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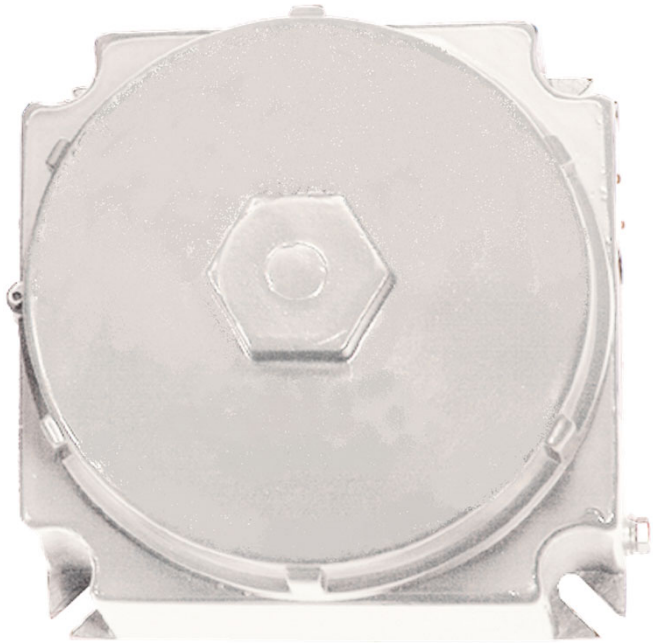
FLAMEPROOF ENCLOSURES

GUB SERIES

Suitable for installation in Zone: 1, 2, 21, 22



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1. General Information

1.1 Manufacturer

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1.2 About these Instructions

- **INSTRUCTION NOTE: D04/18/2302, issued on February 2023**
- Read carefully these Instructions before using the device
- Keep these Instructions throughout the entire service life of the enclosure
- Make these Instructions available to operating and maintenance personnel
- Update these Instructions every time an amendment is delivered from YSEBAERT
- In case of sale of the apparatus, pass these Instructions to subsequent owners

1.3 Conformity with Standards and Regulations

- GUB Series is manufactured in accordance with ATEX standards

2. Explanation of symbols on the device

Symbol	Meaning
	Product compliant with European Directive 2014/34/EU (ATEX) for installation in hazardous areas
	Product compliant with applicable European Directives

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3. Safety

3.1 General precautions

- The apparatus must be installed according to **EN 60079-14** standard (Edit in force) and maintenance operations must be performed according to **EN 60079-17** standard (Edit in force).
- User must be aware of electric risks, chemical and physical characteristics of gas, vapours, and dusts present in the plant.
- To further guarantee good product quality/safety, the **Quality System of YSEBAERT is evaluated and approved by a Notified Body**, which carries out Quality System surveillance.
- YSEBAERT ensures and guarantees correct manufacturing of its products.
- Buyer and/or End User are directly responsible of correct product installation and maintenance, according to local and national laws and product installation specifications.
- Use the apparatus only in accordance with the operating conditions described in these operating Instructions;
- Use the apparatus only for the intended purpose specified in these operating Instructions;
- All modifications and changing are strictly forbidden.

DANGER: EXPLOSION HAZARD DUE TO IMPROPER USE AND/OR ALTERATIONS TO THE APPARATUS CAN CAUSE SEVERE OR FATAL INJURIES

WARNING: ALL MODIFICATIONS / CHANGING, MADE BY BUYER / END USER, WITHOUT YSEBAERT WRITTEN ACCEPTANCE WILL INVALIDATE CERTIFICATIONS, WARRANTIES AND ANY OTHER CONTRACTUAL AGREEMENT

RESIDUAL RISK: ALTOUGH USED PROPERLY, THE APPARATUS CAN PRESENT RESIDUAL RISKS, WHICH ARE TYPICAL OF ANY APPARATUS CONNECTED TO POWER SUPPLY.

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3.2 Type of protection

Flameproof enclosures GUB Series – Protection: Ex db, Ex db [i.], Ex ia/ib, Ex tb**

Compliant with:

- *EN 60079-0*
  Equipment - General requirement
- *EN 60079-1*
  Equipment protection by flameproof enclosures 'd‘
- *EN 60079-11*
  Equipment protection by intrinsic safety 'i'
- *EN 60079-31*
  Equipment dust ignition protection by enclosure “t”

Enclosure:

Type of protection Ex db:

Electric equipment is installed in enclosure suitable to withstand the pressure raised during the internal explosion and avoids flame transmission to the external potentially explosive atmosphere.

Type of protection Ex i:

The energy of the circuit which could be capable of igniting a potentially explosive atmosphere is limited so that neither sparking nor heating of the electrical components can ignite the surrounding potentially explosive atmosphere.

Type of protection Ex tb:

It avoids combustible dust (IIIC) penetration into the enclosure and ensures surface temperature limitation for use in explosive dust atmospheres.

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3.3 Intended Use

GUB Series are suitable for:

- Equipment for explosive Gas and Dust atmospheres, having a "high" Level of Protection, which is not a source of ignition in normal operation or during expected malfunctions.
- Applications such as: control units, junction boxes, industrial power distribution switch racks; receptacles; heat tracing and lighting panels.
- Housing electric and/or electronic equipment and / or terminals.
- Housing arcing or sparking components.
- Indoor / Outdoor application.
- Hazardous areas: Zone 1, 2, 21, 22.
- Safe areas.

WARNING: USE THE APPARATUS ONLY FOR ITS INTENDED PURPOSE. AN INCORRECT USE MAY AFFECT NEGATIVELY THE EFFICIENCY OF THE APPARATUS

WARNING: USE THE APPARATUS ONLY IN THE HAZARDOUS AREAS STATED IN THESE INSTRUCTIONS.

DANGER: AN IMPROPER USE OF THE APPARATUS MAY LEAD TO SEVER AND/OR FATAL INJURIES

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4. Transport, Storage & Handling

4.1 Transport & Storage

- Transport and store the device only in its original packaging:
  - Paper/carton boxes; or
  - Wood boxes; or
  - Wood cages
- Store the device in a dry place, protected from sunlight, humidity, rain and vibration-free in the following condition:
  - -20°C … +40°C

4.2 Handling

For handling, no special measures are required, therefore it is recommended to perform this operation following the common safety standards.

5. Mounting & Installation

5.1 Preparation of the product: unpacking

- Make sure to throw away any packaging component which could result dangerous to people, such as: screws, belts, plastic bags, etc…;
- Make sure that the packaging has not been damanged during transport;
- Put down the right side of the packaging and unpack the apparatus;
- Remove the apparatus from the package in the most appropriate manner according to the weight of the apparatus.

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5.2 Before mounting & installation

Before mounting and installing the device, User must verify that:

- Responsibility for assembly, commissioning, operation, maintenance, and dismounting lies with the plant operator.
- The personnel must be appropriately trained and qualified in order to carry out mounting, installation, commissioning, operation, maintenance, and dismounting of the device. The trained and qualified personnel must have read and understood the instruction manual.
- Do not damage the flame path surfaces between enclosure and enclosure cover during the opening.
- If one of the flame path surfaces is damaged, replace the enclosure.
- Before fixing the enclosure cover to the enclosure, protect the flame path surfaces with a thin layer of suitable protective grease. We recommend using silicone grease type LOCTITE 8104 or similar. It shall be of a type that does not harden, does not contain an evaporating solvent and does not cause corrosion.
- Grounding terminals fastening: the M6 screws and/or nuts of the grounding cables terminals must be screwed tight. Suggested tightening torque 9Nm.
- The enclosure can be supplied c/w transparent tempered glass parts installed by YSEBAERT.
- If other solid obstacles are present outside the enclosure, the minimum distance between the flame path of the enclosure and these obstacles must not be less than the distance according to EN 60079-14:
  - Gas group IIC ≥ 40 mm.
- The enclosure is not damaged.

<u>DANGER</u>: EXPLOSION HAZARD DUE TO INCORRECT MOUNTING OF THE DEVICE CAN CAUSE SEVERE OR FATAL INJURIES

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5.3 Before commissioning

Before placing the device into service:

- Correct project data and installation;
- The electrical ratings (voltages, frequency, mechanical and thermal stress within project data);
- The clamping of the electric and mechanical connections;
- The integrity and the continuity of earth, protection or equipotential conductors;
- That no modifications have occurred to the electrical and/or mechanical structure and functionality of the apparatus (e.g. the alteration of the enclosure by the installation of further equipment inside the apparatus);
- Any electrical protection was not excluded nor deregulated;
- Verify the correct fastening of the enclosure parts;
- Verify the absence of any cause of stress (e.g. exposure to collision damages, presence of corrosive agents, possibility of internal short circuits with power dissipation superior than the admitted one).

WARNING: ALL MODIFICATIONS / CHANGING, MADE BY BUYER / END USER, WHICH IMPACT ON THE ELECTRICAL AND/OR MECHANICAL STRUCTURE AND FUNCTIONALITY OF THE APPARATUS WILL INVALIDATE CERTIFICATIONS, WARRANTIES AND ANY OTHER CONTRACTUAL AGREEMENT

Verify **THREADED ENTRIES and CABLE GLANDS:**

- Type and size of threaded holes are marked on the enclosure;
- Threaded entries must be equipped with suitable cable glands, accessories and blanking elements certified according to type of protection Ex db IIC and / or Ex tb IIIC, suitable to maintain the enclosure protection degree IP66 and suitable for ambient temperature stated on the “marking” label;
- Each entry shall have no more than one thread adapter. DO NOT USE a blanking element with a thread adapter.
- Use certified stopping plugs to close unused entries.

Verify the **COVER:**

- Cover must be properly closed. For more information, refer to paragraph *5.6 Unscrewing / Screwing the enclosure lid*.

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5.4 Apparatus Composition

5.4.1 Components & accessories

The enclosure can host electric and/or electronic equipment and/or terminals.
The cover can be provided by threaded entries for the assembling of following accessories: draining & breathing devices, push buttons, selector switches, potentiometers, signal lamps, rotary handles fuses and/or windows (suitable for visualization of internal apparatus). Refer to below table for the complete list of suitable components:

COMPONENT TYPE:	
Instruments of measure of electric parameters	Time relay
Electronic thermoregulation units	Photocells
Radio communication and telephony units	Capacitors
PLC and multiplexer	Transformers
Devices for the control and the weight measure; pressure; damp; level; temperature and capacity	Anticondensate heatings
Automatic and/or earth leakage circuit breakers	Circumferentor and recorders of physical data
Switches; on load switches; rotary switches	Displays
Fuses / antitrouble filters	Ignitors
Contactors; remote control switches	General purpose drive and UPS
Relay	Fans
Led lamps 3 W max.	Cells and batteries
Electric and electronic of regulation and of starting devices	Terminals
Intrinsically safe devices	

Pushbutton

Pilot lamp

Rotary switch

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5.4.2 Terminals

Refer to below tables for terminals rated current and max. number of terminals which can be installed inside ***GUB**, GUB-QL**, GUB-**/EMH-**** enclosures.

TERMINALS – RATED CURRENT													
Terminal cross-sectional area (mm^2)	2,5	4	6	10	16	35	50	70	95	120	185	240	300
Rated current (A)	24	32	41	57	76	125	150	192	239	269	353	415	520

Max. number of terminals calculated in worst condition, so according to following parameters:

- T. class = T3;
- Ambient temp. = +40°C

TYPE / SECTION	GUB 0	GUB01	GUB02	GUB03	GUB04	GUB05	GUB06	GUB07
2,5 mmq	12	18	22	25	40	46	58	174
4 mmq)	11	17	21	25	40	46	58	174
6 mmq	9	14	17	19	22	34	42	126
10 mmq	7	11	13	15	17	19	34	102
16 mmq	-	9	10	12	14	16	19	57
35 mmq	-	-	6	8	9	8	12	36
50 mmq	-	-	5	8	8	5	11	33
70 mmq	-	-	-	-	-	4	8	24
95 mmq	-	-	-	-	-	-	6	18
120 mmq	-	-	-	-	-	-	6	18
185 mmq	-	-	-	-	-	-	5	15
240mmq	-	-	-	-	-	-	-	10
300mmq	-	-	-	-	-	-	-	6

5.4.3 Bars

Refer to below tables for bars which can be installed inside **GUB-**, GUB-QL**** and **GUB-**/EMH-**** enclosures.

ELECTRICAL BAR CHARACTERISTICS		
GUB-, GUB-QL**** and **GUB-**/EMH-****	Nominal Section sqmm	Nominal current (A)
From GUBX to GUB07	36	72
From GUBX to GUB07	100	200
From GUBX to GUB07	160	250
From GUBX to GUB07	250	400
From GUBX to GUB07	400	625

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5.4.4 Maximum dissipated power

Maximum dissipated power (W / VA) for GUB** and GUB-QL** without windows and without or with IS apparatus when IS apparatus is protected by thermal probes

TYPE OF ENCLOSURE	T6/T85°C for ambient up to					T5/T100°C for ambient up to					
	40°C	50°C	55°C	60°C	70°C (*)	40°C	50°C	55°C	60°C	70°C(*)	80°C (*)
GUB0	34	24	20	15	5	48	39	34	29	20	10
GUB01 GUB-QL01	44	31	25	19	7	62	50	44	37	25	13
GUB02 GUB-QL02	56	40	32	25	9	79	64	56	48	32	16
GUB03 GUB-QL03	71	50	41	31	11	100	80	71	60	41	20
GUB04 GUB-QL04	91	64	52	40	14	127	103	91	77	52	26
GUB05 GUB-QL05	114	81	65	50	17	160	129	114	96	65	33
GUB06 GUB-QL06	151	108	87	67	23	213	172	151	128	87	44
GUB07 GUB-QL07	399	284	230	176	61	561	453	399	338	230	115
T° Cable	N/A		Tcable=75°C		Tcable=80°C	Tcable=80°C		Tcable=85°C		Tcable=95°C	

(*) Ambient temperature +70°C and +80°C are allowed only for enclosure type GUB** except GUB-QL**

TYPE OF ENCLOSURE	T4/T135°C for ambient up to						T3/T200°C for ambient up to					
	40°C	50°C	55°C	60°C	70°C	80°C(*)	40°C	50°C	55°C	60°C	70°C(*)	80°C(*)
GUB0	81	72	67	62	52	43	143	133	129	124	114	105
GUB01 GUB-QL01	105	93	87	81	68	56	185	172	166	161	148	136
GUB02 GUB-QL02	135	118	111	103	87	72	237	221	213	205	189	174
GUB03 GUB-QL03	169	149	139	130	109	90	298	277	268	258	238	218
GUB04 GUB-QL04	216	190	178	166	140	115	381	355	342	330	304	279
GUB05 GUB-QL05	272	239	223	208	175	144	478	445	430	414	381	351
GUB06 GUB-QL06	362	318	298	277	234	193	637	593	573	552	508	467
GUB07 GUB-QL07	953	838	784	730	615	507	1677	1562	1508	1454	1339	1231
T° Cable	Tcable=100°C		Tcable=105°C		Tcable=115°C		Tcable=140°C		Tcable=145°C		Tcable=155°C	

(*) Ambient temperature +70°C and +80°C are allowed only for enclosure type GUB** except GUB-QL**

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Maximum dissipated power (W / VA) for GUB-QL07 and GUB-**/EMH-** with windows, and without or with IS apparatus when IS apparatus is protected by thermal probes.

TYPE OF ENCLOSURE GUB-**	T6/T85°C for ambient up to					T5/T100°C for ambient up to					
	40°C	50°C	55°C	60°C	70°C	40°C	50°C	55°C	60°C	70°C	80°C
03/EMH-160	71	50	41	31	11	100	80	71	60	41	20
04/EMH-175	91	64	52	40	14	127	103	91	77	52	26
05/EMH-200	114	81	65	50	17	160	129	114	96	65	33
06/EMH-230	151	108	87	67	23	213	172	151	128	87	44
QL07	399	284	230	176	-	561	453	399	338	-	-
T° Cable	N/A		Tcable=75°C		Tcable=80°C	Tcable=80°C		Tcable=85°C		Tcable=95°C	

TYPE OF ENCLOSURE GUB-**	T4/T135°C for ambient up to					
	40°C	50°C	55°C	60°C	70°C	80°C
03/EMH-160	133	121	115	109	96	84
04/EMH-175	170	155	147	140	123	107
05/EMH-200	214	195	185	175	154	135
06/EMH-230	285	259	246	234	205	180
QL07	751	683	649	615	-	-
T° Cable	Tcable=95°C		Tcable=100°C		Tcable=80°C	Tcable=95°C

(*) Ambient temperature +70°C and +80°C are allowed only for enclosure type GUB**/EMH*** except GUB-QL07

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5.4.4 Maximum dissipated power

Maximum dissipated power (W / VA) for GUB-**, GUB-QL** and GUB-**/EMH-** with or without windows with IS apparatus without thermal probes protection.

TYPE OF ENCLOSURE	T.AMB OF THE INTRINSIC SAFETY ELEMENT	T6/T85°C FOR AMBIENT UP TO			
		40°C	50°C	55°C	60°C
GUB0	60°C	10	3	N/A	N/A
	70°C	17	10	6	3
	80°C	25	17	13	10
	85°C	28	21	17	13
GUB-01 GUB-QL01	60°C	13	4	N/A	N/A
	70°C	22	13	8	4
	80°C	32	22	17	13
	85°C	36	27	22	17
GUB-02 GUB-QL02	60°C	17	5	N/A	N/A
	70°C	29	17	10	5
	80°C	41	29	22	17
	85°C	46	34	29	22
GUB-03 GUB-QL03	60°C	21	6	N/A	N/A
	70°C	36	21	13	6
	80°C	51	36	28	21
	85°C	58	43	36	28
GUB-04 GUB-QL04	60°C	27	8	N/A	N/A
	70°C	46	27	17	8
	80°C	65	46	36	27
	85°C	74	55	46	36
GUB-05 GUB-QL05	60°C	34	10	N/A	N/A
	70°C	58	34	21	10
	80°C	82	58	45	34
	85°C	93	69	58	45
GUB-06 GUB-QL06	60°C	45	13	N/A	N/A
	70°C	77	45	28	13
	80°C	109	77	60	45
	85°C	124	92	77	60
GUB-07 GUB-QL07	60°C	118	34	N/A	N/A
	70°C	203	118	73	34
	80°C	287	203	158	118
	85°C	327	242	203	158
GUB-03/EMH160	60°C	21	43	N/A	N/A
	70°C	36	36	13	6
	80°C	51	21	28	21
	85°C	58	6	36	28
GUB-04/EMH-175	60°C	27	8	N/A	N/A
	70°C	46	27	17	9
	80°C	65	46	36	27
	85°C	74	55	46	36
GUB-05/EMH-200	60°C	34	10	N/A	N/A
	70°C	58	34	21	10
	80°C	82	58	45	34
	85°C	93	69	58	45
GUB-06/EMH-175	60°C	45	13	N/A	N/A
	70°C	77	45	28	13
	80°C	109	77	60	45
	85°C	124	92	77	60

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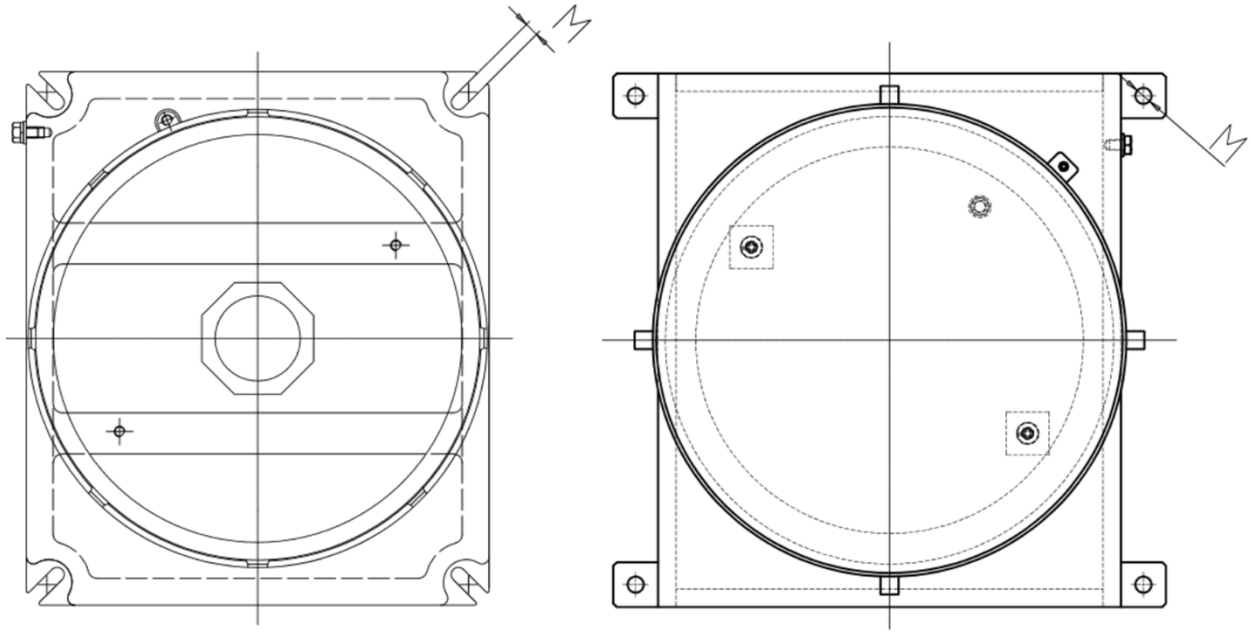
5.5 Mounting the enclosure

- Mount the enclosure in vertical position by using four screws. Refer to dimensional drawings for mounting holes
- Tighten the mounting screws properly.

Fig. 5.



ENCLOSURE TYPE	SCREW SIZE FOR GUB (AL)	SCREW SIZE FOR GUB (SS)
GUB0	M6	M8
GUB-01	M6	M8
GUB-02	M8	M8
GUB-03	M8	M10
GUB-04	M8	M10
GUB-05	M8	M12
GUB-06	M10	M12
GUB-07	M16	M16

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5.6 Unscrewing / Screwing the eclosure lid

Unscrewing the enclosure LID

1. Loosen the clamping dowel
2. Unscrew the enclosure lid and put it safely.

Screwing down the enclosure LID

1. To prevent corrosion the lid thread must be coated with anti-seize Loctite 8150 or equivalent.
2. Screw lid of enclosure carefully onto base of enclosure. Do not tilt the thread.
3. Screw in threads all the way.
4. Fasten the clamping dowel to lock the lid.

5.7 Electrical connections

The terminals of the equipment must be used with the insert and the connection of the wires of type and section allowed, for voltage and current values not higher than ones indicated from the constructor.

DANGER: EXPLOSION HAZARD DUE TO IMPROPER CONNECTION CAN CAUSE SEVERE OR FATAL INJURIES

WARNING: ALL DAMAGES TO THE DEVICE DUE TO IMPROPER CONNECTION WILL INVALIDATE CERTIFICATIONS, WARRANTIES AND ANY OTHER CONTRACTUAL AGREEMENT

Internal wiring

- Strictly adhere to wire size and length for which heat loss dissipation are taken into account for permissible wattage for a given T Class. In case of non-compliance explosion protection can no longer be guaranteed.
- Strictly adhere to the creepage and clearance required.
- Use only insulated wires of suitable voltage grade.
- Mounting rails or components must be loosened and fastened properly.

External wiring

- The cables must comply with EN 60079-14 and relevant regulation and must have the required cross section.
- Strictly adhere to cable size and length for which heat loss dissipation are taken into account for permissible wattage for a given T Class and ambient temperature.
- Cable shall be in compliance with the Tcable.
- In case of non-compliance explosion protection can no longer be guaranteed.

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Protective Earth conductor connection

- The device is equipped with one internal and two external protective conductor connection arrangements with knurled SS screw (anti-rotational) and flat washer.
- Use ring type lug of suitable material and size to be affixed between plain washers.
- The PE conductor size shall be as under:

CROSS SECTIONAL AREA OF PHASE CONDUCTOR S mm^2	MINIMUM CROSS SECTIONAL AREA OF THE CORRESPONDING PE CONDUCTOR IN mm^2
$S \leq 16$	S with min of $4mm^2$
$16 < S \leq 35$	16
$S > 35$	0.5 S

6. Maintenance

6.1 General information

The maintenance is a set of operations performed in order to maintain the safety and functional features of the apparatus during its operating life. The maintenance operations must be performed according to **EN 60079-17** standard (Edit in force).
The apparatus must be submitted to a detailed maintenance program studied and managed by qualified and authorized technicians and related to the type of apparatus, its operating service and environmental conditions.

- Do not exceed the limit of two years between inspections;
- Check the WARNINGS on the marking tag before opening the enclosure;
- All the maintenance operations must be performed with the electrical apparatus isolated from all energy sources;
- The apparatus must be installed and maintained in order to prevent dangers from casual contacts with under voltage elements and the risks of fire and burst derived from possible abnormal working conditions;
- If the apparatus is subjected to vibrations, verify frequently the fastening of screws, pipe and/or cable entries and each part of the enclosure;
- Replace damaged parts by original YSEBAERT spare parts only;
- The inspections and maintenance on the apparatus must be carried out only from expert staff, whose training has included all the necessary instructions on the installation modalities, on the laws and standards relevant and on the general principles of the classification of the hazardous areas.

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7. Cleaning

Cleaning of flanged joints and cover screws:

- Use only non-metallic brushes and non-corrosive cleaning fluids;
- All joints and screws must be thoroughly cleaned and lightly smeared with a suitable grease to protect and prevent corrosion. NON-HARDENING grease (LOCTITE 8104 or equivalent) must be used in order to prevent corrosion and protect them against bad weather;
- Clean and grease the flanged joints and cover screws before cover reassembling;
- Before reassembling the apparatus, verify that flanged joints and screws have not been damaged.

WARNING: APPLY CAREFULLY THE GREASE TO THE JOINTS TO ENSURE THE RETENTION OF NOT HARDENING CHARACTERISTICS

DANGER: EXPLOSION HAZARD DUE TO DAMAGED JOINTS DURING CLEANING TREATMENTS CAN CAUSE SEVERE OR FATAL INJURIES

When the apparatus is installed in environments with combustible dust:

- Proceed with a regular cleaning of the apparatus to avoid dust accumulation on the surfaces

When the Warning: "**POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS**" is present on the tag:

- Proceed with a regular cleaning using damp cloth or antistatic products only;
- During cleaning process, touch the apparatus with an insulated object.

The following precautions must be taken when the apparatus is installed in environments with combustible dust: **TO AVOID DUST ACCUMULATION ON THE SURFACES, USER MUST PROCEED WITH A REGULAR CLEANING OF THE APPARATUS.**

WARNING: DO NOT USE AGGRESSIVE DETERGENTS OR ABRASIVE SOLVENTS WHICH CAN AFFECT NEGATIVELY THE FUNCTIONALITY OF THE APPARATUS

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8. Repairing

Flameproof joints whose dimensions are different from the values specified in the tables of EN 60079-1 standard cannot be repaired.
All repairing impacting the type of protection (except for replacement with original YSEBAERT spare parts) **are admitted only under written authorization of YSEBAERT**.
Written agreements with YSEBAERT must be taken concerning procedures for mandatory verifications and tests to be performed after repairing.

9. Disposal

Ensuring that you dispose of the product in the appropriate way contributes to avoiding potential negative consequences that might arise from unsuitable disposal of the product.
For further information about recycling of this product, contact your local municipal offices, the local municipal waste disposal service or the point-of-sale where you purchased this product.

The symbol, applied to the product or to the package, indicates that **the product should not be considered normal domestic waste, but must be taken to the appropriate collection print for the recycling of electric and electronic devices.**

10. Special conditions of use

- The screws used for cover fastening must have a tensile strength higher or equal to 800 N/mm^2.
- The dimensions of flameproof joints are different from the values specified in the tables of the EN 60079-1 standard. The flameproof joints are not intended to be repaired.

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11. Warranties

For Warranty Terms & Conditions, please refer to our General Terms & Conditions available at https://www.ysebaert.be/en/page/general+conditions

12. Management of non-conformities

In case of receiving a Product considered as non-compliant, please contact exzone@ysebaert.be and communicate the following information: Company name, PO number, delivery date, non-compliant Product and the reason(s) why the Product has been considered as non-compliant. YSEBAERT will evaluate the request and the Product will be repaired or replaced, at YSEBAERT sole discretion.

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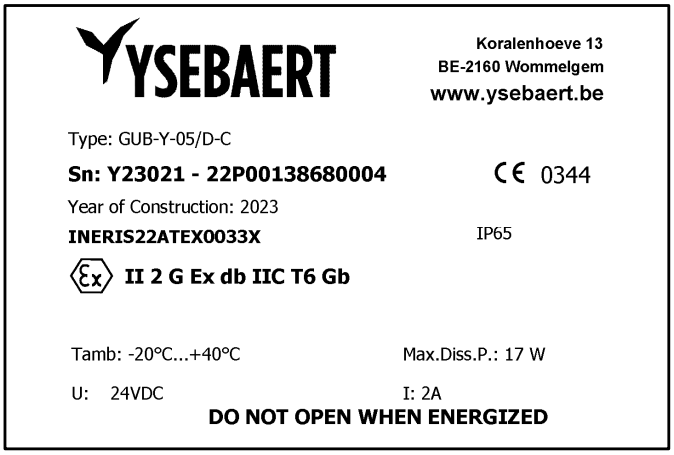
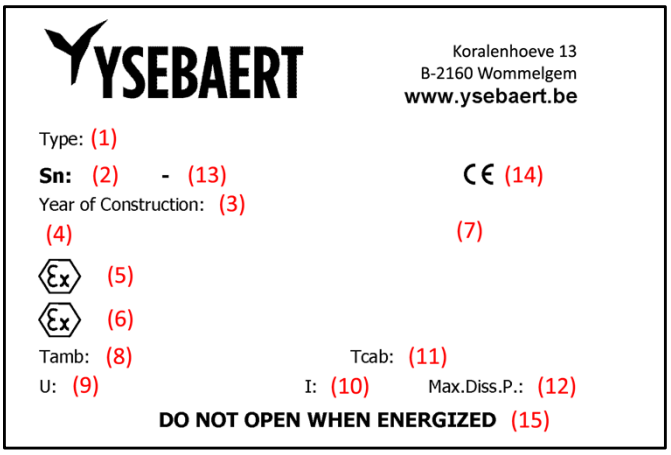
13. Marking

Find below an example of marking that will be present on flameproof enclosure GUB Series





(1)	Equipment type designation given by manufacturer
(2)	Serial number Y…..
(3)	Year of construction
(4)	Certificate
(5)	ATEX marking (gas)
(6)	ATEX marking (dust)
(7)	IP degree
(8)	Ambient temperature
(9)	Voltage
(10)	Current
(11)	Temperature at branching point
(12)	Max. dissipated power
(13)	Serial number of the empty housing
(14)	Identification of Notified Body that has issued the Production Quality Assurance Notification
(15)	Warnings

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14. Annex A – Technical data

14.2 Explosion protection

Europe (ATEX)

II 2 G Ex db IIC T(**) Gb or

II 2 G Ex db ia/ib IIC T(**) Gb and/or

II 2 D Ex tb IIIC T(**) Db

II 2 D Ex tb ia/ib IIIC T(**) Db

***** T6/T85°C, T5/T100°C, T4/T135°C, T3/T200°C***

II 2(1) G Ex db [ia Ga] IIC T6 Gb and/or

II 2(2) G Ex db [ib] IIC T6 Gb and/or

II 2(1) G Ex db ia/ib [ia Ga] IIC T6 Gb and/or

II 2(2) G Ex db ia/ib [ib] IIC T6 Gb and/or

II 2(1) D Ex tb [ia Da] IIIC T85°C Db

II 2(2) D Ex tb [ib] IIIC T85°C Db

II 2(1) D Ex tb ia/ib [ia Da] IIIC T85°C Db

II 2(2) D Ex tb ia/ib [ib] IIIC T85°C Db

I M2 Ex db I Mb

I M2 Ex db ia/ib I Mb

I M2(M1) Ex db [ia Ma] I Mb

I M2(M2) Ex db [ib] I Mb

I M2(M1) Ex db ia/ib [ia Ma] I Mb

I M2(M2) Ex db ia/ib [ib] I Mb

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14.3 Electrical data

I max.	**2000A**
V max. DC	**20 kV**
V max. AC	**20 kV**
Rated Frequency	**0 to 1000Hz**
Maximum supply voltage for “IS” elements	**500V**

14.4 Mechanical data

Degree of protection:	**IP66**
Ambient temp. range:	**FROM -60°C to +80°C for all GUB** SIZES** **FROM -60°C to +60°C for all GUB-QL** and GUB-**/EMH** SIZES**
Body:	**Aluminim / Cast iron / Stainless steel / Carbon steel**
Window	**Tempered glass (GUB-EMH only)**
Entries:	**Metric pitch 1.5, ANSI B1.20.1 NPT**
Coating / Painting:	**Polyurethane painting cycle**
Enclosure colour:	**Blue (RAL5014) - Other colours available upon request**
Certification label:	**Acrylic laminate – Traffolyte available upon request**

14.5 Optional accessories

ACCESSORIES	FEATURES
DRAIN / BREATHER VALVE	ECR-1 Valve
GUB07	Closing system
OPERATION HEADS	PL.. Series: Push buttons, mechanical operators, signaling lamps PSRC.. Series: Rotating switches
WINDOWS	Standard shape: Rectangular Standard dimensions (mm): 45x70; 100x170; 100x270; 110x290 Customization is available upon request

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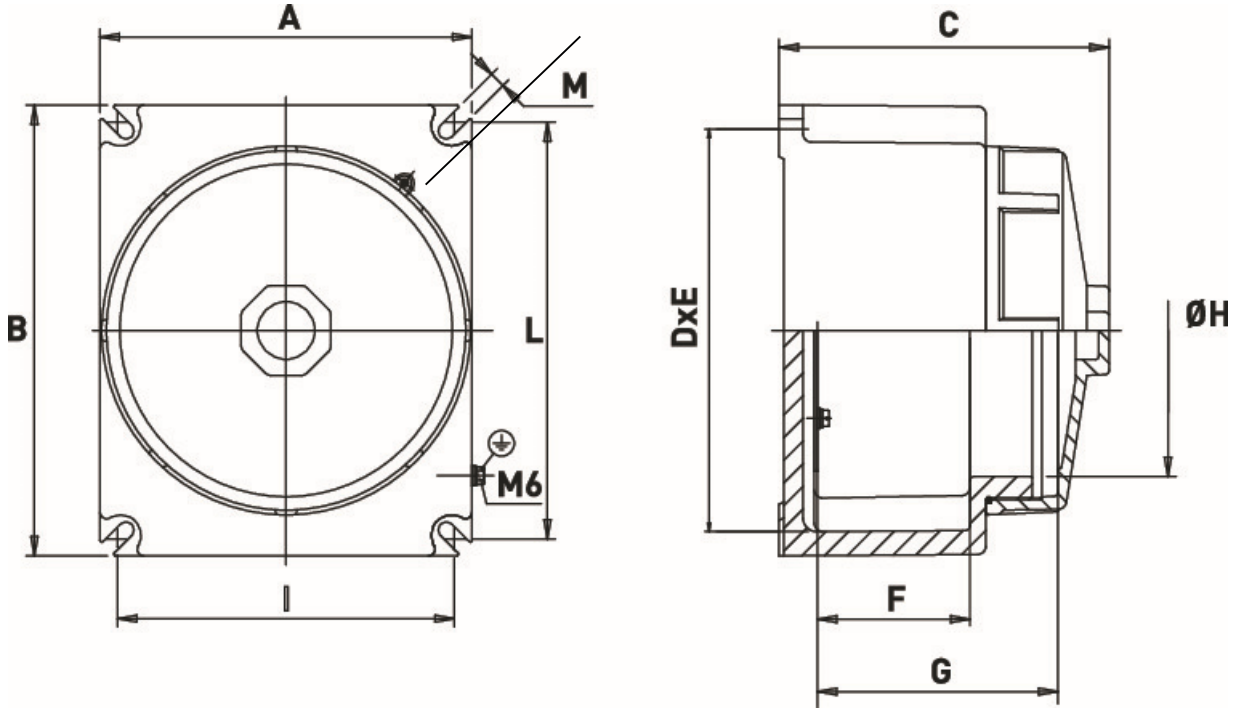
15. Annex B – Enclosure dimensions

GUB… Series in copper-free aluminium

MOUNTING HOLES



TYPE	DIMENSIONS [mm]											WEIGHT [Kg]
	A	B	C	D	E	F	G	ØH	I	L	ØM	
GUB-0	133	133	142	110	110	62	107	90	113	113	8	2.5
GUB-01	169	169	152	139	139	64	115	126	150	150	8	3.60
GUB-02	190	190	164	160	160	65	125	144	170	170	8	4.70
GUB-03	210	210	179	180	180	80	139	167	179	179	8	6.00
GUB-04	281	232	206	202	291	99	160	183	260	210	10	8.90
GUB-05	298	257	222	227	268	108	178	206	275	235	8	11.90
GUB-06	329	293	248	259	295	141	211	242	270	305	10,5	15.80
GUB-07	545	545	248	490	490	195	229	457	475	475	14,5	81.5

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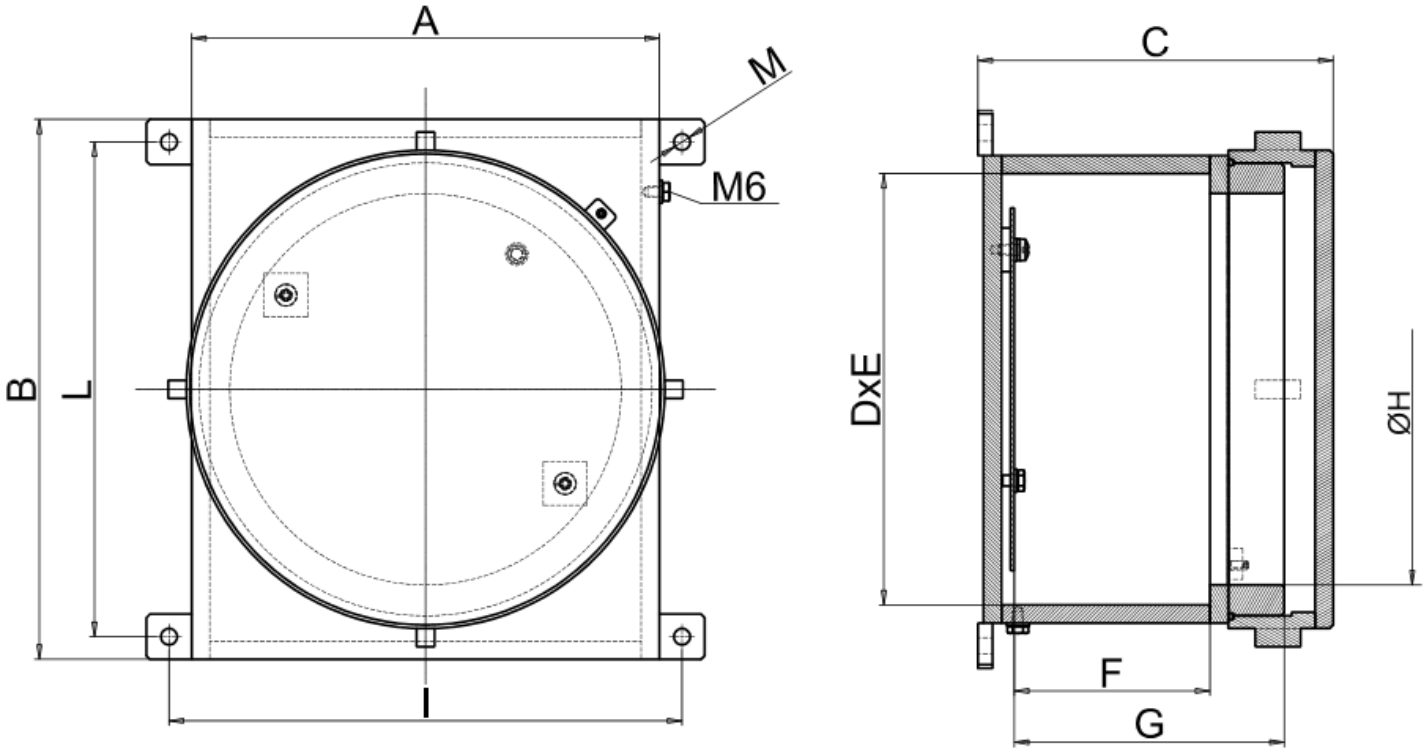
GUB… Series in stainless steel

MOUNTING HOLES



TYPE	DIMENSIONS [mm]											WEIGHT [Kg]
	A	B	C	D	E	F	G	ØH	I	L	ØM	
GUB-01	170	170	135	154	154	68	112	124,5	145	195	9	9.5
GUB-03	210	210	157	190	190	80	129	173	185	235	9	16.5
GUB-04	232	281	183	212	262	101	155	18	256	257	9	23.5
GUB-05	258	298	196	238	278	110	166	216	273	283	9	30
GUB-06	295	330	240	310	275	151	210	257	305	320	9	40.5
GUB-07	545	545	341	515	515	205	290	443	595	495	16	169

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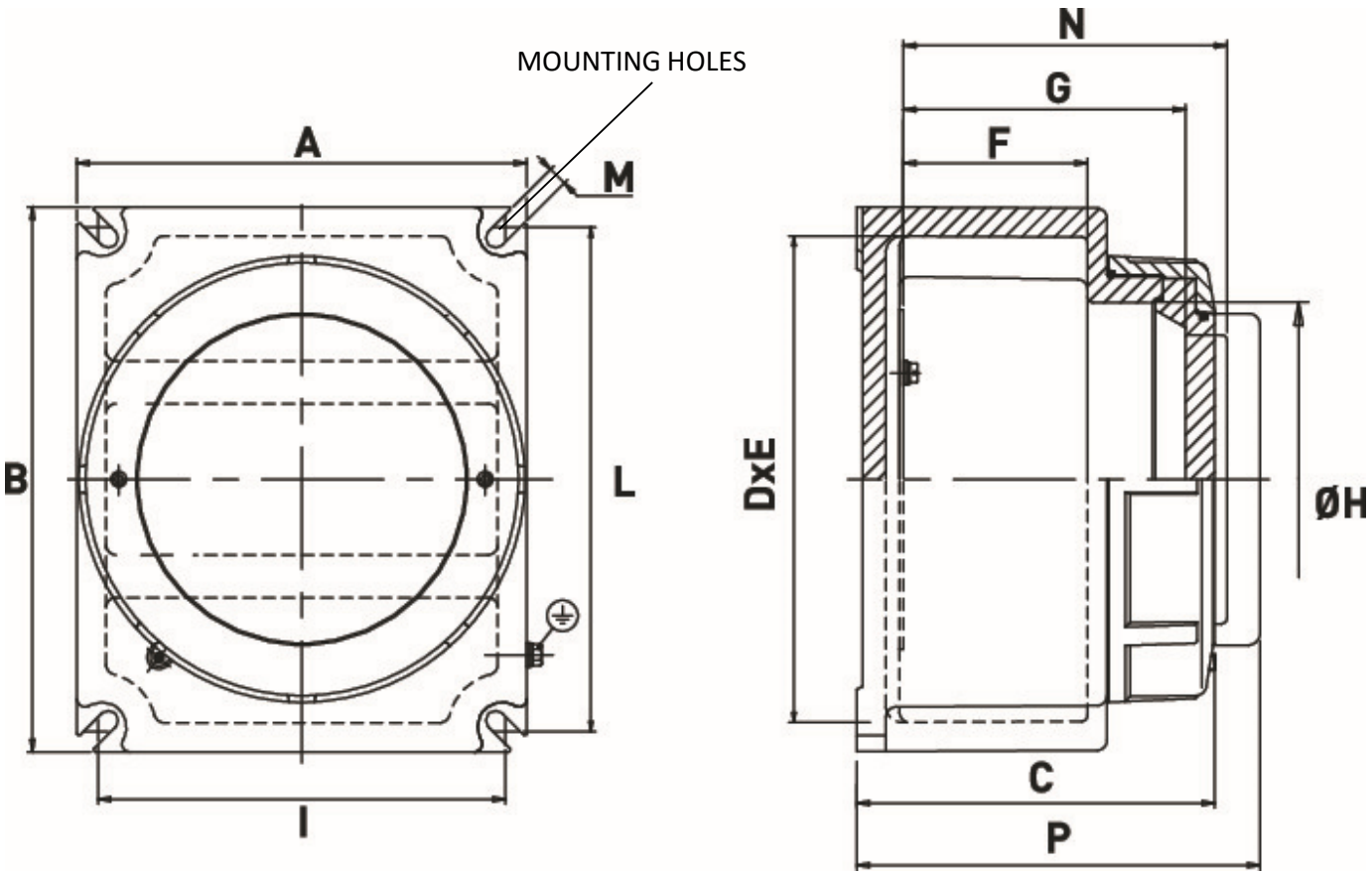
GUB../QL Series in copper-free aluminium



TYPE	DIMENSIONS [mm]													WEIGHT [Kg]
	A	B	C	D	E	F	G	ØH	I	L	ØM	N	P	
GUB-QL 01	169	169	139	139	139	62	103	126	150	150	8	-	-	3.60
GUB-QL 02	190	190	144	160	160	64	114	144	170	170	8	143	179	4.70
GUB-QL 03	210	210	158	180	180	78	129	167	179	179	8	140	174	6.00
GUB-QL 04	281	232	185	202	291	97	148	183	260	210	10	-	-	8.90
GUB-QL 05	298	257	199	227	268	108	161	206	275	235	8	-	-	11.90
GUB-QL 06	330	295	236	259	295	140	195,5	242	270	305	10,5	-	-	15.80
GUB-QL 07	545	545	348	490	490	197	285	457	475	475	14,5	-	-	81.5

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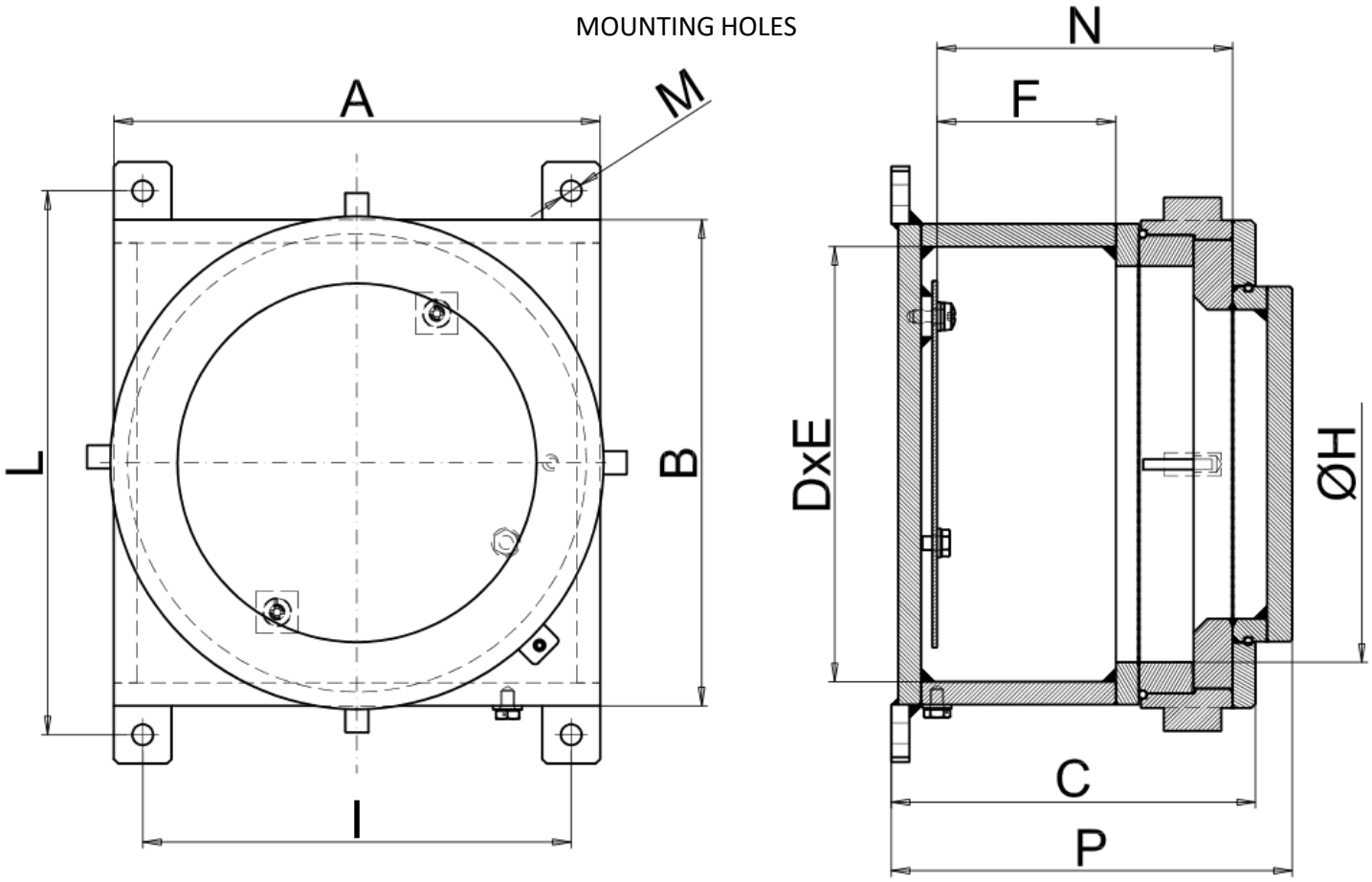
GUB../QL Series in stainless steel



TYPE	DIMENSIONS [mm]													WEIGHT [Kg]
	A	B	C	D	E	F	G	ØH	I	L	ØM	N	P	
GUB-QL 01	170	170	136	154	154	66	109	124,5	145	195	9	-	-	11
GUB-QL 03	210	210	157	190	190	80	129	173	185	235	9	144	175	20
GUB-QL 04	232	281	183	212	262	101	155	18	256	257	9	-	-	26.3
GUB-QL 05	258	298	194	238	278	110	163	216	273	283	9	-	-	32
GUB-QL 06	295	330	238	310	275	151	210	257	305	320	9	-	-	43
GUB-QL 07	545	545	341	515	515	205	290	443	595	495	16	-	-	169

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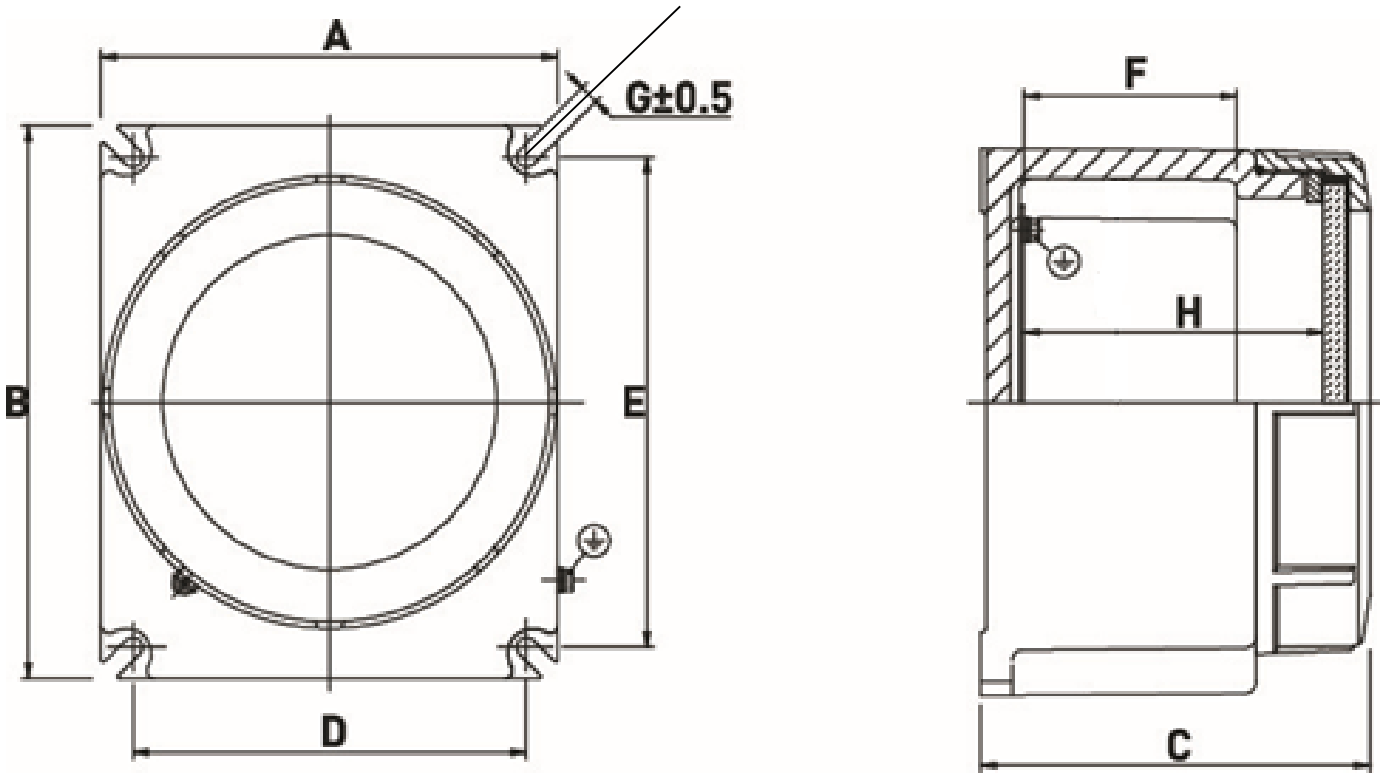
GUB/EMH.. Series in copper-free aluminium

MOUNTING HOLES



TYPE	DIMENSIONS [mm]								WINDOW Ø [mm]	WEIGHT [Kg]
	A	B	C	D	E	F	ØG	H		
EMH-160	210	210	160	180	180	78	8	115	155	6.00
EMH-175	281	232	185	202	251	97	8	141	170	8.90
EMH-200	298	257	200	227	268	106	8	150	195	11.90
EMH-230	329	293	236	259	295	140	10	189	230	15.80

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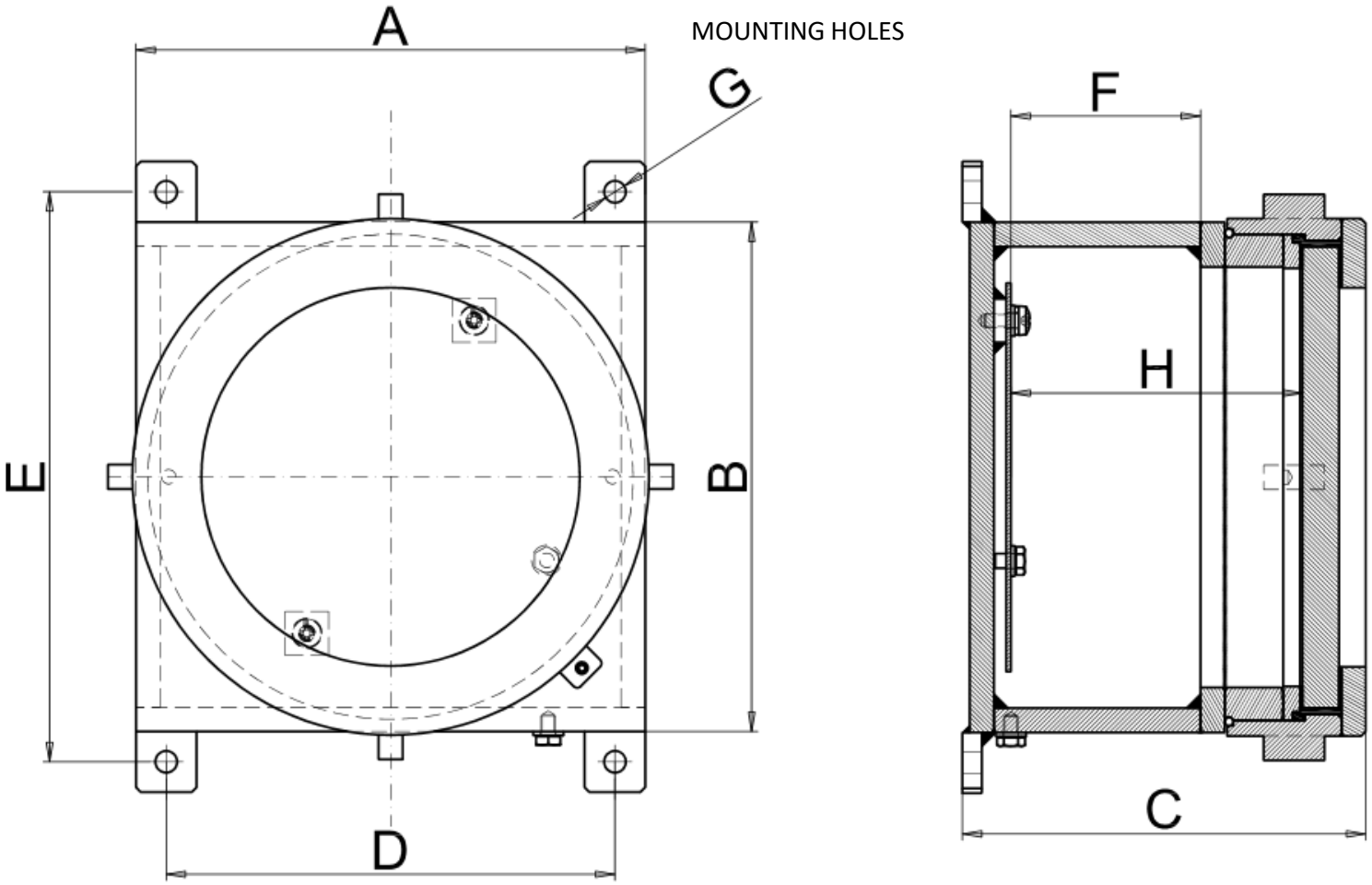
GUB/EMH… Series in stainless steel



TYPE	DIMENSIONS [mm]								WINDOW Ø [mm]	WEIGHT [Kg]
	A	B	C	D	E	F	ØG	H		
EMH-160	210	210	166	185	235	80	9	115	156	17.00
EMH-175	232	281	193	256	257	97	9	141	170	24.3
EMH-200	258	298	204	273	283	110	9	157	205	30
EMH-230	295	330	252	305	320	150	9	201	249	41

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16. Annex C – Maximum number of entries

GUB… Series in copper-free aluminium and stainless steel

Maximum number of entries on sides A/B

TYPE	GUB-01	GUB-QL 01	GUB-02	GUB-QL 02	GUB-03	GUB-QL 03	GUB-03/EMH-160	GUB-04	GUB-QL 04	GUB-04/EMH-175	GUB-05	GUB-QL 05	GUB-05/EMH-200	GUB-06	GUB-QL06	GUB-06/EMH-200	GUB-07	GUB-QL 07
M16 / 3/8"	6/6		8/8		10/10			15/18			18/21			32/36			84/84	
M20 / 1/2"	3/3		5/5		5/5			5/7			7/9			7/9			50/50	
M25 / 3/4"	3/3		5/5		5/5			5/7			7/9			7/9			40/40	
M32 / 1"	2/2		3/3		3/3			5/5			5/7			5/7			24/24	
M50 / 1"½	1/1		1/1		2/2			2/3			2/3			3/5			18/18	
M63 / 2"	1/1		1/1		1/1			2/2			2/2			2/3			10/10	
M75 / 2"½	-		-		-			1/2*			1/2*			2/2*			5/5	
M80 / 3"	-		-		-			1/1*			1/2*			1/2*			4/4	
M90 / 3 ½"	-		-		-			-			-			-			4/4	
M100 / 4"	-		-		-			-			-			-			3/3	

* For Aluminium version, an adaptor is necessary

YSEBAERT

EU Declaration of conformity	**EU Verklaring van overeenstemming**	**UE Déclaration de conformité**	**EU Konformitäts-erklärung**

INERIS22ATEX0033X

We,	Wij,	Nous,	Wir,

YSEBAERT N.V.
Koralenhoeve 13
2160 Wommelgem
Belgium

Hereby declare in our sole responsibility, that the product	Verklaren hierbij onder eigen verantwoordelijkheid dat het product	Déclarons sous notre entière responsabilité, que le produit	Erklären in alleiniger Verantwortung, dass das Produkt

"Enclosure type GUB** or GUB-QL** or EMH**"

Complies with the requirements of the ATEX114 Directive 2014/34/EU,	Voldoet aan de eisen van ATEX114 Richtlijn 2014/34/EU,	Correspond aux exigences de la Directive ATEX114 2014/34/UE,	Die Anforderungen der ATEX114-Richtlinie 2014/34/EU,
And with their corresponding harmonized standards, and other normative documents.	En aan de corresponderende geharmoniseerde normen en andere normatieve documenten.	Et à leurs normes harmonisées, et aux autres documents normatifs suivants.	Und den entsprechenden harmonisierten Normen, und weiteren normativen Dokumenten entspricht.

EN 60079-0	: 2018
EN 60079-1	: 2014
EN 60079-11	: 2012
EN 60079-31	: 2014

Notified body of the certification	Aangemelde instantie	Organe notifié et compétent	Benannte Stelle

INERIS, notified body number 0080
Parc Technologique ALATA, BP n°2
60550 Verneuil-en-Halatte
France

Wommelgem, 20-02-2023

Lotte Ysebaert
Managing Director / Gedelegeerd bestuurder
Président-directeur général / Geschäftsführer

2 **Appareil ou système de protection destiné à être utilisé en atmosphères explosibles**
Equipment and protective systems intended for use in potentially explosive atmospheres

Directive 2014/34/UE
Directive 2014/34/EU

1 # ATTESTATION D'EXAMEN UE DE TYPE
EU-TYPE EXAMINATION CERTIFICATE

3 Numéro de l'attestation d'examen UE de type / *Number of the EU-Type Examination Certificate*

INERIS 22ATEX0033X INDICE / *ISSUE* : 00

4 Appareil ou système de protection / *Equipment or protective system*:

Boîtiers électroniques et/ou boîtes de jonction type GUB, GUB-QL** et GUB-**/EMH-****
Controls Units and/or Junction Boxes type GUB**, GUB-QL** and GUB-**/EMH-**

5 Fabricant / *Manufacturer*: **YSEBAERT N.V.**

6 Adresse / *Address*: **Koralenhoeve 13**
2160 Wommelgem
BELGIUM

7 Cet appareil ou système de protection et toute autre variante acceptable de celui-ci sont décrits dans l'annexe de la présente attestation et dans les documents descriptifs cités dans cette annexe.

This equipment or protective system and any acceptable variation thereto is specified in the Annex of this certificate and the descriptive documents therein referred to.

8 L'Ineris, organisme notifié et identifié sous le numéro 0080, conformément aux articles 17 and 21 de la directive 2014/34/UE du parlement européen et du conseil, datée du 26 février 2014, et accrédité par le Cofrac sous le n° 5-0045 dans le cadre de l'activité de certification de produits et services (portée disponible sur www.cofrac.fr) certifie que cet appareil ou système de protection répond aux exigences essentielles de sécurité et de santé en ce qui concerne la conception et la construction des appareils et des systèmes de protection destinés à être utilisés en atmosphères explosibles, décrites en annexe ii de la directive.

Ineris, notified body and identified under number 0080, in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, and accredited by COFRAC under number 5-0045 for certification of products and services (scope of accreditation available on the website www.cofrac.fr), certifies that this equipment or protective system fulfils the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

Les procédures de certification sont disponibles sur www.ineris.fr.
The rules of certification are available on Ineris website on: www.ineris.fr.

Les examens et les essais sont consignés dans le rapport :
The examinations and the tests are recorded in report:

N° **038043**

IM-1915AD - Mise en application le 06 mars 2020

Institut national de l'environnement industriel et des risques
Parc technologique Alata • BP 2 • F-60550 Verneuil-en-Halatte
www.ineris.fr
Établissement public à caractère industriel et commercial • RCS Compiègne B 381 984 921 - Siret 381 984 921 00019 • 7120B - TVA Intracom FR 73 381 984 921

9 Le respect des exigences essentielles de sécurité et de santé est assuré par :

The respect of the Essential Health and Safety Requirements has been assured by:

- la conformité à / *Conformity with:*

  EN IEC 60079-0 : 2018
  EN 60079-1 : 2014
  EN 60079-11 : 2012
  EN 60079-31 : 2014

- les solutions spécifiques adoptées par le fabricant pour satisfaire aux exigences essentielles de sécurité et de santé décrites dans les documents descriptifs /

  Specific solutions adopted by the manufacturer to meet the Essential Health and Safety Requirements described in the descriptive documents

10 Si le signe X est placé à la suite du numéro de l'attestation d'examen UE de type, il indique que cet appareil ou système de protection est soumis à des conditions spéciales d'utilisation, mentionnées dans l'annexe de la présente attestation.

If the sign X is placed after the number of the EU type examination certificate, it indicates that this equipment and protective system is subject to the Specific Conditions of Use, mentioned in the annex of this certificate.

11 Cette attestation d'examen UE de type se rapporte uniquement à la conception, aux examens et essais de l'appareil ou système de protection spécifié conformément à la directive 2014/34/UE. D'autres exigences de cette directive s'appliquent à la fabrication et à la fourniture de cet appareil ou système de protection, celles-ci ne sont pas couvertes par cette attestation.

This EU-Type Examination Certificate relates only to the design, examinations and tests of the specified equipment or protective system in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These requirements are not covered by this certificate.

12 Le marquage de l'appareil ou du système de protection doit contenir :

The marking of the equipment or the protective system shall include the following:

Ex II 2 GD ou/or Ex II 2 (1) GD ou/or Ex II 2 (2) GD ou/or

Ex I M2 ou/or Ex I M2(M1) ou/or Ex I M2(M2)

Verneuil-en-Halatte, 2022-12-02

Le directeur général de l'Ineris
Par délégation
The Chief Executive Officer of Ineris
By delegation

IM-1915AD - Mise en application le 06 mars 2020

13 ANNEXE

15 DESCRIPTION DE L'APPAREIL OU DU SYSTÈME DE PROTECTION :

Les boîtiers électroniques et/ou boîtes de jonction série GUB**, GUB-QL**, GUB-**/EMH-** sont couverts par le Certificat de Composant Ex INERIS 22ATEX9002U pour les Groupes I, IIC et/ou IIIC. Ils sont destinés à contenir des équipements et/ou terminaux électriques et/ou électroniques, définis dans la note technique. Les boîtiers peuvent également contenir des appareils associés de sécurité intrinsèque ayant un type de protection [Ex ia ou ib] et certifiés selon les normes EN 60079-0 / EN 60079-11. Lors de l'utilisation des bornes de sécurité intrinsèque, le mode de protection « ia » ou « ib » peut être spécifié sur la plaque de marquage.

Ces enveloppes peuvent être équipés des accessoires suivants (non couverts par des Certificats de Composant Ex, sans « Marquage Ex » spécifique) :

- Dispositifs de drainage et de respiration ECR…
- Boutons poussoirs PL…
- Voyants lumineux PLD…
- Actuateurs rotatifs PSRC…
- Actuateurs rotatifs SRC…
- Bouton-poussoir PLC-R…

Ces boîtiers peuvent également être équipés de ventilateurs jusqu'à 50 m^3/h et d'une batterie de capacité 1,5 Ah ou moins (voir note technique).

Les enveloppes possèdent les degrés de protection IP66/68 selon la norme EN 60529. La vérification du degré de protection IPX8 correspond à une immersion sous 1,2 mètres d'eau pendant 30 minutes. Le marquage final devra être en accord avec les degrés de protection minimales des accessoires montés sur les coffrets

PARAMETRES RELATIFS A LA SECURITÉ :

Les enveloppes sont prévues pour être utilisées dans une plage de températures ambiantes :

13 ANNEX

15 DESCRIPTION OF THE EQUIPMENT OR THE PROTECTIVE SYSTEM:

*The enclosures of control units and/or junction boxes type GUB**, GUB-QL**, GUB-**/EMH-** are covered by the Ex-Component Certificate INERIS 22ATEX9002U for Group I, IIC and/or IIIC. The control units and/or junction boxes are intended to contain electric and/or electronic equipment and/or terminals, defined in the technical note. The enclosures can also contain intrinsically safe associated apparatus having type of protection [Ex ia or ib] and certified according to the EN 60079-0 / EN 60079-11 standards. When using intrinsic safety terminals, the type of protection "ia" or "ib" could be specified on the marking plate.*

These enclosures can be fitted with the following accessories (not covered by Ex Component certificates, without specific "Ex Marking"):

- *Draining and breathing devices ECR...*
- *Push buttons PL...*
- *Pilot lights PLD...*
- *Rotary actuators PSRC...*
- *Rotary actuators SRC...*
- *Push button PLC-R…*

These enclosures can also be fitted with fans up to 50 m^3/h and battery having capacity 1.5 Ah or less (see technical note).

The enclosures get the degrees of protection IP66/68 according EN 60529 standard. The verification of the degree of protection IPX8 corresponds to an immersion under 1.2 meters of water during 30 minutes. The final marking should be in accordance with the minimum degrees of protection of accessories mounted on the enclosures.

PARAMETERS RELATING TO THE SAFETY:

Enclosures are intended to be used in range of ambient temperatures:

Température/ *Temperature*	**GUB*** **	**GUB-***/ EMH-*** **	**GUB-QL*** **
Ambiante / *Ambient*	-60°C à/*to* +80°C	-55°C à/*to* +80°C	-60°C à +60°C pour les tailles jusqu'au GUB-QL06 -60°C à +60°C pour le GUB-QL07 sans fenêtre -55°C à +60°C pour le GUB-QL07 avec fenêtres / *-60°C to +60°C for sizes up to GUB-QL06* *-60°C to +60°C for GUB-QL07 without window* *-55°C to +60°C for GUB-QL07 with window*

La gamme de température ambiante doit être réduite en fonction des accessoires (couverts par un Certificat de Composant Ex ou pas) montés sur le coffret.

Pour boîtier sans élément de sécurité intrinsèque :

- Tension maximale : 20 kVac ou 20 kVdc
- Courant maximum : 2 000 A
- Fréquence nominale : 0 à 1000 Hz

Les puissances dissipées maximales sont définies dans le Tableau 1 et 2. Pour le Groupe I, les puissances maximales dissipées sont en accord avec ces tableaux mais sans excéder les valeurs pour une classe de température T4.

The range of ambient temperature shall be reduced depending on accessories (covered by Ex Component Certificates or not) fitted on the final product

For enclosure without intrinsic safety element:

- *Maximum voltage: 20 kVac or 20 kVdc*
- *Maximum current: 2 000 A*
- *Rated frequency: 0 to 1000 Hz*

Maximum dissipated powers are defined in the Table 1 and 2. For Group I, the maximum dissipated powers are in accordance with these tables but not exceeding the values for temperature class T4.

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Pour boîtier avec élément de sécurité intrinsèque :

La température ambiante minimale doit être conforme aux composants SI installés à l'intérieur des boîtiers (barrières, terminaux ...)

- Tension maximale pour les éléments « SI » : 500 V

Les puissances dissipées maximales sont définies dans le Tableau 1 et 2 pour les enveloppes avec sondes thermiques pour le Groupe II et Groupe III. Pour le Groupe I, les puissances maximales dissipées des enveloppes avec sondes thermiques sont en accord avec le Tableau 1 ou 2 mais sans excéder les valeurs pour une classe de température T4.

Les puissances maximales dissipées sont définies le Tableau 3 pour les enveloppes sans sondes thermiques du Groupe I, II et Groupe III.

Le seuil maximal de sonde thermique doit être :

For enclosure with intrinsic safety element:

The minimum ambient temperature must be in accordance with the IS components installed inside the enclosures (barriers, terminals...)

- *Maximum voltage for "IS" elements: 500 V*

Maximum dissipated powers are defined in the Table 1 and Table 2 for enclosures with thermal probes for Group II and Group III. For Group I, the maximum dissipated powers for enclosures with thermal probes are in accordance with the Table 1 or 2 but not exceeding the values for temperature class T4.

Maximum dissipated powers are defined in the Table 3 for enclosures without thermal probes for Group I, II and Group III.

The maximum threshold of thermal probe shall be:

Température ambiante / *Ambient Temperature*	**Température ambiante pour élément SI / *Ambient Temperature of the IS element***	**Seuil de coupure pour les sondes thermique / *Threshold of release of the thermal probe***
40°C et/*and* 50°C	≤ 60°C	55°C ± 5°C
	≤ 70°C	65°C ± 5°C
	≤ 80°C	75°C ± 5°C
	≤ 85°C	80°C ± 5°C
55°C et/*and* 60°C	≤ 70°C	65°C ± 5°C
	≤ 80°C	75°C ± 5°C
	≤ 85°C	80°C ± 5°C

Pour les enveloppes avec voyants lumineux PLD :

Ces versions sont destinées à être utilisées dans une plage de températures ambiantes de -50 ° C à + 60 ° C.

Les voyants PLD peuvent être installées sur des enveloppes ayant une classe de température maximale T4/T135 ° C.

- Puissance nominale de la lampe à incandescence : ≤5 W
- Puissance dissipée maximale de la lampe LED : ≤ 3 W

Liste des Composants Ex pouvant être installés sur les enveloppes : Voir Tableau 3 à la fin du certificat.

For enclosure with pilot lights PLD:

These versions are intended to be used in range of ambient temperatures from -50°C to +60°C.

Pilot lights PLD can be installed on enclosures having temperature class maximum T4/T135°C.

- *Nominal incandescent lamp power: ≤ 5 W*
- *Maximum LED lamp dissipated power: ≤ 3 W*

List of the Ex-components intended to be installed on the enclosures: See Table 3 at the end of the certificate.

Codification des différents types / *Codification of the different types*:

GUB **

Séries coffrets (couvercle fileté) / *Enclosures series (threaded lid)*

Tailles coffrets * / *Enclosure size* *

* (0; 01; 02; 03; 04;05; 06; 07) Aluminium-Fonte / *Aluminium-Cast Iron*
* (01; 02; 03; 04; 05; 06; 07) Acier inoxydable – Acier carbone / *Stainless steel-Carbon steel*

GUB-QL **

Séries coffrets (couvercle fileté) / *Enclosures series (threaded lid)*

Tailles coffrets * / *Enclosure size* *

* (01; 02; 03; 04; 05; 06; 07) Aluminium-Fonte / *Aluminium-Cast Iron*
* (01; 03; 04; 05; 06; 07) Acier inoxydable – Acier carbone / *Stainless steel-Carbon steel*

GUB-**/ EMH-**

Séries coffrets / *Enclosures series*

GUB-03/EMH-160 Aluminium-Fonte-Acier inoxydable – Acier carbone
Aluminum-Cast Iron - Stainless steel- Carbon steel
GUB-04/EMH-175 Aluminium-Fonte-Acier inoxydable – Acier carbone
Aluminum-Cast Iron - Stainless steel- Carbon steel
GUB-05/EMH-200 Aluminium-Fonte-Acier inoxydable – Acier carbone
Aluminum-Cast Iron - Stainless steel- Carbon steel
GUB-06/EMH-230 Aluminium-Fonte-Acier inoxydable – Acier carbone
Aluminum-Cast Iron - Stainless steel- Carbon steel

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MARQUAGE :

Le marquage doit être lisible et indélébile ; il doit comporter les indications suivantes :

A- <u>Coffrets du Groupe II et/ou Groupe III :</u>

YSEBAERT N.V.
B-2160 Wommelgem
GUB... (1)
INERIS 22ATEX0033X
(Numéro de série)
(Année de construction)
⟨Ex⟩ II 2 G D
Ex db (7) IIC T(2) Gb
Ex tb (7) IIIC T(2) Db
⟨Ex⟩ II 2 (1) G D
Ex db [ia Ga] (7) IIC T(2) Gb
Ex tb [ia Da] (7) IIIC T(2) Db
⟨Ex⟩ II 2 (2) G D
Ex db [ib] (7) IIC T(2) Gb
Ex tb [ib] (7) IIIC T(2) Db
IP(6)
T. Amb : (3)
T. Câble : (4)
AVERTISSEMENTS :
NE PAS OUVRIR SI UNE ATMOSPHERE EXPLOSIVE EST PRESENTE
RISQUE DE CHARGE ÉLECTROSTATIQUE POTENTIEL – VOIR INSTRUCTIONS (5)
ENTREES DE CABLE : VOIR INSTRUCTIONS

(1) Le type est complété par des chiffres et/ou des lettres correspondant aux variantes d'exécution : Voir « PARAMETRES RELATIFS A LA SECURITE »

(2) Les classes de température sont définies dans les tableaux ci-dessus en fonction des puissances dissipées et de la température ambiante maximale

(3) Voir paramètres relatifs à la sécurité

(4) Le Tcâble est défini dans les tableaux ci-dessus en fonction des puissances dissipées maximales et de la température ambiante maximale

(5) Avertissement à ajouter lorsque :

- l'épaisseur de peinture non conductrice appliquée sur le coffret est > 0,2 mm, ou
- les matériaux individuels non conducteurs (étiquettes) appliqués sur les boîtiers peints ont une surface exposée chargeable > 2 000 mm^2 , ou
- des matériaux individuels non conducteurs (étiquettes) appliqués sur des boîtiers non peints (surface conductrice mise à la terre) ont une surface exposée chargeable > 8 000 mm^2.

(6) Selon le degré de protection minimum des accessoires montés sur le coffret.

(7) Le mode de protection « ia » ou « ib » peut être ajouté en fonction de la configuration finale.

MARKING:

Marking has to be readable and indelible; it has to include the following indications:

A- <u>Enclosures for Group II and/or Group III:</u>

YSEBAERT N.V.
B-2160 Wommelgem
GUB... (1)
INERIS 22ATEX0033X
(Serial Number)
(Year of Construction)
⟨Ex⟩ *II 2 G D*
Ex db (7) IIC T(2) Gb
Ex tb (7) IIIC T(2) Db
⟨Ex⟩ *II 2 (1) G D*
Ex db [ia Ga] (7) IIC T(2) Gb
Ex tb [ia Da] (7) IIIC T(2) Db
⟨Ex⟩ *II 2 (2) G D*
Ex db [ib] (7) IIC T(2) Gb
Ex tb [ib] (7) IIIC T(2) Db
IP(6)
T. Amb: (3)
Tcable: (4)
WARNINGS:
DO NOT OPEN IF AN EXPLOSIVE ATMOSPHERE IS PRESENT
POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS (5)
CABLE ENTRIES: SEE INSTRUCTIONS

(1) Type is completed by numbers and/or letters corresponding to alternatives of execution: see "PARAMETERS RELATING TO THE SAFETY".

(2) The temperature classes are defined in above Tables according to the maximum dissipated powers and the maximum ambient temperature

(3) See parameters relating to safety

(4) Tcable is defined in above Tables according to the maximum dissipated powers and the maximum ambient temperature

(5) Warning to be added when:

- *thickness of not conductive paint applied on the enclosure is > 0.2 mm, or*
- *not conductive individual materials (labels) applied on painted enclosures have exposed chargeable area > 2 000 mm^2, or*
- *not conductive individual materials (labels) applied on unpainted (conductive earthed surface) enclosures have exposed chargeable area > 8 000 mm^2.*

(6) In accordance with the minimum degrees of protection of accessories mounted on the enclosures.

(7) Type of protection "ia" or "ib" could be added depending on the final configuration.

B- Coffrets du Groupe I :

YSEBAERT N.V.
B-2160 Wommelgem
GUB…(1)
INERIS 22ATEX0033X
(Numéro de série)
(Année de construction)
Ex I M2
Ex db (6) I Mb
Ex I M2(M1)
Ex db [ia Ma] (6) I Mb
Ex I M2(M2)
Ex db [ib] (6) I Mb
IP(5)
T. Amb: (2)
Tcable: (3)
AVERTISSEMENTS :
NE PAS OUVRIR SI UNE ATMOSPHERE EXPLOSIVE EST PRESENTE
RISQUE DE CHARGE ÉLECTROSTATIQUE POTENTIEL – VOIR INSTRUCTIONS (4)
ENTREES DE CABLE : VOIR INSTRUCTIONS

(1) Le type est complété par des chiffres et/ou des lettres correspondant aux variantes d'exécution : Voir « PARAMETRES RELATIFS A LA SECURITE »

(2) Voir paramètres relatifs à la sécurité

(3) Le Tcâble est défini dans les tableaux ci-dessus en fonction des puissances dissipées maximales et de la température ambiante maximale

(4) Avertissement à ajouter lorsque :
- l'épaisseur de peinture non conductrice appliquée sur l'enceinte est > 2 mm , ou
- les matériaux individuels non conducteurs (étiquettes) appliqués sur les boîtiers peints ont une surface exposée chargeable > 10 000 mm^2, ou
- des matériaux individuels non conducteurs (étiquettes) appliqués sur des boîtiers non peints (surface conductrice mise à la terre) ont une surface exposée chargeable > 40 000 mm^2.

(5) Selon le degré de protection minimum des accessoires montés sur le coffret.

(6) Le mode de protection « ia » ou « ib » peut être ajouté en fonction de la configuration finale

L'ensemble du marquage peut être réalisé dans la langue du pays d'utilisation.

L'appareil ou le système de protection doit aussi porter le marquage normalement prévu par les normes de construction qui le concernent.

EXAMENS ET ESSAIS INDIVIDUELS :

Conformément au § 16.1 de la norme EN 60079-1, chaque appareil ou partie de l'appareil (operateurs…) ci-dessus défini doit avoir subi avec succès, avant livraison, une épreuve de surpression statique pendant au moins 10 secondes sous une pression en accord avec les valeurs spécifiées dans le certificat INERIS 22ATEX9002U.

B- Enclosures for Group I:

YSEBAERT N.V.
B-2160 Wommelgem
GUB… (1)
INERIS 22ATEX0033X
(Serial Number)
(Year of Construction)
Ex *I M2*
Ex db (6) I Mb
Ex *I M2(M1)*
Ex db [ia Ma] (6) I Mb
Ex *I M2(M2)*
Ex db [ib] (6) I Mb
IP(5)
T. Amb: (2)
Tcable: (3)
WARNINGS:
DO NOT OPEN IF AN EXPLOSIVE ATMOSPHERE IS PRESENT
POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS (4)
CABLE ENTRIES: SEE INSTRUCTIONS

(1) Type is completed by numbers and/or letters corresponding to alternatives of execution: see "PARAMETERS RELATING TO THE SAFETY".

(2) See parameters relating to safety

(3) Tcable is defined in above Tables according to the maximum dissipated powers and the maximum ambient temperature

(4) Warning to be added when:
- *thickness of not conductive paint applied on the enclosure is > 2 mm, or*
- *not conductive individual materials (labels) applied on painted enclosures have exposed chargeable area > 10 000 mm^2, or*
- *not conductive individual materials (labels) applied on unpainted (conductive earthed surface) enclosures have exposed chargeable area > 40 000 mm^2.*

(5) In accordance with the minimum degrees of protection of accessories mounted on the enclosures.

(6) Type of protection "ia" or "ib" could be added depending on the final configuration.

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:

In accordance with clause 16.1 of the EN 60079-1 standard each piece of equipment or part of equipment (operators..) defined above has to have successfully passed, before delivery, an overpressure test during at least 10 seconds under a pressure in accordance with the values specified in the certificate INERIS 22ATEX9002U.

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16 DOCUMENTS DESCRIPTIFS :

Les documents descriptifs cités ci-après, constituent la documentation technique de l'appareil, objet de la présente attestation.

16 DESCRIPTIVE DOCUMENTS:

The descriptive documents quoted hereafter constitute the technical documentation of the equipment, subject of this certificate.

Titre / *Title*	Réf. / *Ref.*	Rév. / *Rev.*	Date / *Date*
MARKING LABEL GUB** ; GUB-QL** ; GUB-** / EMH-** MARKING DETAILS	GUB TAG	0	2022-03-01
INSTRUCTION NOTE	TN2103 Annex A	0	2022-03-01

17 CONDITIONS SPÉCIALES D'UTILISATION :

Conditions spéciales d'utilisation inhérentes aux coffrets type "GUB**, GUB-QL** et GUB-**/EMH-" couverts par le certificat INERIS 22ATEX9002U:

- Lors de l'installation, pour le groupe I, l'utilisateur devra tenir compte du fait que le matériel n'a subi qu'un choc mécanique faible.
- Lors d'une utilisation dans une atmosphère explosive du Groupe I, l'exposition des coffrets avec hublots aux agents chimiques tels que des huiles, des graisses et liquides hydrauliques doit être exclue.
- La longueur des joints antidéflagrants est supérieure aux valeurs spécifiées dans les tableaux de la norme EN 60079-1. Les interstices des joints antidéflagrants sont inférieurs aux valeurs spécifiées dans les tableaux de la norme EN 60079-1. Contacter le fabricant pour toutes réparations des joints antidéflagrants.

Conditions spéciales d'utilisation inhérentes aux raccords trois-pèces type "BMM ..; BFF ..; BMF" couverts par le certificat IMQ 15ATEX009U :

- Le couplage des raccords de raccordement trois pièces entre les enveloppes antidéflagrantes "Ex-d" et les conduits de câbles doit être effectué comme indiqué dans les documents annexés à ce certificat afin de ne pas compromettre le mode de protection des appareils électriques sur lesquels les éléments de raccordement trois-pièces sont montés. Voir le certificat IMQ 15ATEX009U pour plus de détails.
- L'installation du raccord doit être effectuée conformément aux instructions du fabricant pour maintenir le degré de protection et conformément à la norme EN 60079-14.

Conditions spéciales d'utilisation inhérentes aux unités de commandes et signalisations type "DP/DFP et RS/RX" couverts par le certificat INERIS 14ATEX9009U:

- Les joints antidéflagrants ont une longueur supérieure aux valeurs des tableaux de la norme EN 60079-1.
- Pour le groupe I, l'utilisateur devra tenir compte du fait que le composant Ex n'a subi qu'un choc mécanique faible et les parties non métalliques n'ont pas été soumises aux tests de résistance aux agents chimiques.

Conditions spéciales d'utilisation inhérentes aux raccords scellés type "NPS - CP - TP..." couverts par le certificat CESI 01ATEX080U:

- Les câbles de raccordement des traversées d'étanchéité doivent être raccordés à l'intérieur d'enveloppes conformes à l'un des modes de protection prévus par la norme EN 60079-0, section 1

17 SPECIFIC CONDITIONS OF USE:

*Specific conditions of use referring to the enclosures "GUB**, GUB-QL** and GUB-**/EMH-" covered by the certificate INERIS 22ATEX9002U:*

- *During the installation, for Group I, the user will take into consideration that the equipment underwent only a shock corresponding to an energy of a low risk.*
- *During use in explosive atmosphere of Group I, the exposure of the enclosures with windows to specific chemical agents as oils, greases and hydraulic liquids must be excluded.*
- *The width of the flameproof joints is superior to those specified in tables of EN 60079-1 standard. The gaps and diametrical clearances of flameproof joints are less than the values specified in the tables of the EN 60079-1 standard. To contact the original manufacturer for any repairs of the flameproof joints.*

Specific conditions of use referring to the three pieces unions type "BMM ..; BFF ..; BMF" covered by the certificate IMQ 15ATEX009U:

- *The coupling of the three-pieces connection fittings with flameproof enclosures "Ex-d" and cable conduits shall be made as indicated in the documents annexed to this certificate in order not to jeopardize the type of protections of the electrical apparatus on which the three-pieces connection fittings are mounted. See certificate IMQ 15ATEX009U for details.*
- *The fitting installation shall be done according to safety manufacturer instructions to maintain degree of protection, and according to standard EN 60079-14.*

Specific conditions of use referring to the Command and signalling unit type "DP/DFP and RS/RX" covered by the certificate INERIS 14ATEX9009U:

- *The widths of the flameproof joints are greater than those specified in tables of EN 60079-1 standard.*
- *For group I, the user will take into consideration that the Ex-component underwent only a shock corresponding to an energy of a low risk, and the non-metallic parts haven't been submitted to resistance to chemical agents tests.*

Specific conditions of use referring to the Sealing Nipples type "NPS - CP - TP..." covered by the CESI 01ATEX080U:

- *The connection cables of the sealing bushings should be connected inside enclosures conforming to one of the types of protection foreseen by the EN 60079-0 standard, section 1*

- Les traversées scellées doivent être fixées à l'équipement électrique de manière à empêcher toute rotation et tout desserrage accidentel.
- Si les traversées scellées NPS** sont destinées à être utilisées avec le mode de protection « Ex tb », les perçages dans lesquels les traversées de câbles sont montées doivent être convenablement scellés pour maintenir le degré de protection du coffret. A cet effet, le bon positionnement des joints (pour les filetages cylindriques) ou l'application du produit d'étanchéité sur les filetages (pour les filetages coniques) doit être effectué conformément aux instructions du fabricant.

Conditions spéciales d'utilisation inhérentes aux opérateurs type "PM10X, EFI*, EFP*, EFL*PC* et EFPL3" couverts par le certificat INERIS 13ATEX9017U:

- La longueur des joints antidéflagrants est supérieure aux valeurs spécifiées dans les tableaux de la norme EN 60079-1.
- Lors de l'installation l'utilisateur devra tenir compte du fait que le voyant type EFL*PC* n'a subi qu'un choc mécanique faible à 2J.

Conditions spéciales d'utilisation inhérentes aux adaptateurs de couplage type " EM et NP " couverts par le certificat ICEPI 14ATEX03C009U:

- Pour garantir les degrés de protection IP66, les machons filetés et les mamelons avec filetage cylindrique doivent être installés avec une étanchéité supplémentaire (frein filets) sur au moins deux filets.

Conditions spéciales d'utilisation inhérentes aux mamelons scellés et aux traversées scellées type " GN and TL " couverts par le certificat ICEPI 14ATEX03C009U:

- L'association des mamelons scellés et des traversées scellées avec les coffrets doit être réalisée comme indiqué par le fabricant dans la notice d'instructions, pour ne pas compromettre les modes de protections.

Les instructions d'utilisation doivent être complétées par celles spécifiées dans la notice d'instructions du fabricant et des composants Ex constitutifs de l'équipement final.

- *The sealing bushings shall be fixed to the electrical apparatus in such a way that rotation and accidental loosening will be prevented.*
- *If the sealing bushings NPS** are intended for use with dust protection "Ex tb" the holes into which cable bushings are mounted shall be suitably sealed to maintain the ingress protection rating of the enclosure. To this scope the correct positioning of the gaskets (for cylindrical threads) or the application of sealant on the threads (for tapered threads), shall be done as indicated in the manufacturer instruction.*

Specific conditions of use referring to the Operators type "PM10X, EFI, EFP*, EFL*PC* and EFPL3" covered by the certificate INERIS 13ATEX9017U:*

- *The widths of the flameproof joints are superior than those specified in tables of EN 60079-1 standard.*
- *During the installation, the user will take into consideration that pilot light type EFL*PC* underwent only a shock corresponding to an energy of a low risk at 2J*

Specific conditions of use referring to the Nipple coupling type "EM and NP" covered by the certificate ICEPI 14ATEX03C009U:

- *To grant the degree of protection IP66, the threaded coupling and nipples with cylindrical threads shall be fitted with additional sealing (thread locker) at least on two threads.*

Specific conditions of use referring to Sealed nipples and sealed bushing type "GN and TL" covered by the certificate ICEPI 14ATEX03C009U:

- *The coupling of the sealed nipples and multicore bushings with the enclosures shall be made as indicated by the manufacturer in the instructions of use, to don't jeopardize their type of protection.*

The specific conditions of uses must be completed by those stipulated in the instructions manuals of the manufacturer and of each Ex Component fitted on the final product.

18 EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE :

Le respect des exigences essentielles de sécurité et de santé est assuré par :

- La conformité aux normes listées au paragraphe (9).
- L'ensemble des dispositions adoptées par le constructeur et décrites dans les documents descriptifs.

19 REMARQUES :

Néant.

18 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS:

The respect of the Essential Health and Safety Requirements is ensured by:

- *Conformity to the standards quoted in clause (9).*
- *All provisions adopted by the manufacturer and defined in the descriptive documents.*

19 REMARKS:

None.

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TABLEAUX / TABLES

TABLEAU 1 (PREMIERE PARTIE) / *TABLE 1 (FIRST PART):*

GUB et GUB-QL** sans hublots, sans éléments de SI ou avec éléments de SI protégés par sondes thermiques /**
GUB** and GUB-QL** without windows, and without or with IS apparatus when IS apparatus is protected by thermal probes.
(W)

Classe de température / *Temperature class*	**T6/T85°C**					**T5/T100°C**					
Température ambiante / *Ambient temperature:*	**40°C**	**50°C**	**55°C**	**60°C**	**70°C(*)**	**40°C**	**50°C**	**55°C**	**60°C**	**70°C(*)**	**80°C(*)**
GUB0	34	24	20	15	5	48	39	34	29	20	10
GUB01 ; GUB-QL01	44	31	25	19	7	62	50	44	37	25	13
GUB02; GUB-QL02	56	40	3s2	25	9	79	64	56	48	32	16
GUB03; GUB-QL03	71	50	41	31	11	100	80	71	60	41	20
GUB04; GUB-QL04	91	64	52	40	14	127	103	91	77	52	26
GUB05; GUB-QL05	114	81	65	50	17	160	129	114	96	65	33
GUB06; GUB-QL06	151	108	87	67	23	213	172	151	128	87	44
GUB07; GUB-QL07	399	284	230	176	61	561	453	399	338	230	115
Tcable	N/A		75°C		80°C	80°C		85°C		95°C	

TABLEAU 1 (DEUXIEME PARTIE) / *TABLE 1 (SECOND PART):*

GUB et GUB-QL** sans hublots, sans éléments de SI ou avec éléments de SI protégés par sondes thermiques /**
GUB** and GUB-QL** without windows, and without or with IS apparatus when IS apparatus is protected by thermal probes.
(W)

Classe de température / *Temperature class*	**T4/T135°C**						**T3/T200°C**					
Température ambiante / *Ambient temperature:*	**40°C**	**50°C**	**55°C**	**60°C**	**70°C(*)**	**80°C(*)**	**40°C**	**50°C**	**55°C**	**60°C**	**70°C(*)**	**80°C(*)**
GUB0	81	72	67	62	52	43	143	133	129	124	114	105
GUB01 ; GUB-QL01	105	93	87	81	68	56	185	172	166	161	148	136
GUB02; GUB-QL02	135	118	111	103	87	72	237	221	213	205	189	174
GUB03; GUB-QL03	163	149	139	130	109	90	298	277	268	258	238	218
GUB04; GUB-QL04	216	190	178	166	140	115	381	355	342	330	304	279
GUB05; GUB-QL05	272	239	223	208	175	144	478	445	430	414	381	351
GUB06; GUB-QL06	362	318	298	277	234	193	637	593	573	552	508	467
GUB07; GUB-QL07	953	838	784	730	615	507	1677	1562	1508	1454	1339	1231
Tcable	100°C		105°C		115°C		140°C		145°C		155°C	

(*) Les températures ambiantes +70°C et +80°C sont autorisées pour les coffrets type GUB** exceptés GUB-QL** /
*Ambient temperature +70°C and +80°C are allowed for enclosures type GUB** except GUB-QL***

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TABLEAU 2 (PREMIERE PARTIE) / *TABLE 2 (FIRST PART):*

GUB-QL07 et GUB-/EMH-** avec hublots, et sans éléments de SI ou avec éléments de SI protégés par sondes thermiques / *GUB-QL07 and GUB-**/EMH-** with windows, and without or with IS apparatus when IS apparatus is protected by thermal probes***
(W)

Classe de température / *Temperature class*	**T6/T85°C**					**T5/T100°C**					
Température ambiante / *Ambient temperature:*	**40°C**	**50°C**	**55°C**	**60°C**	**70°C(*)**	**40°C**	**50°C**	**55°C**	**60°C**	**70°C(*)**	**80°C(*)**
GUB-03/EMH-160	71	50	41	31	11	100	80	71	60	41	20
GUB-04/EMH-175	91	64	52	40	14	127	103	91	77	52	26
GUB-05/EMH-200	114	81	65	50	17	160	129	114	96	65	33
GUB-06/EMH-230	151	108	87	67	23	213	172	151	128	87	44
GUB-QL 07	399	284	230	176	-	561	453	399	338	-	-
Tcable	N/A		75°C		80°C	80°C		85°C		95°C	

TABLEAU 2 (DEUXIEME PARTIE) / *TABLE 2 (SECOND PART):*

GUB-QL07 et GUB-/EMH-** avec hublots, et sans éléments de SI ou avec éléments de SI protégés par sondes thermiques /**
GUB-QL07 and GUB-**/EMH-** with windows, and without or with IS apparatus when IS apparatus is protected by thermal probes
(W)

Temperature class :	**T4/T135°C**					
Ambient temperature:	**40°C**	**50°C**	**55°C**	**60°C**	**70°C(*)**	**80°C(*)**
GUB-03/EMH-160	133	121	115	109	96	84
GUB-04/EMH-175	170	155	147	140	123	107
GUB-05/EMH-200	214	195	185	175	154	135
GUB-06/EMH-230	285	259	246	234	205	180
GUB-QL 07	751	683	649	615	-	-
Tcable	100°C		105°C		115°C	

(*) Les températures ambiantes +70°C et +80°C sont autorisées pour les coffrets type GUB**/EMH-*** exceptés GUB-QL07 / *Ambient temperature +70°C and +80°C are allowed for enclosures type GUB**/EMH-*** except GUB-QL 07*

TABLEAU 3 / *TABLE 3 :*

Puissances maximales dissipées pour GUB, GUB-QL** et GUB-**/EMH-** avec ou sans hublots et avec éléments de SI sans sondes thermiques de protection /**
Maximum dissipated power for GUB**, GUB-QL** and GUB-**/EMH-** with or without windows and with IS apparatus without thermal probes protection
(W)

Type de coffret / *Type of enclosure*	**Température ambiante des éléments SI / *Ambient temperature of the IS element***	**T6 pour ambiante / *T6 for ambient* (W)**			
		+40°C	**+50°C**	**+55°C**	**+60°C**
GUB0	+60°C	10	3	N/A	N/A
	+70°C	17	10	6	3
	+80°C	25	17	13	10
	+85°C	28	21	17	13
GUB01 GUB-QL 01	+60°C	13	4	N/A	N/A
	+70°C	22	13	8	4
	+80°C	32	22	17	13
	+85°C	36	27	22	17
GUB02 GUB-QL 02	+60°C	17	5	N/A	N/A
	+70°C	29	17	10	5
	+80°C	41	29	22	17
	+85°C	46	34	29	22
GUB03 GUB-QL 03 GUB-03/EMH-160	+60°C	21	6	N/A	N/A
	+70°C	36	21	13	6
	+80°C	51	36	28	21
	+85°C	58	43	36	28
GUB04 GUB-QL 04 GUB-04/EMH-175	+60°C	27	8	N/A	N/A
	+70°C	46	27	17	8
	+80°C	65	46	36	27
	+85°C	74	55	46	36
GUB05 GUB-QL 05 GUB-05/EMH-200	+60°C	34	10	N/A	N/A
	+70°C	58	34	21	10
	+80°C	82	58	45	34
	+85°C	93	69	58	45
GUB06 GUB-QL 06 GUB-06/EMH-230	+60°C	45	13	N/A	N/A
	+70°C	77	45	28	13
	+80°C	109	77	60	45
	+85°C	124	92	77	60
GUB07 GUB-QL 07	+60°C	118	34	N/A	N/A
	+70°C	203	118	73	34
	+80°C	287	203	158	118
	+85°C	327	242	203	158

TABLEAU 4 : Liste des composants / TABLE 4: *List of the component*			
Type de composant / *Type of component*	**Constrcuteur / *Manufacturer***	**Numéro de certificat / *Certificate number***	**Nomes EN /*EN Standards***
Coffrets / *Enclosures*	TECHNOR ITALSMEA	INERIS 21ATEX9004U	EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-31:2014
Coffrets / *Enclosures*	TECHNOR ITALSMEA S.p.A	INERIS 22ATEX9002U	EN IEC 60079-0 : 2018 EN 60079-1 :2014 EN 60079-31 :2014
Raccord 3 pieces / *Three pieces unions*	GADDI GIANFAUSTO ANTIDEFLAGRANTI S.r	IMQ 15ATEX009U	EN IEC 60079-0 : 2018 EN 60079-1 :2014 EN 60079-31 :2014
Dispositif de respiration et drainage type FT/VS 61090... / *Breathing or draining devices type FT/VS 61090...*	OFFICINE MECCANICHE M.A.M	INERIS 12ATEX9013U	EN IEC 60079-0 : 2018 EN 60079-1 :2014 EN 60079-31 :2014
Unités de commande et de signalisation type DP/DFP and RS/RX / *Command and signaling units type DP/DFP and RS/RX*	COELBO	INERIS 14ATEX9009U	EN IEC 60079-0 : 2018 EN 60079-1 :2014 EN 60079-31 :2014
Operateurs type PM10X, EFP*, EFL*PC* et EFPL3 / *Operators type PM10X, EFP*, EFL*PC* and EFPL3*	BARTEC F.N. S.R.L	INERIS 13ATEX9017U	EN IEC 60079-0 : 2018 EN 60079-1 :2014 EN 60079-31 :2014
Conduit flexible type TFII* / *Flexible conduit type TFII**	BARTEC F.N. S.R.L	INERIS 12ATEX9012U	EN 60079-0 : 2012/A11 :2013 (1) EN 60079-1 :2014 EN 60079-31 :2014
Traversées scellées pour conducteur type NPS, TP, NCS, CP et LPS / *Conductor sealing bushings type NPS, TP, NCS, CP and LPS*	CORTEM S.p.A.	CESI 01ATEX080U	EN 60079-0 : 2012/A11 :2013 (1) EN 60079-1 :2014 EN 60079-31 :2014
Bouchons, réducteurs, adaptateurs / *Stopping plugs, reducers, adaptors*	TECHNOR ITALSMEA S.p.A	INERIS 04ATEX9006U	EN 60079-0:2009 (1) EN 60079-1:2007 (1) EN 60079-31:2009 (1)
Mamelons de couplage / *Nipples couplings*	GADDI	ICEPI 14ATEX 03C009U	EN 60079-0:2009 (1) EN 60079-1:2007 (1) EN 60079-31:2009 (1)
Mamelons et traversées scellées / *Sealed nipples and bushings*	COELBO	ICEPI 10ATEX03C006U	EN 60079-0 : 2012/A11 :2013 (1) EN 60079-1:2007 (1) EN 60079-31:2009 (1)

(1) Non concerné par les modifications techniques majeures des dernières éditions de normes / *Not concerned by the major technical changes of the last editions of the standards.*

IM-1915AD - Mise en application le 06 mars 2020