

## ADDITION

(3) INERIS 12ATEX0081X/03

(4) ENCLOSURES TYPE EJB...

(5) Made by TechNed BENELUX BV

### (15) PURPOSE OF THE ADDITION

Application of following standards:

EN 60079-0 : 2012/A11: 2013 IEC 60079-0 : 2011.

EN 60079-31 : 2014 IEC 60079-31 : 2013.

- Possibility to use the enclosures in explosives atmospheres with hydrogen for group IIB+H2 for ambient temperature from -20°C up to -50°C to 60°C.
- Possibility to use the enclosures, made in stainless steel without window, in explosives atmospheres for group I for ambient temperature from -20°C up to -50°C to 60°C.
- Possibility to install windows on the cover of enclosure EJB-B up to EJB-H and operators devices as push button and switches for all types.
- Possibility to install, for all types, operators devices as push button and switches and/or operator devices Italsmea covered by Ex component certificate IMQ 09ATEX019U.
- Possibility to install, for all types, operators devices as push button and switches and/or operator devices COELBO covered by Ex component certificate INERIS 14ATEX9009U.
- Possibility to add a circular window type W on one of the short side of the enclosure type EJB-H made in stainless steel.
- Possibility to use the version with intrinsic safety element from -25°C up to -50°C when the enclosure is fitted with an internal thermostat or without thermostat if the intrinsic safety element is intended for ambient temperature down to -50°C.
- Possibility to use intrinsic safety element [ib IIA or IIB or IIC].
- Added new tables of powers for enclosures fitted with window.
- Modification of marking and the parameters relating to the safety.

### PARAMETERS RELATING TO THE SAFETY

The parameters relating to the safety are modified as follows:

Maximum supply voltage of "NIS" elements : 15 000 V AC/DC.

Maximum supply voltage of "IS" elements : 250 V AC/DC.

Frequency : 50/60 Hz.

The maximum dissipated power is in accordance with the type of enclosure, the temperature class and the ambient temperature as stipulated on the tables below.

These enclosures can be used in range of ambient temperatures:

**For enclosures without window:** From -20°C to -50°C to 40°C, 50°C or 60°C.

**For enclosures with window:** From -20°C to 40°C, 50°C or 60°C.

When 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.

When 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 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

### MARKING

The marking is modified as follows:

#### A - Enclosures without intrinsic safety element:

TechNed BENELUX BV

4212 LR Spijk


The Netherlands

EJB-...(\*)

INERIS 12ATEX0081X

(Serial number)

(Year of construction)

 II 2 GD

Ex d IIB+H2 T(\*\*) Gb

Ex tb IIIC T(\*\*) Db IP66

...°C < Tamb < ...°C (\*\*\*)

T.Cable :(\*\*)

Cable entries: see instructions

**WARNINGS:** DO NOT OPEN WHILE ENERGIZED.

DO NOT OPEN IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT.


(\*) One of the following types: EJB-A, EJB-B, EJB-C, EJB-D, EJB-E, EJB-F, EJB-G or EJB-H.

(\*\*) Depending on ambient temperature and dissipated power see table 1 or 2 below.


(\*\*\*) One of the range of the ambient temperature stipulated in the parameters relating to the safety above if different to -20°C +40°C.

**B - Enclosures with intrinsic safety elements:**

TechNed BENELUX BV  
4212 LR Spijk  
The Netherlands  
EJB-...(\*)  
INERIS 12ATEX0081X  
(Serial number)  
(Year of construction)

 II 2 (1) GD Ex d [ia IIA or IIB or IIC Ga] IIB+H2 T6 Gb  
Ex tb [ia Da] IIIC T85°C Db IP66

or

 II 2 GD Ex d [ib IIA or IIB or IIC] IIB+H2 T6 Gb  
Ex tb [ib] IIIC T85°C Db IP66


T. cable: (\*\*)  
...°C < Tamb < ...°C (\*\*\*)  
Cable entries: see instructions

**WARNINGS:** DO NOT OPEN WHEN ENERGIZED  
DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT.

- (\*) One of the following types: EJB-A, EJB-B, EJB-C, EJB-D, EJB-E, EJB-F, EJB-G or EJB-H.
- (\*\*) According to ambient temperature and dissipated power see table 4, 5 or 7 below.
- (\*\*\*) One of the range of the ambient temperature stipulated in the parameters relating to the safety above if different to -20°C +40°C

**C - Enclosure in stainless steel without intrinsic safety element:**

TechNed BENELUX BV  
4212 LR Spijk  
The Netherlands  
EJB-...(\*)  
INERIS 12ATEX0081X  
(Serial number)  
(Year of construction)

 I M2  
Ex d I Mb  
...°C < Tamb < ...°C (\*\*\*)

T.Cable :(\*\*)  
Cable entries: see instructions

**WARNINGS:** DO NOT OPEN WHILE ENERGIZED.  
DO NOT OPEN IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT.

- (\*) One of the following types: EJB-A, EJB-B, EJB-C, EJB-D, EJB-E, EJB-F, EJB-G or EJB-H.
- (\*\*) Depending on ambient temperature and dissipated power see table 3 below.
- (\*\*\*) One of the range of the ambient temperature stipulated in the parameters relating to the safety above if different to -20°C +40°C.

**D - Enclosure in stainless steel with intrinsic safety element:**

TechNed BENELUX BV  
4212 LR Spijk  
The Netherlands  
EJB-...(\*)  
INERIS 12ATEX0081X  
(Serial number)  
(Year of construction)

 I M2

Ex d [ia Ma] I Mb or Ex d [ib] I Mb  
... °C < Tamb < ... °C (\*\*\*)  
T.Cable :(\*\*)  
Cable entries: see instructions

**WARNINGS: DO NOT OPEN WHILE ENERGIZED.**

**DO NOT OPEN IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT.**

(\*) One of the following types: EJB-A, EJB-B, EJB-C, EJB-D, EJB-E, EJB-F, EJB-G or EJB-H.

(\*\*) Depending on ambient temperature and dissipated power see table 6 below.

(\*\*\*) One of the range of the ambient temperature stipulated in the parameters relating to the safety above if different to -20°C +40°C.

Marking may be carried out in the language of the country of use.

The protective system or equipment has also to carry the marking normally stipulated by its construction standards.

**Table 1: Enclosure without window and without intrinsic safety element.**

Type of enclosure	Temperature class		Maximum power dissipated and ambient temperature			Cable temperature
	Gas	Dust	40 °C	50 °C	60 °C	
EJB-A	T6	T85 °C	80 W	60 W	35 W	NC
	T5	T100 °C	120 W	95 W	75 W	95 °C
	T4	T135 °C	205 W	180 W	155 W	135 °C
EJB-B	T6	T85 °C	125 W	90 W	55 W	85 °C
	T5	T100 °C	180 W	145 W	110 W	100 °C
	T4	T135 °C	305 W	270 W	235 W	135 °C
EJB-C	T6	T85 °C	210 W	150 W	95 W	85 °C
	T5	T100 °C	295 W	235 W	180 W	100 °C
	T4	T135 °C	500 W	440 W	380 W	135 °C
EJB-D	T6	T85 °C	255 W	185 W	115 W	85 °C
	T5	T100 °C	360 W	290 W	220 W	100 °C
	T4	T135 °C	610 W	535 W	465 W	135 °C
EJB-E	T6	T85 °C	275 W	200 W	125 W	95 °C
	T5	T100 °C	390 W	315 W	240 W	115 °C
	T4	T135 °C	655 W	580 W	505 W	160 °C
EJB-F	T6	T85 °C	365 W	265 W	165 W	95 °C
	T5	T100 °C	515 W	415 W	315 W	115 °C
	T4	T135 °C	850 W	755 W	660 W	160 °C
EJB-G	T6	T85 °C	430 W	315 W	195 W	95 °C
	T5	T100 °C	610 W	495 W	375 W	115 °C
	T4	T135 °C	1020 W	905 W	790 W	160 °C
EJB-H	T6	T85 °C	535 W	390 W	245 W	95 °C
	T5	T100 °C	610 W	460 W	320 W	115 °C
	T4	T135 °C	1260 W	1120 W	975 W	160 °C

**Table 2: Enclosure fitted with window without intrinsic safety element.**

Type of enclosure	Temperature class		Maximum power dissipated and ambient temperature			Cable temperature
	Gas	Dust	40 °C	50 °C	60 °C	
EJB-B	T6	T85 °C	80 W	55 W	35 W	85 °C
	T5	T100 °C	115 W	90 W	70 W	100 °C
	T4	T135 °C	195 W	170 W	150 W	135 °C
EJB-C	T6	T85 °C	130 W	95 W	60 W	85 °C
	T5	T100 °C	185 W	150 W	115 W	100 °C
	T4	T135 °C	320 W	280 W	240 W	135 °C
EJB-D	T6	T85 °C	160 W	115 W	70 W	85 °C
	T5	T100 °C	230 W	185 W	140 W	100 °C
	T4	T135 °C	390 W	340 W	295 W	135 °C
EJB-E	T6	T85 °C	175 W	125 W	80 W	95 °C
	T5	T100 °C	250 W	200 W	150 W	115 °C
	T4	T135 °C	415 W	370 W	320 W	160 °C
EJB-F	T6	T85 °C	230 W	170 W	105 W	95 °C
	T5	T100 °C	330 W	265 W	200 W	115 °C
	T4	T135 °C	540 W	480 W	420 W	160 °C
EJB-G	T6	T85 °C	275 W	200 W	125 W	95 °C
	T5	T100 °C	390 W	315 W	240 W	115 °C
	T4	T135 °C	650 W	575 W	505 W	160 °C
EJB-H	T6	T85 °C	340 W	250 W	155 W	95 °C
	T5	T100 °C	390 W	290 W	205 W	115 °C
	T4	T135 °C	805 W	715 W	620 W	160 °C

**Table 3: Enclosure without window and without intrinsic safety element for group I.**

Type of enclosure	Maximum power dissipated and ambient temperature			Cable temperature
	40 °C	50 °C	60 °C	
EJB-A	205 W	180 W	155 W	135 °C
EJB-B	305 W	270 W	235 W	135 °C
EJB-C	500 W	440 W	380 W	135 °C
EJB-D	610 W	535 W	465 W	135 °C
EJB-E	655 W	580 W	505 W	160 °C
EJB-F	850 W	755 W	660 W	160 °C
EJB-G	1020 W	905 W	790 W	160 °C
EJB-H	1260 W	1120 W	975 W	160 °C

**Table 4: Enclosure without window with intrinsic safety elements and with a thermal probe.**

Type of enclosure	Temperature class		Maximum power dissipated and ambient temperature			Cable temperature
	Gas	Dust	40 °C	50 °C	60 °C	
EJB-A	T6	T85 °C	80 W	60 W	35 W	NC
EJB-B	T6	T85 °C	125 W	90 W	55 W	85 °C
EJB-C	T6	T85 °C	210 W	150 W	95 W	85 °C
EJB-D	T6	T85 °C	255 W	185 W	115 W	85 °C
EJB-E	T6	T85 °C	275 W	200 W	125 W	95 °C
EJB-F	T6	T85 °C	365 W	265 W	165 W	95 °C
EJB-G	T6	T85 °C	430 W	315 W	195 W	95 °C
EJB-H	T6	T85 °C	535 W	390 W	245 W	95 °C

**Table 5: Enclosure with window with intrinsic safety elements and with a thermal probe.**

Type of enclosure	Temperature class		Maximum power dissipated and ambient temperature			Cable temperature
	Gas	Dust	40 °C	50 °C	60 °C	
EJB-B	T6	T85 °C	80 W	55 W	35 W	85 °C
EJB-C	T6	T85 °C	130 W	95 W	60 W	85 °C
EJB-D	T6	T85 °C	160 W	115 W	70 W	85 °C
EJB-E	T6	T85 °C	175 W	125 W	80 W	95 °C
EJB-F	T6	T85 °C	230 W	170 W	105 W	95 °C
EJB-G	T6	T85 °C	275 W	200 W	125 W	95 °C
EJB-H	T6	T85 °C	340 W	250 W	155 W	95 °C

**Table 6: Enclosure without window with intrinsic safety elements and with a thermal probe for group I.**

Type of enclosure	Maximum power dissipated and ambient temperature			Cable temperature
	40 °C	50 °C	60 °C	
EJB-A	80 W	60 W	35 W	NC
EJB-B	125 W	90 W	55 W	85 °C
EJB-C	210 W	150 W	95 W	85 °C
EJB-D	255 W	185 W	115 W	85 °C
EJB-E	275 W	200 W	125 W	95 °C
EJB-F	365 W	265 W	165 W	95 °C
EJB-G	430 W	315 W	195 W	95 °C
EJB-H	535 W	390 W	245 W	95 °C



Table 7: Enclosure with intrinsic safety elements with or without window and without thermal sensor for temperature class T6/T85 °C.

Type of enclosure	Ambient temperature of the intrinsic safety element	Maximum power dissipated and ambient temperature		
		40 °C	50 °C	60 °C
EJB-A	60 °C	10 W	NC	NC
	70 °C	30 W	10 W	NC
	80 °C	45 W	30 W	10 W
EJB-B	60 °C	20 W	NC	NC
	70 °C	40 W	20 W	NC
	80 °C	60 W	40 W	20 W
EJB-C	60 °C	35 W	NC	NC
	70 °C	65 W	35 W	NC
	80 °C	100 W	65 W	35 W
EJB-D	60 °C	40 W	NC	NC
	70 °C	85 W	40 W	NC
	80 °C	130 W	85 W	40 W
EJB-E	60 °C	50 W	NC	NC
	70 °C	100 W	50 W	NC
	80 °C	145 W	100 W	50 W
EJB-F	60 °C	65 W	NC	NC
	70 °C	130 W	65 W	NC
	80 °C	190 W	130 W	65 W
EJB-G	60 °C	80 W	NC	NC
	70 °C	155 W	80 W	NC
	80 °C	225 W	155 W	80 W
EJB-H	60 °C	100 W	NC	NC
	70 °C	190 W	100 W	NC
	80 °C	280 W	190 W	100 W

Characteristics of the thermal probe installed in the enclosure for the maximum dissipated power in tables 4, 5 and 6.

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

Marking may be carried out in the language of the country of use.

The protective system or equipment has also to carry the marking normally stipulated by its construction standards.

**ROUTINE EXAMINATIONS AND TESTS**

The routine tests are modified only for enclosure EJB-A for using at -50° C:

In accordance with clause 16.1 of the EN/IEC 60079-1 standard each apparatus defined above has to have successfully passed, before delivery, an overpressure test of a period comprised between 10 and 60 seconds under 12.8 bar.

**(16) DESCRIPTIVE DOCUMENTS**

The descriptive documents quoted hereafter constitute the technical documentation describing the modification of the equipment, subject of this present addition.

Certification file n° 2013-02 (89 rubrics) rev.3 of 2015.03.31

signed on 2015.03.31

**(17) SPECIAL CONDITIONS FOR SAFE USE**

The special conditions for safe use are completed as follows:

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


**(18) ESSENTIAL SAFETY AND HEALTH REQUIREMENTS**

The respect of the Essential Health and Safety Requirements is completed or modified as follows:

- Conformity to the following standards :
  - EN 60079-0 : 2012/A11 : 2013    IEC 60079-0 : 2011
  - EN 60079-1 : 2007    IEC 60079-1 : 2007
  - EN 60079-11 : 2012    IEC 60079-11 : 2011
  - EN 60079-31 : 2014    IEC 60079-31 : 2013
- All provisions adopted by the manufacturer and defined in the descriptive documents.

Verneuil-en-Halatte, 2015.07.03



 **Po** Olivier COTTIN  
The Chief Executive Officer of INERIS  
By delegation  
T. HOUËIX  
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