[1]

EU-TYPE EXAMINATION CERTIFICATE

[2] **Equipment intended for use in potentially explosive atmospheres Directive 2014/34/EU – Annex III**

[3] Certificate Number: **EPT 17 ATEX 2768 X** **issue 1**

[4] Equipment: **Coil type**

455GD

[5] Manufacturer: **ATAM S.p.A.**

[6] Address: Via Archimede, 7 - 20864 Agrate Brianza (MB) - ITALY

[7] This equipment and its accepted variations are specified in the annex to this Certificate.

[8] Eurofins Product Testing Italy S.r.l., Notified Body n. 0477 in accordance with Article 21 of the Directive 2014/34/EU of the European Parliament and of the Council of 26th February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II of the Directive. The examination and test results are recorded in the confidential Report N°EPT.21.REL.04/2113142.

[9] Compliance with the essential health and safety requirements is assured through the verification of them and by compliance with the following harmonized standards:

EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-31:2014

[10] If the sign "X" is placed after the Certificate number, it indicates that the equipment is subject to the special conditions for safe use specified in the annex to this Certificate.

[11] This EU-TYPE EXAMINATION CERTIFICATE relates only to the design, the exam and the tests of the specified equipment.
Further requirements of the Directive 2014/34/EU apply to the manufacture and supply of this equipment.
These requirements are not object of this Certificate.

[12] The equipment shall include the sign Ex and the following strings:

I M2
Ex db I Mb

II 2 GD
Ex db IIC T6 *or* T5 *or* T4 Gb
Ex tb IIIC T85 °C *or* T100 °C *or* T135 °C Db

-60 °C ≤ Ta ≤ + °C**
** for ambient temperature ranges details see equipment description section.

Place and date of issue:
(DD-MM-YYYY)
Torino, 10-01-2022

Dionisio Bucchieri
Directive Responsible

Paolo Trisoglio
Managing Director

Eurofins Product Testing Italy S.r.l. eurofins Notified Body N. 0477

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO
PRD N° 119B
Signatory of EA, IAF and ILAC Mutual Recognition Agreements

This Certificate has 4 pages and it is reproducible only in its entirely. Conditions of validity are reported below.

CP-ATEX-MOD-26-00

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[15] **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/mm²]	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

455GD	(1)	(2)	(3)	(4)

(4) — Optional suffixes
(3) — Cable length
(2) — Alternate current / direct current
(1) — Maximum power dissipated; Max ambient temperature; Temperature class / maximum surface temperature

(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.

Equipment description

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[15] *(continue)*

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 lable

Warning – DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT

Warning – Tcable: 105°C.

Routine tests

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.

[16] **Assessment Report n° EPT.21.REL.04/2113142**

This EU-Type Examination Certificate is released after the positive result of the conformity assessment of the Council Directive 2014/34/EU and to harmonized technical standards listed in this certificate performed by the Notified Body Eurofins Product Testing Italy S.r.l., and reported in the Assessment Report above cited.

[17] **Special condition for a safe use**

Flameproof joints are not intended to be repaired.

Use screws M5X10 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).

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

Assured by compliance with harmonized standards.

[19] **Descriptive documents**

The equipment object of this Certificate are described by the following documents that are scheduled documents and therefore they cannot be modified without the explicit authorization of the Notified Body.

Type of document	Document identification	Rev.	Date
* Technical Note	TN/455GD	6	2021-12-03
* Safety note	SN/455GD	2	2021-12-15
Equipment drawing	Assieme elettromagnete tipo 455 – Cod. 455GD_	0	2017-10-31
Equipment drawing	Marcatura_flangia – Cod. 45540000A1	0	2017-10-31

* New or revised document

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[20] **Terms and conditions**

The product liability rests with the Manufacturer, his representative or, in the absence of a representative, with the importer, in accordance with the General Product Safety Directive 2001/95/EC.

The following conditions may render this certificate invalid:

- changes in the design or construction of the product;
- changes or amendments to the Directive;
- changes or amendments in the standards which form the basis for documenting compliance with the essential requirements of the 2014/34/EU Directive.

[21] **History**

Issue	Description	Date
0	First Emission.	10-11-2017
1	Standard update from to EN 60079-0:2012 + A11:2013 to EN IEC 60079-0:2018.	10-01-2022

Dionisio Bucchieri
Directive Responsible

End of Certificate