


## 1st SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 3080

(Translation)

Equipment: TMP tripping devices CM-MSS and CM-MSN

Marking:  II (2) GD

Manufacturer: ABB Stotz-Kontakt Gmb

Address: Eppelheimerstraße 82, 69123 Heidelberg, Germany

### Description of supplements and modifications

The TMP tripping devices CM-MSS (1 and 3 detector circuits) and CM-MSN (6 detector circuits) with non-volatile fault storage serve to monitor explosion-protected machines of categories 2 and 3.

They are monitored and controlled and work in accordance with the closed-circuit principle. Among the most important functions are: overtemperature detection, detection of wire interruption and short-circuit detection in all detector circuits. Among the most important additional functions of these devices are the supply voltage and the function control. The operating condition of the supply voltage and the faults (overtemperature, PTC wire interruption and PTC short circuit) is signaled by light-emitting diodes (LEDs).

Due to the cancellation of the microcontroller of the motorcontrollers of the certified TMP tripping devices of type CM-MSS und CM-MSN, this controller had to be replaced by a compatible type.

For the mode of operation with low requirement rate and at a fault tolerance of 0, the devices meet, in accordance with EN 61508, for type B the safety integrity level SIL 1 and, in accordance with EN 954-1, the category 2.

### Applied standards

EN 60947-8

EN 61508

EN 954-1

Test report: PTB Ex 07-37371

Sheet 1/2

## Essential health and safety requirements

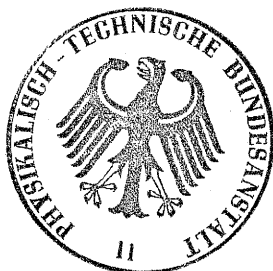
The tests carried out and their positive results as well as the proof furnished of January 14, 2007 have confirmed compliance with the standards and thus with Directive 94/9/EC, Annex II (in particular point 1.5). Suitably selected and adjusted safety devices of this type are necessary for the safe operation of explosion-protected machines. The devices themselves must be installed outside potentially explosive atmospheres.

Zertifizierungsstelle Explosionsschutz  
By order:

Braunschweig, January 24, 2008



Dr.-Ing. F. Lienesch  
Regierungsdirektor





## (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 02 ATEX 3080**



(4) Equipment: Tripping devices for thermal motor protection (TMP)  
types CM-MSS and CM-MSN

(5) Manufacturer: ABB Stotz-Kontakt GmbH

(6) Address: Eppelheimer Str. 82, 69123 Heidelberg, 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 02-32150.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 60947-1; EN 60947-5      DIN VDE 0660 part 302 and part 303      EN 60079-14**

(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.

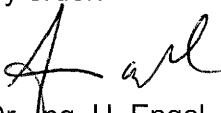
(11) This EC-type-examination Certificate relates only to the design and construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

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



Zertifizierungsstelle Explosionsschutz

By order:

  
Dr.-Ing. U. Engel  
Regierungsdirektor



Braunschweig, September 30, 2002

sheet 1/3

## SCHEDULE

(13)

(14)

### EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 3080

(15) Description of equipment

All CM-MSS and CM-MSN TMP tripping devices work according to the closed-circuit principle.

Among the most important functions are: overtemperature detection, detection of wire interruption and short-circuit detection in all detector circuits.

The CM-MSS and CM-MSN tripping devices with non-volatile fault storage are monitored and controlled by a microcontroller.

Error messages are stored and, in the case of power failure, maintained after voltage recovery. The fault storage is electronically and, therefore, insensitive to vibrations. The memory function may be switched off.

Among the most important additional functions of these devices are: supply voltage monitoring and watchdog functions. In addition, three detector circuits may be connected to 1SVR430720R0500 devices and six detector circuits to 1SVR450025R0100 devices. The error messages of these detector circuits are displayed in accordance with their time of generation and may be deleted after their cause has been eliminated. The output contact remains in error position as long as there is at least one error message.

With device variant 1SVR430710R0200 (two detector circuits, each one equipped with an error signalling contact of its own), a warning can be realized before the device is switched off, provided the motor is equipped with suitable sensors.

The operating state of supply voltage and failures (overtemperature, PTC wire interruption and PTC short-circuit) is signalized by LED displays.

All functions in the TMP tripping devices serve to protect non-explosion-protected motors and explosion-protected motors in regular operation and in case of failure.

Types CM-MSS and CM-MSN are available in eight variants.

For installation and safe functioning, the following documents, which are enclosed to the devices, must be observed:

- 1) Operating and mounting instructions
- 2) Additional information and safety instructions

(16) Test report: PTB Ex 02-32150

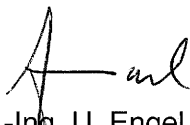
(17) Special conditions for safe use  
none

(18) Essential health and safety requirements

The tests carried out and their positive results as well as the proof furnished have confirmed compliance with the standards and thus with Directive 94/9/EC, Annex II (in particular point 1.5) of July 19, 2002 (Analyse\_RL94-9\_EG\_Realisation). Suitably selected and adjusted safety devices of this type are necessary for the safe operation of motors of the "Increased Safety" type of protection. The devices themselves are installed outside potentially explosive atmospheres (article 1, section 2 of the Directive).

Zertifizierungsstelle Explosionsschutz

By order:

  
Dr.-Ing. U. Engel  
Regierungsdirektor



Braunschweig, September 30, 2002