



Translation

(1) EU-Type Examination Certificate

(2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 2014/34/EU**

- (3) **Certificate Number** TÜV 25 ATEX 410149 X **Issue:** 00
- (4) for the product: ON-OFF and proportional coils for potential explosive atmosphere
- (5) of the manufacturer: **Diplomatic MS S.p.A.**
- (6) Address: Via Mario Re Depaolini; 24 - 20015 Parabiago (MI); Italy
- Order number: 8003091698
- Date of issue: See signature date
- (7) The design of this product and any acceptable variation thereto are specified in the schedule to this EU-Type Examination Certificate and the documents therein referred to.
- (8) The TÜV NORD CERT GmbH, Notified Body No. 0044, in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive. The examination and test results are recorded in the confidential ATEX Assessment Report No. 25 203 410149.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN IEC 60079-0:2018/AC:2020-02 EN 60079-1:2014 EN 60079-31:2014
except in respect of those requirements listed at item 18 of the schedule.
- (10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions for Use specified in the schedule to this certificate.
- (11) This EU-Type Examination Certificate relates only to the design, and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.
- (12) The marking of the product shall include the following:
- II 2G Ex db IIC T5 Gb (-40 °C ≤ Ta ≤ +55 °C)
 - II 2G Ex db IIC T4 Gb (-40 °C ≤ Ta ≤ +80 °C)
 - II 2G Ex db IIC T5 Gb (-60 °C ≤ Ta ≤ +55 °C)
 - II 2G Ex db IIC T4 Gb (-60 °C ≤ Ta ≤ +80 °C)
 -  II 2D Ex tb IIIC T100 °C Db (-40 °C ≤ Ta ≤ +55 °C)
 -  II 2D Ex tb IIIC T135 °C Db (-40 °C ≤ Ta ≤ +80 °C)
 - II 2D Ex tb IIIC T100 °C Db (-60 °C ≤ Ta ≤ +55 °C)
 - II 2D Ex tb IIIC T135 °C Db (-60 °C ≤ Ta ≤ +80 °C)
 - I M2 Ex db I Mb (-40 °C ≤ Ta ≤ +80 °C)

TÜV NORD CERT GmbH, Am TÜV 1, 45307 Essen, notified by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The deputy head of the notified body

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(13) **SCHEDULE**

(14) **EU-Type Examination Certificate TÜV 25 ATEX 410149 X Issue 00**

(15) **Description of product**

The coils can be ON-OFF or PROPORTIONAL: versions ON-OFF behaviour is according to the principle "energized" or "de-energized", while versions PROPORTIONAL allow the modulation of the controlled variable in a continuous mode, proportionally to the current supplied to the solenoid. The ON-OFF versions are available for current supply (DC) or alternate (RAC); the last one include a diode rectifier bridge.

The following type of coils are below described:

Aluminum/steel or steel coil with EPL Gb and Db and ambient temperature range -40°C up to +55°C:

- C22KD2-*K9*/10/T5 • CS22KD2-*K9*/10/T5
- CE22KD2-*K9*/10/T5 • CSE22KD2-*K9*/10/T5

Aluminum/steel or steel coil with EPL Gb and Db and ambient temperature range -40°C up to +80°C:

- C22KD2-*K9*/10 • CS22KD2-*K9*/10
- CE22KD2-*K9*/10 • CSE22KD2-*K9*/10

Stainless steel coil with EPL Gb and Db and ambient temperature range -60°C up to +55°C:

- CX22KD2-*K9*/10/T5
- CXE22KD2-*K9*/10/T5

Stainless steel coil with EPL Gb and Db and ambient temperature range -60°C up to +80°C:

- CX22KD2-*K9*/10
- CXE22KD2-*K9*/10

Aluminum/steel or steel coil with EPL Mb and ambient temperature range -40°C up to +80°C:

- C22KDM2-*K9*/10/* • CS22KDM2-*K9*/10/*
- CE22KDM2-*K9*/10/* • CSE22KDM2-*K9*/10/*

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Type key:

C			22	K			–		K9	/	10	
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Coil _____

Material _____
X = stainless steel
S = steel
 omit for standard coil with aluminium terminal box

Type _____
E = proportional (omit for ON-OFF coil)

Internal diameter for solenoid tube _____
22 = Ø22 mm

Explosion-proof _____

Protection type _____
D = "db" for gas – "tb" for dusts

Category of protection _____
2 = Equipments for surface plants – II 2GD (EPL Gb – EPL Db)
M2 = Equipments for mines – I M2 (EPL Mb)

Power supply _____
D12 = 12V ON-OFF (direct current – DC)
D24 = 24V ON-OFF (direct current – DC)
D48 = 48V ON-OFF (direct current – DC)
D110 = 110V ON-OFF (direct current – DC)
R120 = 120V ON-OFF (alternating current with built-in rectifier bridge – RAC)
R240 = 240V ON-OFF (alternating current with built-in rectifier bridge – RAC)
D09 = 12V PROPORTIONAL
D20 = 24V PROPORTIONAL

Coil electrical connection: junction block _____

Connection type for cable gland _____
 upper connection:
T01 = M20x1.5 – ISO 261
T02 = Gk 1/2 – UNI EN 10226-2
T03 = 1/2" NPT – ANSI B1.20.1 (ex ANSI B2.1)
 side connection
S01 = M20x1.5 – ISO 261
S02 = Gk 1/2 – UNI EN 10226-2
S03 = 1/2" NPT – ANSI B1.20.1 (ex ANSI B2.1)
S04 = M16x1.5 – ISO 261

Series No.: (the overall and mounting dimensions do not change from 10 to 19) _____

Temperature class _____
/T5 = T5 for Gas / T100°C for Dusts
 Omit if not required (for standard class of temperature T4 for Gas / T135°C for Dusts)

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Technical data:

COIL DATA			POWER	NOMINAL VOLTAGE	NOMINAL CURRENT	RECOMMENDED PRE-FUSE CHARACTERISTICS MEDIUM TIME-LAG ACCORDING TO DIN 41571	AMBIENT TEMPERATURE
ATEX MARKING II 2G Ex db IIC T5 Gb - II 2G Ex db IIC T4 Gb II 2D Ex tb IIIC T100°C Db IP66/IP68 II 2D Ex tb IIIC T135°C Db IP66/IP68							
DESCRIPTION	COIL VERSION	SUFFIX	[W] or [VA]	[V]	[A]	[A]	[°C]
C22KD2- [*] K9 [*] /10/ [*] CS22KD2- [*] K9 [*] /10/ [*]	DIRECT CURRENT	D [*]	5 ÷ 30	5 ÷ 240	0,05 ÷ 3	0,05 ÷ 5	-40°C Ta +80°C (T4 - T135°C)
	ALTERNATING CURRENT (RECTIFIED BY INTERNAL DIODE BRIDGE)	R [*]					-40°C Ta +55°C (T5 - T100°C)
CE22KD2- [*] K9 [*] /10/ [*] CSE22KD2- [*] K9 [*] /10/ [*]	PROPORTIONAL CURRENT	D [*]					
CX22KD2- [*] K9 [*] /10/ [*]	DIRECT CURRENT	D [*]	5 ÷ 30	5 ÷ 240	0,05 ÷ 3	0,05 ÷ 5	-60°C Ta +80°C (T4 - T135°C)
	ALTERNATING CURRENT (RECTIFIED BY INTERNAL DIODE BRIDGE)	R [*]					-60°C Ta +55°C (T5 - T100°C)
CXE22KD2- [*] K9 [*] /10/ [*]	PROPORTIONAL CURRENT	D [*]					
COIL DATA			POWER	NOMINAL VOLTAGE	NOMINAL CURRENT	RECOMMENDED PRE-FUSE CHARACTERISTICS MEDIUM TIME-LAG ACCORDING TO DIN 41571	AMBIENT TEMPERATURE
ATEX MARKING I M2 Ex db I Mb IP66/IP68							
DESCRIPTION	COIL VERSION	SUFFIX	[W] or [VA]	[V]	[A]	[A]	[°C]
C22KDM2- [*] K9 [*] /10/ [*] CS22KDM2- [*] K9 [*] /10/ [*]	DIRECT CURRENT	D [*]	5 ÷ 30	5 ÷ 240	0,05 ÷ 3	0,05 ÷ 5	-40°C Ta +80°C
	ALTERNATING CURRENT (RECTIFIED BY INTERNAL DIODE BRIDGE)	R [*]					
CE22KDM2- [*] K9 [*] /10/ [*] CSE22KDM2- [*] K9 [*] /10/ [*]	PROPORTIONAL CURRENT	D [*]					

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Thermal data:

For gas applications: The ambient temperature range depending on the temperature class and coil is marked in the name plate.

Ambient temperature range	Temperature class	Coils
-40°C up to +55°C	T5	<u>Coils: C*22</u> -Aluminum: The upper part -Steel: The lower part or <u>Coils: (CS*22)</u> -Steel: All from steel.
-40°C up to +80°C	T4	<u>Coils: C*22</u> -Aluminum: The upper part -Steel: The lower part or <u>Coils: (CS*22)</u> -Steel: All from steel.
-60°C up to +55°C	T5	<u>Coils (CX*22)</u> -Stainless steel: All from stainless steel
-60°C up to +80°C	T4	<u>Coils (CX*22)</u> -Stainless steel: All from stainless steel

For dust applications: The permissible ambient temperature range during operation depending on the coil and the maximum surface temperature is marked in the name plate.

Ambient temperature range	Temperature class	Coils
-40°C up to +55°C	T100°C	<u>Coils: C*22</u> -Aluminum: The upper part -Steel: The lower part or <u>Coils: (CS*22)</u> -Steel: All from steel.
-40°C up to +80°C	T135°C	<u>Coils: C*22</u> -Aluminum: The upper part -Steel: The lower part or <u>Coils: (CS*22)</u> -Steel: All from steel.
-60°C up to +55°C	T100°C	<u>Coils (CX*22)</u> -Stainless steel: All from stainless steel
-60°C up to +80°C	T135°C	<u>Coils (CX*22)</u> -Stainless steel: All from stainless steel

For mining:

Ambient temperature range	Coils
-40°C up to +80°C	<u>Coils: C*22</u> -Aluminum: The upper part -Steel: The lower part or <u>Coils: (CS*22)</u> -Steel: All from steel.

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(16) Drawings and documents are listed in the ATEX Assessment Report No. 25 203 410149

(17) Specific Conditions for Use:

1. The cover screws are M5x16 class A4-80.
2. Interrupting current of the pre-connected fuse as stated in specific conditions of safe uses.
 - Upstream of each coil, an appropriate fuse (max 3 x I_n according to IEC 60127) or a protective motor switch with short-circuit and thermal instantaneous tripping, as short-circuit protection, must be connected. The fuse ratings listed in technical data.
 - The cut-off power of the fuse must correspond or exceed the short circuit current of the supply source.
 - The fuse or the protective motor must be placed outside the dangerous area or they must be protected with an explosion-proof covering.
 - The breaking capacity of the fuse link shall be the same as or higher than the maximum short-circuit current expected to occur at the place of installation (normally 1500 A).
3. Cable glands must be assessed and certified in accordance with EN 60079-1:2014 and EN 60079-31:2014. In the end application, the degree of protection is at least IP66.

(18) Essential Health and Safety Requirements:

No additional ones.

- End of EU-Type Examination Certificate -