

[1] EC-TYPE EXAMINATION CERTIFICATE

**[2] Equipment or Protected System Intended for use
in Potentially explosive atmospheres
Directive 94/9/EC**

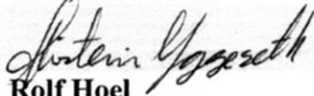
- [3] **EC-Type Examination Certificate Number:** Nemko 00ATEX405X
- [4] **Equipment or Protective System:** Temperature Transmitter
- [5] **Manufacturer and applicant:** Smar Equipamentos Industriais Ltda
- [6] **Address:** Av. Antonio Furlan Jr., 1028
Sertazinho SP-14160.000
Brazil
- [7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] Nemko AS, notified body number 0470 in accordance with Article 9 of 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. 200038158
- [9] **Compliance with the Essential Health and Safety Requirements has been assured by compliance with:**
- CENELEC EN 50014: 1997 + A1: 1999 + A2: 1999 and CENELEC EN
CENELEC EN 50020 1994
CENELEC 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 in accordance 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:**

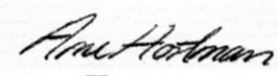


II 1 G

EEx ia IIC T4

Oslo, 2001-02-22

for 
Rolf Hoel
Certification Manager


Arne Hortman
Project Engineer

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[13] Schedule**[14] EC-TYPE EXAMINATION CERTIFICATE No Nemko 00ATEX405 X****[15] Description of Equipment or Protective System**

Fieldbus temperature transmitters for external temperature sensors such as RTDs, thermocouples, pyrometers, load cells, resistance position indicators etc..

Type Designation

TT 302 and TT 303

Ingress Protection Code

IP66 according to EN 60529.

Data for the Intrinsic Safety

Maximum input voltage.	U _i :	22,5V
Maximum input current.	I _i :	206mA
Maximum input power.	P _i :	1,15W
Maximum internal capacitance.	C _i :	5nF
Maximum internal inductance.	L _i :	6μH
Maximum output voltage.	U _o :	8V
Maximum output current.	I _o :	12mA
Maximum output power.	P _o :	0,1W
Maximum external capacitance.	C _o :	1μF
Maximum external inductance.	L _o :	1mH

[16] Report No. 200038158

Composed in total 47 pages and the listed pages of descriptive documents.

Descriptive Documents

Title/Description	Number	Sheets	Rev.	Date
TT302 and TT303 Control Drawing	102A0690	1	00	2000-12-08
Marking (Nemko)ATEX	101A457300	1	00	2000-09-22
Marking (Nemko)ATEX	101A454700	1	00	2000-09-22
TT302/303 Boards Arrangement	102A034101	1	1	2000-08-25
TT 302/303 Printed Circuit Board Interconnection	102B044001	1	1	2000-08-25
Field Devices Terminal Block GLL897	102B039500	1/2	-	1997-04-25
Field Devices Bill of Materials Terminal Block GLL897	102B039500	2/2	-	1997-04-25
GLL 897 Top Silk	102A022200	1/4	-	1997-05-01
GLL 897 Top	102A022200	2/4	-	1997-05-01
GLL 897 Bottom	102A022200	3/4	-	1997-05-01
GLL 897 Bottom Silk	102A022200	4/4	-	1997-05-01
Field Devices Filters GLL896	102B005101	1/2	1	1997-04-25
Field Devices Bill of Materials Filters GLL896	102B005101	2/2	1	1997-04-25
GLL895 Top Silk	102A022100	1/3	-	1997-05-01
GLL895 Top	102A022100	2/3	-	1997-05-01

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GLL895 Top Silk	102A022100	3/3	-	1997-05-01
Field Devices Main Board GLL 1004	102B022407	1-4/6	7	2000-06-13
Field Devices Bill of Materials Main Board GLL 1004	102B022407	05-06/6	7	2000-06-13
GLL1004 Top Silk	102A032103	1/4	3	2000-11-10
GLL1004 Top	102A032103	2/4	3	2000-11-10
GLL1004 Bottom	102A032103	3/4	3	2000-11-10
GLL1004 Bottom Silk	102A032103	4/4	3	2000-11-10
GLL895 Top Silk	102A022003	1/4	3	2000-11-10
GLL895 Top	102A022003	2/4	3	2000-11-10
GLL895 Bottom	102A022003	3/4	3	2000-11-10
GLL895 Bottom Silk	102A022003	4/4	3	2000-11-10
Field Devices Analog Input Board GLL895	102B27805	1/2	5	2000-11-10
Field Devices Bill of Materials Analog Input Board GLL895	102B27805	2/2	5	2000-11-10
Field Devices Display GLL802	102B0044305	1/2	5	2000-01-21
Field Devices Bill of Materials Display GLL802	102B004305	2/2	5	2000-01-21
GLL802 Top Silk	102A022702	1/4	2	2000-02-17
GLL802 Top	102A022702	2/4	2	2000-02-17
GLL802 Bottom	102A022702	3/4	2	2000-02-17
GLL802 Bottom Silk	102A022702	4/4	2	2000-02-17
Transformer General Information	102B019900	1		1996-06-05
Dimensional Drawing with Indicator	101D010301	1	1	1995-05-15

[17] Special conditions for safe use.

1. The transmitter is marked with three options for the indication of the protection code.

The certification is valid only when the protection code is indicated in **one** of the boxes following the code.

The following options apply:

1.a

EEx d IIC T6 () with **X** ticked in the parenthesis:

The EEx d IIC T6 protection according to certificate Nemko 00ATEX363X applies for the specific transmitter. Certified EEx d IIC cable entries shall be used.

1.b

EEx ia IIC T4 () with **X** ticked in the parenthesis:

The EEx ia IIC T5 protection according to certificate Nemko 00ATE405X applies for the specific transmitter. Certified safety zener barriers shall be used.

1.c

EEx d IIC T6 / EEx ia IIC T4 () with **X** ticked in the parenthesis:

The transmitter has a double protection. Both EEx d IIC T6 and EEx ia IIC T5 protection apply for the specific transmitter according to certificates Nemko 00ATEX363X and Nemko 00ATEX405X

In this case the transmitter shall be fitted with appropriate certified cable entries EEx d IIC and the electric circuit supplied by a certified diode safety barrier as specified for the protection EEx ia IIC T4

2.

The enclosure of the transmitter contains aluminium and impact and friction hazards shall be considered when the transmitter is used in category II 1 G according to EN 50284 clause 4.3.1

[18] Essential Health and Safety Requirements

Covered by the standards listed under [9]

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Supplement 2 to EC-TYPE EXAMINATION CERTIFICATE

[15] Description

The certificate is extended to include ingress protection IP 66 and IP 67 according to EN 60529.

The threaded entries of the transmitter have to be fitted with cable gland(s) and closing device for any unused opening, and having at least the same degree of ingress protection as the transmitter.

[16] Report No 47577

Oslo, 2005-07-04



Rolf Hoel
Certification Department

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SUPPLEMENT 3 TO EC-TYPE EXAMINATION CERTIFICATE**[14] EC-TYPE EXAMINATION CERTIFICATE No Nemko 00ATEX405X****[15] Description of Equipment or Protective System**

This certificate covers the following changes:

- Revised documents
- Technical changes that do not affect the intrinsic safety.

[16] Report No. 63428**Descriptive Documents**

Name/Title	Drawing No.	Rev.	Date	Sheets
GLL802 (PCB Layout)	102A022703	03	2004-08-24	4
GLL895 PCB	102A022005	05	2003-05-04	4
GLL1004 (PCB Layout)	102A032106	06	2004-03-30	4
Field Devices Main Board GLL 1004	102B022411	11	2004-03-30	4
Field Devices Terminal Block GLL897	102B039502	02	2004-03-15	1

[18] Essential Health and Safety Requirements

See item 9

Oslo, 2006-05-31**Rolf Hoel
Certification Department***This certificate may only be reproduced in its entirety and without any change, schedule included.*

SUPPLEMENT 4 TO EC-TYPE EXAMINATION CERTIFICATE**[14] EC-TYPE EXAMINATION CERTIFICATE No Nemko 00ATEX405X****[15] Description of Equipment or Protective System**

This certificate covers the following changes:

- Revised documents
- Technical changes that do not affect the intrinsic safety.

[16] Report No. 70130**Descriptive Documents**

Name/Title	Drawing No.	Rev.	Date	Sheets
FIELD DEVICES ANALOG INPUT BOARD GLL895	102B004013	1	2003-12-16	13
TRANSFORMER GENERAL INFORMATION	102B019902	1	2002-09-02	02
Lista de Material TT302	LM102023520	1	2004-02-10	20
Lista de Material TT302	LM102037429	1	2004-02-10	29

[18] Essential Health and Safety Requirements

See item 9

Oslo, 2006-07-13

**p.p. Rolf Hoel**
Certification Department*This certificate may only be reproduced in its entirety and without any change, schedule included.*