IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx EUT 15.0001

Issue No: 1

Certificate history:
Issue No. 1 (2016-11-10)
Issue No. 0 (2015-05-22)

Status: **Current**

Date of Issue: **2016-11-10**

Applicant: **Nadi S.r.l.**
Via Risorgimento , 10 – 20017 Mazzo di Rho (MI)
Italy

Equipment: **Solenoid valves and electromagnetic devices**

Optional accessory:

Type of Protection: **Flameproof enclosures "d"; Equipment dust ignition protection by enclosure "t"**

Marking:

Ex d IIB TX Gb -20°C≤Tamb≤+X°C

Ex tb IIIC TX°C Db -20°C≤Tamb≤+X°C

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

Position: Head of IECEx CB

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 the Official IECEx Website.

Certificate issued by:

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

eurofins | Product Testing

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Manufacturer: **Nadi S.r.l.**
Via Risorgimento , 10 – 20017 Mazzo di Rho (MI)
Italy

Additional Manufacturing location(s):

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 apparatus 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 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*This Certificate **does not** indicate compliance with electrical 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/ExTR15.0001/01

Quality Assessment Report:

NO/DNV/QAR15.0005/00

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The solenoid flameproof housing for the devices type; L, C, D, E, F, G, H, VL, VC, VD, VE, VF, VG, VH, are used to control the flow of flammable and/or inert gas or liquids.

The flameproof enclosure is made of light alloy (the paint used has a maximum thickness of 200 µm) and silicone gaskets.

The body of the valve can be made of brass UNI 5705/ UNI 4893, nickel-plated brass UNI 5705/ UNI 4893, bronze UNI 7013, stainless steel AISI 303/AISI 304/AISI 316/AISI 316L, light alloy Mg<6%, or Carbon steel while the seals materials can be NBR, viton, urepan, PTFE, rulon, metallic, neoprene, EPDM, HNBR, kalrez or special.

The equipment is suitable for groups IIB and group IIIC. It has respectively the type of protection “Ex d” and “Ex t”.

Maximum voltage: 400 Vdc or 400 Vac (50 or 60 Hz)

Maximum power dissipation: 11W or 26W

Ambient temperature. -20 ÷ +40 °C (or -20°C ÷ +60 °C)

Temperature class and Maximum surface temperature:

Maximum ambient temperature	P≤11W	P≤26W
+40°C	T6 and T65°C	T5 and T87°C
+60°C	T5 and T85°C	T4 and T107°C

See annex for further description.

SPECIFIC CONDITIONS OF USE: NO

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Specified the materials allowed for the body of the valve and its seals materials.

Annex:

EPT.16.REL.01_52308.pdf

Annex to certificate: IECEx EUT 15.0001 Issue N. 1 of 2016-11-10

General product information:

The solenoid valves and electromagnetic devices are used to control the flow of flammable and/or inert gas or liquids in a potential explosive atmosphere.

They are identified by a code as follows:

SOLENOID VALVES	①	00 ÷ 99	②	00 ÷ 99	③	④	⑤	⑥
ELECTROMAGNETIC DEVICES	H	②	0000 ÷ 9999		⑤	⑥		
CUSTOMIZED CODES	V	①	②	0000 ÷ 9999	④	⑤	⑥	

Where:

① DEVICE TYPE

L	2 way solenoid valves
C	3 way solenoid valves
D	5 way solenoid valve
E	2 way manual reset sol. valves
F	3 way manual reset sol. valves
G	5 way manual reset sol. valves
H	Electromagnetic device
V	Customized code

② BODY MATERIAL

T	Brass	UNI-5705 / UNI-4893
N	Nickel-plated brass	UNI-5705 / UNI-4893
B	Bronze	UNI-7013
H	Stainless Steel	AISI 303 UNI-X10CrNiS1809
		AISI 304 UNI-X10CrNiS1810
I	Stainless Steel	AISI 316 UNI-X5CrNiMo1712
		AISI 316L UNI-X2CrNiMo1712
L	Light alloys	(Al alloys with Mg<6%)
C	Carbon steel	

Ex housing seals material

S	SILICONE

③ CONNECTION TYPE

THREADED CONNECTION Type UNI ISO 228.1 or ISO7.1 generically named "GAS"		THREADED CONNECTION Type ANSI B2.1 or B2.2 generically named "NPT"		FLANGE or BASE JOINTS	
A	1/8"	B	1/8"	=	Neck
C	1/4"	D	1/4"	U	Base
E	3/8"	T	3/8"	X	ASA300
F	1/2"	G	1/2"	Y	ASA150
H	3/4"	I	3/4"	Z	Flange
L	1"	M	1"		
N	1"1/4	V	1"1/2		
O	1"1/2	W	2"		
P	2"				
Q	2"1/2				
R	3"				
S	4"				

④ SEALS MATERIAL

0	NBR (Buna N)	6	EPDM
1	VITON	7	HNBR
2	UREPAN	8	KALREZ
3	PTFE o RULON	9	SPECIAL
4	Metallic		
5	Neoprene		

⑤ PROTECTION DEGREE

P	IP65 with plug
S	IP67 with housing
H	Ex-d c II B IP67
T	Ex-d c II C IP67

⑥ OPTIONS

□	No option	/C	Antinoise Condenser
W	Stable Manual Operator	/V	Varistor
X	Instable Manual operator	/LC	Low consumption coil
Y	Transmission pin		
/AP	High pressure version		
/SG	Degreasing for O_2		
/LT	ATEX housing for t.amb -60°C		

The flameproof enclosure is made of light alloy (the paint used has a maximum thickness of 200 µm) and silicone gaskets.
The body of the valve can be made of brass UNI 5705/ UNI 4893, nickel-plated brass UNI 5705/ UNI 4893, bronze UNI 7013, stainless steel AISI 303/AISI 304/AISI 316/AISI 316L, light alloy Mg<6%, or Carbon steel while the seals materials can be NBR, viton, urepan, PTFE, rulon, metallic, neoprene, EPDM, HNBR, kalrez or special.
The equipment is suitable for groups IIB and group IIIC. It has respectively the type of protection “Ex d” and “Ex t”.

Electrical characteristics

Maximum voltage: 400 Vdc or 400Vac
Rated frequency: 50 or 60 Hz
Maximum power dissipation: 11W or 26W

Degree of protection: IP 6X

Ambient temperature. -20 ÷ +40 °C (or -20°C ÷ +60 °C)

Temperature class and Maximum surface temperature:

Maximum ambient temperature	P≤11W	P≤26W
+40°C	T6 and T65°C	T5 and T87°C
+60°C	T5 and T85°C	T4 and T107°C

Cable entries

The cable entry devices used on the enclosures must be suitably IEC Ex certified. They must be chosen according to the type of protection, the type of thread and the degree of protection of the equipment.

Screws

N/A

Warning label

“After de-energizing delay 15 min before opening”
“Joints can not be repaired”