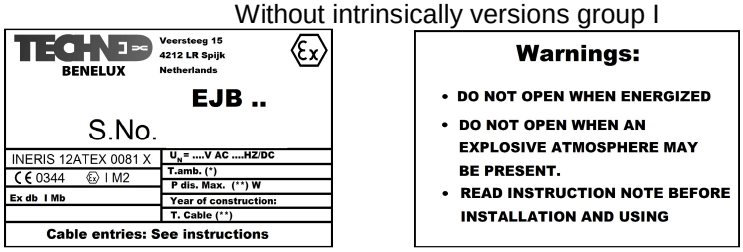
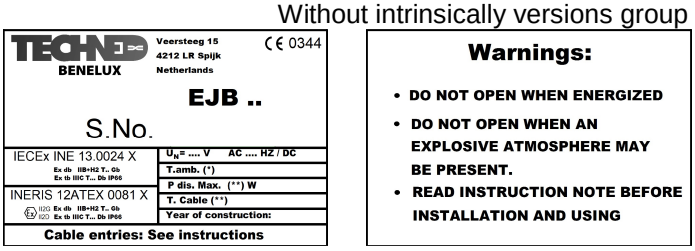
Examples of Marking:

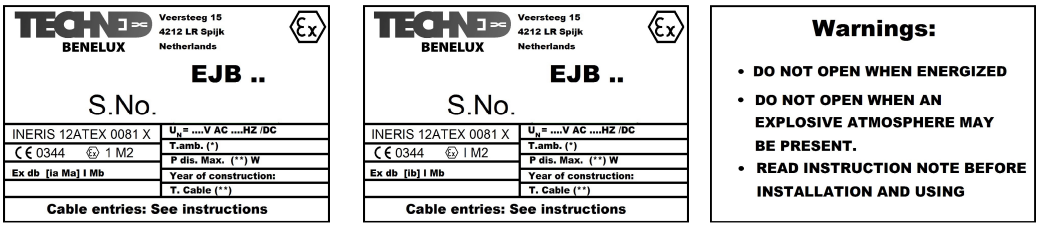
Without intrinsically versions group I



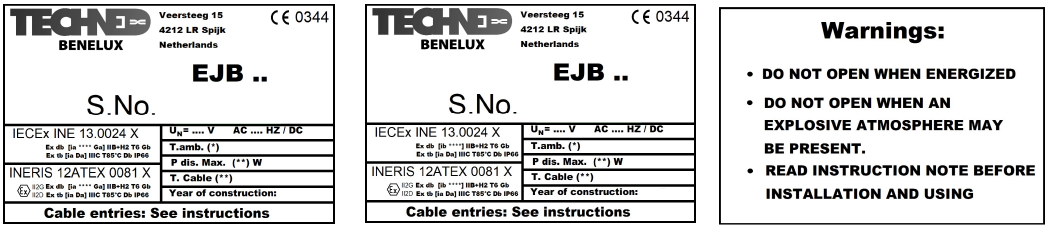
Without intrinsically versions group II



With intrinsically versions group I



With intrinsically versions group II



(*) <u>For the Ex db and Ex tb versions:</u>

from -20°C up to -50°C to 40°C, 50°C or 60°C in accordance with the maximum dissipated power for enclosures EJB-A up to EJB-H without window and with or without operators.
from -20°C up to 40°C, 50°C or 60°C in accordance with the maximum dissipated power for enclosures EJB-B up to EJB-H with window and with or without operators and with or without signalling lamp.

(*) <u>For the Ex db I:</u>

from -20°C up to -50°C to 40°C, 50°C or 60°C in accordance with the maximum dissipated power for enclosures EJB-A up to EJB-H without window and with or without operators.

(*) For the Ex db [ia] or [ib] and Ex tb [ia] or [ib] versions:

from -20 up to -50°C to 40°C**,** 50°C or 60°C in accordance with the maximum dissipated power for enclosures EJB-A up to EJB-H without window and with or without operators and from -20°C up to 40°C, 50°C or 60°C EJB-B up to EJB-H with window and with or without operators and with or without signalling lamp.

The codes marking are :

Ex db IIB + H_2 T4 or T5 or T6 Gb, Ex tb IIIC T85°C or T100°C or T135°C Db IP66

Ex db I Mb

Ex db [ia IIA or IIB or IIC Ga] IIB + H_2 T6 Gb, Ex tb [ia Da] IIIC T85°C Db IP66

Ex db [ib IIA or IIB or IIC] IIB + H2 T6 Gb, Ex tb [ib] IIIC T85°C Db IP66

Ex db [ia Ma] I Mb or Ex d [ib] I Mb

This equipment is made in accordance with the IECEx scheme and ATEX Directive 94/9/CE and with the following standards:

- IEC 60079-0	:	2011	EN 60079-0	:	2012/A11:2013
- IEC 60079-1	:	2014	EN 60079-1	:	2014
- IEC 60079-11	:	2011	EN 60079-11	:	2012
- IEC 60079-31	:	2013	EN 60079-31	:	2014

1. Installation:

The installation must be realised in accordance with IEC/EN 60079-14 and/or in accordance with the national requirements. This equipment must be installed and used only by qualified personnel, having knowledge concerning electrical equipment for use in potentially explosive areas containing gas and/or dust. Qualified personnel must have knowledge regarding the types of explosion protection.

This equipment is intended to be used in zone 1, 2, 21 & 22, for groups IIB+H_2 and IIIC with temperature class T4/T5/T6 or T135°C/T100°C/T85°C, it is necessary to control if this equipment is in accordance with the atmosphere where it is installed.

Verify that the voltage marked on label is correct before powering.

2. Connections :

Electrical parameters:

Maximum supply voltage of “NIS” elements	:	15,000 V ac/dc
Maximum supply voltage of “IS” elements	:	250 V ac/dc
Frequency	:	50/60Hz
Maximum power of the signalling lamp	:	1 W LED
Ingress protection	:	IP 66

This equipment can be used with different voltage and power, the nominal parameters are specified on the label.

Cable glands:

The cable entry must be made in order not to alter the specific properties of the explosion proof enclosure, as indicated in the IEC/EN 60079-1 or dust enclosure as indicated in the IEC/EN 60079-31, with a minimum degree of protection IP66.

The connection to the external circuits must be realized by cable glands covered by an IECEx and/or ATEX certificate and in particular in accordance with item 10.4.2 of IEC/EN 60079-14.

If a cable gland is not used the entry must be closed by a stopping plug covered by an IECEx and/or ATEX certificate.

The diameter of the cable gland is cylindrical ISO x 1.5 it can be conical NPT with different diameters. The table below indicate the maximum quantity of entries permitted for ISO and NPT treading.

A specific drawing with the different diameters of cable gland will be joined with each enclosure

ALUMINIUM BOXES

L = Long side	EJB-A		EJB-B		EJB-C		EJB-D		EJB-E		EJB-F		EJB-G		EJB-H		EJB-C/S	
S = Short side	L	S	L	S	L	S	L	S	L	S	L	S	L	S	L	S	L	S
M20 - ½"	8	6	12	6	20	16	24	22	30	24	55	26	55	32	60	38	20	8
M25 - ¾"	8	4	8	4	12	9	22	16	25	20	38	18	40	22	44	24	12	7
M32 - 1"	3	3	3	2	10	8	11	9	13	11	30	15	34	18	36	20	10	5
M40 - 1"1/4	2	1	2	1	4	3	8	8	8	8	14	6	16	12	17	13	4	2
M50 - 1"1/2	2	1	2	1	4	3	8	8	8	8	14	6	16	12	17	13	4	2
M63 - 2"	1	1	2	1	3	2	3	3	4	4	10	4	11	5	12	6	3	1
M75					2	2	2	2	3	2	4	2	6	4	6	4	2	1
2"1/2									3	2	4	2	6	4	6	4		
M80							1	1	2	2	3	1	5	3	5	3		
3"									2	2	3	1	5	3	5	3		

STAINLESS STEEL BOXES

L = Long side	EJB-A		EJB-B		EJB-C		EJB-D		EJB-E		EJB-F		EJB-G		EJB-H		EJB-C/S	
S = Short side	L	S	L	S	L	S	L	S	L	S	L	S	L	S	L	S	L	S
M20 - 1/2"	8	6	12	6	20	16	24	22	30	24	55	26	55	32	60	38	20	8
M25 - 3/4"	8	4	8	4	12	9	22	16	25	20	38	18	40	22	44	24	12	7
M32 - 1"	3	3	3	2	10	8	11	9	13	11	30	15	34	18	36	20	10	5
M40 - 1"1/4	2	1	2	1	4	3	8	8	8	8	14	6	16	12	17	13	4	2
M50 - 1"1/2	2	1	2	1	4	3	8	8	8	8	14	6	16	12	17	13	4	2
M63 - 2"	1	1	2	1	3	2	3	3	4	4	10	4	11	5	12	6	3	1
M75					2	2	2	2	3	2	4	2	6	4	6	4	2	1
2"1/2					2	2	2	2	3	2	4	2	6	4	6	4		
M80							1	1	2	2	3	1	5	3	5	3		
3"							1	1	2	2	3	1	5	3	5	3		

Yellow background = wall thickness 12 and 15 mm
Red background = wall thickness 20 mm

Earthing connection:

In addition to the internal ground connection, this equipment is also provided by an external secondary ground connection. Both are made in stainless steel and fitted with a split washer, must be connected for the internal ground the section must be equal to the active conductors. The external ground can receive a wire of 16 mm^2.

The user/installer must connect the internal and external earthing before powering.

4. Dismantling

All repairs of explosion-proof equipment must be made according the specified criteria of IEC/EN 60079-19 rule by qualified personnel, having knowledge concerning electrical equipment for potentially explosive areas containing gas. Qualified personnel must have knowledge regarding the types of explosion protection.

5. Maintenance:

The maintenance must be realised in accordance with IEC/EN 60079-17 and/or in accordance with the national requirements. This equipment must be installed and used only by qualified personnel, having knowledge concerning electrical equipment for use in potentially explosive areas containing gas and/or dust. Qualified personnel must have knowledge regarding the types of explosion protection.

When re-installing the covers, make sure the flanges are not damaged, clean and well lubricated and all cover screws are installed correctly.

Tightening torque of cover bolts:

M8	22 Nm
M10	42 Nm
M12	73 Nm

The lubricant must not harden over time, must not contain solvents that evaporate and should not cause corrosion of the joints. (e.g. Copper Slibor Locktite 8150)

6. Special conditions for safe use

During the installation it will be neccessary to keep a minimum of **40** mm distance between the flanged joint of the enclosure and all solid obstacles.

In case the enclosure is re-painted, the thickness of paint is to be less than 0,2 mm to avoid electrostatic risck.

The dimensions of the flameproof joints are superior to the value specified in tables of the standard IEC/EN 60079-1. For more information, contact Techned Benelux BV.

The batteries can only be replaced by TechNed Benelux BV by original type.
The carging of the batteries shall be performed in accordance with the manufacturer requirement of the battery.

For group I, during the installation, the user will take into consideration that the enclosure underwent only a shock corresponding to an energy of a low risk

The gap between the cover and the body of the enclosure is less or equal to 0,04 mm.

The user must perform a regular cleaning of the enclosure to avoid accumulation of dust on the enclosure (thickness less than 5 mm).

Specific conditions for the Ex db [ia] or [ib] and Ex tb [ia] or [ib] versions

The installation of the intrinsic safety circuits “IS” inside the enclosure is subordinated to the respect of the requirements of their instrcutions and certificates joined, and with that after:

Circuits IS shall be cabled with connection wires of which the thickness of insulator is ≥ 0,5 mm and the section ≥0,5 mm^2. The connection wires shall support a dielectric test of 500 V effective.

After connection the air gap and creepage distances in the air, between the active parts under voltage of the intrinsic safety circuit compared to an intrinsic safety circuit close are higher or equal to 6 millimeters.

After connection the air gap and creepage distances in the air between the active parts under voltage of the intrinsic safety circuit compared to the metal parts which can be with the ground shall be higher or equal to 3 millimeters.

For the positive ambient temperature:
In case the enclosure is equiped with an internal thermal probe, the system must be connected to a cut-off device that will switch off of the circuits when the threshold of release is reached.

Ambient temperature of the enclosure	Ambient temperature of the intrinsic safety element	Threshold of release of the thermal probe
40°C	≥ 60°C	55°C ± 5°C
50°C	≥ 70°C	65°C ± 5°C
60°C	≥ 80°C	75°C ± 5°C

For the negative ambient temperature below to -20°C:
in case of the minimum ambient temperature of the enclosure is greater or equal than the minimum ambient temperature specified in the certificate of the intrinsic safety elements, it is not necessary to add an internal thermostat.
In case of the minimum ambient temperature of the enclosure is lower than the minimum ambient temperature specified in the certificate of the intrinsic safety elements, the enclosure shall be provided with a calibrated thermostat near the intrinsic safety elements in order to switch off the power supply of of these elements.
The threshold of thermal probe shall be:

Ambient temperature of the IS element	Threshold of release of the thermal probe
≥ - 30°C	-25°C ± 5°C
≥ - 40°C	-35°C ± 5°C
≥ - 50°C	-45°C ± 5°C

Note : The storage temperature specified for the IS element must be ensured inside the enclosure during the switch-off mode, for example using heating resistances.