

# CESI

CESI  
Centro Elettrotecnico  
Sperimentale Italiano  
Giacinto Motta SpA

Via R. Rubattino 54  
20134 Milano - Italia  
Telefono +39 022125.1  
Fax +39 0221255440  
www.cesi.it

Capitale sociale 8 550 000 €  
interamente versato  
Codice fiscale e numero  
iscrizione CCIAA 00793580150

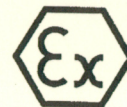
Registro Imprese di Milano  
Sezione Ordinaria  
N. R.E.A. 429222  
P.I. IT00793580150

Schema di certificazione

# CEI-ATEX

Il CESI è stato autorizzato  
dal governo italiano ad  
operare quale organismo di  
certificazione di apparecchi  
e sistemi destinati a essere  
utilizzati in atmosfera  
potenzialmente esplosiva  
con D.M. 1/3/1983, D.M.  
19/6/1990, D.M. 20/7/1998  
e D.M. 27/9/2000

# CERTIFICATE



## [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:

**CESI 05 ATEX 038**

[4] Equipment: Thermometric assemblies Omnigrad S series TR 6 ; TC 6

[5] Manufacturer: ENDRESS + HAUSER SICESTHERM S. r. l.

[6] Address: Via M. Luther King 7, Pessano con Bornago (Milano) Italy

[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] CESI, notified body n. 0722 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 n. EX- A5/020554.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 50014: 1997 + A1 A2 EN 50018: 2000 + A1 EN 50281-1-1: 1998 + A1 EN 50284: 2000**

[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 2G EEx d IIC T6, T5**



**II 2GD EEx d IIC T6, T5, IP66 T85, 100 °C**



**II 1/2GD EEx d IIC T6, T5, IP66 T85, 100 °C**

This certificate may only be reproduced in its entirety and without any change, schedule included.

Date April 28<sup>th</sup> 2005 - Translation issued the April 28<sup>th</sup> 2005

Prepared  
Vanni Ottoboni

Verified  
Mirko Balaz

Approved  
Ulisse Colombo

**CESI**

CENTRO ELETTROTECNICO SPERIMENTALE ITALIANO

Business Unit Certificazione

Il Responsabile



[13]

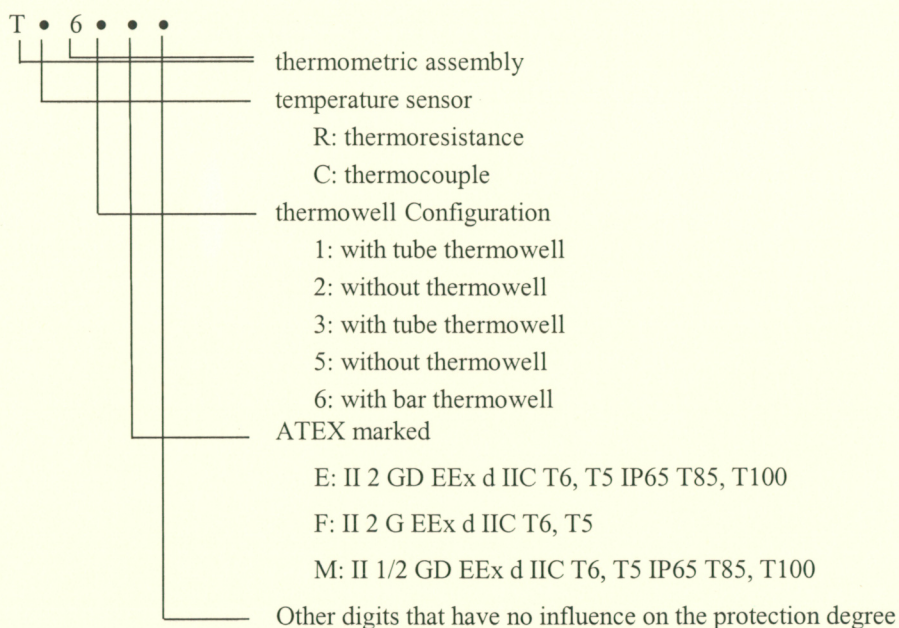
## Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 05 ATEX 038**

### [15] Description of equipment

The thermometric assemblies series TR6 and TC6 subject of this certificate are made by a sensor (thermocouple or thermoresistance), a thermowell and an enclosure (component subject of separate certification) in which a terminal block or a transmitter or free wires can be installed.

The thermometric assemblies are identified by a code as follows:



The T•62• models shall be marked (letter F):

**Ex II 2G EEx d IIC T6, T5**

The T•65• models shall be marked (letter E):

**Ex II 2GD EEx d IIC T6, T5, IP66 T85, T100 °C**

The T•61•, T•63• e T•66• models shall be marked (letter M):

**Ex II 1/2GD EEx d IIC T6, T5, IP66 T85, T100 °C**

the detailed description of the thermometric assemblies and their constructional characteristics are reported in the documents annexed to this certificate.

### Electrical characteristics

Max voltage 50 V  
Max current 30 mA

The ambient temperature range is -40÷70 °C with temperature class T6; max surface temperature for Dust 85°C

The ambient temperature range is -40÷80 °C with temperature class T5; max surface temperature for Dust 100°C

This certificate may only be reproduced in its entirety and without any change, schedule included.



[13]

## Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 05 ATEX 038**

The accessories used for cable entries and for closing unused apertures shall have a degree of protection IP66 and shall be certified to the standards EN 50014 and EN 50018 and EN 50281-1-1.

### Warning label

When the temperature at the cable entry point is higher than 70 °C, suitable heat resisting cables shall be used.

[16] **Report n. EX- A5/020554**

### Routine tests

The manufacturer shall carry out the routine tests prescribed at clause 24 of the EN 50014 standard.

The manufacturer is exempted from the routine overpressure test on the terminal head series TA21H since it has passed the type test performed at a pressure of 32 bar, equal to 4 times the reference pressure.

The routine overpressure test shall be carried out on each thermowell with the static method (par. 15.1.3.1 of EN 50018 standard) at a pressure equal to 1.5 times the pressure of the process and in any case not lower than 20 bar.

### Descriptive documents (prot. EX- A5/020574)

- n. 24SK066 (2 pages)	Rev. B	dated	19.04.2005
- n. 24SK068	Rev. C	dated	19.04.2005
- n. 24SK069	Rev. C	dated	19.04.2005
- n. 24SK070	Rev. C	dated	19.04.2005
- n. 24SK071	Rev. C	dated	19.04.2005
- n. 24SK072	Rev. C	dated	19.04.2005
- n. 24SK073	Rev. B	dated	19.04.2005
- n. 25SK003	Rev. B	dated	19.04.2005
- n. 909A034XX	Rev. B	dated	19.04.2005
- n. 965A082XX	Rev. B	dated	19.04.2005
- n. 965A083XX	Rev. B	dated	19.04.2005
- n. 970A51XXX	Rev. A	dated	21.01.2004
- n. 566I061AE	Rev. B	dated	19.04.2005
- n. 566I061AF	Rev. B	dated	19.04.2005
- n. 566I061AH	Rev. B	dated	19.04.2005
- Technical note EH2004 ATEX/002_E(9 pages.)	Rev 2	dated	19.04.2005
- Safety instruction and EC declaration of conformity XA014T/02/en (6 pages)		dated	19.04.2005

One copy of all documents is kept in CESI files.

[17] **Special conditions for safe use**

None.

[18] **Essential Health and Safety Requirements**

Covered by standards.

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


## EXTENSION n. 01/10

to EC-Type Examination Certificate CESI 05 ATEX 038

### Marking and type of protection

#### Model TX61X:


 II 2G Ex d IIC T6 *or* T5 Ex tD A21 IP66 T85°C, T100°C


 II 1/2GD Ex d IIC T6 *or* T5 Ex tD A21 IP66 T85°C, T100°C

#### Model TX62X:


 II 2G Ex d IIC T6 *or* T5

#### Model TX63X:


 II 1/2GD Ex d IIC T6 *or* T5, Ex tD A21 IP66 T85°C, T100°C

 II 2GD Ex d IIC T6 *or* T5, Ex tD A21 IP66 T85°C, T100°C

#### Model TX65X:

 II 2GD Ex d IIC T6 *or* T5, Ex tD A21 IP66 T85°C, T100°C

#### Model TX66X:

 II 2GD Ex d IIC T6 *or* T5, Ex tD A21 IP66 T85°C, T100°C

### Electrical characteristics

- Max voltage 50 V
- Max current 30 mA

### Ambient temperature:

- Tamb.  $-40 \div +70^{\circ}\text{C}$  for Class T6; surface temperature T85°C
- Tamb.  $-40 \div +80^{\circ}\text{C}$  for Class T5; surface temperature T100°C

The accessories used for cable entries and for closing unused apertures shall have a degree of protection IP66 and shall be certified to the standards EN60079-0, EN60079-1, EN61241-0 and EN61241-1.

**Report n. EX-B0018174**

### Routine tests

The manufacturer shall carry out the routine tests prescribed at clause 27 of the EN 60079-0 and at clause 24 of the EN 61241-0 standards.

The routine overpressure test shall be carried out on each thermowell with the static method (par. 15.1.3.1 of the EN60079-1 standard) at a pressure equal to 1.5 times the pressure of the process and in any case not lower than 20 bar.

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## EXTENSION n. 01/10

to EC-Type Examination Certificate CESI 05 ATEX 38

### Descriptive documents (prot. EX-B0018217)

- Technical note n. EH2010-ATEX_001_en Rev.1	(pg.9)	dated	25.06.2010
- Drawing n. 24SK066 Rev. C	(pg.2)	dated	13.05.2010
- Drawing n. 24SK068 Rev. D	(pg.1)	dated	13.05.2010
- Drawing n. 24SK069 Rev. D	(pg.1)	dated	13.05.2010
- Drawing n. 24SK070 Rev. D	(pg.1)	dated	13.05.2010
- Drawing n. 24SK071 Rev. D	(pg.1)	dated	13.05.2010
- Drawing n. 24SK072 Rev. D	(pg.1)	dated	13.05.2010
- Drawing n. 24SK073 Rev. D	(pg.1)	dated	13.05.2010
- Drawing n. 566I061AE Rev. C	(pg.1)	dated	13.05.2010
- Drawing n. 566I061AF Rev. C	(pg.1)	dated	13.05.2010
- Drawing n. 566I061AH Rev. C	(pg.1)	dated	13.05.2010
- Safety instructions XA014ta3	(pg.16)	dated	25.06.2010
- Dichiarazione CE di Conformità	(pg.1)	dated	18.06.2010

One copy of all documents is kept in CESI files.

### Special conditions for safe use

None

### Essential Health and Safety Requirements

The Essential Health and Safety Requirements are assured by compliance to the following standards:

EN 60079-0: 2006	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements.
EN 60079-1: 2007	Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures "d"
EN 60079-26: 2007	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga
EN 61241-0: 2006	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements.
EN 61241-1: 2004	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"