

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

Schema di certificazione

CEX-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.
19/5/1990, D.M. 20/7/1998
e D.M. 27/9/2000

CERTIFICATE



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:

CESI 03 ATEX 186

[4]

Equipment: Command, breaking, control, signalling and display units series CS

[5]

Manufacturer: **DYNAMIN S.r.l.**

[6]

Address: Piazza Venini, 8 - 20010 Vittuone (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-A3/024327.

[9]

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

EN50014: 1997+A1..A2 EN50018: 2000+A1 EN50281-1-1: 1998+A1

[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 IIB T6 or ⊕ II 2G EEx d IIC T6

⊕ II 2GD EEx d IIB T6 IP66 T85 °C or ⊕ II 2GD EEx d IIC T6 IP66 T85 °C

⊕ I M2 EEx d I

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

Date 05 July 2003 - Translation issued the 05 July 2003

Prepared
Enrico Radaelli

Verified
Damiano Cavanna

Approved
Elisio Colombo

CESI
CENTRO ELETTROTECNICO SPERIMENTALE ITALIANO
Business Unit-Certificazione

Il Responsabile

[13]

Schedule

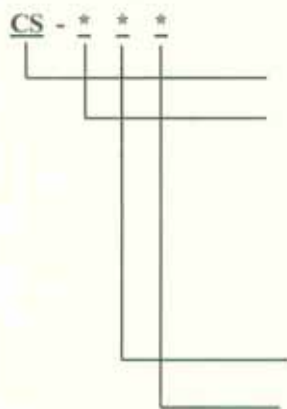
[14] EC-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 186

[15] Description of equipment

The command, breaking, control, signalling and display units series CS are realized by different size of EEx-d enclosures, within various electrical equipment, as reported in the descriptive document annexed to this certificate.

The command, breaking, control, signalling and display units series CS are identified by following codes:

Breakers and selectors:



Series enclosures: CS

Type of equipment:

INP = breaker

INCP = commutator

INDP = switch

IAMT / IAMT-L = automatic breaker without/with lamp

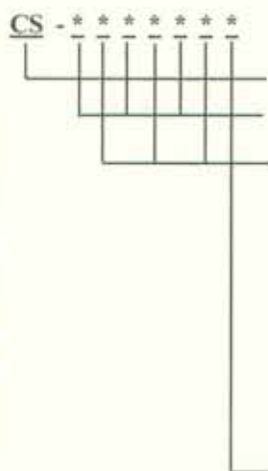
SEL / SEL-L = selector without/with lamp

INV / INVR = vibration breaker without/with reset

Number of poles: 1 ÷ 4

Current [A]: 16 ÷ 63

Push-buttons and signallers:



Series enclosures: CS

Number of elements: 1, 2, 3, 4 (*absent for equipment with only one element*)

Element type:

P = push-button

Pe = emergency button

Pf = throttle command button

R = potentiometric regulator

L = lamp

I = pack breaker

C = pack commutator

D = pack switch

S = pack selector

Possible functionality codes not relevant for type of protection EEx d

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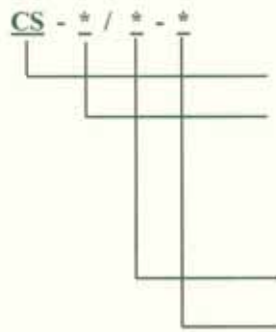
[13]

Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 186

[15] Description of equipment (follows)

Limit switches:



Series enclosures: CS

Type of equipment:

IFC = standard roller limit switch

IFCS = limit switch with special head

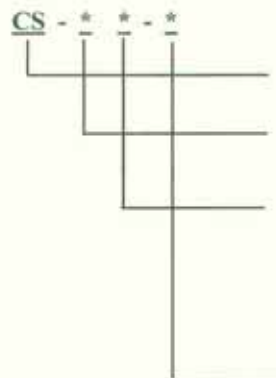
IF62 = limit switch with horizontal head

IFV62 = limit switch with vertical head

Entries layout: A, C, L, T

Possible functionality codes not relevant for type of protection EEx d

Instruments holder:



Series enclosures: CS

Type of equipment:

PS = Instruments holder

Window type:

48 (enclosure 84)

56, 72, 90 (enclosure 104)

96, 110 (enclosure 126)

130 (enclosure 180)

T (thermostat) (enclosure 180)

Possible functionality codes not relevant for type of protection EEx d

The enclosure for the units of category 2GD are made in aluminium, bronze, cast iron or stainless steel.

The enclosure for the units of category M2 are made in cast iron or stainless steel.

The electrical and/or constructional characteristics of the apparatus and accessories within enclosure, and the use in function of category are specified in the descriptive documents annexed to this certificate.

Cable entries

The accessories used for cable entries and for unused holes shall be subject of separate certification:

- in execution EEx d I according to EN 50014 and EN 50018 standards, for the units in execution EEx d I;
- in execution EEx d IIB/IIC according to EN 50014 and EN 50018 standards, for the units in execution EEx d IIB.
- in execution EEx d IIC according to EN 50014 and EN 50018 standards, for the units in execution EEx d IIC.

For the units category 2D the accessories shall be certified according to EN 50281-1-1 and shall guarantee a minimum degree of protection IP 66 according to EN 60529 standard.

If cylindrical threads are used, the coupling between the cable gland and the enclosure shall be provided with block to prevent loosening as specified in the documents annexed to the certificate.

[13]

Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 186

[15] Description of equipment (*follows*)

Electrical characteristics

Breakers and selectors:

- Maximum voltage: 660 Vac / 125 Vdc
- Maximum current: 63 A
- Signalling lamps: 220Vca / 125Vcc – Pmax 5W^[1] / 2W^[2]

Push-buttons and signallers:

- Maximum voltage: 380 Vac / 125 Vdc
- Maximum current: 10 A
- Signalling lamps: 220Vac / 125Vdc – Pmax 5W^[1] / 2W^[2]

Potentiometric regulators:

- Maximum voltage: 300 Vac/dc
- Maximum power: 3 W

Limit switches:

- Maximum voltage: 380 Vac / 125 Vdc
- Maximum current: 10 A

Instruments holder:

- Maximum dissipated power: 5 W

- Ambient temperature: -20 ÷ +40 °C
- 20 ÷ +60 °C
- 40 ÷ +40 °C
- 40 ÷ +60 °C

^[1] with Tamb + 40°C for equipment of group II or with Tamb + 60°C for equipment of group I.

^[2] with Tamb + 60°C

The functional electrical parameters of the equipment within enclosures are specified in the descriptive documents annexed to the certificate and when appropriate also reported on the label.



[13]

Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE** n. CESI 03 ATEX 186

[16] **Report n.** EX-A3/024327.

Routine tests

The manufacturer shall carry out the routine tests prescribed at paragraph 24 of the EN 50014 Standard and at paragraph 16 of the EN 50018 Standard.

The units with minimum Tamb -20°C, without cemented accessories, are exempted from overpressure routine test since they have been submitted, with the static method and favourable result, to an overpressure test at a pressure corresponding to 4 times the reference pressure

On the units with minimum Tamb -20°C completed of cemented accessories, the routine overpressure test shall be carried out at 13 bar with the static method according to paragraph 15.1.3.1 of the EN 50018 Standard.

On the units with minimum Tamb -40°C the routine overpressure test shall be carried out at 19.5 bar with the static method according to paragraph 15.1.3.1 of the EN 50018 Standard.

Descriptive documents (prot. EX-A3/024329)

- n. NT.C-024/03.01	(pg. 7)	dated	24.06.2003
- n. IM.C-024/03.01	(pg. 3)	dated	03.07.2003
- n. C-024.99/01		dated	24.06.2003
- n. C-042.99/01		dated	24.06.2003
- n. C-042.99/02		dated	24.06.2003
- n. C-042.99/03		dated	24.06.2003
- n. C-076.99/01		dated	24.06.2003
- n. C-076.99/02		dated	24.06.2003
- n. C-134.99/01		dated	24.06.2003
- n. Declaration of conformity DC.C-024/03.01		dated	05.07.2003
- n. Declaration of conformity DC.C-024/03.11		dated	05.07.2003

One copy of all documents is kept in CESI files.

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

None.

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

Assured by compliance to the Standards.



EXTENSION n. 01/08

to EC-Type Examination Certificate CESI 03ATEX 186

Equipment: Command, breaking, control, signalling and display units series CS

Manufacturer: DYNAMIN S.r.l.

Address: Piazza Venini, 8 – 20010 Vittuone (Milano) – Italy

Admitted variation

- Updating to EN60079-0 (2006), EN60079-1 (2004), EN61241-0 (2006), EN61241-1 (2004) standards;
- Updating of the identification code for the series CS “*breakers and selectors*”;
- new series named CS-INV e CS-INVR with *Robertshaw Controls Company* or *T&P* devices.

Details of the admitted variations are specified in the descriptive documents annexed to this extension.

Marking

The equipment shall be marked as follows:



II 2G Ex d IIB or IIC T6



II 2GD Ex d IIB or IIC T6 Ex tD A21 IP66 T85°C



IM2 Ex d I

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 03 ATEX 186.

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date 12 June 2008 - translation issued the 12th June 2008

prepared

Enrico Radaelli

verified

Mirko Balaz

approved

Fiorenzo Bregani

CESI S.p.A.
Divisione Energia
“Area Tecnica Certificazione”
Il Responsabile

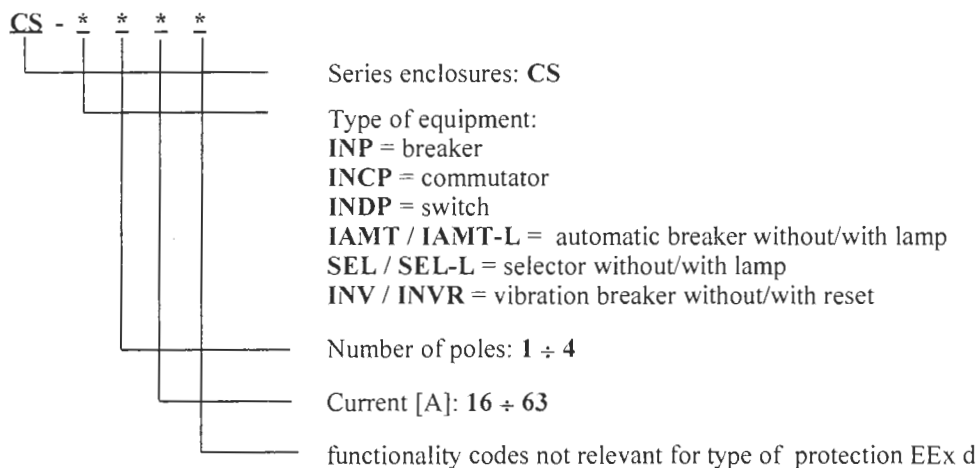
page 1/3

EXTENSION n. 01/08

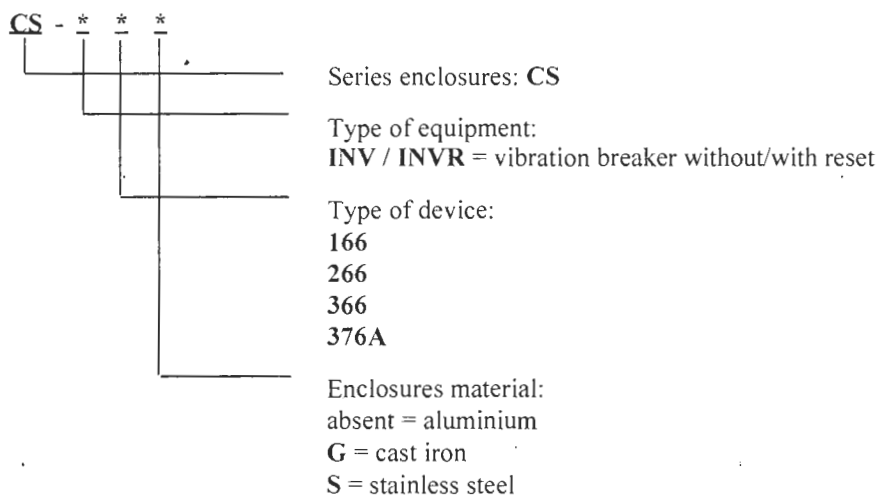
to EC-Type Examination Certificate CESI 03 ATEX 186

Identification of the equipment

The code of the series CS “*breakers and selectors*” is updating as follows:



The new series named **CS-INV** and **CS-INVR** “*vibration breaker*”, with **Robertshaw Controls Company** or **T&P** devices type “EURO 166”, “EURO 266”, “EURO 366”, “EURO 376A” is identified by the following code:



Electrical characteristics

Unchanged.

Cable entries

The accessories used for cable entries and for unused holes shall be subject of separate certification, guarantee the type of protection of the unit on which they are installed and be suitable for the expected minimum and maximum operating temperatures.

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EXTENSION n. 01/08

to EC-Type Examination Certificate CESI 03 ATEX 186

Report n. EX-A8017107

Routine tests

The manufacturer shall carry out the routine tests prescribed at paragraph 27 of the EN 60079-0 Standard and at paragraph 16 of the EN 60079-1 Standard.

The units with minimum Tamb -20°C, without cemented accessories, are exempted from overpressure routine test since they have been submitted, with the static method and favourable result, to an overpressure test at a pressure corresponding to 4 times the reference pressure

On the units with minimum Tamb -20°C completed of cemented accessories, the routine overpressure test shall be carried out at 13 bar with the static method according to paragraph 15.1.3.1 of the EN 60079-1 Standard.

On the units with minimum Tamb -40°C the routine overpressure test shall be carried out at 19.5 bar with the static method according to paragraph 15.1.3.1 of the EN 60079-1 Standard.

Descriptive documents (prot. EX-A8017112)

- n. I.NT.C-024/03.02	(pg. 5)	dated	07/04/2008
- n. C-003.99/21		dated	07/04/2008
- n. IM.C-024/03.11	(pg. 3)	dated	07/04/2008
- n. DC.C-024/03.12		dated	07/04/2008
- n. DC.C-024/03.13		dated	07/04/2008
- n. DC.C-024/03.14		dated	07/04/2008
- n. DC.C-024/03.15		dated	07/04/2008

One copy of all documents is kept in CESI files.

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 atmosphere -General requirements.
- EN 60079-1: 2004 – Electrical apparatus for explosive gas atmosphere - Flameproof enclosure “d”.
- EN 61241-0: 2006 - Electrical apparatus for use in the presence of combustible dust -General requirements
- EN 61241-1: 2004 - Electrical apparatus for use in the presence of combustible dust – Protection by enclosures “tD”.

EXTENSION n. 02/10



to EC-Type Examination Certificate CESI 03ATEX 186

Equipment: Command, breaking, control, signalling and display units series CS

Manufacturer: **DYNAMIN S.r.l.**

Address: Piazza Venini, 8 – 20010 Vittuone (Milano) – Italy

Admitted variation

Only for the series **CS-INV** and **CS-INVR**:

- updating to **EN60079-0 (2009)**, **EN60079-1 (2007)**, **EN60079-31 (2009)** standards;
- new type of enclosure (cover with threaded joint) and identification code updating;
- new minimum ambient temperature value;
- updating of the routine tests.

Details of the admitted variations are specified in the descriptive documents annexed to this extension.

Marking

The equipment shall be marked as follows:

IM2 Ex d I Mb

II 2GD Ex d IIC T6 Gb
Ex tb IIC T85°C Db IP66

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 03 ATEX 186.

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date 14 October 2010 - translation issued the 14th October 2010

prepared Enrico Radaelli

verified Mirko Balaz

approved Fiorenzo Bregani

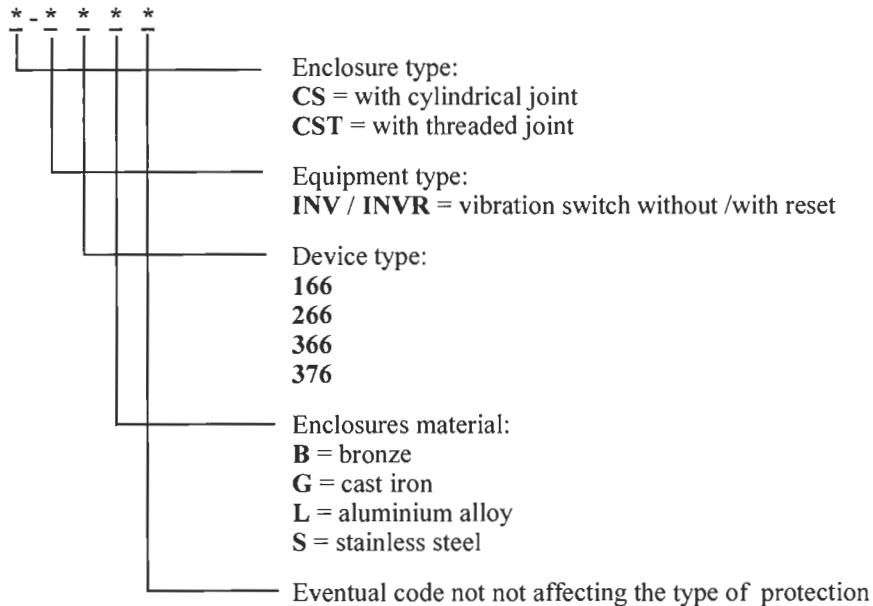
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EXTENSION n. 02/10

to EC-Type Examination Certificate CESI 03 ATEX 186

Identification of the equipment

The identification code of the series **CS** “*vibration breaker*” is updated as follows:



Electrical characteristics

Unchanged [*]

Ambient temperature: -60/-40/-20 ÷ +40/+60°C

[*] Electrical and functional parameters of the devices installed within the enclosures are specified in the descriptive documents annexed to the extension and if opportune also on the nameplate.

Cable entries

The accessories used for cable entries and for unused holes shall be subject of separate certification, guarantee the type of protection of the unit on which they are installed and be suitable for the expected minimum and maximum operating temperatures.

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EXTENSION n. 02/10

to EC-Type Examination Certificate CESI 03 ATEX 186

Report n. EX-B0029367

Routine tests

The manufacturer shall carry out the routine tests prescribed at paragraph 27 of the EN 60079-0 Standard and at paragraph 16 of the EN 60079-1 Standard.

The units with minimum Tamb –20°C are exempted from overpressure routine test since they have been submitted, with the static method and favourable result, to an overpressure test at a pressure corresponding to 4 times the reference pressure.

On the units with minimum Tamb –40°C the routine overpressure test shall be carried out at 15.6 bar with the static method according to paragraph 15.1.3.1 of the EN 60079-1 Standard.

On the units with minimum Tamb –60°C the routine overpressure test shall be carried out at 16.7 bar with the static method according to paragraph 15.1.3.1 of the EN 60079-1 Standard.

Descriptive documents (prot. EX-B0029372)

- n. I.NT.C-024/10.01	(pg. 6)	dated	28.09.2010
- n. C-024.99/11		dated	28.09.2010
- n. C-024.99/12		dated	28.09.2010
- n. C-024.99/13		dated	28.09.2010
- n. C-024.99/14		dated	28.09.2010
- n. C-024.99/15		dated	28.09.2010
- n. IM.C-024/10.01	(pg. 4)	dated	28.09.2010
- n. DC.C-024/10.01		dated	28.09.2010
- n. DC.C-024/10.02		dated	28.09.2010

One copy of all documents is kept in CESI files.

Special conditions for safe use (X)

*With the updating to the new standard the following special condition for safe use is added; moreover the X suffix is added to the certificate number, and beginning from this extension it becomes **CESI 03ATEX186X**.*

The flamepaths characteristics are specified in the manufacturer drawings. For information regarding the dimensions of the flameproof joints the manufacturer shall be contacted.

Essential Health and Safety Requirements

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

- EN 60079-0: 2009 - Explosive atmospheres - Part 0: Equipment -General requirements.
- EN 60079-1: 2007 - Explosive atmospheres - Part 1: Equipment protection by flameproof enclosure “d”.
- CEI EN 60079-1: 2008-11- Explosive atmospheres - Part 1: Equipment protection by flameproof enclosure “d” (annex 1)
- EN 60079-31: 2009 - Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure “t”