. 03-9809-0009 (open case), order No. 03-9809-0010 (holster) and order No. 03-9809-0011 (loop). The mobile computers MC9090ex, types 17-A119-0**0/H******* may be operated optionally with SD-memory cards.

The modifications concern the extension of the type series for the mobile computer MC9090ex, type 17-A119-0**0/H*******, the electrical data and the marking.

The marking changes as follows:  II 2 G Ex q [ib] IIC T4

Electrical data

	Mobile computer MC 9000ex / MC9060ex and MC9090ex
Supply	type of protection Intrinsic Safety Ex ib IIC only from the appropriate battery, type 17-A1Z0-0001 7.4 V, 2200 mAh
Headset-connector	type of protection Intrinsic Safety Ex ib IIC U_o = 8.6 V I_o = 37 mA P_o = 68 mW C_o = 400 nF L_o = 34 mH

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2055

WLAN Bluetooth	radiated transmitter power 100 mW
	Mobile computer MC9090ex
SD-memory cards	type of protection Intrinsic Safety Ex ib IIC
	The SD-card rack may be fitted with the following SD-cards:
	512 MB Order No. 17-28BE-F006/0001
	1 GB Order No. 17-28BE-F006/0002
	2 GB Order No. 17-28BE-F006/0003

The battery, type 17-A1Z0-0001 shall be charged only outside the hazardous area. The keyboard and the SD-card shall be replaced only outside the hazardous area (cf. notes in the operating instructions).

Applied standards

EN 60079-0:2004 **EN 50017:1998** **EN 50020:2002**

Essential health and safety requirements

Met by compliance with the standards mentioned above.

The requirements of the draft to EN 50017 from the working paper TC31/563/CD clause 4.7 "Cells and Batteries" have been considered with the evaluation of the back-up battery.

Furthermore a thread measure of 5 mm is kept between the joints of the enclosure and the electrically conductive parts. Therefore the requirements of EN 50017, clause 6 "Distances" for an operating voltage of 275 V (lowest value from table 1: "Distances through filling material ") are complied with. The other distances partly fall below the thread measure of 5 mm. The protective measures applied in these areas enable the comparability with the 5 mm requirement of table 1, EN 50017:1998. This includes, amongst others, the safe voltage limitation (battery powerd apparatus), the use of a plastic enclosure and the application of an enclosed housing wall (prevention of a flame propagation to the outside).

Test report: PTB Ex 07-26159

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, July 9, 2007

Dr.-Ing. U. Johannsmeyer
Direktor und Professor

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2055

(Translation)

Equipment: Mobile Computer MC 9000ex / MC9060ex Typen 17-A11*-0**0/H******* and MC9090ex Typen 17-A119-0**0/H*******

Marking:  **II 2 G Ex q [ib] IIC T4**

Manufacturer: BARTEC GmbH

Address: Max-Eyth-Straße 16, 97980 Bad Mergentheim, Germany

Description of supplements and modifications

Applied standards

EN 60079-0:2006 **EN 60079-5:2007** **EN 60079-11:2007**

The mobile computers MC 9000^{ex} / MC9060^{ex} type series 17-A11*-0**0/H******* and MC9090^{ex} type series 17-A119-0**0/H*******are hand-held electrical apparatus. They are used for the mobile acquisition, processing and radio transmission of data inside the hazardous area. They are extended by the mobile computers MC9090^{ex} type series 17-A119-0KK0/H******* and type series 17-A119-0KW0/H*******. All mobile computers may be operated optionally with belt case and case accessory kit , order No. 03-9809-0009 (open case), order No. 03-9809-0010 (holster) and order No. 03-9809-0011 (loop). All mobile computers MC9090^{ex}, types 17-A119-0**0/H******* may be operated optionally with SD-memory cards.

The modifications concern the extension of the type series for the mobile computer MC9090^{ex} type series 17-A119-0KK0/H******* and type series 17-A119-0KW0/H*******, the electrical data and the marking. They are listed in the test documentation in item 3 of the test report.

The marking changes as follows:

Mobile Computer	Marking
MC 9000^{ex} / MC9060^{ex} type series 17-A11*-0**0/H******* and MC9090^{ex} type series 17-A119-0GJ0/H******* and type series 17-A119-0KA0/H*******	 II 2 G Ex q [ib] IIC T4
MC9090^{ex} type series 17-A119-0KK0/H******* and type series 17-A119-0KW0/H*******	II 2 G Ex q [ib] IIB T4

2. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2055

Electrical data

	MC 9000^{ex} / MC9060^{ex} type series 17-A11*-00/H******* and MC9090^{ex} type series 17-A119-0GJ0/H******* and type series 17-A119-0KA0/H*********
Supply	type of protection Intrinsic Safety Ex ib IIC only from the appropriate battery, type 17-A1Z0-0001 7.4 V, 2200 mAh
Headset-connector	type of protection Intrinsic Safety Ex ib IIC U_o = 8.6 V I_o = 37 mA P_o = 68 mW C_o = 400 nF L_o = 34 mH
WLAN Bluetooth	radiated transmitter power 100 mW
	MC9090^{ex} type series 17-A119-0GJ0/H***** and type series 17-A119-0KA0/H**********
SD-memory cards	type of protection Intrinsic Safety Ex ib IIC The SD-card rack may be fitted with the following SD-cards: 512 MB Order No. 17-28BE-F006/0001 1 GB Order No. 17-28BE-F006/0002 2 GB Order No. 17-28BE-F006/0003
	MC9090^{ex} type series 17-A119-0KK0/H***** and type series 17-A119-0KW0/H**********
Supply	type of protection Intrinsic Safety Ex ib IIB only from the appropriate battery, type 17-A1Z0-0001 7.4 V, 2200 mAh
Headset-connector	type of protection Intrinsic Safety Ex ib IIB U_o = 8.6 V I_o = 37 mA P_o = 68 mW C_o = 400 nF L_o = 34 mH
WLAN Bluetooth	radiated transmitter power 100 mW

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2055

SD-memory cards	type of protection Intrinsic Safety Ex ib IIB	
	The SD-card rack may be fitted with the following SD-cards:	
	512 MB	Order No. 17-28BE-F006/0001
	1 GB	Order No. 17-28BE-F006/0002
	2 GB	Order No. 17-28BE-F006/0003

The battery, type 17-A1Z0-0001 shall be charged only outside the hazardous area.

The keyboard and the SD-card shall be replaced only outside the hazardous area (cf. notes in the operating instructions).

Essential health and safety requirements

The requirements of the draft to EN 50017 from the working paper TC31/563/CD clause 4.7 "Cells and Batteries" have been considered with the evaluation of the back-up battery.

A thread distance of 5 mm is kept between the joints of the enclosure and the electrically conductive parts. Therefore the requirements of EN 60079-5, clause 4.3 "Distances" for an operating voltage of 275 V (lowest value from table 1: "Distances through filling material ") are complied with. The other distances partly fall below the thread distance of 5 mm. The protective measures applied in these areas enable the comparability with the 5 mm requirement of table 1, EN 60079-5. This includes, amongst others, the safe voltage limitation (battery powered apparatus), the use of a plastic enclosure and the application of closed housing wall (prevention of flame propagation to the outside).
The construction is further in compliance with the proposal for an amendment of the 3rd edition of EN 60079-5. There it is specified, that in areas where there is no gap or opening in the wall of the enclosure, a distance of 1.5 mm through the filling material to the wall of the enclosure is required up to a voltage of 80 V. This requirement is complied with.

Test report: PTB Ex 08-27417

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Johanns[illegible]
Direktor und Professo[illegible]

Braunschweig, May 14, 2008

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

3. S U P P L E M E N T

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2055

(Translation)

Equipment: Mobile Computer MC 9000ex / MC9060ex type series 17-A11*-0**0/H******* and MC9090ex type series 17-A119-0**0/H*******

Marking:  **II 2 G Ex q [ib] IIC/B T4**

Manufacturer: Bartec GmbH

Address: Max-Eyth-Straße 16, 97980 Bad Mergentheim, Germany

Description of supplements and modifications

The mobile computers MC9090^{ex} type series 17-A119-0**0/H******* are hand-held electrical apparatus. They are used for the mobile acquisition, processing and radio transmission of data inside the hazardous area. They may be manufactured and operated in accordance with the test results mentioned in section 3 of the test report.

The modification concerns the application of a new display with associated circuit.

All other data remain unchanged.

Essential health and safety requirements

A thread distance of 5 mm is kept between the joints of the enclosure and the electrically conductive parts. Therefore the requirements of EN 60079-5, clause 4.3 "Distances" for an operating voltage of 275 V (lowest value from table 1: "Distances through filling material ") are complied with. The other distances partly fall below the thread distance of 5 mm. The protective measures applied in these areas enable the comparability with the 5 mm requirement of table 1, EN 60079-5. This includes, amongst others, the safe voltage limitation (battery powered apparatus), the use of a plastic enclosure and the application of closed housing wall (prevention of flame propagation to the outside).

The construction is further in compliance with the proposal for an amendment of the 3rd edition of EN 60079-5. There it is specified, that in areas where there is no gap or opening in the wall of the enclosure, a distance of 1.5 mm through the filling material to the wall of the enclosure is required up to a voltage of 80 V. This requirement is complied with.

Applied standards

EN 60079-0:2006 **EN 60079-5:2007** **EN 60079-11:2007**

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

3. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2055

Assessment and test report: PTB Ex 09-28206

Zertifizierungssektor Explosionsschutz
By order:

Braunschweig, October 2, 2009

Dr.-Ing. U. Johannsmeyer
Direktor und Professor

Physikalisch-Technische Bundesanstalt • Bundesallee 100 • 38116 Braunschweig • GERMANY

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

4. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2055

(Translation)

Equipment: Mobile computer type series MC 9000ex / MC9060ex Typen 17-A11*-0**0/H******* and MC9090ex type series 17-A119-0**0/H*******

Marking:  **II 2 G Ex q [ib] IIC/B T4**

Manufacturer: Bartec GmbH

Address: May-Eyth-Straße 16, 97980 Bad Mergentheim, Germany

Description of supplements and modifications

The mobile computers MC 9000^{ex} / MC9060^{ex} type series 17-A11*-0**0/H******* and MC9090^{ex} type series 17-A119-0**0/H******* are hand-held electrical apparatus. They are used for the mobile acquisition, processing and radio transmission of data inside the hazardous area. The tpye designation of the mobile computer MC9090ex type series 17-A119-0**0/H******* is changed in type series MC9090ex type series 17-A119-****/H*******.

The changes concern the extension of the type series of mobile computers MC9090ex types 17-A119-****/H******* to the type series 17-A119-R**1/2/3/4/6/7/H*******, the marking, the electrical data and the use of the screen protector type 17-A1Z0-0003 as an option for Gas Group IIB

The marking changes as follows:

Mobile Computer	Marking
MC 9000^{ex} / MC9060^{ex} type series 17-A11*-0**0/H******* und MC9090^{ex} type series 17-A119-0GJ0/H*******, type series 17-A119-0KA0/H*******, type series 17-A119-RGJ*/H******* and type series 17-A119-RKA*/H*******	 II 2 G Ex q [ib] IIC T4
MC9090^{ex} type series 17-A119-0KK0/H******* and type series 17-A119-0KW0/H******* and type series 17-A119-RKK*/H*******, type series 17-A119-RKW*/H*******, Typen 17-A119-R**6/H******* and type series 17-A119-R**7/H*******	 II 2 G Ex q [ib] IIB T4

ZSEx10101e.dot

4. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2055

Electrical data

	MC 9000^{ex} / MC9060^{ex} type series 17-A11*-0**0/H******* and MC9090^{ex} type series 17-A119-0GJ0/H*******, type series 17-A119-0KA0/H*******, type series 17-A119-RGJ*/H******* and type series 17-A119-RKA*/H*******,
Supply	type of protection Intrinsic Safety Ex ib IIC only from the appropriate battery, type 17-A1Z0-0001 7.4 V, 2200 mAh
Headset-connector	type of protection Intrinsic Safety Ex ib IIC U_o = 8.6 V I_o = 37 mA P_o = 68 mW C_o = 400 nF L_o = 34 mH
WLAN Bluetooth	radiated transmitter power 100 mW
HF-output power	radiated transmission power max. 2 W
	MC9090^{ex} type series 17-A119-0GJ0/H*******, type series 17-A119-0KA0/H*******, type series 17-A119-RGJ*/H******* and type series 17-A119-RKA*/H*******
SD-memory cards	type of protection Intrinsic Safety Ex ib IIC The SD-card rack may be fitted with the following SD-cards: 512 MB Order No. 17-28BE-F006/0001 1 GB Order No. 17-28BE-F006/0002 2 GB Order No. 17-28BE-F006/0003
	MC9090^{ex} type series 17-A119-0KK0/H******* and type series 17-A119-0KW0/H******* and type series 17-A119-RKK*/H*******, type series 17-A119-RKW*/H*******, type series 17-A119-R**6/H******* and type series 17-A119-R**7/H*******
Supply	type of protection Intrinsic Safety Ex ib IIB only from the appropriate battery, type 17-A1Z0-0001 7.4 V, 2200 mAh

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

4. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2055

Headset-connector	type of protection Intrinsic Safety Ex ib IIB U_o = 8.6 V I_o = 37 mA P_o = 68 mW C_o = 400 nF L_o = 34 mH
WLAN Bluetooth	radiated transmitter power 100 mW
HF-output power	radiated transmission power max. 2 W
SD-memory cards	type of protection Intrinsic Safety Ex ib IIB The SD-card rack may be fitted with the following SD-cards: 512 MB Order No. 17-28BE-F006/0001 1 GB Order No. 17-28BE-F006/0002 2 GB Order No. 17-28BE-F006/0003

The battery, type 17-A1Z0-0001 shall be charged only outside the hazardous area.

The keyboard and the SD-card shall be replaced only outside the hazardous area (cf. notes in the operating instructions).

The Mobile Computer MC 9000EX / MC9060ex type series 17-A11*-0**0/H******* and MC9090ex type series 17-A119-****/H****** operated with the screen protector type 17-A1Z0-0003 may be used in the hazardous areas of category 2-equipment Gas Group IIB.

All other data remain unchanged.

Essential health and safety requirements

A thread distance of 5 mm is kept between the joints of the enclosure and the electrically conductive parts. Therefore the requirements of EN 60079-5, clause 4.3 "Distances" for an operating voltage of 275 V (lowest value from table 1: "Distances through filling material ") are complied with. The other distances partly fall below the thread distance of 5 mm. The protective measures applied in these areas enable the comparability with the 5 mm requirement of table 1, EN 60079-5. This includes, amongst others, the safe voltage limitation (battery powered apparatus), the use of a plastic enclosure and the application of closed housing wall (prevention of flame propagation to the outside).
The construction is further in compliance with the proposal for an amendment of the 3rd edition of EN 60079-5. There it is specified, that in areas where there is no gap or opening in the wall of the enclosure, a distance of 1.5 mm through the filling material to the wall of the enclosure is required up to a voltage of 80 V. This requirement is complied with.

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

4. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2055

Applied standards

EN 60079-0:2006, EN 60079-5:2007, EN 60079-11:2007

Assessment and test report: PTB Ex 10-29124

Zertifizierungssektor Explosionsschutz
By order:

Braunschweig, July 28, 2010

Dr.-Ing. U. Johannsmeyer
Direktor und Professor