EC-TYPE EXAMINATION CERTIFICATE

(1)

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

(3) EC-Type Examination Certificate Number: **KEMA 03ATEX1419 X**

(4) Equipment or protective system: **Temperature Transmitters Model Mp82700, Mp88700, Mp82800, Mp88800, Mp82800R and Mp88800R**

(5) Manufacturer: **S-Products b.v.**

(6) Address: **Nijverheidscentrum 26, 2761 JP Zevenhuizen, The Netherlands**

(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. 2031239.

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

EN 50014 : 1997 + A1, A2 **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 T4 ... T6

Arnhem, 11 November 2004
KEMA Quality B.V.

C.G. van Es
Certification Manager

KEMA Quality B.V.
Utrechtseweg 310, 6812 AR Arnhem, The Netherlands
P.O. Box 5185, 6802 ED Arnhem, The Netherlands
Telephone +31 26 3 56 20 08 Telefax +31 26 3 52 58 00

ACCREDITED BY THE DUTCH COUNCIL FOR ACCREDITATION

PRODUCTS RvA C 001

(13) # SCHEDULE

(14) **to EC-Type Examination Certificate KEMA 03ATEX1419 X**

(15) **Description**

The Temperature Transmitters Model Mp82700, Mp88700, Mp88800, Mp88800R, Mp82800 and Mp82800R convert a measurement signal from a thermocouple, a mV source or an RTD into a 4 - 20 mA current signal.
An optional indicator can be provided.

Ambient temperature range -40 °C ... +85 °C.

The relation between the ambient temperature and the temperature class is as follows:

Maximum Ambient Temperature	Temperature Class
+60 °C	T6
+75 °C	T5
+85 °C	T4

Electrical data

Temperature Transmitter Model Mp82800:

Supply circuit..... (terminals KL5 and KL6) — in type of explosion protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

U_i = 30 V
I_i = 100 mA
P_i = 750 mW
L_i = 0 mH
C_i = 0 nF

Input circuit..... (terminals KL1 to KL4) — in type of explosion protection intrinsic safety EEx ia IIC, with following maximum values:

U_o = 7,2 V
I_o = 12 mA
P_o = 85 mW
L_o = 200 mH
C_o = 13,5 µF

Temperature Transmitter Model Mp88800:

Supply circuit..... (terminals CON4.a and CON4.b) — in type of explosion protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

U_i = 30 V
I_i = 100 mA
P_i = 750 mW
L_i = 0 mH
C_i = 0 nF

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 03ATEX1419 X**

Input circuit..... (terminals CON2a to CON2.d) in type of explosion protection intrinsic safety EEx ia IIC, with following maximum values:

U_o = 7,2 V
I_o = 12 mA
P_o = 85 mW
L_o = 200 mH
C_o = 13,5 µF

Temperature Transmitter Model Mp82800R:

Supply circuit..... (terminals KL5 and KL6) in type of explosion protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

U_i = 30 V
I_i = 100 mA
P_i = 750 mW
L_i = 0 mH
C_i = 0 nF

Input circuit..... (terminals KL1, KL2, KL3) in type of explosion protection intrinsic safety EEx ia IIC, with following maximum values:

U_o = 7,2 V
I_o = 12 mA
P_o = 85 mW
L_o = 200 mH
C_o = 9,8 µF

Temperature Transmitter Model Mp88800R:

Supply circuit..... (terminals CON2.a and CON2.b) in type of explosion protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

U_i = 30 V
I_i = 100 mA
P_i = 750 mW
L_i = 0 mH
C_i = 0 nF

Input circuit..... (terminals CON1.a, CON1.b, CON1.c) in type of explosion protection intrinsic safety EEx ia IIC, with following maximum values:

U_o = 7,2 V
I_o = 12 mA
P_o = 85 mW
L_o = 200 mH
C_o = 9,8 µF

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 03ATEX1419 X**

Temperature Transmitter Model Mp82700:

Supply circuit..... (terminals KL5 and KL6) — in type of explosion protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

U_i = 30 V
I_i = 100 mA
P_i = 750 mW
L_i = 0 mH
C_i = 0 nF

Input circuit..... (terminals KL1 to KL4) — in type of explosion protection intrinsic safety EEx ia IIC, with following maximum values:

U_o = 7,2 V
I_o = 58 mA
P_o = 103 mW
L_o = 10 mH
C_o = 13,5 µF

The input circuit and the supply circuit are infallibly galvanically isolated up to a sum of peak voltages of 30 V.

Temperature Transmitter Model Mp88700:

Supply circuit..... (terminals CON4.a and CON4.b) — in type of explosion protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

U_i = 30 V
I_i = 100 mA
P_i = 750 mW
L_i = 0 mH
C_i = 0 nF

Input circuit..... (terminals CON2a to CON2.d) — in type of explosion protection intrinsic safety EEx ia IIC, with following maximum values:

U_o = 7,2 V
I_o = 58 mA
P_o = 103 mW
L_o = 10 mH
C_o = 13,5 µF

The input circuit and the supply circuit are infallibly galvanically isolated up to a sum of peak voltages of 30 V.

(13) # SCHEDULE

(14) ## to EC-Type Examination Certificate KEMA 03ATEX1419 X

Installation instructions

The Temperature Transmitter shall be mounted in an enclosure providing a degree of ingress protection of at least IP20 per EN 60529.
This enclosure shall be in conformance with Clauses 4.3 and 4.4 of EN 50284, when the Temperature Transmitter is mounted in an area where the use of category 1 G apparatus is required.
This enclosure shall be in conformance with Clauses 7.3 and 8.1 of EN 50014, when the Temperature Transmitter is mounted in an area where the use of category 2 G apparatus is required.

Routine tests

The transformer of the Temperature Transmitters Model Mp82700 and Mp88700 shall be subjected to a voltage test with a minimum voltage of 1500 Vac during one minute, in accordance with clause 11.2 of EN 50020.

(16) **Report**

KEMA No. 2031239.

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

For electrical data and temperature data see (15).

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

Covered by the standards listed at (9).

(19) **Test documentation**

		dated
1.	Description (18 pages)	04.11.2004
2.	Drawing No. EX_labelMP.cdr	02.02.2004
	S-317-1, rev. B	05.12.2003
	Mp88800R_B.ddf, rev. B (4 pages)	02.02.2004
	Mp88800R_B.bom (2 pages)	28.01.2004
	S-314-4, rev.B	17.12.2003
	Mp82800RT_B (4 pages)	03.02.2004
	Mp82800RT_B.bom	28.01.2004
	S-314-5, rev. B	05.01.2004
	Mp82800RB_B (6 pages)	04.02.2004
	Mp82800RB_B.bom (2 pages)	30.01.2004
	S-316-1, rev. B	19.01.2004
	Mp88800_B.ddf, rev. B (6 pages)	04.02.2004
	Mp88800_B.bom (2 pages)	02.02.2004
	S-314-1, rev. B	21.01.2004
	Mp82800T_B (6 pages)	04.02.2004
	Mp82800T_B.bom	26.01.2004
	S-314-2, rev. B	20.01.2004
	Mp82800M_B (6 pages)	04.02.2004
	Mp82800M_B.bom	03.02.2004

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 03ATEX1419 X**

Testdocumentation (continued)

S-314-3-B, rev. B	23.01.2004
Mp82800B_B (6 pages)	04.02.2004
Mp82800B_b.bom	26.01.2004
SPD3291B, rev. B	20.03.1995
Mp_Displ (4 pages)	04.02.2004
DISPLAY.bom	02.02.2004
Trafo.cdr	28.09.2004
S-312-1, rev. C	29.01.2004
Mp88700_C.ddf, rev. C (6 pages)	12.10.2004
Mp88700_c.bom (3 pages)	04.11.2004
S-310-1, rev.C	02.02.2004
Mp82700T_C (6 pages)	12.10.2004
Mp82700T_c.bom	18.02.2004
S-310-2, rev. C	02.02.2004
Mp82700M_C (6 pages)	12.10.2004
Mp82700M_c.bom	18.02.2004
S-310-3, rev. C	06.02.2004
Mp82700B_C (6 pages)	12.10.2004
Mp82700B_c.bom (2 pages)	04.11.2004