

Translation

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

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



(3) **Certificate Number** TÜV 07 ATEX 554295

(4) for the equipment: Safety temperature limiter
type STL50Ex-*-1R-*-00

(5) of the manufacturer: Martens Elektronik GmbH

(6) Address: Kiebitzhörn 18
D-22885 Barsbüttel

Order number: 8000554295


Date of issue: 2007-12-19

- (7) This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV NORD CERT GmbH, notified body No. 0044 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), 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 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 No. 07203554295.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2004

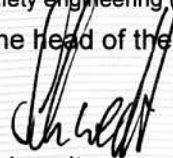
EN 50020:2002

- (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.
- (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 or protective system must include the following:

 II (1) GD [Ex ia] IIC/IIB

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the certification body


Schwedt

Hanover office, Am TÜV 1, 30519 Hanover, Fon +49 (0)511 986 1455, Fax +49 (0)511 986 1590

This certificate may only be reproduced without any change, schedule included.
Excerpts or changes shall be allowed by the TÜV NORD CERT GmbH

(13) **SCHEDULE**

(14) **EC-Type Examination Certificate No. TÜV 07 ATEX 554295**

(15) Description of equipment

The safety temperature limiter type STL50Ex-*-1R-*-00 is used for temperature monitoring of electrical operating equipment.

The temperature measurement is carried out with double thermocouples or with PT100 sensors in the explosion hazardous area.

The safety temperature limiter is also used for the safe galvanic separation of the intrinsically safe circuits and the non intrinsically safe circuits.

The maximum permissible ambient temperature +55°C.

Electrical Data

Supply circuit U = 230 V a.c. \pm 10%, 50 ... 60Hz
 (Connections 11 and 13) U = 115 V a.c. \pm 10%, 50 ... 60Hz
 U = 24 V d.c. \pm 15%
 P ca. 4W
 U_m = 253 V a.c. resp. 125 V d.c.

Relay contacts Maximum values:
 (Connections 11 and 13) U = 250 V a.c., I = 2 A, S = 200 VA; cos φ \geq 0,7
 U = 250 V d.c., I = 2 A, P = 80 W

External alarm signal only for connection to a signalling device
 (Connections 15 und 16) U = 24 V
 max. 50 mA

External reset only for connection to a switch contact
 (Connections 17 und 18)

Input circuits
 for thermocouples in type of protection Intrinsic Safety Ex ia IIC/IIB
 (Connections 45, 46 and 47, 48) Maximum values for the circuits connected in parallel:
 U_o = 0,7 V
 I_o = 2 mA
 P_o = 1,5 mW
 R = 5 k Ω
 Characteristic line: trapezoidal
 The effective internal capacitances and inductances are negligibly small.

Ex ia	IIC	IIB
max. permissible external inductance	50 mH	100 mH
max. permissible external capacitance	54 μ F	240 μ F

Schedule EC-Type Examination Certificate No. TÜV 07 ATEX 554295

Input circuits Pt100 in type of protection Intrinsic Safety Ex ia IIC/IIB
 (Connections 35, 36, 38) Maximum values:
 $U_o = 1,4 \text{ V}$
 $I_o = 4 \text{ mA}$
 $P_o = 5 \text{ mW}$
 $R = 2,4 \text{ k}\Omega$
 Characteristic line: trapezoidal
 The effective internal capacitances and inductances are negligibly small.

Ex ia	IIC	IIB
max. permissible external inductance	20 mH	100 mH
max. permissible external capacitance	29 μF	120 μF

The maximum values of the table are also allowed to be used up to the permissible limits as concentrated capacitances and as concentrated inductances.

The intrinsically safe output circuit is safely galvanically separated from the non intrinsically safe circuit up to the peak crest value of the voltage of 375 V.

(16) Test documents are listed in the test report No. 07203554295.

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones