IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx INE 14.0040X**

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Certificate history:

Issue 2 (2020-04-29)
Issue 1 (2016-02-03)
Issue 0 (2014-08-13)

Status: **Current**

Issue No: 3

Date of Issue: 2020-12-10

Applicant: **SCAME PARRE S.p.A.**
Via Costa Erta, 15
24020 PARRE (BG)
Italy

Equipment: **Isolators-Ex[GD] type 591.xxxxxxx-xxx**

Optional accessory:

Type of Protection: **db eb tb**

Marking: Ex db eb IIC T4 or T5 Gb
Ex tb IIIC T80°C Db IP66

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Approved for issue on behalf of the IECEx Certification Body:

Thierry HOUEIX

Position: Ex Certification Officer

Signature: (for printed version)

Digitally signed by Thierry HOUEIX

Date: **2020-12-10**

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Certificate issued by:

INERIS
Institut National de l'Environnement Industriel et des Risques
BP n2 / Parc Technologique ALATA
F-60550 Verneuil-en-Halatte
France

INERIS
controlling risks for sustainable development

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Certificate No.: **IECEx INE 14.0040X**

Issue No: 3

Date of issue: 2020-12-10

Manufacturer: **SCAME PARRE S.p.A.**
Via Costa Erta, 15
24020 PARRE (BG)
Italy

Additional manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

FR/INE/ExTR14.0034/03

Quality Assessment Report:

IT/IMQ/QAR15.0001/05

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The ISOLATORS-Ex[GD] type 591.xxxxxxx-xxx are formed by Ex eb enclosures made in GRP, Aluminium or Stainless steel with safety switches type COMMAND-Ex mounted on the lid. The safety switch type COMMAND-Ex manufactured by SCAME is certified IECEx INE 13.0032U with type of protection Ex db eb IIC Gb. The GRP or stainless steel enclosures type ZENITH-P/-S manufactured by SCAME are certified IECEx IMQ 19.0004U with type of protection Ex eb IIC Gb and Ex tb IIIC IP66 Db.
The ISOLATORS-Ex[GD] can also be equipped with optional auxiliary contacts type ZBWE manufactured by EX-TECH SOLUTION (certified IECEx INE 13.0063U with type of protection Ex db eb IIC Gb) or optional Drain / Breathing valves (see the detailed list in the certificate Annex).
All version of ISOLATORS-Ex[GD] enclosures get the degrees of protection IP66 in accordance with IEC 60529.

SPECIFIC CONDITIONS OF USE: YES as shown below:
The minimum ambient temperatures must be limited by the minimum operating temperatures of the installed Ex components, see the table in the Annex.
For the switch COMMAND-EX:
The dimensions of flameproof joints are different from the values specified in the tables of the IEC 60079-1 standard. The flameproof joints are not intended to be repaired.
For enclosures series Zenith-P or Zenith-S:
For painted enclosure for use in dust atmosphere, installation shall be performed in order to minimize the risk from electrostatic discharge.
Drain / Breathing valve type ECR3:
The valve cannot be open when an explosive dust atmosphere is present, the valve can be open when an explosive gas atmosphere is present. When open, the valve reaches the protection degree IP44. This condition must be taken in consideration when the valve is installed on the enclosure.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
For the issue 03 :

- Addition of new plastic material for the Handle-Ex kit.

For the issue 02 :

- Standard update : IEC 60079-0:2017, IEC 60079-1:2014, IEC 60079-7:2017, IEC 60079-31:2013.
- Delete of auxiliary contacts types M-0530 or M-0531 manufactured by CORTEM.
- Addition of enclosures type ZENITH-P/-S manufactured by SCAME, and Drain/Breathing valves defined in Ex component table.
- Update of the technical documentation and marking plate.

For the issue 01 :

- Addition of optional auxiliary contacts type ZBWE 10A made by EX-TECH SOLUTION and certified IECEx INE 13.0063U (Ex d e IIC)

Annex:

IECEx INE 14.0040X-03_Annex.pdf

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IECEx Certificate of Conformity

Certificate No.: IECEx INE 14.0040X

Issue No.: 03

Annex: IECEx INE 14.0040X-03_Annex.pdf

PARAMETERS RELATING TO THE SAFETY

Electrical parameters for the ISOLATORS-Ex[GD] / safety switch COMMAND-Ex:

- Maximal current: 20 A to 63 A
- Max. voltage: 690 V
- Nominal frequency: 50/60 Hz
- Maximum number of safety switches: 2

Types		591.xGE200X 591.xEM200X	591.xGE250X 591.xEM250X	591.xGE320X 591.xEM320X	591.xGE400X 591.xEM400X	591.xGE630X 591.xEM630X
Category	*Rated voltage*	*Rated current*				
AC22A	690V	20A	25A	32A	40A	63A
AC23A	690V	-	-	-	40A	63A
	500V	20A	25A	32A	40A	63A
AC3	500V	20A	25A	25A	40A	50A

Electrical parameters for the auxiliary contacts manufactured by EX-TECH SOLUTION:

- Maximum supply voltage: 415 V
- Maximum current: 4 A
- Maximum dissipated power: 1 W
- Maximum number of auxiliary contacts: 2

MARKING

Marking has to be readable and indelible; it has to include the following indications:

- SCAME PARRE S.p.A
- 24020 Parre (BG)
- 591.xxxxxxxx-xxx (1)
- IECEx INE 14.0040X
- (Serial number)
- Ex db eb IIC T5 or T4 (2) Gb
- Ex tb IIIC T80°C Db
- IP66
- Tamb. : (3)
- Tcable. : (4)
- WARNING:
  - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT

(1) The type is completed by numbers and/or letters in accordance with the manufacturing variations.

591.XXXXXXX-XXX

- *Auxiliary contacts - configurations =* 1=1NO, 2=1NC, 3=2NO, 4=2NC, 5=1NC+1NO
- *letter to define an option*
- *02 or 04 (Numbers of Poles)*
- 20 or 25 or 32 or 40 or 63 (*Rated current*)
- *GE for Heavy Duty Type or EM for Emergency Type*
- *P for GRP enclosure or S for Stainless Steel or A for Aluminium*

(2) Temperature Class for Gas according to the table below

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(3) Ambient temperature range according to the table below when different from –20°C to +40°C

(4) Tcable: 80°C for type 591.Axx63xx-xxx when maximum ambient temperature is +60°C;

Tcable: 75°C for types 591.xxx32xx-xxx when maximum ambient temperature is +60°C.

Tamb	591.xxx20xx-xxx 591.xxx25xx-xxx 591.Axx32xx-xxx	591.Pxx32xx-xxx 591.Sxx32xx-xxx 591.xxx40xx-xxx 591.Axx63xx-xxx	591.Pxx63xx-xxx	591.Sxx63xx-xxx
-20°C / +40°C	T5	T5	T5	T5
-20°C / +50°C	T5	T5	T5	N/A
-20°C / +55°C	T5	T5	N/A	N/A
-20°C / +60°C	T4	N/A	N/A	N/A
-35°C / +40°C	T5	T5	T5	T5
-35°C / +50°C	T5	T5	T5	N/A
-35°C / +55°C	T5	T5	N/A	N/A
-35°C / +60°C	T4	N/A	N/A	N/A
-50°C / +40°C	T5	T5	T5	T5
-50°C / +50°C	T5	T5	T5	N/A
-50°C / +55°C	T5	T5	N/A	N/A
-50°C / +60°C	T4	N/A	N/A	N/A

ROUTINE EXAMINATIONS AND TESTS

In accordance with clause 7.1 of the IEC 60079-7 standard, a dielectric strength test on each of the different circuits of the connection units, performed according to the relevant standards, the supply voltage shall be applied for one minute.

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Certificate No.: IECEx INE 14.0040X

Issue No.: 03

Annex: IECEx INE 14.0040X-03_Annex.pdf

LIST OF THE COMPONENT INTENDED TO BE INSTALLED:

Material	*Certificate*	*Marking*	*Standards*
Enclosure type ZENITH-P/-S made in GRP (glass reinforced polyester) or stainless steel 304L/316L manufactured by SCAME	IECEx IMQ 19.0004U	Ex eb IIC Gb Ex tb IIIC Db Ts = -60°C to +100°C (GRP) Ts = -50°C to +100°C (stainless steel)	IEC 60079-0 : 2017 IEC 60079-7 : 2015 (*) IEC 60079-31 : 2013
Safety Switch COMMAND-Ex type SC600 manufactured by SCAME	IECEx INE 13.0032U	Ex db eb IIC Gb Ex tb IIIC Db with handle kit Ts = -50°C to +100°C (without contact ZBWE) Ts = -50°C to +75°C (with contact ZBWE)	IEC 60079-0 : 2017 IEC 60079-1 : 2014 IEC 60079-7 : 2017 IEC 60079-31 : 2013
Contact type ZBWE manufactured by Ex-Tech Solution	IECEx INE 13.0063U	Ex db eb IIC Gb Ex tb IIIC Db Ts = -50°C to +75°C	IEC 60079-0 : 2011 (*) IEC 60079-1 : 2014 IEC 60079-7 : 2015 (*) IEC 60079-31 : 2013
Drain / Breathing valve type ECD by Nuova ASP	IECEx EXA 14.0005U	Ex d IIC Gb Ex e IIC Gb Ex tb IIIC Db Ta = -60°C to +80°C	IEC 60079-0 : 2011 (*) IEC 60079-1 : 2007 (*) IEC 60079-7 : 2006 (*) IEC 60079-31 : 2013
Drain valve type V by Nuova ASP	IECEx TUN 11.0038U	Ex d IIC Gb Ex e IIC Gb Ex tb IIIC Db IP66 Ta = -60°C to +130°C	IEC 60079-0 : 2011 (*) IEC 60079-1 : 2007 (*) IEC 60079-7 : 2006 (*) IEC 60079-31 : 2008 (*)
Drain / Breathing valve type ECR3 by Technor Italsmea	IECEx IMQ 14.0008U	Ex e IIC Gb Ex tb IIIC Db IP66 Ts = -50°C to +105°C	IEC 60079-0 : 2011 (*) IEC 60079-7 : 2006 (*) IEC 60079-31:2008 (*)
Drain / Breathing valve type CZ0527 by CZ Explosion proof	IECEx EUT 16.0010	Ex eb IIC Gb Ex tb IIIC Db IP64 Ts = -40°C to +85°C	IEC 60079-0 : 2011 (*) IEC 60079-7 : 2015 (*) IEC 60079-31:2013
Drain / Breathing valve type CV by Ex Innovation Limited	IECEx SIR 09.0096X	Ex e IIC Gb Ex tb IIIC Db IP66 Ta = -70°C to +150°C	IEC 60079-0 : 2007 (*) IEC 60079-7 : 2006 (*)
Breather/drain by Ex Innovation Limited	IECEx SIR 08.0024X	Ex e IIC Gb Ex tb IIIC Db IP66 Ta = -70°C to +180°C	IEC 60079-0 : 2007 (*) IEC 60079-7 : 2006 (*) IEC 60079-31 : 2008 (*)
Earth terminal by Weidemuller	IECEx ULD 14.0005U	Ex eb IIC Gb Ts = -60°C to +110°C	IEC 60079-0 : 2017 IEC 60079-7 : 2017

(*) not concerned by major technical changes of the last standard edition

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