

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

(2) Equipment or protective system intended for use in potentially explosive atmospheres - Directive 94/9/EC

(3) EC-Type Examination Certificate Number: **KEMA 03ATEX1441 X**

(4) Equipment or protective system: **Photoelectric Sensors Series SMI900, SMI30, MIAD9, Q45AD9 and T30AD9**

(5) Manufacturer: **Banner Engineering Corporation**

(6) Address: **9714 Tenth Avenue North, Minneapolis, MN 55441, USA**

(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) KEMA Quality B.V., notified body number 0344 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 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 confidential report no. 2036451.

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

EN 50014 : 1997

EN 50020 : 2002

EN 50284 : 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.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment or protective system according to the Directive 94/9/EC. Further requirements of the directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

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



II 1 G EEx ia IIC T6 (MIAD9, Q45AD9 and T30AD9)

II 2 G EEx ib IIC T5 (SMI900 and SMI30)

Arnhem, 22 December 2003
KEMA Quality B.V.



C.G. van Es
Certification Manager

BANNER P/N
1332 REV -

SCHEDULE

(13)

(14)

to EC-Type Examination Certificate KEMA 03ATEX1441 X

(15) **Description**

The SMI900, SMI30, MIAD9, Q45AD9 and T30AD9 Series Photoelectric Sensors are 2-wire devices that receive or emit a beam of light and operate by detecting breaks or reflections in their beams. The output is a current signal, indicating the status (dark or light).

Ambient temperature range -40 °C to +70 °C.

Electrical data

The supply and output circuit is only to be connected to a certified intrinsically safe circuit. The electrical data for each series is shown in the following table:

Series	Type of explosion protection	U _i (V)	I _i (mA)	P _i (mW)	C _i (nF)	L _i (µH)
SMI900	EEx ib	30	100	750	0	0
SMI30	EEx ib	30	100	750	0	0
MIAD9	EEx ia	15	60	225	300	0
Q45AD9	EEx ia	15	60	225	300	0
T30AD9	EEx ia	15	35	131	300	0

16) **Report**

KEMA No. 2036451.

(17) **Special conditions for safe use**

Parts of the enclosure are non-conducting and may generate an ignition-capable level of electrostatic charge. Cleaning of the equipment shall be done only with a damp cloth.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

(19) **Test documentation**

dated

Drawing list No. 115545

08.10.2003