



(1) EC-TYPE-EXAMINATION CERTIFICATE (Translation)

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

(3) EC-type-examination Certificate Number:

PTB 00 ATEX 1093 X



(4) Equipment: Limit switch, type 07-25.1-..../....

(5) Manufacturer: BARTEC Componenten und Systeme GmbH

(6) Address: D-97980 Bad Mergentheim

(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 00-10203.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 50014:1997 EN 50018:1994

(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 and construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

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

 **II 2 G EEx d IIC T6 or T5**

Zertifizierungsstelle Explosionsschutz

Braunschweig, December 7, 2000

By order

Dr.-Ing. U. Klausmeyer
Regierungsdirektor



(13)

SCHEDULE

(14)

EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1093 X

(15) Description of equipment

The limit switch of type 07-25.1-.../... is used as an auxiliary switch for signal and control circuits. It will comprise one or two interrupting chambers and housings differing in their thermal resistance.

Connection is provided by means of an encapsulated connecting cable (open ended line).

Technical data

Rated insulation voltage ^{a)} up to

500 V

Rated operating voltage U_e

Type 07-2511-.../... and type 07-2581-.../...

400 V

250 V

Rated current I_e max.

2 A

0.15 A

Related to utilization category

AC-15

DC-13

Rated operating voltage U_e

Type 07-2521-..1./... to 07-25221-..4./...

250 V

250 V

Rated current I_e max.

5 A

0.4 A

Related to utilization category

AC-15

DC-13

Rated operating voltage U_e

Type 07-2521-..6./...

250 V

250 V

Rated current I_e max.

2 A

0.4 A

Related to utilization category

AC-15

DC-13

Rated operating voltage U_e

Type 07-2521-..7./...

400 V

250 V

Rated current I_e max.

2 A

0.4 A

Related to utilization category

AC-15

DC-13

Rated operating voltage U_e

Type 07-2521-..8./...

500 V

250 V

Rated current I_e max.

2 A

0.4 A

Related to utilization category

AC-15

DC-13

^{a)} depending on connecting cable used

Provided the making and breaking capacity complies with the relevant conditions, rated values other than those specified above are accepted and will be defined by the manufacturer on the basis of the operating mode, utilization category, etc.

Contacts depending on switching module 1 or 2 changeover contacts or
1 break and/or 1 make contact,
1 or 2 break contacts with positive opening operation

Temperature	≤ 60 °C	70 °C	75 °C	90 °C
Temperature class	T6			
Type 07-2511-...X0/.... and 07-2581-...X0/.... Rated thermal current	7 A	--	3 A	--
Type 07-2511-...XX/.... and 07-2581-...XX/.... Rated thermal current	6 A	--	2 A	--
Temperature class	T6	T5	T6	T5
Type 07-2521-...X0/.... Rated thermal current	5 A	8 A	3 A	3 A
Type 07-2521-...XX/.... Rated thermal current	5 A	6 A	2 A	2 A

The limit switches of type 07-2511- and 07-2581- are designed for a temperature resistance of -55 °C to 100 °C.

The limit switch of type 07-2521- is designed for a temperature resistance of -20 °C to 115 °C.

Nominal conductor cross section 2 to 8 x 1.5 mm²

(16) Test report PTB Ex 00-10203

(17) Special conditions for safe use

The limit switch shall be installed so as to provide for mechanical protection against impact energy in accordance with EN 50014 section 23.4.3.1.

The quality of the connecting cable shall satisfy the thermal and mechanical requirements within the functional range.

This EC type-examination certificate as well as any future supplements thereto shall at the same time be regarded as supplements to Certificate of Conformity PTB No. Ex-91.C.1083 X.

(18) Essential health and safety requirements

The tests and the favourable results these have produced reveal that the limit switch meets the requirements of directive 94/9/EC as well as those of the standards quoted on the cover sheet.

Zertifizierungsstelle Explosionsschutz

By order:


Dr. Ing. U. Klausmeyer
Regierungsdirektor



Braunschweig, December 7, 2000

1st SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1093 X

(Translation)

Equipment: Limit switch, type 07-25.1-.../....

Marking:  II 2 G EEx d IIC T6 resp. T5

Manufacturer: BARTEC GmbH

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

Description of supplements and modifications

The limit switch of type 07-25.1-.../.... is used as an auxiliary switch for signal and control circuits.

Description of changes:

- 1) The name of the manufacturer changed.
- 2) The standards were adapted.
- 3) The EPL marking was added.
- 4) Material name changed.
- 5) An additional casting resin material was added.
- 6) The name of a connection cable changed.
- 7) Additional connection cables were added.
- 8) Added design variation with lateral resp. dual connection cable.

Applied standards

EN 60079-0:2009, EN 60079-1:2007

Applying the above standards will change the marking, as follows:

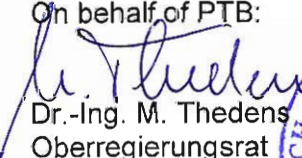
 II 2 G Ex d IIC T6, T5 Gb resp. Ex db IIC T6, T5

Assessment and test report: PTB Ex 10-10255

Zertifizierungssektor Explosionsschutz

Braunschweig, November 11, 2010

On behalf of PTB:


Dr.-Ing. M. Thedens
Oberregierungsrat



Sheet 1/1

EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.



[1] **EC-TYPE EXAMINATION CERTIFICATE**
(Translation)

[2] Equipment or Protective System intended for use in Potentially Explosive Atmospheres, **Directive 94/9/EC**

[3] EC-Type Examination Certificate Number: **IBEXU01ATEX1007 X**

[4] Equipment or Protective System: Limit switch type 07-2511-..../....

[5] Applicant: **BARTEC**
Komponenten und Systeme GmbH

[6] Address: **Max-Eyth Straße 16**
D-97980 Bad Mergentheim

[7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate, and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, notified body number 0637, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment or protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report IB-01-123 of 20.02.2001.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

- DIN EN 50 014:2000
- DIN EN 50 281-1-1:1999

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

IBExU Institut für Sicherheitstechnik GmbH

An-Institut der TU Bergakademie Freiberg

- [11] This EC-Type Examination Certificate relates only to the design and construction of the specified equipment or protective system. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment or protective system.
- [12] The marking of the equipment or protective system shall include the following:

 II 2D T80°C IP 66

IBExU Institut für Sicherheitstechnik GmbH
Fuchsmühlenweg 7
D-09599 Freiberg

Authorized for certifications
- Explosion protection-

Freiberg, 20.02.2001

By order



(Dr. Lösch)



- Seal -

Schedule

[13] **SCHEDULE**

[14] **EC-TYPE EXAMINATION CERTIFICATE IBEXU01ATEX1007 X**

[15] **DESCRIPTION OF EQUIPMENT OR PROTECTIVE SYSTEM**

The limit switch type 07-2511-..../.... is used as an auxiliary switch for signal control circuits. It will comprise one or two interrupting chambers. The connection is provided by means of an encapsulated connecting cable (open ended line).

Technical data

operating temperature:	-55 °C to +75 °C	
protection class (DIN EN 60529:1992):	IP 66	
Type of protection:	Protection by enclosure	
Rated insulation voltage (depending on connecting cable):	500 V	
Rated operating voltage U_e :	400 V	250 V
Rated current I_e :	2 A	0,15 A
Related to utilization category:	AC-15	DC-13
Number of limit switches:	1 (single or double)	

Further details are contained in the test documents (see Annex).

[16] **TEST REPORT**

The test results are set down in the confidential test report IB-01-123 of 20.02.2000.

Summary of the results:

The limit switch type 07-2511-..../.... meets the requirements of the type of protection "Electrical apparatus protected by enclosures" for an electrical apparatus for use in the presence of combustible dust, equipment group II, category 2D.

Safety instructions

The manufacturer is under an obligation to carry out routine tests and the required tests for meeting the explosion proofness regulations for the limit switch type 07-2511-..../.... in accordance with DIN EN 50 014:2000, section 24.

Before affixing the CE marking, the manufacturer is under an obligation to carry out the required tests of the conformity assessment procedures according to the directive 94/9/EC.

At selection, installation and maintenance the requirements of DIN EN 50281-1-2 shall meet. Especially the maximum surface temperature of the limit switch type 07-2511-..../.... shall not exceed the ignition temperature of the dust/air mixture respectively the dust layer (under consideration of the safety margin laid down in DIN EN 50281-1-2).

[17] SPECIAL CONDITIONS FOR SAFE USE

The limit switch shall be installed in such way, that the mechanical protection against impact energy in accordance with EN 50014 section 23.4.3.1 is always guaranteed.

The quality of the connecting cable shall satisfy the thermal and mechanical requirements within the functional range. If the connecting cable is not shielded, the connecting cable must be protected from damage. The partly limited temperature range of the cables (max. 70 °C) has to be taken into account. The open ends of the connecting cable are to be protected.

The maximum surface temperature $T \leq 80 \text{ °C}$ is valid for the following ambient temperatures and maximum currents:

ambient temperature	$\leq 60 \text{ °C}$	$\leq 75 \text{ °C}$
type 07-2511-...XO/....		
rated thermal current	$\leq 7 \text{ A}$	$\leq 3 \text{ A}$
type 07-2511-...XX/....		
rated thermal current	$\leq 6 \text{ A}$	$\leq 2 \text{ A}$

Freiberg, 20.02.2001

By order



(Dr. Lösch)

Annex

The mentioned test documents are contained at the German version of the EC-TYPE EXAMINATION CERTIFICATE IBExU01ATEX1007 X.