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 EUT 17.0030X**

Certificate history:
Issue 0 (2017-11-10)

Status: **Current**

Issue No: 1

Date of Issue: 2022-01-10

Applicant: **ATAM S.p.A.**
Via Archimede, 7
Agrate Brianza (MB) I - 20864
Italy

Equipment: **Coil type 455GD**

Optional accessory:

Type of Protection: **Equipment protection by flameproof enclosures “d”, Equipment dust ignition protection by enclosure "t"**

Marking: **Ex db I Mb**

Ex db IIC T6 *or* **T5** *or* **T4 Gb**

Ex tb IIIC T85 °C *or* **T100 °C** *or* **T135 °C Db**

The ambient temperature ranges and their relationship with the temperature classes and maximum surface temperatures assigned to these devices are detailed in the annex of this certificate.

The ambient temperature range, temperature class and maximum surface temperature are defined for each individual device code.

Approved for issue on behalf of the IECEx Certification Body: **Dionisio Bucchieri**

Position: **Head of IECEx Certification Body**

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Eurofins Product Testing Italy S.r.l.
Via Cuorgnè
n.21 - 10156 Torino
Italy

eurofins | Product Testing

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Date of issue: 2022-01-10 Issue No: 1

Manufacturer: **ATAM S.p.A.**
Via Archimede, 7
Agrate Brianza (MB) I - 20864
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

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:

IT/EUT/ExTR17.0035/01

Quality Assessment Report:

IT/CES/QAR15.0002/06

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

Solenoid valve coil protected by flame-proof and dust tight enclosure method.

For more details see the annex of this certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:
Flameproof joints are not intended to be repaired.

Use screws M5 X 10 quality A*-70 between body and cable entry flange.

See installation instruction document of the manufacturer for the installation of a proper cable gland in the threaded hole of enclosure (thread type and size: ½" NPT).

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Standard update from IEC 60079-0 (Ed. 6.0) (2011) to IEC 60079-0 (Ed. 7.0) (2017).

Annex:

EPT.21.REL.03-2113142.pdf

Annex to certificate: **IECEx EUT 17.0030X Issue 1**

Equipment description

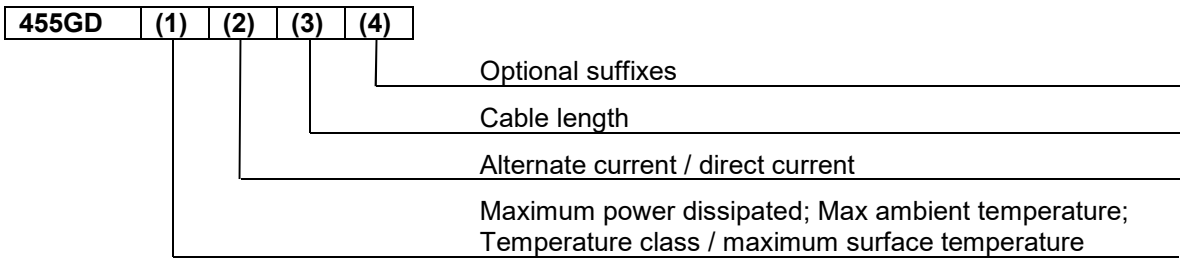
The equipment is a coil designed to operate either with AC or DC supply; the equipment is composed of two main parts, the winding and the flame-proof/tight dust enclosure in which the winding is placed.
The electrical connection to the supply is made through a cable gland screwed into the enclosure.
The coil type 455GD is a device suitable to be installed in zone 1 / zone 21 with type of protection Ex db IIC / Ex tb IIIC and Ex db I for mine.
The coils are installed in a process where there is a fluid that can reach a maximum value in temperature equal to the maximum ambient temperature in which the coils are intended to be used.

The temperature class and the maximum surface temperature depend on the ambient temperature and on the maximum power that the coil can dissipate, as shown in the following table:

Temperature class [°C]	Max. surface temperature [°C]	Ambient temperature range [°C]	Rated voltage [V]	Max. current density [A/mm^2]	Max. power at 20°C [W]
T4	T135°C	-60 ÷ +70	6÷240 V_{AC}/V_{DC}	9.3	30
T4	T135°C	-60 ÷ +80	6÷240 V_{AC}/V_{DC}	6.3	14
T5	T100°C	-60 ÷ +60	6÷240 V_{AC}/V_{DC}	6.3	14
T5	T100°C	-60 ÷ +70	6÷240 V_{AC}/V_{DC}	5.5	10
T6	T85°C	-60 ÷ +55	6÷240 V_{AC}/V_{DC}	5.5	10

Due to the fact that the maximum surface temperature does not exceed the limit of 150°C, the equipment can be used in mines where a coal dust layer may be deposited on the external surfaces of the equipment

Type designation



(1): 0 = Pmax: 30 W; Tamb max: 70 °C; T4 / T135 °C;
1 = Pmax: 14 W; Tamb max: 80 °C; T4 / T135 °C;
2 = Pmax: 14 W; Tamb max: 60 °C; T5 / T100 °C;
A = Pmax: 10 W; Tamb max: 70 °C; T5 / T100 °C;
B = Pmax: 10 W; Tamb max: 55 °C; T6 / T85 °C.

(2): 0 = AC;
1 = DC.

(3): XX = cable length in meters;
00 = version without cable.

(4): Suffixes that do not have influences on the equipment type of protections.

Annex to certificate: **IECEx EUT 17.0030X Issue 1**

Electrical parameters

Rated voltage: 6÷240 V_{DC} or 6÷240 V_{AC}

Frequency (AC): 50/60 Hz

Max. dissipated power at 20°C: 10 W or 14 W or, 30 W

Degree of protection: IP66/IP67

Warning label

Warning – DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT

Warning – Tcable: 105°C.

Routine test

The equipment has not welded parts and therefore it is exempted to the routine overpressure test, since that it has passed the type overpressure test, carried out applying static method, at a pressure value equal to **4** times the reference pressure recorded.