Base Load Power Hub (BLPH)

LIGHTING FIXTURE

EQUIPMENT MANUFACTURERS RECORD BOOK

Document Number: 1724001290-QC-DB-00007

Document Class: 2

ROSETTI MARINO

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4	APPROVAL NOT REQUIRED

NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Date

Rosetti Marino SpA Ravenna - Italy

Nov. 2nd 2024

Rev.	Date	Description	Prepared	Reviewed	Approved
01	19/11/24	Approved for Construction (AFC)	M. Meneguzzi	S. Ziani	A. Della Ricca
00	11/11/24	Issue for Review (IFR)	M. Meneguzzi	S. Ziani	A. Della Ricca

Base Load Power Hub (BLPH)

LIGHTING FIXTURE

EQUIPMENT MANUFACTURERS RECORD BOOK LIGHTING - INDEX

Document Number: 1724001290-QC-LIS-00010

Document Class: 2

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4	APPROVAL NOT REQUIRED

NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
ROSETTI MARINO S.p.A. Shipyard Repair Quality Control Dept.	07/11/24

Rev.	Date	Description	Prepared	Reviewed	Approved
01	21/10/2024	Accepted for Construction (AFC)	M. MENEGUZZI	S. ZIANI	A. DELLA RICCA
00	31/07/2024	Issue for Review (IFR)	M. MENEGUZZI	S. ZIANI	A. DELLA RICCA

CORTEM GROUP
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SH.	DESCRIPTION	REVISIONS							
		00	01						
1	Cover	X	X						
2	Table of Contents	X	X						
3	Revision / Change Log / Hold List	X	X						
4	References	X	X						
5	EQUIPMENT MANUFACTURERS RECORD BOOK LIGHTING - INDEX	X	X						

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Rev.	Description
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- Test Record. 98
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PART 1 – DESIGN DOSSIER

- List:
  - Documents register – Doc. No. 1724001290-MD-LIS-00001

Base Load Power Hub (BLPH)

LIGHTING FIXTURE

SUPPLIER MASTER INFORMATION REGISTER

Document Number: 1724001290-MD-LIS-00001

Document Class: 3

ROSETTI MARINO

1	NO COMMENTS - APPROVED - WORK MAY PROCEED
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3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

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Sign	Date
	25/09/2024

Rev.	Date	Description	Prepared	Reviewed	Approved
02	24/09/2024	Issue for Information (IFI)	M. MENEGUZZI	S. ZIANI	A. DELLA RICCA
01	30/07/2024	Issue for Information (IFI)	M. MENEGUZZI	S. ZIANI	A. DELLA RICCA
00	19/07/2024	Issue for Information (IFI)	M. MENEGUZZI	S. ZIANI	A. DELLA RICCA

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		00	01	02					
1	Cover	X	X	X					
2	Table of Contents	X	X	X					
3	Revision / Change Log / Hold List	X	X	X					
4	References	X	X	X					
5	SMIR	X	X	X					

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Revision / Change Log

Rev.	Description
00	Issue for Information (IFI)
01	Issue for Information (IFI)
02	Issue for Information (IFI)

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SMIR - REGISTRO DOCUMENTI / *SMIR - SUPPLIER MASTER INFORMATION REGISTER*

	Ordine n°/*order nr.*	1724001290		Fornitore/*Supplier*:	CORTEM SPA							
	data / *dated:*	24/09/2024		Codice F./ *S. Code:*								
	Commessa / *Job:*	123A90		Indirizzo/ *address* :	Via Aquileia, 10 - 34070 Villesse (Go) Italy							
	Descrizione / *Description*	LIGHTING FIXTURE		Persona di riferim./ *contact person:*	pmd@cortemgroup.com							
	Macrofase / *Phase*											

Pos.	Document nr. Client (1)	Doc Client Rev. (1)	Document nr. Internal	Document nr. Internal Rev. (2)	Document nr. Supplier (3)	Doc Supplier Rev. (3)	Titolo Documento / *Document title* (4)	Disciplina / *Discipline* (5)	Blocco Classe / *Class Block (6)*	Docum. Format (7)	first issue date (8)	Third Party Approval (I/A)	Design KEY Document	Document Approval (I/A)
							CONTROL DOCUMENTS							
1	1724001290-MD-LIS-00001	00	1724001290-MD-LIS-00001	00	VDL-2693	00	SUPPLIER MASTER INDEX REGISTER (SMIR) - LIGHTING FIXTURE	ELE		A0	30/09/2024		N	I
							QUALITY DOCUMENTS							
2	1724001290-QC-ITP-00002	00	1724001290-QC-ITP-00002	00	ITP-2693	00	INSPECTION AND TEST PLAN- LIGHTING FIXTURE	QUA		A4	30/09/2024		N	A
							ENGINEERING DOCUMENTS							
3	1724001290-EL-DA-00003	00	1724001290-EL-DA-00003	00	GAD-2693	00	GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS (INCLUDING TERMINAL SCHEDULE) - LIGHTING FIXTURE	ELE		A4	30/09/2024		Y	A
4	1724001290-EL-DS-00004	00	1724001290-EL-DS-00004	00	CAT-2693	00	EQUIPMENT TECHNICAL DATA SHEET - LIGHTING FIXTURE	ELE		A4	30/09/2024		N	A
5	1724001290-EL-LIS-00005	00	1724001290-EL-LIS-00005	00	ATEX-2693	00	ATEX REGISTER- LIGHTING FIXTURE	QUA			30/09/2024		N	A
6	1724001290-EL-LIS-00006	00	1724001290-EL-LIS-00006	00	VAR-2693	00	VENDOR ASSET REGISTER - LIGHTING FIXTURE	DATA			30/09/2024		N	A
7	1724001290-QC-LIS-00010	00	1724001290-QC-LIS-00010	00	MRBI-2693	00	EQUIPMENT MANUFACTURERS RECORD BOOK- LIGHTING FIXTURE - INDEX	QUA			30/09/2024		N	A
8	1724001290-QC-DB-00007	00	1724001290-QC-DB-00007	00	MRB-2693	00	EQUIPMENT MANUFACTURERS RECORD BOOK- LIGHTING FIXTURE	QUA			30/09/2024		N	A
							SPARES & MAINTENANCE DATA							
9	1724001290-IN-MAN-00008	00	1724001290-IN-MAN-00008	00	IOM-2693	00	INSTALLATION, OPERATING AND MAINTENANCE MANUAL -LIGHTING FIXTURE	ELE		A4	30/09/2024		N	I
10	1724001290-COM-LIS-00009	00	1724001290-COM-LIS-00009	00	SPI-2693	00	SPARE PART INDEX REGISTER - LIGHTING FIXTURE	COM		A4	30/09/2024		N	A

Notes:

(1) Numero documento Cliente
Document number assigned by final Client
(2) Numero documento interno
Document number internal
(3) Numero documento Fornitore (assegnato dal Fornitore)
Document number assigned by Supplier
(4) Assegnare il Titolo del documento (assegnato dal Fornitore)
Fill in the document title (to be assigned by Vendor)

(5) Specific are la disciplina (compilato da Rosetti)
Process, Piping; Electrical, Expediting, Inspection, Commissioning, Quality, ecc (to be filled by Rosetti)
(6) Blocco Classe: Specifica, Disegno, Report, Data Sheet, etc. (compilato da Rosetti)
Procedure, list, drawing, data sheet, etc. (to be filled by Rosetti)
(7) A4, A3, A1 (compilato dal Fornitore)
A4, A3, A1 (Supplier)
(8) Data prevista per l'emissione del documento (compilato dal Fornitore)
Foreseen date for the first issue (Supplier)

PART 1 – DESIGN DOSSIER

- Diagrams N/A

PART 1 – DESIGN DOSSIER

- Drawings

- General arrangement drawings – Doc.No. 1724001290-EL-DA-00003

Base Load Power Hub (BLPH)

LIGHTING FIXTURE

GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS (INCLUDING TERMINAL SCHEDULE)

Document Number: 1724001290-IN-DA-00003

01

Document Class: 2

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1	NO COMMENTS - APPROVED - WORK MAY PROCEED
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Sign	Date
	05/08/2024

Rev.	Date	Description	Prepared	Reviewed	Approved
01	05/08/2024	Accepted for Construction (AFC)	A. FRATTARUOLO	M. GIUSTI	R. GRATTON
00	23/07/2024	Issue for Review (IFR)	A. FRATTARUOLO	M. GIUSTI	R. GRATTON

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1	Cover	X	X						
2	Table of Contents	X	X						
3	Revision / Change Log / Hold List	X	X						
4	References	X	X						
5	GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS (INCLUDING TERMINAL SCHEDULE)	X	X						

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TERMINAL SCHEDULE

ITEM	DESCRIPTION	TYPE	Q.TY	MANUFACTURER
1	PANEL MOUNTABLE MODULAR MULLTI-POLE TERMINALS, 4mm ²	BPL.4 & BPL/R	2+2	CABUR
2	PANEL MOUNTABLE MODULAR MULLTI-POLE TERMINALS, 4mm ²	BPL.4 & BPL/R	2+6	CABUR

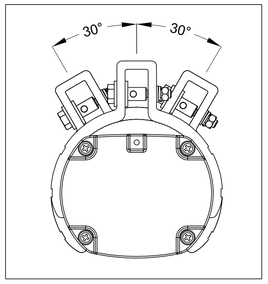
01

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MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 1
- Q.TY: 57
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

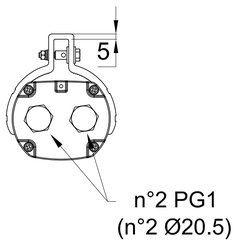
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



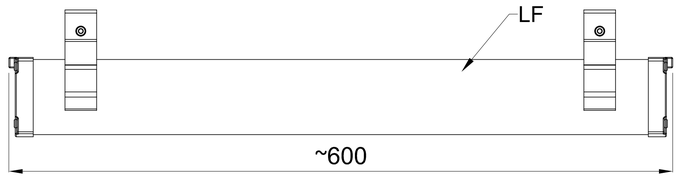
LF INFORMATION	
NOMINAL POWER	45W
CONSUMED POWER	43,5W
POWER FACTOR	>0,93
RATED CURRENT	200 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6200 lm
LIGHT INTENSITY	2248 cd
EFFICIENCY	143 lm/W
WEIGHT	2,5 Kg
IP PROTECTION	IP66

N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-0645-BB	110-277Vac 50-60Hz 45W LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

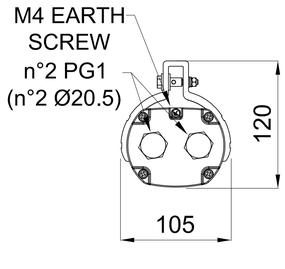
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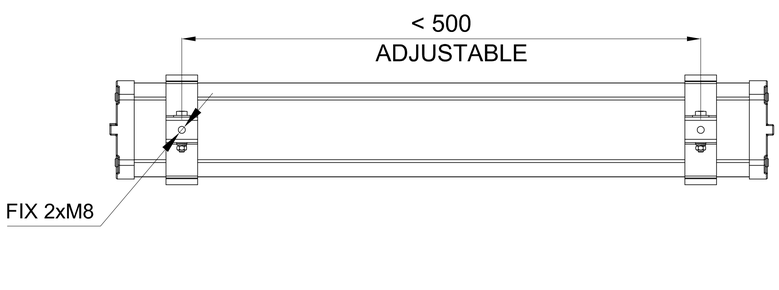
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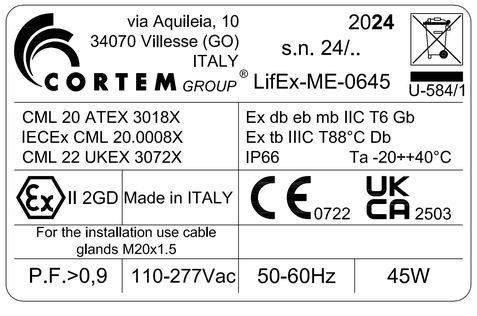
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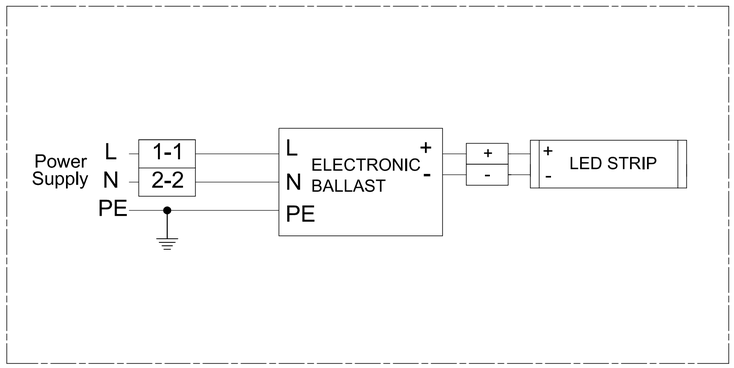
TOP SIDE



CERTIFICATE NAMEPLATE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
001 LIFEX-ME-0645-BB/C2402693/10.

CORTEM JOB: COV2402693 (17/102)
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27521
SHEET 1 / TOT. 2
NEXT 2

CORTEM GROUP
contem
FONDISONZO
ELFIT

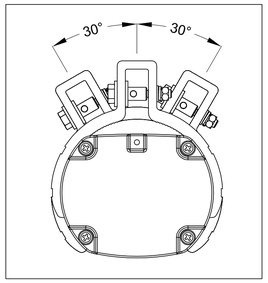
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MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001290 DD 26/06/2024
- ITEM.: 2
- Q.TY: 78
- EXTERNAL PAINTING: RAL 7022 (END CAPS)
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

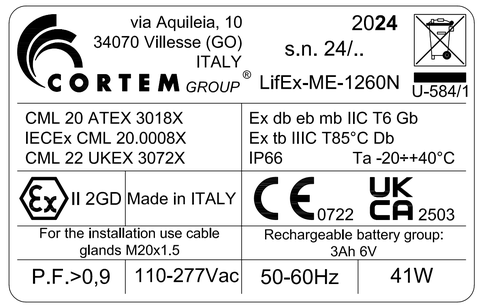
STANDARD FIXING BRACKET
FASTENING WITH 2 THREADED M8
HOLES, ADJUSTABLE FROM 0° TO ±30°



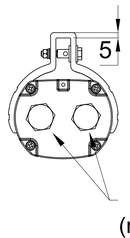
LF INFORMATION	
NOMINAL POWER	60W
CONSUMED POWER	40,9W
POWER FACTOR	>0,96
RATED CURRENT	185 mA
VIEWING ANGLE	120°
COLOUR TEMP.	5000 K
CRI	>80
INSTANT RESTRIKE	YES
LUMEN	6218 lm
LIGHT INTENSITY	2191 cd
EFFICIENCY	152 lm/W
WEIGHT	3,5 Kg
IP PROTECTION	IP66
AUTONOMY	180 min
LUMEN EMERG. MODE	1168 lm

N°	Q.TY	CODE	DESCRIPTION
LF	1	LIFEX-ME-1260N-BB	110-277Vac 50-60Hz 60W (RED. TO 40W) LED LINEAR LIGHTING FIXTURE BODY: ALUMINUM ALLOY EXTRUSION AND ALUMINUM END CAPS TRANSPARENT PART: GLASS RESISTANT TO SHOCKS, UV RAYS AND IMPACT RESISTANCE IK09 GASKETS: ACID AND HYDROCARBON RESISTANT SILICONE ASSEMBLY: FASTENING BRACKETS FOR M8 HOLES, ADJUSTABLE 0° TO ±30° MADE IN ANODIZED ALUMINUM CONNECTION: TERMINAL BLOCK ON SIDE (IN) L, N, PE CROSS SEC. MAX. 4mmq SUITABLE FOR LOOP-IN LOOP-OUT SCREWS, BOLTS AND NUTS: STAINLESS STEEL 304
PG1	4	PLG1IB +DL1IB +RDI1IS/A4	IP66 Ex db IIC Gb - Ex eb IIC Gb NICKEL PLATED BRASS PLUG ISO M20x1,5 WITH RELEVANT LOCKNUT AND SERRATED WASHER MADE IN STAINLESS STEEL

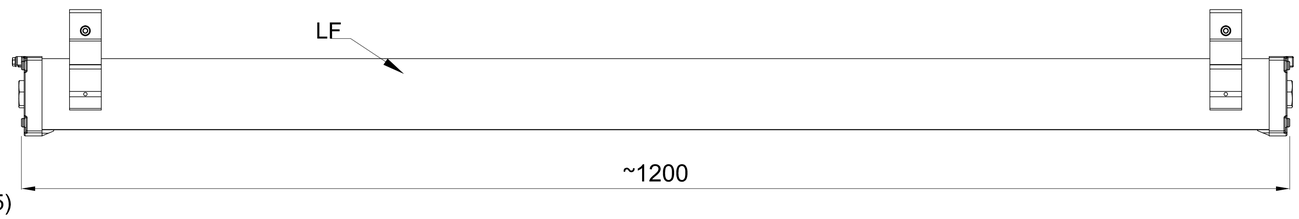
CERTIFICATE NAMEPLATE



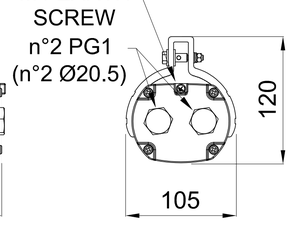
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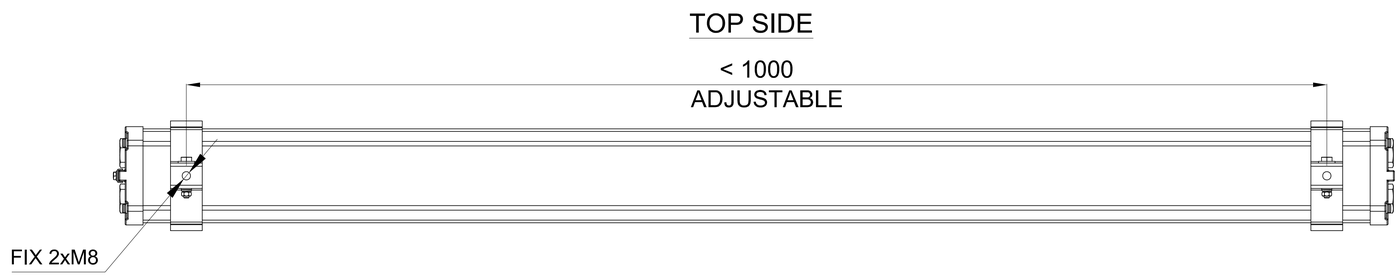
FRONT SIDE



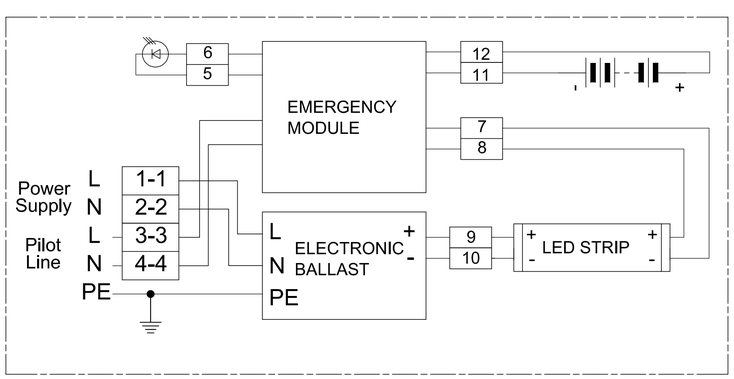
RIGHT SIDE (IN)



TOP SIDE



WIRING DIAGRAM



REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
2	09/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	05/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE

ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 LIFEX-ME-1260N-BB/C2402693/20.

CORTEM JOB 18/102: COV2402693

DRAWING SCALE: /

DRAWING NUMBER: A3-C 27521

SHEET 2 / NEXT /

TOT. 2

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PART 1 – DESIGN DOSSIER

- Project Procedures and Specification

- Manufacturing and Testing procedures – Cortem internal Procedure No. I37.04

- Installation, Operation and Maintenance Manual – Doc. No. 1724001290-EL-MAN-00008

F.A.T.

FACTORY ACCEPTANCE TEST PROCEDURES

SUMMARY

1. **SCOPE**
2. **REQUIREMENTS FOR TEST AND INSPECTION**
3. **OPERATIVE FORMALITIES**
4. **RESPONSABILITIES**
5. **REFERENCES**
6. **SCOPE OF INSPECTION**

Documento di proprietà di Cortem SpA con diritti tutelati a norma di legge

1. SCOPE

The present operative instruction is issued for formulation of the tests and inspections for all assembled and produced by Cortem spa according to its own standards or to customers' specification.

2. REQUIREMENTS FOR TESTS AND INSPECTION

The tests made to verify the characteristics of an apparatus include:

- Apparatus Inspection
- Check of correct installation of components
- Check number of terminals
- Dieletric test (if applicable)
- Electrical performance (if applicable)
- Insulation resistance (if applicable)

3. OPERATIVE FORMALITIES

A) Test Activities:

- Verification of the conformity to the order specifications and compliance with the drawings:
- Dimensional check
- Check of quantity
- Check of machining tolerance
- Check of threads
- Check of surface treatments
- Check of protection degree
- Check of marking
- Check of *Ex-d, Ex-e, Ex-I* certificates

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- Check of earthing connections
- Dieletric Test (if applicable)
- Electrical performance (if applicable)
- Insulation resistance (if applicable)
- Test of surface treatments
- Test of mechanical operation

B) Functioning at nominal voltage:

- Check of correct installation of components
- Reading and check of the instruments (if applicable)
- Verification of the correct functioning of all parts in nominal and / or automatic service (if applicable)

C) Applied Voltage Test (Dielectric Test)

C.1) Low-voltage switchgear & controlgear assemblies (see TAB.1 & TAB.2)

- The test voltage must be applied between all the active parts and the earth of the apparatus for 1".

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TAB.1 Test for Power Circuit:

Rated insulation voltage Ui	*Dielectric test voltage a.c.*
Ui < 60	1000
60 < Ui < 300	1500
300<Ui<690	1890
690<Ui<800	2000
800<Ui<1000	2200

TAB.2 Test for Auxiliary Circuit:

Rated insulation voltage Ui	*Dielectric test voltage a.c.*
Ui < 12	250
12 < Ui < 60	500
Ui > 60	2 Ui + 1000

C.2) The test voltage (1800Vac) must be applied between all the active parts and the earth of the apparatus for 10" (if applicable).

D) Test of insulating resistance

- As an alternative for ASSEMBLIES with incoming protection rated up to 250A the verification of insulation resistance may be by measurement using an insulation measuring device at a voltage of at least 500 V d.c.
- In this case, the test is satisfactory if the insulation resistance between circuits and exposed conductive parts is at least 1000 Ohm/V per circuit referred to the supply voltage to earth of these circuits.

4. RESPONSIBILITY

The Quality Assurance has the responsibility to supervise the correct application of what described in this document. The Project and Inspection department is responsible of the recording and execution of these operative instructions.

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5. REFERENCES

- Quality Manual Section 3.5.3
- Quality Control Plan
- 2014/34/UE ATEX and IECEx directive
- Check of correct installation of components
- European Directive 2014/34/UE
- EN ISO IEC 80079-34
- Quality and Environmental Integrated Manual (Cortem Group)
- EN 50014
- EN 60079-0
- EN 60079-1
- EN 60079-7
- EN 50020
- EN 60079-11
- EN 60079-15
- EN 50281
- EN 61241-0
- EN 61241-1
- ISO 10005 “Guide for drawing up Quality Plans”
- IEC 60079-0
- IEC 60079-1
- IEC 60079-7
- IEC 60079-11
- IEC 60079-15
- IEC 61439-1
- IEC 61439-2
- IEC 61241-0
- IEC 61241-1
- Ex IECEx 002 Rules
- Enforceable product specifications and regulations as indicated in the “List of regulations” Mod. C-212
- *Brazilian administrative rule 179*

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6. SCOPE OF INSPECTION

- Visual and Dimensional Check
- Dielectric Test (if applicable)
- Electrical performance (if applicable)
- Insulation resistance (if applicable)

6.1 METHOD OF TESTING

- Visual and Dimensional Check
- Dielectric Test with SCHLEICH GLP1 e
- Insulation Test with SCHLEICH GLP1 e
- Thickness Test with GAUGE THICKNESS

6.2 INSTRUMENT EQUIPMENT FOR THE TESTING

- INSTRUMENT SCHLEICH GLP1 e
  (for Dielectric Test)
- INSTRUMENT SCHLEICH GLP1 e
  (for Insulation Test)
- GAUGE THICKNESS matr. 080206XGF
  (for tickness test)

6.3 ACCEPTANCE CRITERIA

- As per drawings approved
- Dielectric Test (as per TAB.1 & TAB.2 for Distribution Control Panels)
  shall not trip when the output current is less than 100mA.
  For all others Cortem products the Dielectric Test will be as per § C.2.
- Insulation Test as per § D (if applicable)
- Functional Test (if applicable)
- Final Test Report

Preparato da	Approvato da Direzione
P.Riganti	A.Rossi

Documento di proprietà di Cortem SpA con diritti tutelati a norma di legge

Base Load Power Hub (BLPH)

LIGHTING FIXTURE

INSTALLATION, OPERATING AND MAINTENANCE MANUAL

Document Number: 1724001290-IN-MAN-00008

Document Class: 3

ROSETTI MARINO	
1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED
NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.	
Sign	Date
	05/08/2024

00	22/07/2024	Issue for Information (IFI)	M. MENEGUZZI	S.ZIANI	A. DELLA RICCA
Rev.	Date	Description	Prepared	Reviewed	Approved

CORTEM GROUP
To be sure to be safe.

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		00							
1	Cover	X							
2	Table of Contents	X							
3	Revision / Change Log / Hold List	X							
4	References	X							
5	IOM	X							

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Revision / Change Log

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CORTEM GROUP®

ARMATURE ILLUMINANTI
SERIE LifEx-M...
ISTRUZIONI DI SICUREZZA, USO E MANUTENZIONE
Safety, maintenance and mounting instructions for LifEx-M series lighting fixtures

IN ACCORDO ALLA DIRETTIVA 2014/34/EU
IN ACCORDO ALLO SCHEMA IECEx
E AI REGOLAMENTI UKEX

according to directive ATEX
according to IECEx scheme
and UKEX regulations

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ELFIT contem FONDISONZO

CONFORMITÀ ALLE NORMATIVE STANDARD

ARMATURE ILLUMINANTI LifEx-M
COSTRUITE IN ACCORDO ALLE NORMATIVE
EN/IEC 60079-0, EN/IEC 60079-1,
EN/IEC 60079-7, EN/IEC 60079-18,
EN/IEC 60079-31



ISTRUZIONI DI SICUREZZA

RIVOLTE A PERSONALE QUALIFICATO IN ACCORDO CON LE LEGGI NAZIONALI, INCLUSE LE RELATIVE NORME E, DOVE APPLICABILE, IN ACCORDO CON EN/IEC 60079-17 RIGUARDANTE LE APPARECCHIATURE ELETTRICHE PER ATMOSFERE POTENZIALMENTE ESPLOSIVE

-L'ARMATURA ILLUMINANTE NON DEVE ESSERE INSTALLATA IN AREA PERICOLOSA ZONA 0

- DEVONO ESSERE RISPETTATI I DATI TECNICI INDICATI SULL'ARMATURA

- NON SONO AMMESSE MODIFICHE AL PRODOTTO

- I GIUNTI DI LAMINAZIONE DI DRIVER E INVERTER DELLE VERSIONI LifEx-M-ME... NON DEVONO ESSERE RIPARATI

- L'ARMATURA PUÒ ESSERE INSTALLATA SOLO SE COMPLETAMENTE INTEGRA

- DEVONO ESSERE UTILIZZATE ESCLUSIVAMENTE PARTI DI RICAMBIO CORTEM

- LE OPERAZIONI DI MANUTENZIONE ORDINARIE E STRAORDINARIE DEVO ESSERE EFFETTUATE SOLO DA ELETTRICISTI QUALIFICATI CON L'APPROVAZIONE DI PERSONALE "ESPERTO"

- TOGLIERE LE PRESENTI ISTRUZIONI DALL'INTERNO DELL'ARMATURA DURANTE IL FUNZIONAMENTO

- DEVONO ESSERE STRETTAMENTE OSSERVATE LE NORME NAZIONALI DI SICUREZZA E PREVENZIONE INFORTUNI, E LE PRESCRIZIONI INDICATE CON " ⚠ " NEL PRESENTE FASCICOLO TECNICO

- CONDIZIONI SPECIALI PER UN UTILIZZO SICURO (X)
SONO FORNITI INGRESSI PER CAVI CON MENO DI 5 FILETTI IN PRESA. È NECESSARIO PRESTARE ATTENZIONE PER GARANTIRE CHE VENGANO UTILIZZATE LE GUARNIZIONI E LE RONDELLE CORRETTE CON IL PRESSACAVO PER MANTENERE IP66.
L'APPARECCHIATURA UTILIZZA UNA PARTE ESTERNA COSTRUITA CON MATERIALI NON METALLICI, PERTANTO È NECESSARIO PRESTARE ATTENZIONE PER EVITARE IL RISCHIO DI CARICA ELETTROSTATICA. VEDERE IL PRESENTE MANUALE DI ISTRUZIONI PER I DETTAGLI.
PER LE VERSIONI CON VETRO DI SPESSORE 4MM SENZA COPERTURA, L'APPARECCHIO DEVE ESSERE INSTALLATO IN UN LUOGO A BASSO RISCHIO DI PERICOLO MECCANICO.
LA TEMPERATURA NEL PUNTO DI INGRESSO PUÒ RAGGIUNGERE I 75°C.
DEVONO ESSERE UTILIZZATI PRESSACAVI DI DIMENSIONI ADEGUATE.

Conformity with standards

lighting fixtures LifEx-M
manufactured according to European standards
EN/IEC 60079-0, EN/IEC 60079-1,
EN/IEC 60079-7, EN/IEC 60079-18,
EN/IEC 60079-31



safety instruction

for skilled electricians and instructed personnel in accordance with national legislation, including the relevant standards and, where applicable, in accordance with EN/IEC 60079-17 on electrical apparatus for explosive atmospheres

- the lighting fixture must not be operated in zone 0 hazardous areas

- the technical data indicated on lighting fixture must be observed

- changes of the design and modifications to the lighting fixture are not allowed

- the flameproof joints of driver and inverter of the LifEx-M-ME... versions are not to be repaired

- the lighting fixture shall be installed as intended and only in undamaged and perfect condition

- only genuine CORTEM spare parts may be used for replacement

- repairs may only be carried out by qualified electricians and will subsequently have to be checked by an "expert"

- do not keep these operating instruction inside the lighting fixture during operation

- the national safety rules and regulations for prevention of accidents and the following safety instruction which are marked with an " ⚠ " in these operating instruction, will have to be observed

- Special conditions for safe use (X)
Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are used with the cable gland to maintain IP66.
The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See this instruction manual for details.
For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger.
The temperature at the entry point may reach up to 75°C.
Suitably rated cable glands must be used.

COR.TEM GROUP è da sempre impegnata nella salvaguardia dell'ambiente ed in tal senso raccomanda di smaltire i contenitori e gli imballaggi usati secondo le prescrizioni e le normative vigenti nel Paese di destinazione, evitando di disperderli nell'ambiente dopo l'utilizzo.

COR.TEM GROUP cares for the environmental protection and recommends therefore to dispose properly of the packing and wrapping of its goods, according to the prescriptions and regulations in force in the destination country. The differentiated waste disposal is strongly recommended.

INFORMAZIONE AGLI UTENTI DI APPARECCHIATURE DOMESTICHE O PROFESSIONALI



Ai sensi dell'art. 13 del Decreto Legislativo 25 luglio 2005, n. 151 "Attuazione delle Direttive 2002/95/CE, 2002/96/CE e 2003/108/CE, relative alla riduzione dell'uso di sostanze pericolose nelle apparecchiature elettriche ed elettroniche, nonché allo smaltimento dei rifiuti".

Il simbolo del cassonetto barrato riportato sull'apparecchiatura o sulla sua confezione indica che il prodotto alla fine della propria vita utile deve essere raccolto separatamente dagli altri rifiuti. L'utente dovrà, pertanto, conferire l'apparecchiatura giunta a fine vita agli idonei centri di raccolta differenziata dei rifiuti elettronici ed elettrotecnici, oppure riconsegnarla al rivenditore al momento dell'acquisto di una nuova apparecchiatura di tipo equivalente, in ragione di uno a uno.

Nel caso di utenti professionali (aziende o enti), ai sensi della normativa sopra citata, la raccolta differenziata della presente apparecchiatura giunta a fine vita è organizzata e gestita:

a) direttamente dall'utente, nel caso in cui questo decida di disfarsi dell'apparecchiatura senza sostituirla con una apparecchiatura nuova equivalente ed adibita alle stesse funzioni;
b) dal produttore, inteso come il soggetto che ha per primo introdotto e commercializzato in Italia o rivende in Italia col proprio marchio l'apparecchiatura nuova che ha sostituito la precedente, nel caso in cui, contestualmente alla decisione di disfarsi dell'apparecchiatura a fine vita, l'utente effettui un acquisto di un prodotto di tipo equivalente ed adibito alle stesse funzioni. In tale ultimo caso, l'utente potrà richiedere al produttore il ritiro della presente apparecchiatura entro e non oltre 15 giorni naturali consecutivi dalla consegna della suddetta apparecchiatura nuova.

L'adeguata raccolta differenziata per l'avvio successivo dell'apparecchiatura dismessa al riciclaggio, al trattamento e allo smaltimento ambientalmente compatibile contribuisce ad evitare possibili effetti negativi sull'ambiente e sulla salute e favorisce il reimpiego e/o riciclo dei materiali di cui è composta l'apparecchiatura.

Lo smaltimento abusivo del prodotto da parte dell'utente comporta l'applicazione delle sanzioni di cui alla corrente normativa di legge.

INFORMATION TO USERS OF DOMESTIC AND PROFESSIONAL EQUIPMENT



According to art. 13 of Legislative Decree dated 25 July 2005 No. 151 "Putting into effect Directives 2002/95/CE, 2002/96/CE and 2003/108/CE, aimed to limit the use of dangerous substances in electronic and electrical equipment, and related to waste disposal".

The symbol of the crossed dustbin shown on the equipment or on its package indicates that the product must be collected separately from other waste, at the end of its lifetime. The user shall bring the equipment at the end of its lifetime in places dedicated to collect electrical and electronic waste, or he shall return it to a dealer, buying equivalent equipment (one back, one in).

In the case of professional users (companies or organizations), the subject equipment collection at the end of its lifetime is managed as following indicated:

a) Directly by the user, if he decides to throw the equipment away and not to replace it with a new equivalent one with the same functions;
b) By the manufacturer (i.e. he who first introduced and put on the Italian market, or he who resells in Italy with his brand the new equipment that replaced the previous one), in case the user decides to throw away the old equipment and to replace it with a new equivalent one with the same functions. In this last case, the user can ask the manufacturer to pick up the subject equipment within and not later than 15 days, natural and consecutive, after the new equipment has been delivered.

Separating waste and recycling is aimed to environmentally compatible waste treatment and disposal, in order to limit negative effects on environment and health and to promote recycling the old equipment construction materials and its remake into new products.

Illegal disposal of the product by the user is subject to fines, as per the current applicable law.

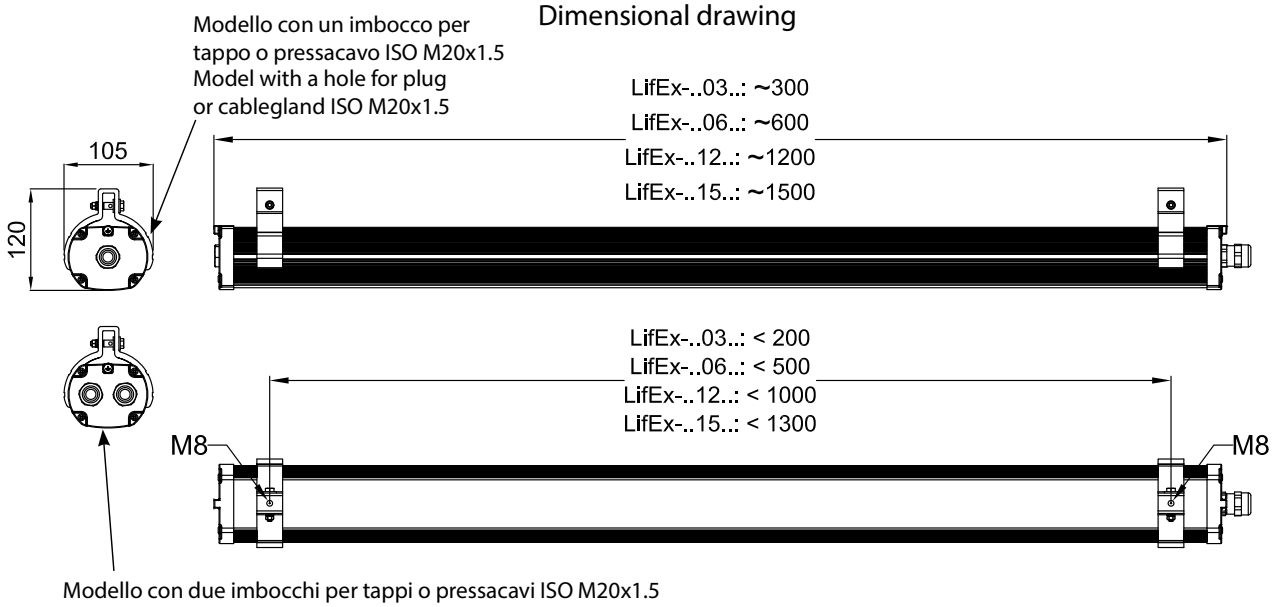
TIPI E CARATTERISTICHE

Type and characteristics

MODO DI PROTEZIONE type of protection	Codice Code	ATEX	IECEx
	For LifEx-ME	⟨Ex⟩ II 2GD Ex db eb mb IIC T.. Gb Ex tb IIIC T..°C Db IP66	Ex db eb mb IIC T.. Gb Ex tb IIIC T..°C Db IP66
	For LifEx-MN	⟨Ex⟩ II 3G Ex ec IIC T.. Gc ⟨Ex⟩ II 2D Ex tb IIIC T..°C Db IP66	Ex ec IIC T.. Gc Ex tb IIIC T..°C Db IP66
VOLTAGGIO voltage range	100-277Vac		
FREQUENZA frequency range	50-60 Hz		
COS. φ	> 0,96÷ > 0,98		
SEZIONE DEI CONDUTTORI conductor section	INTERNO LAMPADA SEZ. 2,5mm² ARRIVO FINO A SEZ. 4mm² internal wiring sect. 2,5mm² incoming max. 4mm²		
TEMPERATURA AMBIENTE ambient temperature	-20°C ÷ +40°C (Max -60°C* ÷ +60°C)		
GRADO DI PROTEZIONE STD. std. protection degree	IP66		
PESO kg weight Kg	1.5 ÷ 5 Kg		

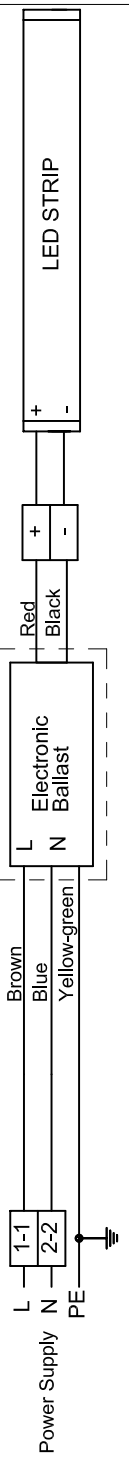
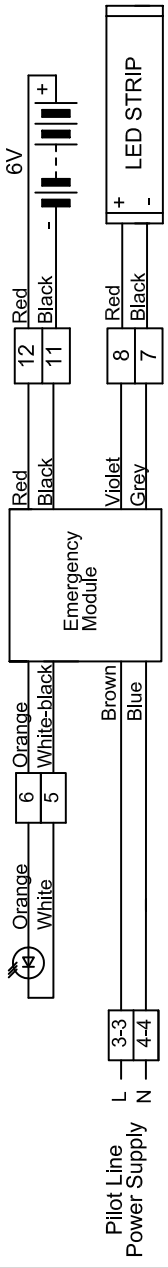
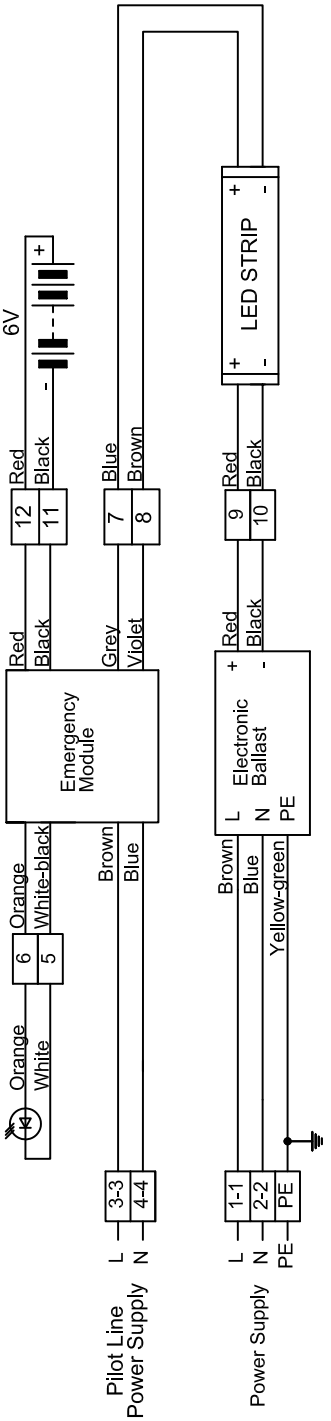
* Da -40°C a -60°C solo per funzionamento continuo
* From -40°C to -60°C only for continuous functioning

DISEGNO DIMENSIONALE
Dimensional drawing



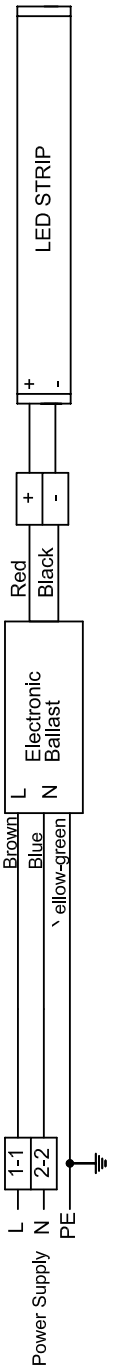
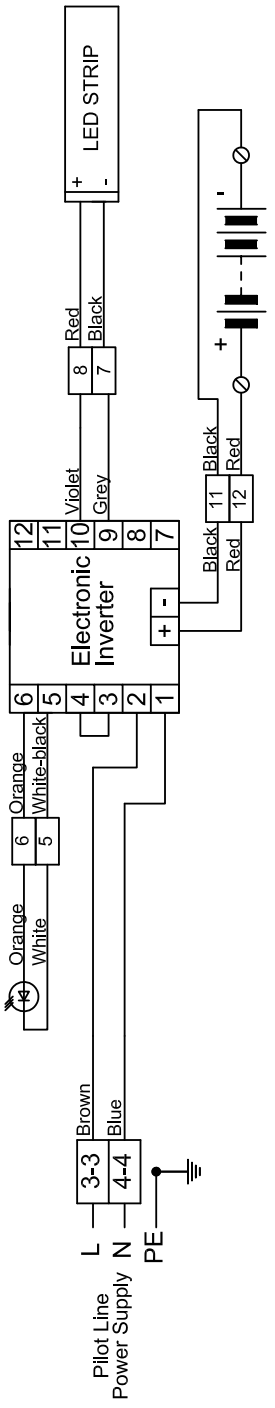
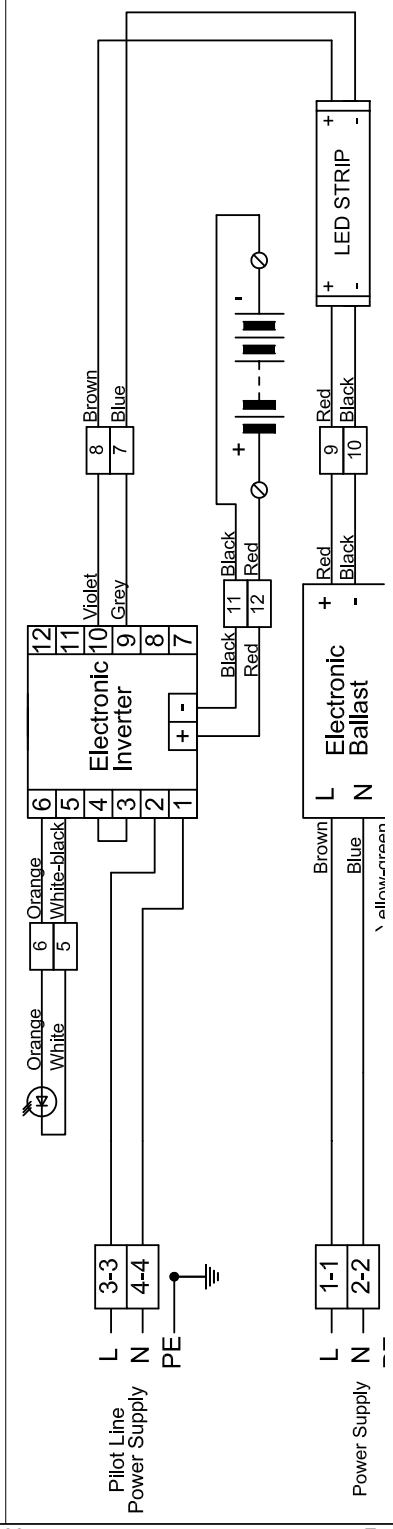
Armatura illuminante LifEx-M-ME
circuito elettrico

LifEx-M-ME lighting fixture
electrical circuit

LifEx-ME... Funzionamento normale Normal service	LifEx-ME...E Funzionamento solo emergenza Only emergency service	LifEx-ME...N Funzionamento normale + emergenza Normal + emergency service
		

Armatura illuminante LifEx-M-MN
circuito elettrico

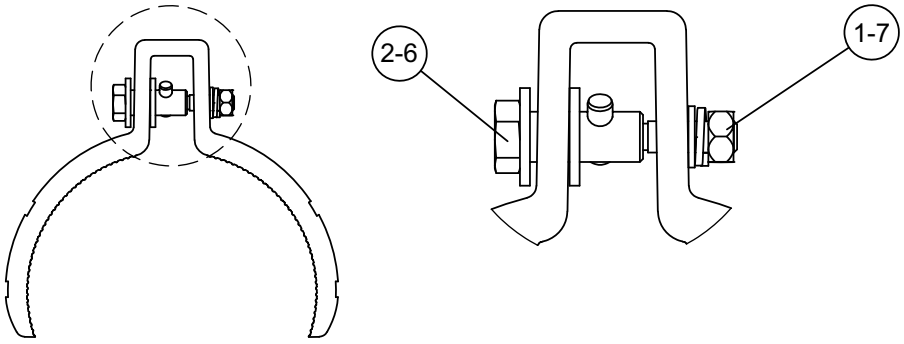
LifEx-M-MN lighting fixture
electrical circuit

LifEx-MN... Funzionamento normale Normal service	LifEx-MN...E Funzionamento solo emergenza Only emergency service	LifEx-MN...N Funzionamento normale + emergenza Normal + emergency service
		

ISTRUZIONI PER L'INSTALLAZIONE
Installation instruction

1. Dopo aver fissato le pinze di supporto delle armature illuminanti LifEx-M alla superficie di montaggio, allentare il dado M5 della vite esagonale;
   After the LifEx-M's clamps installation, unscrew the M5 nut of the hexagonal screw;

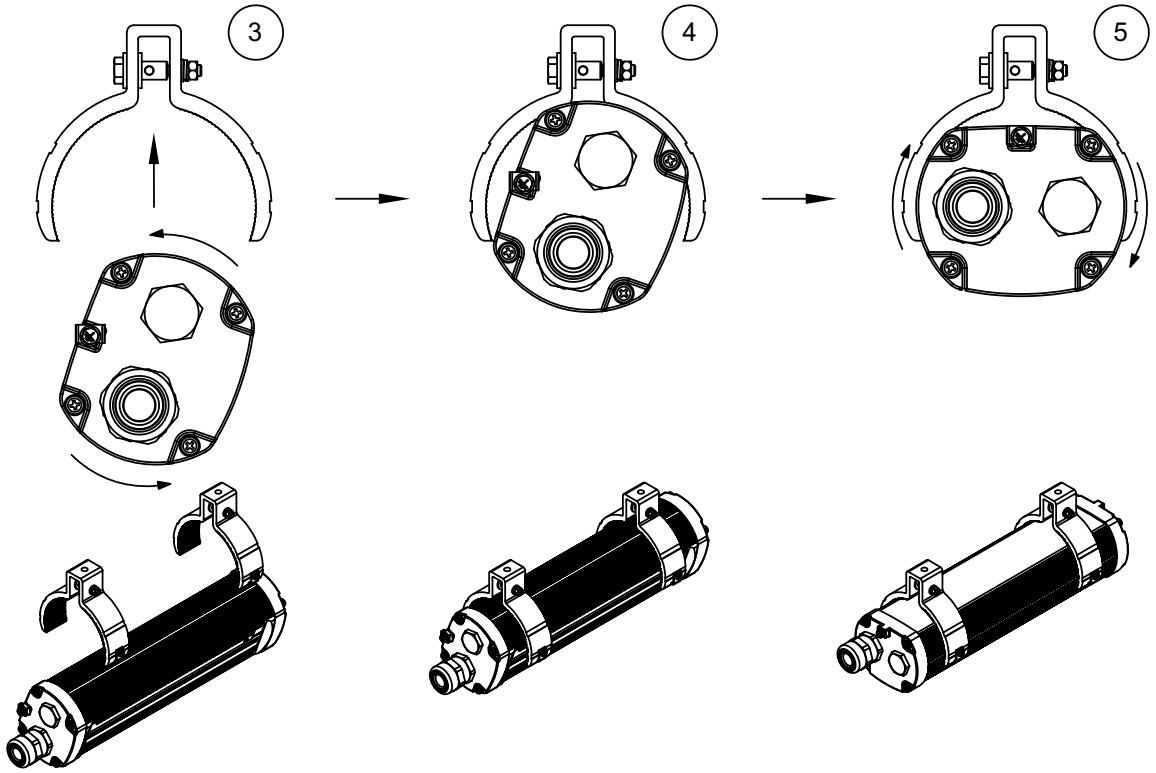
2. Svitare la vite esagonale applicando una coppia pari a 2 Nm per poter aprire le pinze di supporto;
   Unscrew the hexagonal screw by applying a torque force of 2 Nm in order to open the support clamps;



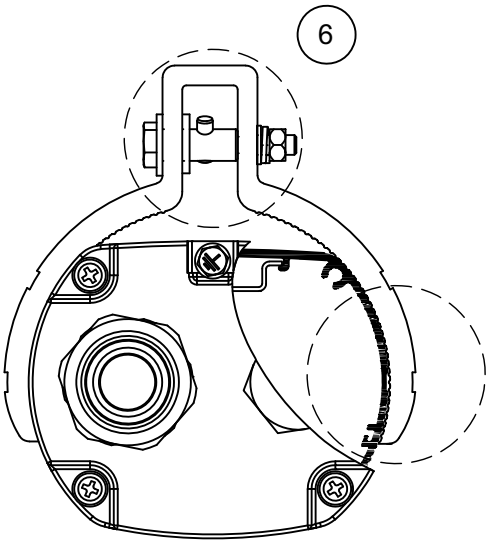
3. Ruotare l'armatura illuminante come mostrato in figura;
   Turn the lighting fixture as shown on the picture;

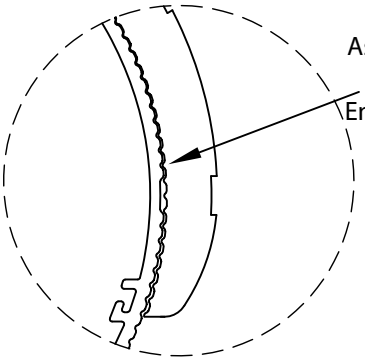
4. Posizionarla all'interno delle pinze di fissaggio;
   Place it inside the fixing clamps;

5. Ruotare nuovamente il corpo dell'armatura nell'inclinazione d'installazione desiderata (compresa tra i -30° e i +30°) come mostrato in figura;
   Turn again the lighting fixture body to the mounting orientation desired (from -30° to +30°) as shown on the picture;



6. Una volta trovata l'inclinazione desiderata, avvitare la vite esagonale applicando un coppia di serraggio pari a 7 Nm;
   After the reaching of the mounting orientation desired, crew the hexagonal screw by applying a torque force of 7Nm;

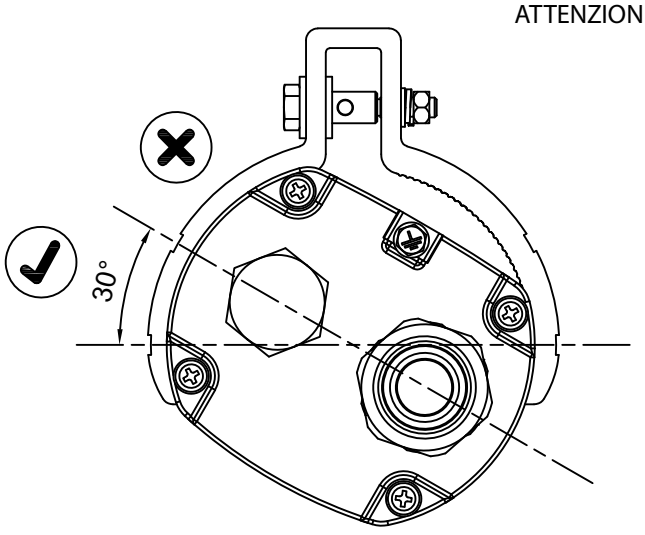


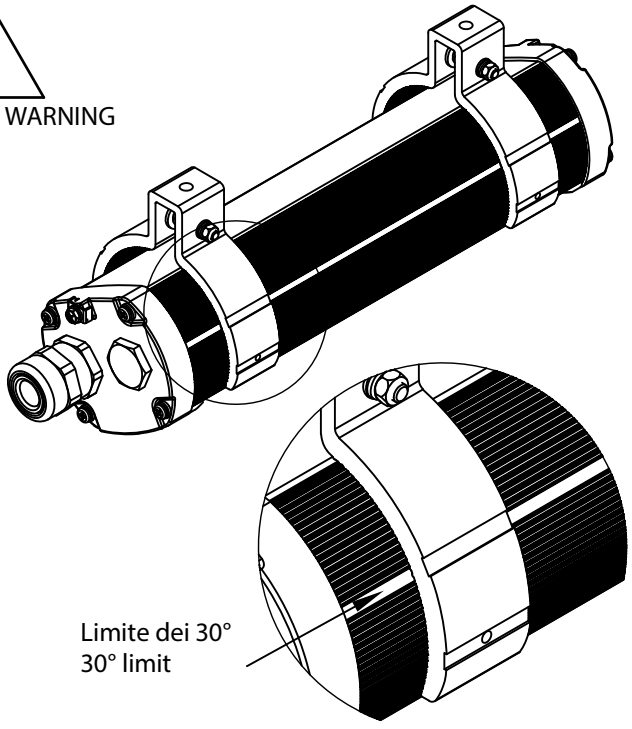


Assicurarsi che i dentini della LifEx-M combacino con quelli della pinza
Ensure that the LifEx-M's teeth match the clamp teeth

7. Infine avvitare nuovamente il dado M5 presente all'estremità della vite esagonale.
   In the end screw again the M5 nut on the end of the hexagonal screw.

ATTENZIONE - WARNING



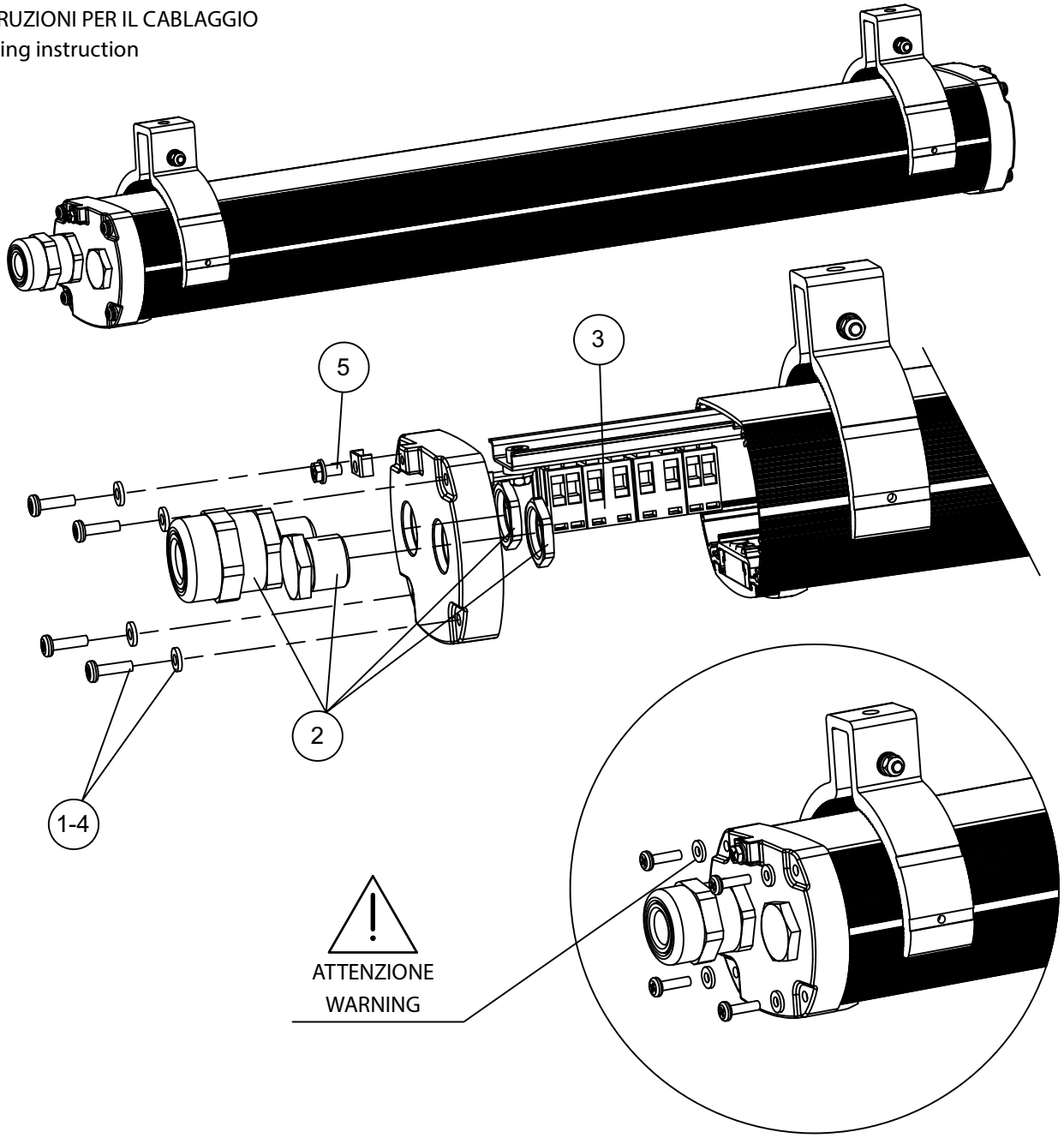


Limite dei 30°
30° limit

Le LifEx-M possono essere posizionate ad un orientamento minimo di -30° fino ad un massimo di +30°.
I limiti di questa inclinazione sono visibili dall'allineamento dei segni presenti sul corpo dell'apparecchio e sulla pinza (vedi immagine) - NON superare tali limiti.

The LifEx-M can be placed with an mounting orientation from a minimum of -30° to a maximum of +30°.
This inclination limits visible by the signs alignment located on the luminaire body and on the clamp (see picture) - DO NOT exceed these limits.

ISTRUZIONI PER IL CABLAGGIO
Wiring instruction



1. Svitare le 4 viti M4 del coperchio lato morsetti (lato con il logo “LifEx-M”);
2. Montare gli appositi pressacavi/tappi stringendo i controdadi dalla parte interna al coperchio;
3. Far passare il cavo all’interno del pressacavo, cablarlo alla morsettiera come da schemi elettrici e infine serrarlo all’interno del pressacavo;
4. Avvitare nuovamente le viti svitate al punto 1. applicando una coppia di serraggio pari a 1,5 Nm. ATTENZIONE - avvitarle con le loro apposite rondelle in Teflon;
5. Dove richiesto, collegare il cavo di terra sull’apposita vite di terra esterna.

1. Unscrew the 4 M4 screws of the cap on the terminal block side (side with the “LifEx-M” logo);
2. Fix the appropriate cable glands/plugs by screwing their nuts on the internal part of the cap;
3. Fix the appropriate cable glands/plugs by screwing their nuts on the internal part of the cap;
4. Screw again the screws unscrewed on step 1. by applying a torque force equal to 1,5 Nm.
5. Where required, connect the earth wire on the appropriate external earth screw.

ISTRUZIONI PER LA CONNESSIONE DELLE BATTERIE

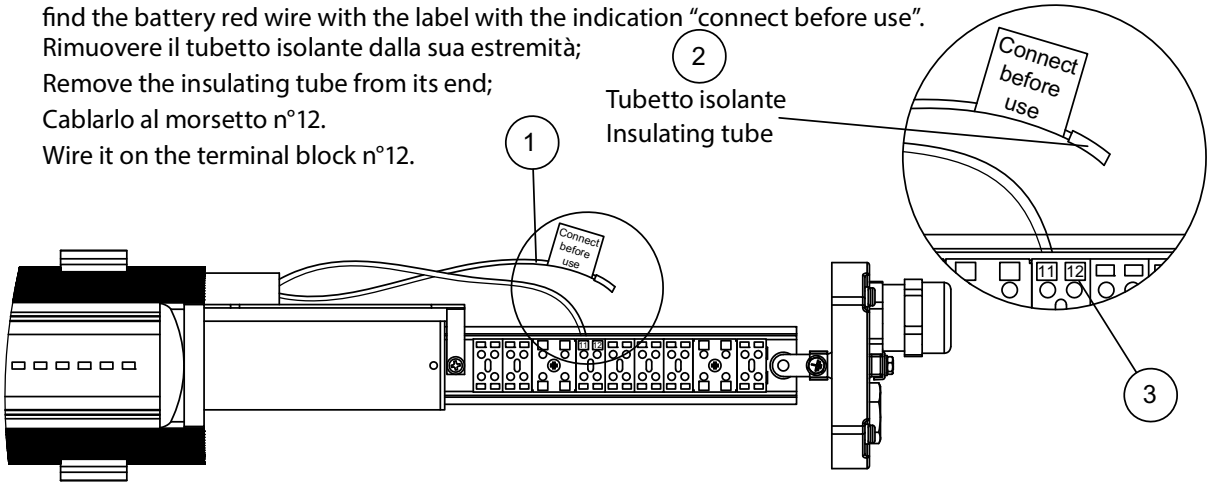
Battery connection instruction

Durante la fase di cablaggio, se l'armatura illuminante dispone delle batterie è importante collegarle alla morsettiera appena prima dell'utilizzo di quest'ultima.
Tale connessione viene eseguita in due modi in funzione se l'armatura illuminante utilizza le batterie a bastone (G-1096/B) o le batterie disposte parallelamente (G-1097/F).

During the wiring procedure, if the lighting fixture has the battery pack, connect them to the terminal block just before the using is very important.
This connection is done in two several ways depending on if the lighting fixture is using the stick battery pack (G-1096/B) or the battery pack with the parallel cells (G-1097/F).

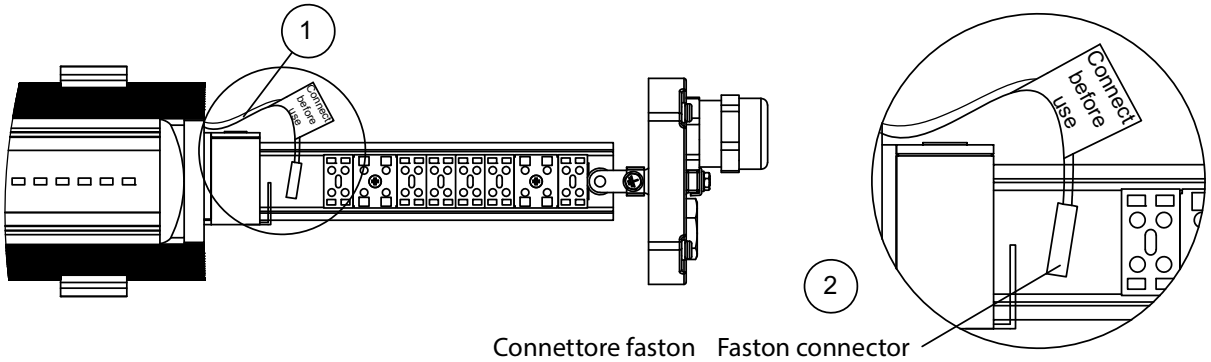
LifEx-M con G-1096/B:
LifEx-M with G-1096/B:

1. Dopo aver eseguito le operazioni descritte nelle istruzioni per il cablaggio, prima di richiudere il coperchio, individuare il cavo rosso delle batterie con la scritta "connect before use";
   After the first steps of the operations described on the wiring instruction, before the cap replacement, find the battery red wire with the label with the indication "connect before use".
2. Rimuovere il tubetto isolante dalla sua estremità;
   Remove the insulating tube from its end;
3. Cablarlo al morsetto n°12.
   Wire it on the terminal block n°12.



LifEx-M con G-1097/F:
LifEx-M with G-1097/F:

1. Dopo aver eseguito le operazioni descritte nelle istruzioni per il cablaggio, prima di richiudere il coperchio, individuare il cavo rosso delle batterie con la scritta "connect before use";
   After the first steps of the operations described on the wiring instruction, before the cap replacement, find the battery red wire with the label with the indication "connect before use".
2. Collegare il connettore faston di questo cavo al polo positivo delle batterie.
   Connect the faston connector of this wire to the positive terminal of the battery pack.



ATTENZIONE. Se dopo tale operazione le armature illuminanti non vengono installate ma stoccate assicurarsi di scollegare il polo positivo delle batterie e ricollegarlo durante l'installazione.

WARNING. If after the above procedure the lighting fixtures are not installed but they are stocked, ensure to disconnect the positive terminal of battery pack and re-connect it during the installation.

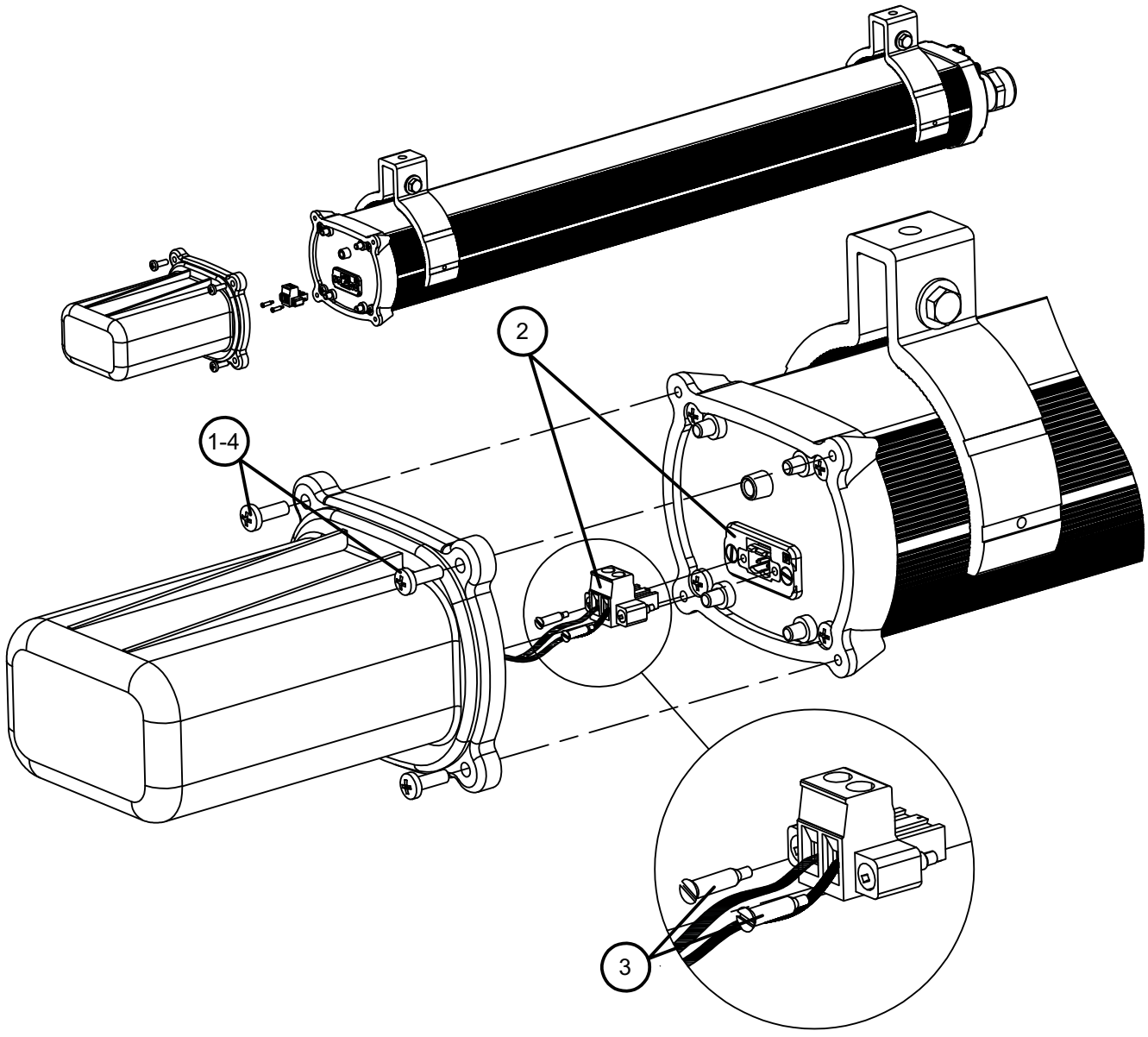
ISTRUZIONI PER LA CONNESSIONE DEL BATTERY BOX

Battery box connection instruction

Durante la fase di cablaggio, se l'armatura illuminante dispone del battery box è importante collegare le batterie appena prima dell'utilizzo di quest'ultima.
During the wiring procedure, if the lighting fixture has the battery box, the connection of the battery just before the using is very important.

1. Svitare le 4 viti M4 del battery box per poterlo rimuovere dall'armatura illuminante
   Unscrew the 4 M4 screws of the battery box to remove it from the lighting fixture;
2. Collegare il connettore del pacco batteria maschio all'apposito connettore femmina fissato alla testata dell'armatura illuminante;
   Connect the battery box male connector to the appropriate female connector fixed on the lighting fixture cap;
3. Bloccare il connettore maschio al connettore femmina avvitando le 2 viti presenti su di esso;
   Lock the male connector to the female connector by screwing the 2 screws on the male connector;
4. Avvitare nuovamente le 4 viti M4 del battery box per poterlo fissare nuovamente all'armatura illuminante.

   Screw again the 4 M4 screws of the battery box to fix it again of the lighting fixture cap.





ATTENZIONE - WARNING

USO E MANUTENZIONE:
Tutte le operazioni di installazione e manutenzione devono essere fatte quando l'apparecchiatura non è in tensione.
Fare attenzione a non danneggiare i componenti durante queste operazioni.
Assicurarsi che i cavi del cablaggio interno della lampada siano sempre fissati adeguatamente sui loro appositi supporti ferma-cavo.

USE AND MAINTENANCE:
All the installation and maintenance operations must be done when the luminaire is disconnected from the power supply.
Be carefull to don't damage the internal components during these operations.
Ensure that the internal wiring conductor are always properly held on their cables holeders.

SOSTITUZIONE DELLE BATTERIE:
1. Scollegare i cavi rosso e nero delle batterie dalla morsettiera;
2. Isolare questi due conduttori per evitare corto-circuiti;
3. Tagliare i collari di fissaggio delle batterie;
4. Riposizionare le nuove batterie sugli appositi supporti;
5. Usare due nuovi collari di fissaggio per fissare le batterie ai supporti;
6. Ricollegare i cavi rosso e nero delle batterie alla morsettiera.

BATTERY REPLACEMENT:
1. Disconnect the battery red and balck wires from the terminal block;
2. Insulate these two conductors in order to avoid short-circuit;
3. Cut the battery cable ties;
4. Replace the new battery on its proper supports;
5. Use two new cable ties to fix the battery on its supports;
6. Reconnect the battery red and black wires to the terminal block.

IN CASO DI SOSTITUZIONE, IL GRUPPO BATTERIA DEVE ESSERE SOSTITUITO INTERAMENTE CON IL CORRISPONDENTE RICAMBIO CORTEM:
COD. SERIE G-1096/.. , G-1097/.. , G-1098/.. GRUPPO BATTERIA NiMH 6V
NON SONO AMMESSE MODIFICHE DEL GRUPPO BATTERIA.

IN CASE OF BATTERY REPLACEMENT, THE BATTERY PACK MUST BE REPLACED COMPLETELY BY THE CORRESPONDING CORTEM SPARE PART:
CODE G-1096/.. ,G-1097/.. ,G-1098/.. SERIES - BATTERY GROUP NiMH 6V
MODIFICATIONS TO THE BATTERY PACK ARE NOT PERMITTED.

Per mantenere le migliori prestazioni dei prodotti non utilizzati per lungo tempo, si consiglia di caricare e scaricare le celle/batterie almeno una volta ogni 6 mesi.

To keep the best performance for the products not used for a long time, we recommend to charge and discharge the cells/batteries at least once in every 6 months.

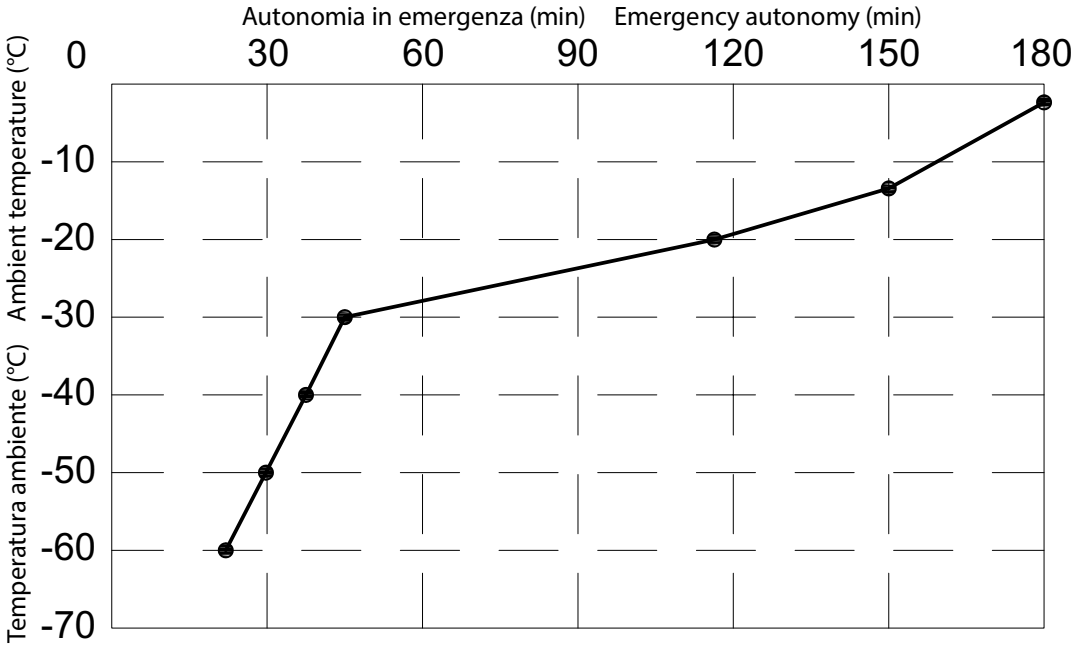
MANUTENZIONE BATTERIE:
La vita media e l'autonomia delle batterie può dipendere da diversi fattori, si consiglia di adottare i seguenti accorgimenti:
- Prima della messa in servizio dell'armatura illuminante, eseguire 3 cicli completi di carica e scarica delle batterie (anche con tempi di ricarica >36-48h);
- Una volta installate, eseguire nuovi cicli di carica/scarica completi almeno ogni 6 mesi;
- Per l'immagazzinamento a stock, assicurarsi di eseguire un ciclo di carica/scarica completo con frequenza minima 6 mesi.

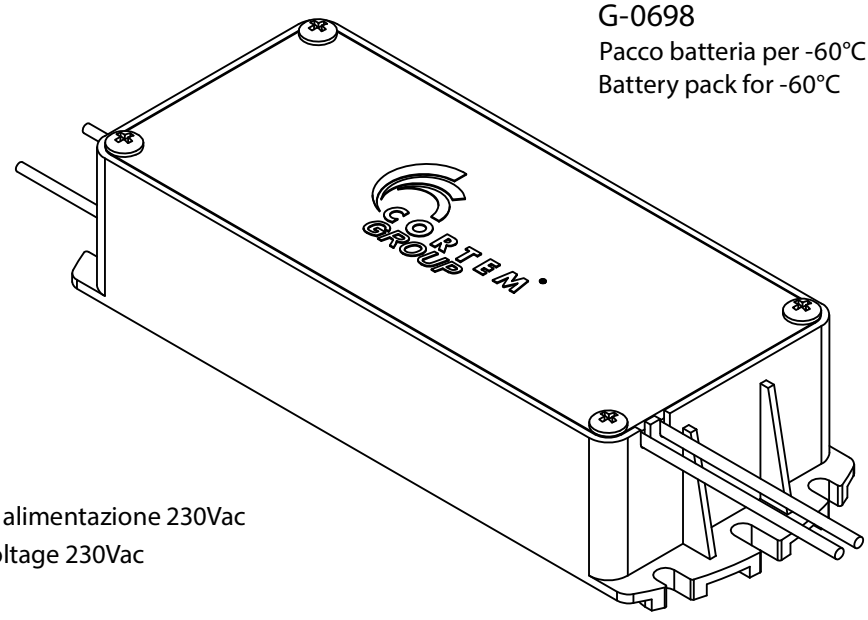
BATTERY MAINTENANCE:
The average lifetime and autonomy of the batteries could depend on various factors. It is recommended to follow these guidelines:
- Before the lighting fixture installation, perform 3 complete charge and discharge cycles of the batteries (even with charging durations >36-48h);
- Once installed, perform new complete charge/discharge cycles at least every 6 months;
- For stock storage, ensure a complete charge/discharge cycle is performed at a minimum frequency of every 6 months.

AUTONOMIA EMERGENZA VERSIONI SERIE LIFEX-..H
Emergency autonomy for versions series LifEx-..H

Le armature illuminanti serie LifEx-..H, ovvero quelle predisposte al funzionamento in emergenza per applicazioni sotto i -20°C di temperatura ambiente (con battery box), hanno un'autonomia delle batterie legata alla temperatura ambiente.
Vedere grafico sotto per i dettagli.

The lighting fixture LifEx-..H series, which are the versions intended for emergency functioning application with an ambient temperature lower than -20°C (with battery box), have a battery autonomy related to the ambient temperature.
See graph below for the details.





G-0698
Pacco batteria per -60°C
Battery pack for -60°C

Tensione di alimentazione 230Vac
Supplied voltage 230Vac

CORTEM s.p.a.
cap. soc. €1.578.000,00 i.v
R.E.A. C.C.I.A.A. GORIZIA U. 32755 - M. GO 000139
Registro Imprese Gorizia 00052120318
Cod. Fiscale e P. Iva **IT00052120318**
Eco contributo RAEE assolto ove dovuto n° Registro A.E.E. IT08020000001818

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COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV
ISO 9001 - ISO 14001
ISO 45001

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Member of CORTEM GROUP
To be sure to be safe.

DICHIARAZIONE DI CONFORMITA' *DECLARATION OF CONFORMITY*

N° 0260

Il costruttore:
We:

CORTEM S.p.A.
Via Aquileia, 10
34070 VILLESSE (GO) – ITALY

Dichiara con la presente la conformità allo schema IECEx, del Prodotto
Hereby declares the conformity to IECEx scheme, of the Product

Armature illuminanti serie: *Lighting fixtures series:*	**LifEx-M**
Modo di protezione: *Protection mode:*	**Ex db eb mb IIC T6/T5/T4 Gb** **Ex eb mb IIC T6/T5/T4 Gb** **Ex ec IIC T6/T5/T4 Gc** **Ex tb IIIC T56°C÷T120°C Db** **IP66**
Temperatura ambiente: *Ambient temperature:*	**-20°C÷+40°C, -20°C÷+45°C, -20°C÷+50°C, -20°C÷+55°C** **-20°C÷+60°C, -60°C÷+40°C, -60°C÷+45°C, -60°C÷+50°C** **-60°C÷+55°C, -60°C÷+60°C**
Certificato: *Certificate:*	**IECEx CML 20.0008X**

In accordo con le seguenti norme IEC:
In accordance with the following IEC Standards:

IEC 60079-0: 2017
IEC 60079-1: 2014
IEC 60079-7: 2017
IEC 60079-18:2017
IEC 60079-31:2013
IEC 60529: 2001

Villesse, 29.10.2021

Firma
Signature . . . . . .

Riccardo Gratton
Vice-president

CORTEM GROUP®

ADATTATORI E TAPPI TIPO RE - REB - REM - REN - PLG ISTRUZIONI DI SICUREZZA, USO E MANUTENZIONE

Adaptors and plugs type RE - REB - REM - REN - PLG safety, maintenance and mounting instructions

IN ACCORDO ALLA DIRETTIVA 2014/34/EU ED
IN ACCORDO ALLO SCHEMA IECEx
according to directive 2014/34/EU and
according to IECEx scheme

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ELFIT | contem | FONDISONZO

Istruzioni per il montaggio raccorderia serie
RE - REB - REM - REN - PLG
in esecuzione Ex d IIC e Ex e II IP66/67
Costruite in accordo alle normative:

EN 60079-0:2012 +A11:2013
EN 60079-1:2014
EN 60079-7:2015
EN 60079-31:2014
EN 60529:1991
in accordo alla direttiva ATEX 2014/34/EU del 26 FEBBRAIO 2014

IIEC 60079-0:2011
IEC 60079-1:2014
IEC 60079-7:2015
IEC 60079-31:2013
IEC 60529:2001
in accordo allo schema IECEx

Ta -20°C +80°C (acciaio zincato A105 o acciaio inox o ottone o alluminio)
Ta -40°C +150°C (acciaio zincato A203 o acciaio inox o ottone o alluminio)
Ta -60°C +150°C (solo acciaio inox)

Mounting instructions of adaptors and plugs type
RE - REB - REM - REN - PLG
execution Ex d IIC and Ex e II IP66/67
Manufactured in according to Standards:

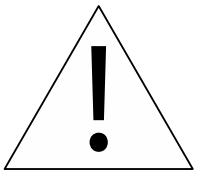
EN 60079-0:2012 +A11:2013
EN 60079-1:2014
EN 60079-7:2015
EN 60079-31:2014
EN 60529:1991
according to ATEX directive 2014/34/EU of 26 February 2014

IEC 60079-0:2011
IEC 60079-1:2014
IEC 60079-7:2015
IEC 60079-31:2013
IEC 60529:2001
according to IECEx scheme

Ta -20°C +80°C (galvanized steel A105 or stainless steel or brass or aluminium)
Ta -40°C +150°C (galvanized steel A203 or stainless steel or brass or aluminium)
Ta -60°C +150°C (stainless steel only)

Marcatura Marking

CORTEM GROUP ...code... CE 0722 Ex II 2GD CESI 02 ATEX 049X
Ex db IIC Gb/Ex eb IIC Gb Ex tb IIIC Db IP66/67 IECEx CES 10.0001X



ISTRUZIONI DI SICUREZZA

Rivolte a personale qualificato in accordo con le leggi nazionali, incluse le relative norme e,dove applicabile in accordo con IEC 60079-17, riguardante le apparecchiature elettriche per atmosfere potenzialmente esplosive.

- Non sono ammesse modifiche al prodotto

- Devono essere seguite scrupolosamente le seguenti istruzioni per ottenere una perfetta installazione

- Devono essere strettamente osservate le norme nazionali di sicurezza e prevenzione infortuni, e le prescrizioni indicate "⚠" con nel presente fascicolo tecnico.

Safety instruction

To the attention of qualified personnel in accordance with national legislation and its attendant regulations and, if applicable, in accordance with IEC 60079-17 concerning electrical equipment for high-explosive areas.

- Product modifications are not allowed

- In order to get a proper installation, the following instruction must be thoroughly followed.

- The national safety rules and regulations for prevention of accident and the following safety instruction which are marked with an "⚠" these operating instruction, will have to be observed

CONDIZIONI SPECIALI PER UN UTILIZZO SICURO (X)



SPECIAL CONDITIONS FOR SAFE USE (X)

L'accoppiamento degli adattatori e dei tappi con le tubazioni o le custodie, deve essere realizzato come indicato sulle presenti istruzioni, in modo da rispettare il modo di protezione delle apparecchiature elettriche su cui gli adattatori e i tappi sono montati.
Gli adattatori e i tappi devono essere fissati alla tubazione o alla apparecchiatura elettrica in modo tale da impedirne la rotazione o lo smontaggio accidentale.
Gli adattatori e i tappi con diametro inferiore a 25mm costruiti in lega di alluminio non possono essere utilizzati.
Gli adattatori e i tappi devono essere montati in modo tale che la temperatura al punto di installazione, sia in accordo con le seguenti temperature di esercizio:

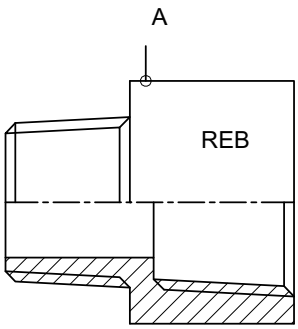
The coupling of the adaptors and plugs with the conduits or enclosures shall be made as indicated in the these instructions in order to respect the type of protection of the electrical apparatus on which the adaptors and plugs are mounted.
The adaptors and plugs shall be mounted at the conduit or at the electrical apparatus in such a way that accidental rotation and loosening will be prevented.
Adaptors and plugs with diameter lower than 25mm made of aluminium alloy cannot be used.
The adaptors and plugs shall be installed in such a way that the temperature at the mounting point will remain within the following service temperature ranges:

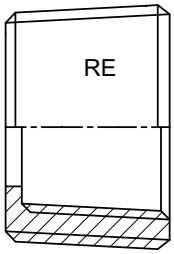
Tipo adattatori o tappi Adaptor or plug type	Materiali Materials	Guarnizioni Gaskets	Temperatura Temperature	
			Min.	Max.
RE... REB... REM... REN... PLG...	Acciaio zincato (ASTM A105), Ottone nichelato, Acciaio inossidabile, Lega di alluminio Galvanized steel (ASTM A105), Nickel plated brass, Stainless steel, Aluminium alloy	Silicone Silicon	-20°C	+80°C
	Acciaio zincato (ASTM A203), Ottone nichelato, Acciaio inossidabile, Lega di alluminio Galvanized steel (ASTM A105 or A203), Nickel plated brass, Stainless steel, Aluminium alloy		-40°C	+150°C
	Acciaio inossidabile Stainless steel		-60°C	+150°C

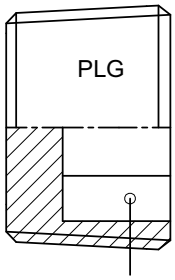
Il grado di protezione IP66/IP67 in accordo alla norma EN 60529 è garantito per gli adattatori e i tappi se i fori nei quali sono montati vengono adeguatamente sigillati. a tale scopo, il corretto posizionamento della guarnizione (per filettature cilindriche) o l'applicazione del sigillante sui filetti (per filettature coniche), dovranno essere eseguiti come indicato sulle presenti istruzioni.

The degree of protection IP66/IP67 according to the EN 60529 standard will be guaranteed for the adaptors and plugs if the holes into which adaptors and plugs are mounted are suitably sealed. 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 on these instructions.

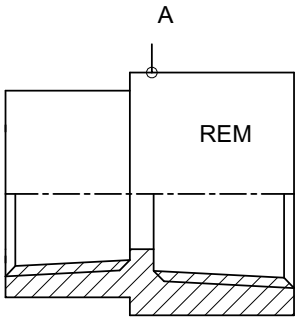
Tipi di raccorderia
Fittings type

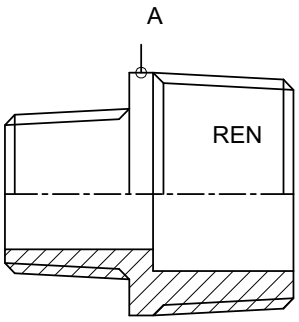


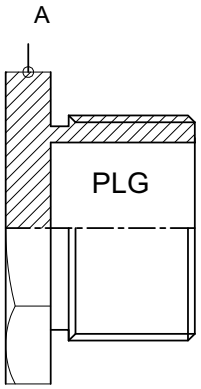




Sede per serraggio con chiave
Seat for tightening with spanner







NOTA A
Posizione da tenere per serraggio con chiave
NOTE A
Position for tightening with spanner

ISTRUZIONI PER IL MONTAGGIO

MOUNTING INSTRUCTIONS

1)Tutti i prodotti qui raffigurati possono essere impiegati negli impianti elettrici in luoghi con pericolo di esplosione o incendio eseguiti in conformità quanto previsto dalle norme di installazione EN 60079-14 ed IEC 60079-14. In particolare l'esecuzione Ex d è prescritta per le apparecchiature installate nei luoghi pericolosi, ossia laddove gli impianti elettrici devono essere AD-PE .

1) All the products in this part of drawing may be used in electrical installations in hazardous areas in accordance with the prescriptions of EN 60079-14 and IEC 60079-14 standards. In particular the Ex d execution is required for the equipment installed in hazardous areas , where the electrical installation must be explosion proof.

ISTRUZIONI PER IL MONTAGGIO

2)Gli adattatori serie RE - REB - REM - REN permettono di convertire filettature maschio in filettature femmina o viceversa, diametri maggiori in diametri minori o viceversa. Inoltre consentono di collegare parti con filettature di tipo diverso. Gli adattatori serie REN si possono ottenere anche assemblando un adattatore serie RE con un nipplo serie NP (esempio : REN 43 = RE 43 - NP3).

3)I tappi serie PLG permettono la chiusura di imbocchi femmina o fori inutilizzati, su tubazioni o custodie Ex d. Dopo il montaggio i tappi devono essere bloccati con "Loctite 577" se filettati conici o con un controdado serie DL e "Loctite 577" se filettati cilindrici. (Vedere schema C)

4) Per tappi o adattatori con filettatura cilindrica in esecuzione Ex e, la tenuta IP viene assicurata mediante guarnizione piana o "Loctite 577"(Vedere schema A)

5) È importante attenersi alle prescrizioni indicate nello schema B per un corretto montaggio

6) La posizione da tenere, per il serraggio con chiave, sui diversi tipi di raccordi, è indicata in " Tipi raccorderie". Il sistema di montaggio è quello indicato nello schema B.

MOUNTING INSTRUCTIONS

2)The adaptors type RE - REB - REM - REN are suitable to change a male thread into a female thread, or vice versa; larger diameter internal smaller diameter or vice versa. Besides having these characteristics, they are suitable to connect parts with different threads. The adaptors type REN can be obtained also by assembling an adaptor type RE with a nipple type NP (example REN 43=RE43 + NP3).

3)The plugs of PLG series are used for closing female hubs or unused openings on Ex d piping or enclosure. After the mounting the plugs must be locked with "Loctite 577" if the thread is conical and with locknut DL type and "Loctite 577" if the thread is cylindrical. (See scheme C)

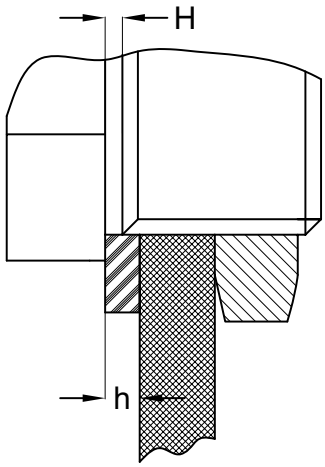
4) For plug in or adaptors with cylindrical thread in execution Ex e, the IP protection degree is assured by a plain gasket or "Loctite 577" sealing (see scheme A)

5)For a correct assembling is important to follow the prescriptions indicated in the scheme B.

6) The position for clamping with spanner is indicated in "Fittings Types".The method of assembly is indicated in scheme B.

Schema A
Scheme A

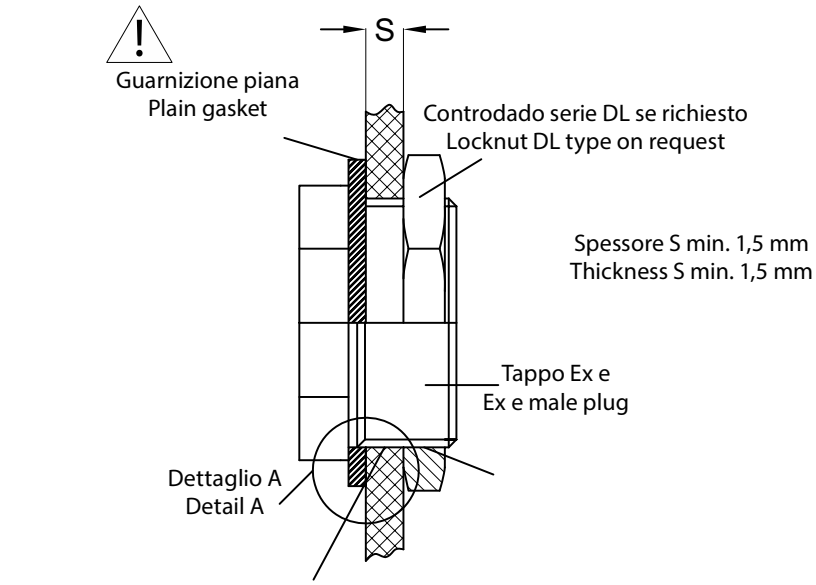
Dettaglio A
Detail A



H = Parte non filettata
H = Not threaded part

h = Spessore guarnizione piana
h = thickness plain gasket

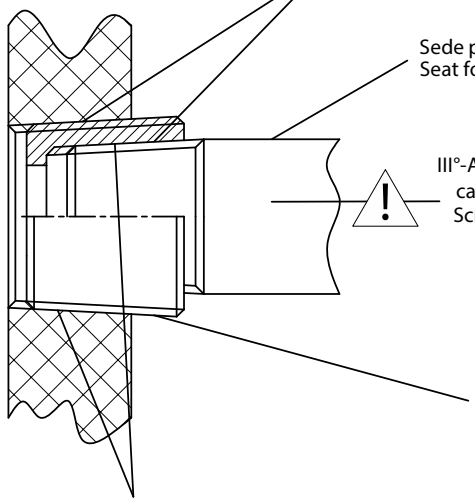
h sempre > 0,5 mm di H
h always > 0,5 mm of H



"Loctite 577" per tenuta IP e bloccaggio su richiesta
"Loctite 577" for IP degree of protection and blocking on request

Schema B
Scheme B

I° -Assicurasi prima dell'assemblaggio che i due imbocchi filettati siano privi di materiali coprenti (vernici, teflon, ecc) in quanto detti materiali non assicurano una tenuta antideflagrante sul filetto.
Before assembling the fittings make sure that the two threaded hubs are without cover coated materials (paint, teflon, etc) because these materials don't assure a flameproof tightness on the thread

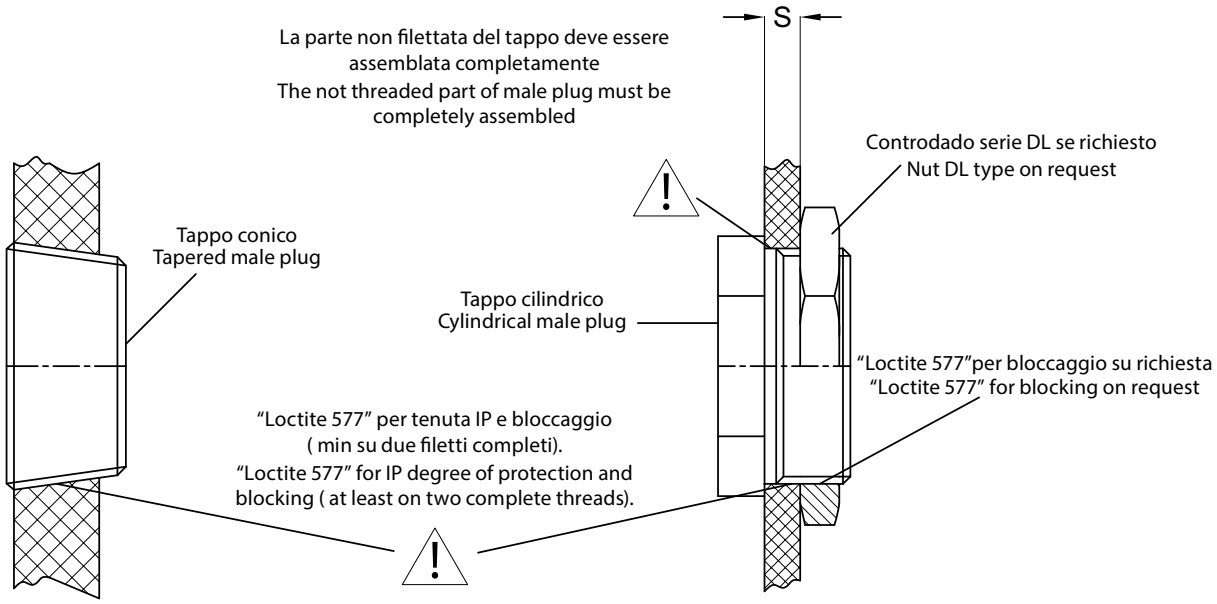


III°-Avvitare sull'adattatore il raccordo a mano fino al suo completo bloccaggio. Assicurare il serraggio dello stesso con mezzo giro di chiave.
Screw the fitting on the adaptor by hand until its complete blocking. Assure the closing of the fitting with a half turn of spanner.

II°-Avvitare l'adattatore a mano fino al suo completo bloccaggio.
Screw the adaptor by hand until its complete blocking.

Per ottenere il bloccaggio e/o una tenuta IP sulla filettatura stendere sulla stessa un velo di "Loctite 577" o "Loctite 648" (min su due filetti completi). Per temperatura massima +150°C usare solo "Loctite 648". In ogni caso si deve fare attenzione a garantire la continuità metallica.
To obtain the fixing or/and IP degree of protection on the thread put on it just a thin layer of "LOCTITE 577" or "Loctite 648" (at least on two complete threads). For maximum temperature +150°C use only "Loctite 648". In any case you must pay attention to guarantee the metallic continuity.

Schema C
Scheme C



Spessore S min. 6 filetti in presa
Thickness S min. 6 threads engaged

CORTEM s.p.a.
cap. soc.€ 1.578.000,00 i.v.
R.E.A. C.C.I.A.A. GORIZIA U. 32755 - M. GO 000139
Registro Imprese Gorizia 00052120318
Cod.Fisc. e Partita Iva **IT00052120318**
Eco-contributo RAEE assolto ove dovuto n° Registro A.E.E. IT08020000001818

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV GL = ISO 9001 =
COMPANY WITH ENVIRONMENTAL SYSTEM CERTIFIED BY DNV GL = ISO 14001 =

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Member of CORTEM GROUP
To be sure to be safe.

DICHIARAZIONE DI CONFORMITA' *DECLARATION OF CONFORMITY*

N° 0085

Il costruttore:
***We*:**

CORTEM S.p.A.
Via Aquileia, 10
34070 VILLESSE (GO) - ITALY

Dichiara con la presente la conformità allo schema IECEx, del Prodotto
Hereby declares the conformity to IECEx scheme, of the Product

Adattatori e tappi: *Adaptors and plugs:*	**RE REB REM REN PLG**
Modo di protezione: *Protection mode:*	**Ex db IIC Gb** **Ex eb IIC Gb** **Ex tb IIIC Db** **IP66/67**
Temperatura ambiente: *Ambient temperature:*	**Ta -40°C ÷ +150°C** **Ta -20°C ÷ +80°C for galvanized steel ASTM A105 only** **Ta -60°C ÷ +150°C for stainless steel only**
Certificato: *Certificate:*	**IECEx CES 10.0001X**

In accordo con le seguenti norme IEC:
In accordance with the following IEC Standards:

IEC 60079-0: 2011-06 Ed.6.0
IEC 60079-1: 2014-06 Ed.7.0
IEC 60079-7: 2015-06 Ed.5.0
IEC 60079-31:2013-11 Ed.2.0
IEC 60529: 2001

Villesse, 03.04.2017

Firma
Signature . . . . . .
Riccardo Gratton
Vice-president

PART 1 – DESIGN DOSSIER

- Piping Classes N/A

PART 1 – DESIGN DOSSIER

- Calculation Notes N/A

PART 1 – DESIGN DOSSIER

- Equipment requisitions – Vendor Asset Register Doc. No. 1724001290-EL-LIS-00006

Base Load Power Hub (BLPH)

VENDOR ASSET REGISTER

LIGHTING FIXTURE

Document Number: 1724001290-EL-LIS-00006

Document Class: 2

ROSETTI MARINO	
1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED
NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.	
Sign	Date
	27/09/2024

Rev.	Date	Description	Prepared	Reviewed	Approved
03	27/09/2024	Accepted for Construction (AFC)	M. MENEGUZZI	S.ZIANI	A. DELLA RICCA
02	28/08/2024	Accepted for Construction (AFC)	M. MENEGUZZI	S.ZIANI	A. DELLA RICCA
01	08/08/2024	Issue for Review (IFR)	M. MENEGUZZI	S.ZIANI	A. DELLA RICCA
00	22/07/2024	Issue for Review (IFR)	M. MENEGUZZI	S.ZIANI	A. DELLA RICCA

CORTEM GROUP
To be sure to be safe.

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3	Revision / Change Log	X	X	X	X				
4	References	X	X	X	X				
5	Asset Register	X	X	X	X				

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Revision / Change Log

Rev.	Description
00	Issue for Review (IFR)
01	Issue for Review (IFR)
02	Accepted for Construction (AFC)
03	Accepted for Construction (AFC)

HOLDS LIST

No.	Description
1.	
2.	
3.	
4.	

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Tag Number	Tag Description	Physical Class Name	Location	System/SubSystem Code	Purchase Order Number	Vendor Company Name	Manufacturer Company Name	Model Number	Equipment Manufacturer Serial Number	Model Part No	Hazardous Area Equip Relevant	Hazardous Area Certificate Standard	Hazardous Area Certifying Authority	Hazardous Area Certificate Number	Atex Classification	Explosion Protection Examination Certificate Document Number	Layout Drawing	Datasheet	Assembly/Dimensional Drawing	General Arrangement	Operating & Maintenance Manual	Wiring Diagram	Spare Parts List	Lubricant Document Reference	Criticality	Remarks
ELF-200N1-09-L2-24	Emergency Lighting Fixture	-	Monopile Transistion Piece	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-25	Emergency Lighting Fixture	-	Monopile Transistion Piece	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-10-L3-06	Emergency Lighting Fixture	-	Monopile Transistion Piece	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-10-L3-07	Emergency Lighting Fixture	-	Monopile Transistion Piece	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-10-L3-08	Emergency Lighting Fixture	-	Monopile Transistion Piece	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-10-L3-09	Emergency Lighting Fixture	-	Monopile Transistion Piece	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-10-L3-10	Emergency Lighting Fixture	-	Monopile Transistion Piece	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-10-L3-11	Emergency Lighting Fixture	-	Monopile Transistion Piece-stairs	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-10-L3-12	Emergency Lighting Fixture	-	Monopile Transistion Piece-stairs	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-10-L3-13	Emergency Lighting Fixture	-	Monopile Transistion Piece-stairs	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-10-L3-01	Emergency Lighting Fixture	-	Monopile Transistion Piece-stairs	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-10-L3-14	Emergency Lighting Fixture	-	Monopile Transistion Piece	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-22	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-03-L2-14	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-21	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-20	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-03-L2-13	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-19	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-18	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-03-L2-12	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-17	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-03-L2-11	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-16	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-03-L2-10	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-03-L2-09	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-11	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-03-L2-08	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-10	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-15	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-03-L2-07	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-14	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-03-L2-16	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-13	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-12	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-03-L2-15	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-23	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-08	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-03-L2-04	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-07	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-09	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-06	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-05	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-03-L2-03	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-03-L2-02	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-04	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-03	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-01	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-09-L2-02	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-03-L2-05	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-03-L2-06	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-03-L2-01	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-21	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-16	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-20	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-19	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-25	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-18	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-24	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-17	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-23	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-16	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-04	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-03	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-23	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-22	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-21	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-15	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-20	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-14	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-19	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-13	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-18	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-12	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-17	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-22	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-10-L3-04	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-10-L3-05	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-15	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-14	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-08	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-12	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-09	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-02	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-01	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-04	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-06	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-03	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-07	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-10	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-02	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-01	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-05	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-08	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-05	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-06	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-07	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-09	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-11	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-11	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-02-L1-13	Normal Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-08-L1-10	Emergency Lighting Fixture	-	UPPER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-04-L3-02	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-10-L3-02	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-04-L3-01	Normal Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-0645-BB	24/86772	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA
ELF-200N1-10-L3-03	Emergency Lighting Fixture	-	LOWER DECK	-	1724001290	Cortem Spa	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	NA	-	EN IEC 60079-0:2018	Eurofins E&E CML	CML 20 ATEX 3018X	Zone 1	1724001290-EL-LIS-00005	1724001290-EL-DA-00003	1724001290-EL-DS-00004	1724001290-EL-DA-00003	1724001290-EL-DA-00003	1724001290-EL-MAN-00008	1724001290-EL-DA-00003	1724001290-COM-LIS-00009	NA	NA	NA

PART 1 – DESIGN DOSSIER

- Data Sheets

- Equipment Technical Datasheet - Doc. No. 1724001290-EL-DS-00004

Base Load Power Hub (BLPH)

LIGHTING FIXTURE

EQUIPMENT TECHNICAL DATA SHEET

Document Number: 1724001290-IN-DS-00004

Document Class: 2

ROSETTI MARINO

1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
	09/09/2024

Rev.	Date	Description	Prepared	Reviewed	Approved
02	09/09/2024	Accepted for Construction (AFC)	M. MENEGUZZI	S. ZIANI	A. DELLA RICCA
01	20/08/2024	Issue for Review (IFR)	M. MENEGUZZI	S. ZIANI	A. DELLA RICCA
00	22/07/2024	Issue for Review (IFR)	M. MENEGUZZI	S. ZIANI	A. DELLA RICCA

CORTEM GROUP
To be sure to be safe.

This document undergoes an approval cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Table of Contents

SH.	DESCRIPTION	REVISIONS							
		00	01	02					
1	Cover	X	X	X					
2	Table of Contents	X	X	X					
3	Revision / Change Log / Hold List	X	X	X					
4	References	X	X	X					
5	Technical Data Sheet	X	X	X					

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Revision / Change Log

Rev.	Description
00	Issue for Review (IFR)
01	Issue for Review (IFR)
02	Accepted for Construction (AFC)

HOLDS LIST

No.	Description
1.	
2.	
3.	
4.	

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Row	Data Sheet for Lighting Fixtures				Rev.
1	General				
2		Required	Manufacturer Proposal	Comments	
3	Manufacturer	by Vendor	Cortem SpA		
4	Order Status	for Purchase	CONFIRMED		
5	General - Electrical Input Data				
6	System Voltage	230 V ac	CONFIRMED		
7	Voltage Variation (Steady State)	±5 %	CONFIRMED		
8	Rated Frequency	50Hz	CONFIRMED		
9	Frequency Variation (Steady State)	±2 %	CONFIRMED		
10	Number of Phases	1ph + neutral TN-S system	CONFIRMED		
11	Installation conditions				
12	Ambient Temperature	-8.4°C to +25°C	CONFIRMED		
13	Relative humidity (%)	Maximum 95 %	CONFIRMED		
14	Atmosphere	Marine Offshore-fixed	CONFIRMED		
15	Altitude > 1000 m (m)	not more than 1000 m	CONFIRMED		

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Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	**42W LED Linear Luminaire-Normal Lighting Fixture**				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-MN-0645-BB		
4	Serial Number	by vendor	T24/86772		
5	Quantity	57 Nos.	57 Nos.	Note-1	
6	Location / Module	Lower deck/Below lower deck	NOTED		
7	**LED Lamp**				
8	Nominal power	42 watts	45		
9	No. of linear	1	CONFIRMED		
10	Luminous flux	5810 lm	6200 lm		
11	Colour Temperature	5000 K	CONFIRMED		
12	**Protection**				
13	Hazardous Area Certification (Ex)	Safe area	CONFIRMED		
14	Degree of Protection (IP)	IP 56	IP66		
15	ATEX certified	Not required	suitable for zone 2		
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		
18	Refelector	GRP/Aluminium	Aluminium alloy		
19	Diffuser	Polycarbonate/temperate glass	temperate glass		
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	CONFIRMED		
22	Size	M20	CONFIRMED		
23	**Emergency Battery Pack**				
24	Requirement	Not required	CONFIRMED		
25	Battery type	Not required	CONFIRMED		
26	Autonomy	Not required	CONFIRMED		
27	Emergency luminous flux	Not required	CONFIRMED		
28	**Mechanical parameters**				
29	Dimension	by vendor	600x105x120 mm		
30	Weight	by vendor	2,5		

Note:
1 Quantity included 10% of contingency with roundup value.

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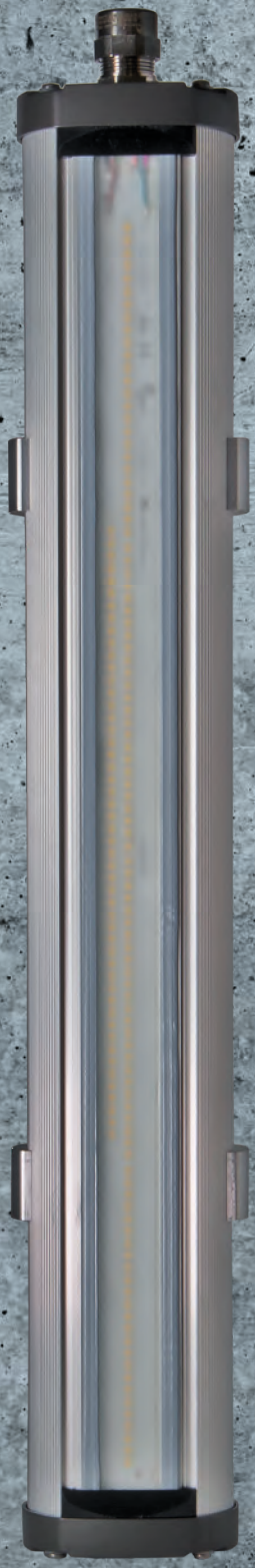
Row	Data Sheet for Lighting Fixtures & Accessories				Rev.
1	**45W LED Linear Luminaire-Emergency Lighting Fixture**				
2	Item	Required	Manufacturer Proposal	Comments	
3	Model Number	by vendor	LIFEX-ME-1260N-BB		
4	Serial Number	by vendor	24/86773		
5	Quantity	78 Nos.	78 Nos.	Note-1	
6	Location / Module	Lower deck/Upper deck/ Below lower deck	NOTED		
7	**LED Lamp**				
8	Nominal power	45 watts	60		
9	No. of linear	1	CONFIRMED		
10	Luminous flux	5810 lm	6200 lm		
11	Colour Temperature	5000 K	5000		
12	**Protection**				
13	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1	Confirmed zone 1 IIC T6		
14	Degree of Protection (IP)	IP 56	IP66		
15	ATEX certified	Classification EX db	CONFIRMED (Ex db eb)		
16	**Material**				
17	Body	GRP/Aluminium alloy	Aluminium alloy		
18	Refelector	GRP/Aluminium	Aluminium alloy		
19	Diffuser	Polycarbonate/temperate glass	temperate glass		
20	**Cable Entry**				
21	No. of cable entry	4 Nos.	Confirmed		
22	Size	M20	Confirmed		
23	**Emergency Battery Pack**				
24	Requirement	Required	CONFIRMED		
25	Battery type	NiCd internal battery, gas-tight	Ni-MH		
26	Autonomy	180 mins.	CONFIRMED		
27	Emergency luminous flux	1168 lm	1168		
28	**Mechanical parameters**				
29	Dimension	by vendor	1200x105x120		
30	Weight	by vendor	4,5		

Note:

1 Quantity included 10% of contingency with roundup value.

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Less is More



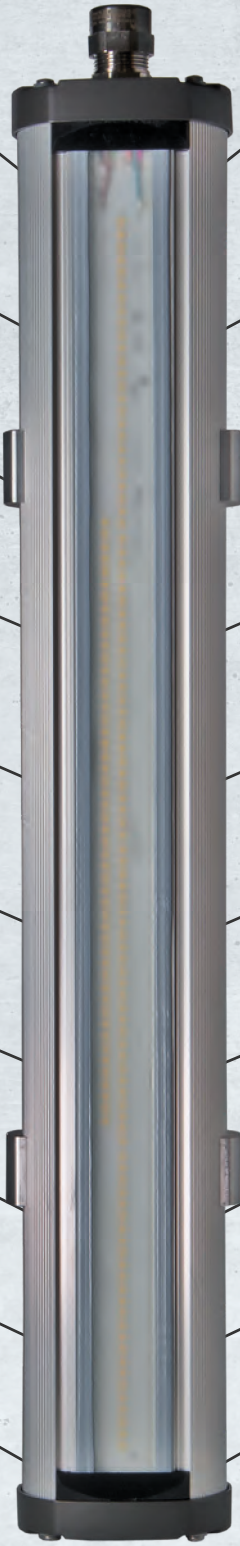
Lifex®, the shift in the new lighting paradigm

CORTEM® GROUP

To be sure to be safe.

We have reduced the size, lowered the weight, shortened the time of installation, removed any type of risk, reduced any maintenance intervention, avoided 70% of the components and saved tons of CO_2.

Lifex®



Reduced glare

Dimmable

Low CO_2 generation

LED technology

Anodised aluminium

Loop-in/loop-out

Available in 4 lengths

Easy retrofit brackets

Power from 12 to 120W

Weight reduced by 40%

Comprehensively tested

Low power consumption

EX compliant driver

Wide voltage range

Innovative styling

Up to 15,500 lumen

Affordable costs

Zone 1, 2, 21, 22

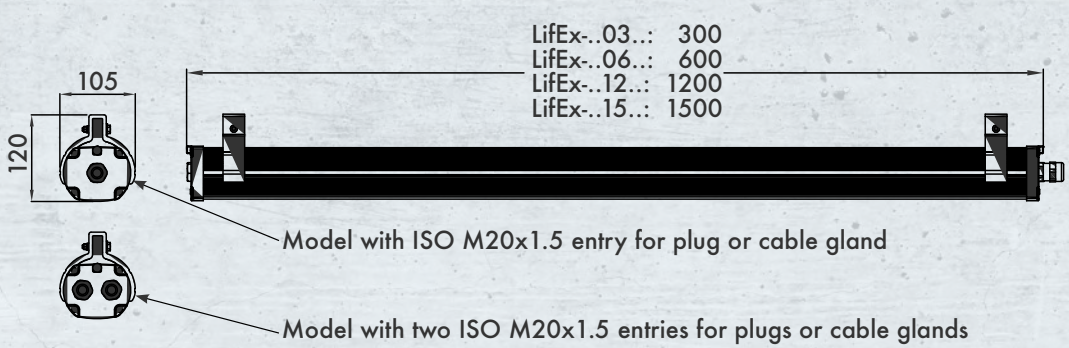
CRI>80

Recyclable

We have also eliminated the possibility of improving it.

Reduced dimensions and weight

Careful product architecture oriented towards achieving optimal total life cycle management (circular economy) and maximising working life made it possible to create a compact, lightweight and easy to install lighting fixture that is also extremely robust and durable.



Luminous flux up to 15,500 lumen

From the perspective of electronics and lighting design, the use of LED technology and high-power LED strips allowed us to reach a light output of 15,500 lm with high efficiency and guaranteed durability through time.

Retrofit brackets

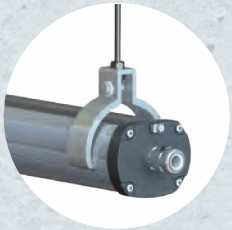
An innovative brackets system, without C/C distance constraints, allows simple installation, easy retrofitting, and the facility to rotate the lighting fixture from -30° to +30°.



from -30° to +30°



LifEx pole mounting



LifEx ceiling mounting (six versions in catalogue)

Comprehensively tested

LifEx has passed, together with all regulatory tests, extra mechanical and electrical tests in addition to those specified in the certificate such as vibration test, IK09 and IPX9, photobiological risk exemption.

Application sectors and zones



On-shore plants | Off-shore plants | Chemical and petrochemical plants | Agri-food plants | Wastewater treatment plants | Naval installations | Low temperatures

MECHANICAL CHARACTERISTICS

Body:	housing and heads in aluminium alloy resistant to atmospheric corrosion and marine environments
Diffuser:	Glass, resistant to thermal shock, impact and UV radiation
Gaskets:	acid and hydrocarbon resistant silicone
Internal frame:	aluminium extrusion
Bolts and screws:	stainless steel
Entries:	Max. 4 inlets Ø25.5. Standard version with no.2 Ø20.5 holes complete with no.1 NAV20IB cable gland and no.1 PLG1IB plug. For other versions, caps and cable glands are on request
Assembly:	mounting brackets for M8 holes adjustable from 0° to 30°

ELECTRICAL CHARACTERISTICS

Power unit:	electronic
Rated voltage:	100÷277 Vac/dc (refer to selection tables for details)
Rated frequency:	50/60 Hz
Connection:	directly to terminal board L, N, Pe 4 mm2 max section terminal board with jumpers suitable for through-wiring both from single side and from two opposite sides
Emergency unit:	electronic inverter 110/227 Vac 50/60 Hz, 110 -270 Vdc. Ni / Mh batteries, 1.8 Ah or 3 Ah, 6V
Wiring:	high-temperature resistant semi-rigid cables

CERTIFICATION DATA

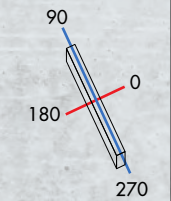
Classification:	group II Category 2 G D
Installation:	Zone 1, 2, 21, 22 (LifEx-ME) zone 2, 21, 22 (LifEx-MN) zone 21, 22 (LifEx-MT)
Marking:	CE 0722 Ex II 2GD - Ex db eb mb IIC T.. Gb - Ex tb IIIC T..°C Db IP66 LifEx-ME
	CE Ex II 3GD Ex ec IIC T.. Gc - Ex tb IIIC T..°C Db IP66 LifEx-MN
	CE 0722 Ex II 2D - Ex tb IIIC T..°C Db IP66 LifEx-MT
Certified:	ATEX Ex IEC IECEx EAC
Ambient Temp.:	-60°C for versions without battery, -20°C/-60°C for versions with battery
Protection degree:	Certified IP66

PHOTOMETRIC CHARACTERISTICS

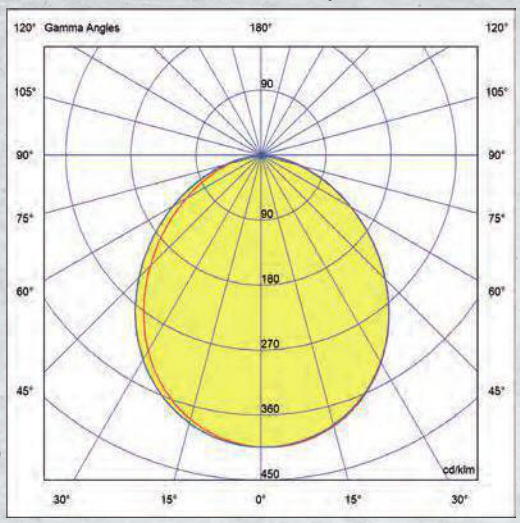
Multichip LED:	Mid power
Viewing angle:	120°
Colour temperature:	5000 K
CRI:	> 80
Instant Restrike:	SI
L80:	> 54000 hours

Flux 6390 lm
Maximum 404.41 cd/klm
Position C=0.00 G=2.00
Efficiency: 100.00%
Date: 11-05-2022
Asymmetrical

1211mm x 114mm



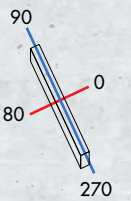
C Halfplanes
180.0 — 0.0
270.0 — 90.0



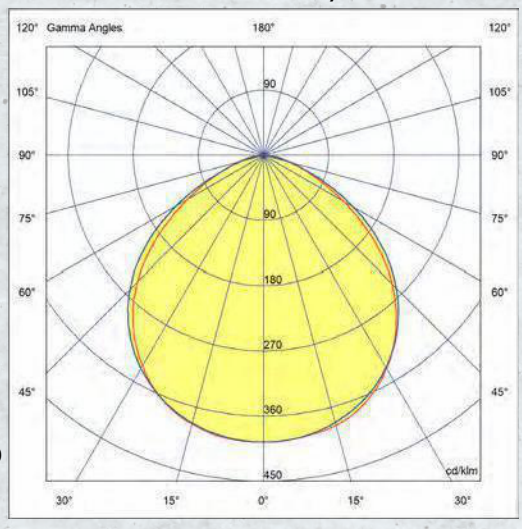
Photometric curve LifEx-MT-1290

Flux 14544.33 lm
Maximum 395.91 cd/klm
Position C=170.00 G=1.00
Efficiency: 100.00%
Date: 12-12-2019
Asymmetrical

1170mm x 95mm

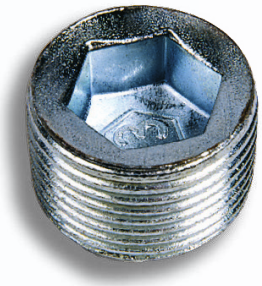


C Halfplanes
180.0 — 0.0
270.0 — 90.0



Photometric curve LifEx-MT-12120

PLG series plugs are used for close-up unused entries. They feature a hexagonal recessed-type head to ensure the opening with proper tools only.



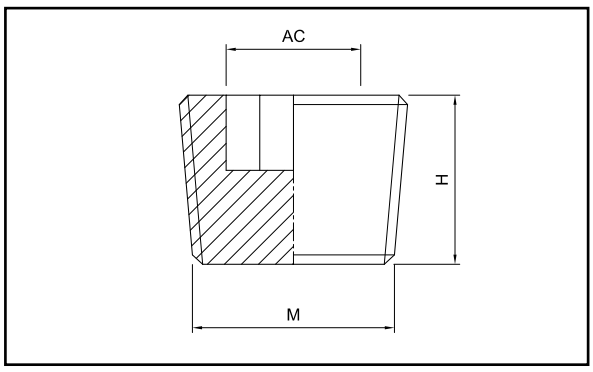
Classification: 2014/34/UE	Group II	Category 2GD
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)
Marking:	CE 0722 Ex II 2 GD Ex db IIC Gb Ex tb IIIC Db IP66/67	
	CE 0722 Ex II 2 GD Ex eb IIC Gb Ex tb IIIC Db IP66/67	
Certification:	ATEX CESI 02 ATEX 049X	
	IECEx IECEx CES 10.0001X	For IEC Ex and others certifications data can be downloaded at www.elfit.com
Standards:	CENELEC EN 60079-0: 2012+A11: 2013, EN 60079-1: 2014, EN 60079-7: 2015, EN 60079-31: 2014 and EUROPEAN DIRECTIVE 2014/34/UE IEC60079-0: 2011, IEC60079-1: 2007-04, IEC60079-7: 2006-07, IEC60079-31: 2008 Directive RoHS 2011/65/UE	
Degree of protection:	IP66/67	

Operating temperature:

Close-up plugs	Material	Ambient temperature
PLG...	Galvanised steel **(G)**	-20°C +80°C
PLG...	Nickel-plated brass **(B)**, Aluminium alloy **(A)**	-40°C +150°C
PLG...	Stainless steel **(S)**	-60°C +150°C

Certificates are available on www.elfit.com

vendite@elfit.com info@elfit.com
www.elfit.com



SELECTION TABLE FOR PLUGS WITH STANDARD CONICAL THREAD

Code	Thread M	Dimensions in mm		Material	Weight
		AC	H		Kg
PLG02NG	1/4" NPT	8	23	Galvanised steel	0,014
PLG01NG	3/8" NPT	8	14	Galvanised steel	0,024
PLG1NG	1/2" NPT	13	18	Galvanised steel	0,034
PLG2NG	3/4" NPT	17	18	Galvanised steel	0,054
PLG3NG	1" NPT	19	24	Galvanised steel	0,124
PLG4NA	1 ¼" NPT	24	24	Aluminium	0,061
PLG5NA	1 ½" NPT	35	24	Aluminium	0,063
PLG6NA	2" NPT	36	24	Aluminium	0,109
PLG7NA	2 ½" NPT	50	30	Aluminium	0,169
PLG8NA	3" NPT	50	30	Aluminium	0,242
PLG10NA	4" NPT	85	30	Aluminium	0,489
PLG12NA	5" NPT	102	32	Aluminium	0,735
PLG14NA	6" NPT	119	32	Aluminium	1,00
PLG02G	1/4" ISO 7/1	8	23	Galvanised steel	0,014
PLG01G	3/8" ISO 7/1	8	14	Galvanised steel	0,024
PLG1G	1/2" ISO 7/1	13	18	Galvanised steel	0,034
PLG2G	3/4" ISO 7/1	17	18	Galvanised steel	0,054
PLG3G	1" ISO 7/1	19	24	Galvanised steel	0,124
PLG4A	1 ¼" ISO 7/1	24	24	Aluminium	0,061
PLG5A	1 ½" ISO 7/1	35	24	Aluminium	0,063
PLG6A	2" ISO 7/1	36	24	Aluminium	0,109
PLG7A	2 ½" ISO 7/1	50	30	Aluminium	0,169
PLG8A	3" ISO 7/1	50	30	Aluminium	0,242
PLG10A	4" ISO 7/1	85	30	Aluminium	0,489
PLG12A	5" ISO 7/1	102	32	Aluminium	0,735
PLG14A	6" ISO 7/1	119	32	Aluminium	1,00

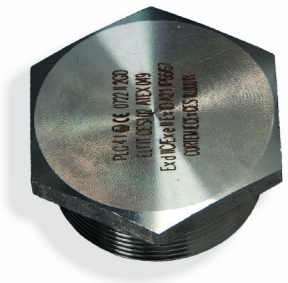
Order code example

PLG	10	N	B
MODEL	SIZE	THREAD	MATERIAL

TECHNICAL NOTES:

- *Available also in stainless steel (example code PLG3**S**)*
- *Available also in nickel plated brass (example code PLG1**B**)*
- *Available also in aluminium (example code PLG2**A**)*
- *Available also in galvanized steel (example code PLG6**G**)*

PLG series plugs are used for close-up unused entries. They feature a hexagonal external head to ensure the opening with proper tools only.



Classification: 2014/34/UE	Group II	Category 2GD
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)
Marking:	CE 0722 Ex II 2 GD Ex db IIC Gb Ex tb IIIC Db IP66/67	
	CE 0722 Ex II 2 GD Ex eb IIC Gb Ex tb IIIC Db IP66/67	
Certification:	ATEX CESI 02 ATEX 049X	
	IECEx IECEx CES 10.0001X	For IEC Ex and others certifications data can be downloaded at www.elfit.com
Standards:	CENELEC EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-31: 2009 and EUROPEAN DIRECTIVE 2014/34/UE IEC60079-0: 2011, IEC60079-1: 2007-04, IEC60079-7: 2006-07, IEC60079-31: 2008 Directive RoHS 2011/65/UE	
Degree of protection:	IP66/67	

Operating temperature:

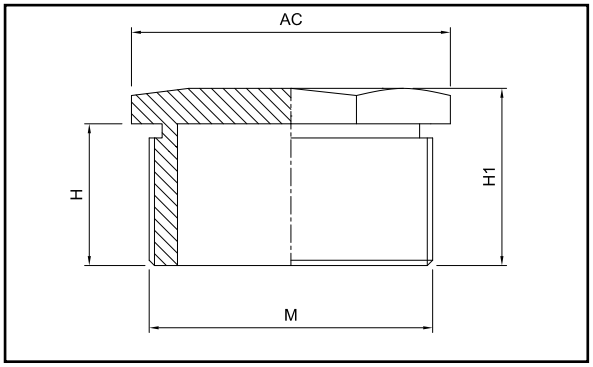
Close-up plugs	Material	Gaskets	Ambient temperature
PLG...	Galvanised steel **(G)**	Silicone	-20°C +80°C
PLG...	Nickel-plated brass **(B)**, Aluminium alloy **(A)**	Silicone	-40°C +150°C
PLG...	Stainless steel **(S)**	Silicone	-60°C +150°C

Certificates are available on www.elfit.com

ACCESSORIES OPON REQUEST

Lock nuts *	Thread ISO228	Code	Material	ISO metric thread	Code	Material
	1/4"	**DL02G**	Galvanised steel	M12x1,5	DL02IB	Nickel-plated brass
	3/8"	**DL01G**	Galvanised steel	M16x1,5	DL01IB	Nickel-plated brass
	1/2"	**DL1G**	Galvanised steel	M20x1,5	DL1IB	Nickel-plated brass
	3/4"	**DL2G**	Galvanised steel	M25x1,5	DL2IB	Nickel-plated brass
	1"	**DL3G**	Galvanised steel	M32x1,5	DL3IB	Nickel-plated brass
	1 ¼"	**DL4G**	Galvanised steel	M40x1,5	DL4IB	Nickel-plated brass
	1 ½"	**DL5A**	Aluminium	M50x1,5	DL5IB	Nickel-plated brass
	2"	**DL6A**	Aluminium	M63x1,5	DL6IB	Nickel-plated brass
	2 ½"	**DL7A**	Aluminium	M75x1,5	DL7IB	Nickel-plated brass
	3"	**DL8A**	Aluminium	M90x1,5	DL8IB	Nickel-plated brass
	3 ½"	**DL9A**	Aluminium	-	-	-
	4"	**DL10A**	Aluminium	M100x1,5	DL10IB	Nickel-plated brass

* For different material contact the sales office.



SELECTION TABLE FOR PLUGS WITH CYLINDRICAL THREAD

Code	Thread M	Dimensions in mm			Material	Weight
		AC	H	H1		Kg
PLG02C...	1/4" UNI ISO 228/1	17	16	21	On request	0,014
PLG01C...	3/8" UNI ISO 228/1	22	16	21		0,024
PLG1C...	1/2" UNI ISO 228/1	25	20	25		0,034
PLG2C...	3/4" UNI ISO 228/1	32	20	25		0,054
PLG3C...	1" UNI ISO 228/1	38	24	29		0,124
PLG4C...	1 ¼" UNI ISO 228/1	45	24	29		0,061
PLG5C...	1 ½" UNI ISO 228/1	55	24	29		0,063
PLG6C...	2" UNI ISO 228/1	65	24	29		0,109
PLG7C...	2 ½" UNI ISO 228/1	85	24	29		0,169
PLG8C...	3" UNI ISO 228/1	100	24	29		0,242
PLG10C...	4" UNI ISO 228/1	120	24	29		0,489
PLG01I...	M16x1,5	20	16	21	On request	0,014
PLG1I...	M20x1,5	24	16	21		0,024
PLG2I...	M25x1,5	30	16	21		0,034
PLG3I...	M32x1,5	36	16	21		0,054
PLG4I...	M40x1,5	46	16	21		0,124
PLG5I...	M50x1,5	55	16	21		0,061
PLG6I...	M63x1,5	70	18	23		0,063
PLG7I...	M75x1,5	85	18	23		0,109
PLG8I...	M90x1,5	95	18	23		0,169
PLG10I...	M100x1,5	105	18	23		0,242

Order code example

PLG	8	I	G
MODEL	SIZE	THREAD	MATERIAL

TECHNICAL NOTES:

- *Available also in stainless steel (example code PLG3I**S**)*
- *Available also in nickel plated brass (example code PLG1I**B**)*
- *Available also in aluminium (example code PLG2I**A**)*
- *Available also in galvanized steel (example code PLG2I**G**)*
- *Available also with PG thread (example code PLG5**P**A)*

THREAD CODIFICATION

Pg DIN 40430

2	3	4	5	6	7	8	9	10
PG9	PG11	PG13,5	PG16	PG21	PG29	PG36	PG42	PG48

PART 2 – CERTIFICATION DOSSIER

• Acceptance

- Internal and External Inspection reports (Vendors) - refer to section Test Report
- Conformity with technical specification certificates - Doc. No. COV2402693/01

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VENDOR CONFORMANCE CERTIFICATE

No. COV2402693/01

Customer	:	ROSETTI MARINO S.p.A.
Project	:	123A90A Base Load Power Hub Platform
P. Order	:	1724001290
Cortem Job	:	COV2402693
Material	:	Lighting Fixtures and accessories
Date	:	29/08/2024

We hereby declare that all materials relevant to the subject purchase order conform to contractual quality requirements including applicable codes, standards and specifications, have satisfactorily passed our technical and quality inspection requirements and have therefore been approved for shipment.

Cortem SpA

cortem s.p.a.
UFFICIO PROGETTI E COLLAUDI
PROJECT & INSPECTION DEPT.
28 AUG 2024

PART 2 – CERTIFICATION DOSSIER

- Manufacturing and testing Record

- Materials certificates (including consumables, such as electrodes and paint)

- Quality Control plan /Inspection & test Plan / Inspection Reports - Doc. No. 1724001290-QC-ITP-00002

- Compliance with CE Marking, ATEX, and PED requirements as relevant to the scope of supply. - Atex Register Doc. No. 1724001290-EL-LIS-00005

RAFFMETAL

THE ALUMINIUM EVOLUTION



Leghe di alluminio in colata continua. Continuous casting aluminium alloys

Standard: **UNI EN 1676 and 1706**

Alloy group: **Al Si**

Alloy designation: **EN AB and AC 44100 - Al Si 12 (b)**

Replaces: **UNI 4514 - G Al Si 13**

CHEMICAL COMPOSITION %

ALLOY		ELEMENTS												
		Si	**Fe**	**Cu**	**Mn**	**Mg**	**Cr**	**Ni**	**Zn**	**Pb**	**Sn**	**Ti**	Individual impurities	Global impurities
EN AB 44100	min	10,5												
	max	13,5	0,55	0,10	0,55	0,10	-	0,10	0,15	0,10	-	0,15	0,05	0,15
UNI 4514 - G Al Si 13	min	12,0												
	max	13,5	0,6	0,05	0,4	0,05	-	0,01	0,08			0,10		0,15*

*Exc.Fe+Mn+Ti

MECHANICAL FEATURES DETECTED FROM SEPARATE CASTING TEST SPECIMENS

Casting process	Temper designations	Rm Tensile strength		Sp 0,2 Yield strength		A Elongation		HB Brinell hardness	
		EN 1706	UNI 4514	EN 1706	UNI 4514	EN 1706	UNI 4514	EN 1706	UNI 4514
		Mpa	N/mm2	Mpa	N/mm2	%	%	HBW	HB
SAND (as cast)	F	150	165-195	70	80-100	4	4-8	50	50-60
Annealed	T5		155-195		70-110		6-10		50-60
SHELL (as cast)	F	170	175-215	80	90-110	5	5-7	55	55-65
Annealed	T5		165-215		80-100		6-10		50-60
PRESSURE DIE (as cast)	F		225-265		125-165		1,5-2,5		75-95

PHYSICAL PROPERTIES (indicative values subject to the UNI EN and ex UNI Standards)

DENSITY	2.65 Kg/dm³
MELTING RANGE or MELTING POINT	577 °C
SPECIFIC HEAT (at 100)°	0.23 cal/g °C
LATENT HEAT OF MELTING	93 cal/g
LINEAR SHRINKAGE	˜1,30 %
ELECTRIC CONDUCTIVITY	16 - 23 MS/m
MODULUS OF ELASTICITY	7600 Kg/mm²

THERMAL CONDUCTIVITY at 20°C	130 - 160 W/(m K)
LINEAR THERMAL EXPANSION from 20 t 100°C	20.0x10-6/°C
LINEAR THERMAL EXPANSION from 20 t 200°C	20.5x10-6/°C
LINEAR THERMAL EXPANSION from 20 t 300°C	21.5x10-6/°C
SUGGESTED MAXIMUM TEMPERATURE	780 °C
SUGGESTED CASTING TEMPERATURE	
°in sand	700-750 °C
°in shell	700-750 °C
°in pressure die	640-700 °C

TECHNOLOGICAL FEATURES, QUALITATIVE INDICATIONS

STRENGTH AT ELEVATED TEMPERATURE(to 200°	MEDIUM
GENERAL RESISTANCE TO CORROSION	GOOD
MACHINABILITY	BAD
CASTABILITY	EXCELLENT
POLISHING	MEDIUM

RESISTANCE TO HOT TEARING	SMALL
PRESSURE TIGHTNESS	GOOD
WELDABILITY	GOOD
DECORATIVE ANODISING	LOW
PROTECTIVE ANODISING	LOW

AZIENDA CON SISTEMA DI GESTIONE PER LA QUALITÀ CERTIFICATO DA DNV = UNI EN ISO 9001:2008 =

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tel:0365.890.100 fax 0365.899.327
qualita@raffmetal.it
vendite@raffmetal.it

AZIENDA CON SISTEMA DI GESTIONE AMBIENTALE CERTIFICATO DA DNV = UNI EN ISO 14001:2004 =

RAFFMETAL

THE ALUMINIUM EVOLUTION



Leghe di alluminio in colata continua. Continuous casting aluminium alloys

Standard: **UNI EN 1676 and 1706**

Alloy group: **Al Si**

Alloy designation: **EN AB and AC 44100 - Al Si 12 (b)**

Replaces: **UNI 4514 - G Al Si 13**

GENERALITIES REGARDING USE

The ingot recasting process must be carried out as quickly as possible and overheating must be avoided (maximum melting temperature 770°C).

The iron tools that can come into contact with the liquid metal must be appropriately painted to prevent contamination of the alloy.

The best results for refining the alloy are reached by treatments with inert gases such as nitrogen and/or argon with the intent of removing the hydrogen dissolved and the oxides present in the bath of molten metal. Better distribution of the gas in the molten metal is obtained by the use of relevant rotors. Pay particular attention that all transfer operations of the molten metal are performed with less turbulence possible. It is recommended to leave the molten metal at rest for a few minutes before starting casting. Careful skimming operations of the bath are recommended.

The re-cycling of risers and casting appendixes is allowed but within the limits of 40% of the total weight of the load.

The EN 44100 alloy is delivered by RAFFMETAL exclusively under the form of ingots produced with Continuous Casting, this has the following advantages:

- Lower presence of oxides with consequent reduced aptitude for the formation of HARD POINTS
- Fine and even structure with reduced quantity and dimension intermetallic compounds
- Reduced hydrogen content in relation to the high solidification speed.
- Possibility of customising according to different options of the dimensions and geometry of the stack
- Less risk of explosion of the ingot in the melting phase owing to the smaller presence of open shrinkage cavities.
- Improved metal yield owing to the excellent surface quality of the ingot

SPECIFICITY REGARDING USE

For the realisation of casting with sensitive thickness, it is recommended to envision "modification" treatment.

If Strontium is used as the modifying element, it is recommended to operate with Strontium that do not exceed 300 ppm in order to prevent excess reactivity of the alloy in the liquid state with consequent oxidation and gassing phenomena of the bath.

Remember that the contents of Strontium exceeding 100 ppm are normally sufficient to obtain a well-modified structure.
Considering the relative level of purity of the alloy's chemical composition (reduced content of Cu - Zn - Fe) it is important to consider the level of cleanliness of the melting furnaces and the attention of the re-cycling of the risers in order to prevent induced pollution that could jeopardise the technical properties of the alloy.

TYPICAL USE

Alloy suitable for applications requiring excellent castability in all casting techniques, for the realisation of thin wall castings on particulars that do not require high mechanical resistance but good lengthening values.
It is widely used in all sectors, its fundamental features are: good casting, good resistance to corrosion and mediocre machinability. It is not suitable for decorative anodic oxidation due to the high presence of Silicone that leads to dark grey colouring.

Used particularly in the textile industry, in mechanics and in the electrical and transport sectors.

EN 44100 alloy, with lead below 0,05%, is in compliance with the EN 601 foodstuff Standard.

COMPARISON WITH EQUIVALENT OR SIMILAR FOREIGN STANDARDS

	ITALY	GERMANY	FRANCE	G.B.R.	USA	ISO	JAPAN	TURKEY
	UNI	(Din1725/5-86)	(NFA57-105)	(BS1490-88)	(ASTM B179-82)	(3522-84)	(JIS H2211-92)	(ETIAL)
Equivalent	4514	230 A	AS 13	LM 6	A 413.2	Al Si 12		
Similar		230 D		L 33	SAE 305		AC 3 A	ETIAL - 140

HEAT TREATMENTS

Annealing of casting in sand and shell at 360-400 °C for 4-8 hours in normal conditions.

Limitation of liability
The contents of these technical sheets gave an informative purpose and do not constitute a warranty regarding the properties stated. The decisions based on this information are taken under the responsibility and risk of the user and do not exclude it from the verification. If the former are not carried out, we do not assume any liability.

AZIENDA CON SISTEMA DI GESTIONE PER LA QUALITÀ CERTIFICATO DA DNV = UNI EN ISO 9001:2008 =

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qualita@raffmetal.it
vendite@raffmetal.it

AZIENDA CON SISTEMA DI GESTIONE AMBIENTALE CERTIFICATO DA DNV = UNI EN ISO 14001:2004 =

Base Load Power Hub (BLPH)

LIGHTING FIXTURE

INSPECTION AND TEST PLAN

Document Number: 1724001290-QC-ITP-00002

ROSETTI MARINO	
1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED
NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.	
Sign	Date
ROSETTI MARINO SpA Shipbuilding Lifecycle Quality Control Dept.	19/10/2024

Document Class: 2

Rev.	Date	Description	Prepared	Reviewed	Approved
02	01/10/2024	Accepted for Construction (AFC)	M. MENEGUZZI	S. ZIANI	A. DELLA RICCA
01	27/08/2024	Accepted for Construction (AFC)	M. MENEGUZZI	S. ZIANI	A. DELLA RICCA
00	22/07/2024	Issue for Review (IFR)	M. MENEGUZZI	S. ZIANI	A. DELLA RICCA

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4	References	X	X	X					
5	ITP	X	X	X					

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Revision / Change Log

Rev.	Description
00	Issue for Review (IFR)
01	Accepted for Construction (AFC)
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HOLDS LIST

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1.	
2.	
3.	
4.	

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References

Tag Number	Tag Description	Model Number	Equipment Manufacturer Serial Number
ELF-200N1-09-L2-24	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
ELF-200N1-09-L2-25	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
ELF-200N1-10-L3-06	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
ELF-200N1-10-L3-07	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
ELF-200N1-10-L3-08	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
ELF-200N1-10-L3-09	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
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ELF-200N1-10-L3-01	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
ELF-200N1-10-L3-14	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
ELF-200N1-09-L2-22	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
ELF-200N1-03-L2-14	Normal Lighting Fixture	LIFEX-ME-0645-BB	24/86772
ELF-200N1-09-L2-21	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
ELF-200N1-09-L2-20	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
ELF-200N1-03-L2-13	Normal Lighting Fixture	LIFEX-ME-0645-BB	24/86772
ELF-200N1-09-L2-19	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
ELF-200N1-09-L2-18	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
ELF-200N1-03-L2-12	Normal Lighting Fixture	LIFEX-ME-0645-BB	24/86772
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ELF-200N1-03-L2-01	Normal Lighting Fixture	LIFEX-ME-0645-BB	24/86772
ELF-200N1-08-L1-21	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773

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ELF-200N1-08-L1-19	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
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ELF-200N1-08-L1-11	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
ELF-200N1-02-L1-11	Normal Lighting Fixture	LIFEX-ME-0645-BB	24/86772
ELF-200N1-02-L1-13	Normal Lighting Fixture	LIFEX-ME-0645-BB	24/86772
ELF-200N1-08-L1-10	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
ELF-200N1-04-L3-02	Normal Lighting Fixture	LIFEX-ME-0645-BB	24/86772
ELF-200N1-10-L3-02	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773
ELF-200N1-04-L3-01	Normal Lighting Fixture	LIFEX-ME-0645-BB	24/86772
ELF-200N1-10-L3-03	Emergency Lighting Fixture	LIFEX-ME-1260N-BB	24/86773

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Cod.Fisc. e Partita Iva **IT00052120318**
Eco-contributo RAEE assolto ove dovuto n° Registro A.E.E. IT08020000001818

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =
COMPANY WITH ENVIRONMENTAL SYSTEM CERTIFIED BY DNV = ISO 14001 =

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Quality Control Plan N°: 1724001290-QC-ITP-00002	Purchase Order: 1724001290	Project: HOLLANDSE KUST NOORD WIND PARK Project		
Material: Lighting Fixtures	Cortem Ref: COV2402693	Date: 01/10/2024	Rev.: 02	Issued by: PMD

1 Checks and tests

1.1 The checks and tests shall be at least those indicated in activities herein below mentioned.Other test and checks may be defined at the inspection time (if necessary).
1.2 The scope of the tests is to verify, by examining the documents and/or drawings, the compliance with the client's requests and to detect any fault in materials and construction.
1.3 The checks and tests shall be carried out by the authority indicated in columns A, B, C.

2 Reference codes

2.1 A : tests performed by Cortem
B: tests performed by Rosetti Marino
C: tests performed by Crosswind

2.2 H : hold point
W : witness
R : review of the documentation
NA : not applicable

CORTEM s.p.a.
cap. soc.€ 1.578.000,00 i.v.
R.E.A. C.C.I.A.A. GORIZIA U. 32755 - M. GO 000139
Registro Imprese Gorizia 00052120318
Cod.Fisc. e Partita Iva **IT00052120318**
Eco-contributo RAEE assolto ove dovuto n° Registro A.E.E. IT08020000001818

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =
COMPANY WITH ENVIRONMENTAL SYSTEM CERTIFIED BY DNV = ISO 14001 =

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N°	Activity	Controlling document	Acceptance criteria	Frequency of test during manufacturing	Tests performed by Cortem "A"			Frequency of test during inspection	Tests performed by Rosetti Marino "B"			Tests performed by Crosswind "C"		
					H	W	R		H	W	R	H	W	R
1	Compliance with the drawings a/o catalogue data	drawings No. 1724001290-EL-DA-00003	No differencies of mounting with drawings or catalogue	100%	x			1 ea. for item			x			x
2	Visual & Dimensional check	drawings No. 1724001290-EL-DA-00003	No differencies of dimensions with drawings or catalogue	100%	x			1 ea. for item			x			x
3	Check of quantity	drawings No. 1724001290-EL-DA-00003	No differencies of quantity with purchase order	100%	x			100%			x			x
4	Check of size of threaded hubs	drawings No. 1724001290-EL-DA-00003	No differencies with the hubs indicated on drawings or catalogue	10%	x			1 ea. for item			x			x
5	Check of painting (visual & color)	Cortem std. painting specification	painting colour and protection devices must be as per specification	100%	x			1 ea. for item			x			x
6	Checks of correct installation of components	drawings No. 1724001290-EL-DA-00003	Components must be installed as per Ex standard	100%	x			1 ea. for item			x			x
7	Check of protection degree	drawings No. 1724001290-EL-DA-00003	Protection degree must be as per minimum standard specification requirements	100%	x			1 ea. for item			x			x

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	Activity	Controlling document	Acceptance criteria	Frequency of test during manufacturing	Tests performed by Cortem "A"			Frequency of test during inspection	Tests performed by Rosetti Marino "B"			Tests performed by Crosswind "C"		
					H	W	R		H	W	R	H	W	R
8	Check of nameplates a/o marking	drawings No. 1724001290-EL-DA-00003	No differencies of nameplates engraving with the drawings	100%	x			1 ea. for item			x			x
9	Check of explosion-proof certificates	Ex-Certificate - Doc. No. 1724001290-EL-LIS-00005	All components must be Ex certified	100%			x	100%			x			x
10	Dielectric test (SEE TAB BELOW)	I 37.04 FAT procedures	shall not trip when the output current is less than 100mA	100%	n/a	n/a	n/a	1 ea. for item	n/a	n/a	n/a	n/a	n/a	n/a
11	Electrical performance	I 37.04 FAT procedures	No deviations from wiring diagrams	100%	x			1 ea. for item			x			x
12	Insulation resistance measurement	I 37.04 FAT procedures	Insulation resistance must be 1000Ω/V minimum	100%	n/a	n/a	n/a	1 ea. for item	n/a	n/a	n/a	n/a	n/a	n/a
13	Test of surface treatments	applicable standards	Minimum thickness of treatments must be as per specification	100%	x			1 ea. for item			x			x

APPLICABLE STANDARDS:

- □ IEC/EN 60079-0 (General rules)
- □ IEC/EN 60079-1 (Ex-d type of protection)
- □ IEC/EN 60079-7 (Ex-e type of protection)
- □ IEC/EN 60079.11 (Ex-i type of protection)
- □ IEC/EN 60079-15 (Ex-n type of protection)
- □ IEC/EN 61439-1 (Low voltage switchgear & controlgear assemblies)
- □ IEC/EN 61439-2 (Low voltage switchgear & controlgear assemblies - Power switchgear & controlgear assemblies)
- □ IEC/EN 60529 (Mechanical protection degree)

(*) applicable only for Ex-d materials/components.
(**) overpressure test is performed only once during manufacture.

TAB.1 - Test for Power Circuit

Rated insulation voltage Ui	Dielectric test voltage a.c.
Ui<60	1000
60<Ui<300	1500
300<Ui<690	1890
690<Ui<800	2000
800<Ui<1000	2200

TAB.2 - Test for auxiliary Circuit

Rated insulation voltage Ui	Dielectric test voltage a.c.
Ui<12	250
12<Ui<60	500
Ui>60	2Ui+1000 with a minimun of 1500

TAB.3 - All Cortem products

The test voltage (1800Vac) must be applied between all the active parts and the earth of the apparatus for 10"

Base Load Power Hub (BLPH)

ATEX REGISTER

LIGHTING FIXTURE

Document Number: 1724001290-EL-LIS-00005

Document Class: 2

ROSETTI MARINO

1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
3	MAJOR COMMENTS – REJECTED – DO NOT PROCEED
4	APPROVAL NOT REQUIRED

NOTE: Approval doesn't relieve the supplier from mandatory compliance with contractual documents and specifications. Comments made do not imply acceptance of any cost or delivery impact.

Sign	Date
	27/09/2024

Rev.	Date	Description	Prepared	Reviewed	Approved
03	27/09/2024	Accepted for Construction (AFC)	M. MENEGUZZI	S.ZIANI	A. DELLA RICCA
02	28/08/2024	Accepted for Construction (AFC)	M. MENEGUZZI	S.ZIANI	A. DELLA RICCA
01	08/08/2024	Issue for Review (IFR)	M. MENEGUZZI	S.ZIANI	A. DELLA RICCA
00	22/07/2024	Issue for Review (IFR)	M. MENEGUZZI	S.ZIANI	A. DELLA RICCA

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4	References	X	X	X	X				
5	ATEX REGISTER	X	X	X	X				

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Revision / Change Log

Rev.	Description
00	Issue for Review (IFR)
01	Issue for Review (IFR)
02	Accepted for Construction (AFC)
03	Accepted for Construction (AFC)

HOLDS LIST

No.	Description
1.	
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No.	Revision	Tag Number	Description	Location	Manufacturer	Model Type Catalogue Number	Serial Number	ATEX Certification Marking	Reference Document	ATEX Certificate Number	Installation Zone	Notes / Comments	P.O.	Vendor	Skid / Package	Barrier Calculation Ref.	Non-Electrical Equipment	Special Conditions of safe use Applicable
1	00	ELF-200N1-09-L2-24	Emergency Lighting Fixture	Monopile Transistion Piece	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
2	00	ELF-200N1-09-L2-25	Emergency Lighting Fixture	Monopile Transistion Piece	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
3	00	ELF-200N1-10-L3-06	Emergency Lighting Fixture	Monopile Transistion Piece	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
4	00	ELF-200N1-10-L3-07	Emergency Lighting Fixture	Monopile Transistion Piece	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
5	00	ELF-200N1-10-L3-08	Emergency Lighting Fixture	Monopile Transistion Piece	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
6	00	ELF-200N1-10-L3-09	Emergency Lighting Fixture	Monopile Transistion Piece	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
7	00	ELF-200N1-10-L3-10	Emergency Lighting Fixture	Monopile Transistion Piece	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
8	00	ELF-200N1-10-L3-11	Emergency Lighting Fixture	Monopile Transistion Piece-stairs	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
9	00	ELF-200N1-10-L3-12	Emergency Lighting Fixture	Monopile Transistion Piece-stairs	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
10	00	ELF-200N1-10-L3-13	Emergency Lighting Fixture	Monopile Transistion Piece-stairs	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
11	00	ELF-200N1-10-L3-01	Emergency Lighting Fixture	Monopile Transistion Piece-stairs	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
12	00	ELF-200N1-10-L3-14	Emergency Lighting Fixture	Monopile Transistion Piece	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
13	00	ELF-200N1-09-L2-22	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
14	00	ELF-200N1-03-L2-14	Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
15	00	ELF-200N1-09-L2-21	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
16	00	ELF-200N1-09-L2-20	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
17	00	ELF-200N1-03-L2-13	Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
18	00	ELF-200N1-09-L2-19	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
19	00	ELF-200N1-09-L2-18	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
20	00	ELF-200N1-03-L2-12	Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
21	00	ELF-200N1-09-L2-17	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
22	00	ELF-200N1-03-L2-11	Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
23	00	ELF-200N1-09-L2-16	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
24	00	ELF-200N1-03-L2-10	Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
25	00	ELF-200N1-03-L2-09	Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
26	00	ELF-200N1-09-L2-11	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
27	00	ELF-200N1-03-L2-08	Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
28	00	ELF-200N1-09-L2-10	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
29	00	ELF-200N1-09-L2-15	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
30	00	ELF-200N1-03-L2-07	Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
31	00	ELF-200N1-09-L2-14	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
32	00	ELF-200N1-03-L2-16	Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
33	00	ELF-200N1-09-L2-13	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
34	00	ELF-200N1-09-L2-12	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
35	00	ELF-200N1-03-L2-15	Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
36	00	ELF-200N1-09-L2-23	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
37	00	ELF-200N1-09-L2-08	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
38	00	ELF-200N1-03-L2-04	Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
39	00	ELF-200N1-09-L2-07	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
40	00	ELF-200N1-09-L2-09	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
41	00	ELF-200N1-09-L2-06	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
42	00	ELF-200N1-09-L2-05	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
43	00	ELF-200N1-03-L2-03	Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
44	00	ELF-200N1-03-L2-02	Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
45	00	ELF-200N1-09-L2-04	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
46	00	ELF-200N1-09-L2-03	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
47	00	ELF-200N1-09-L2-01	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
48	00	ELF-200N1-09-L2-02	Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
49	00	ELF-200N1-03-L2-05	Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
50	00	ELF-200N1-03-L2-06	Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
51	00	ELF-200N1-03-L2-01	Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
52	00	ELF-200N1-08-L1-21	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
53	00	ELF-200N1-02-L1-16	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
54	00	ELF-200N1-08-L1-20	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
55	00	ELF-200N1-08-L1-19	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
56	00	ELF-200N1-02-L1-25	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
57	00	ELF-200N1-08-L1-18	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
58	00	ELF-200N1-02-L1-24	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
59	00	ELF-200N1-08-L1-17	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
60	00	ELF-200N1-02-L1-23	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
61	00	ELF-200N1-08-L1-16	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
62	00	ELF-200N1-02-L1-04	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
63	00	ELF-200N1-02-L1-03	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
64	00	ELF-200N1-08-L1-23	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
65	00	ELF-200N1-02-L1-22	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
66	00	ELF-200N1-02-L1-21	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
67	00	ELF-200N1-08-L1-15	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
68	00	ELF-200N1-02-L1-20	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
69	00	ELF-200N1-08-L1-14	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
70	00	ELF-200N1-02-L1-19	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
71	00	ELF-200N1-08-L1-13	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
72	00	ELF-200N1-02-L1-18	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
73	00	ELF-200N1-08-L1-12	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
74	00	ELF-200N1-02-L1-17	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
75	00	ELF-200N1-08-L1-22	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
76	00	ELF-200N1-10-L3-04	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
77	00	ELF-200N1-10-L3-05	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
78	00	ELF-200N1-02-L1-15	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
79	00	ELF-200N1-02-L1-14	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
80	00	ELF-200N1-08-L1-08	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
81	00	ELF-200N1-02-L1-12	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
82	00	ELF-200N1-08-L1-09	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
83	00	ELF-200N1-08-L1-02	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
84	00	ELF-200N1-08-L1-01	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
85	00	ELF-200N1-08-L1-04	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
86	00	ELF-200N1-02-L1-06	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
87	00	ELF-200N1-08-L1-03	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
88	00	ELF-200N1-02-L1-07	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
89	00	ELF-200N1-02-L1-10	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
90	00	ELF-200N1-02-L1-02	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
91	00	ELF-200N1-02-L1-01	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
92	00	ELF-200N1-08-L1-05	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
93	00	ELF-200N1-02-L1-08	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
94	00	ELF-200N1-02-L1-05	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
95	00	ELF-200N1-08-L1-06	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
96	00	ELF-200N1-08-L1-07	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
97	00	ELF-200N1-02-L1-09	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
98	00	ELF-200N1-08-L1-11	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
99	00	ELF-200N1-02-L1-11	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
100	00	ELF-200N1-02-L1-13	Normal Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-0645	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
101	00	ELF-200N1-08-L1-10	Emergency Lighting Fixture	UPPER DECK	Cortem Spa	LIFEX-ME-1260N	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
102	00	ELF-200N1-04-L3-02	Stair Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645-BB	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
103	00	ELF-200N1-10-L3-02	Stair Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
104	00	ELF-200N1-04-L3-01	Stair Normal Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-0645-BB	24/86772	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X
105	00	ELF-200N1-10-L3-03	Stair Emergency Lighting Fixture	LOWER DECK	Cortem Spa	LIFEX-ME-1260N-BB	24/86773	Ex db eb mb IIC T6 Gb	GAD No. 1724001290-EL-DA-00003	CML 20 ATEX 3018X	Zone 1	NA	1724001290	Cortem Spa	NA	NA	NO	X

EU Type Examination Certificate CML 20ATEX3018X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**

3 Manufacturer **Cortem S.p.A.**

4 Address **Via Aquileia 10**
34070 Villesse
(GO)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-1:2014 EN IEC 60079-7:2015+A1:2018

EN 60079-18:2015+A1:2017 EN 60079-31:2014

10 The equipment shall be marked with the following:

LifEx-ME	LifEx-MN and LifEx-MT
Ex db eb mb IIC T.. Gb	Ex tb IIIC T...°C Db
Ex eb mb IIC T.. Gb *(when Ex mb LED drivers are used)*	IP66
Ex tb IIIC T...°C Db	
IP66	
Ta=* see description	Ta=* see description

11 Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -60°C for versions with the battery heater
- -20°C for versions with battery

The range is available with the following maximum ambient temperatures:

	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table.

13. (For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T56°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T69°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T72°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T77°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T58°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T67°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T75°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T72°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

	Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb	EPL Db	EPL Gb
LifEx-M...0310	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T62°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T88°C	T6	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T100°C	T6	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T65°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T85°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T96°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T94°C	T6	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

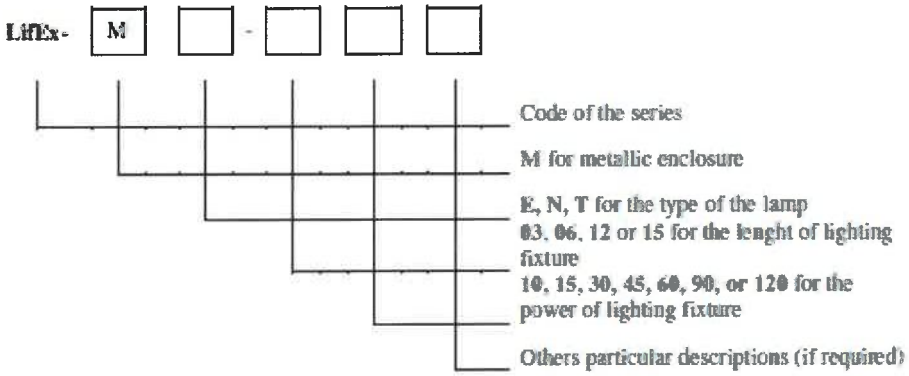
Table 4: Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser

	Maximum Surface Temperature (EPL Db) Based on ambient temperature						
	40°C	45°C	47°C	50°C	54°C	57°C	60°C
LifEx-M...0310	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0315	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0615	T56°C	T56°C	T58°C	T61°C	T65°C	T68°C	T71°C
LifEx-M...0630	T69°C	T69°C	T71°C	T74°C	T78°C	T81°C	T84°C
LifEx-M...0645	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...0660	T77°C	T77°C	T79°C	T82°C	T86°C	T89°C	T92°C
LifEx-M...1230	T58°C	T58°C	T60°C	T63°C	T67°C	T70°C	T73°C
LifEx-M...1260	T67°C	T67°C	T69°C	T72°C	T76°C	T79°C	T82°C
LifEx-M...1290	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C
LifEx-M...12120	T75°C	T75°C	T77°C	T80°C	T84°C	T87°C	T90°C
LifEx-M...1590	T72°C	T72°C	T74°C	T77°C	T81°C	T84°C	T87°C

Table 5: (Applicable to EPL Db only) Maximum Surface Temperature for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:



Variation 1:

This variation has assed the following changes:

i. Addition of an optional new removable cover for "easy installation" (which use the new aluminium extrusion);
ii. Addition of an optional external battery box;
iii. minimum ambient temperature extended to -60°C when Ex mb heater is used;
iv. Additional optional Ex mb EBM LED driver as an alternative to EBL3040 / EBL4040 Ex db series LED drivers;
v. added 30W model for size 300mm (LifEx-M..-0330).

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 May 2020	R13027A/00	Prime Issue
1	01 Jul 2022	R14875A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
iii. The routine dielectric strength test on the LifEx-ME and LifEx-MN luminaries with applied voltage shall be performed at 2U + 1000V with a minimum value of 1560V (U = maximum rated voltage of the lamp)

iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are sued with the cable gland to maintain IP66.

ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.

iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger

iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.

Certificate Annex

Certificate Number	**CML 20ATEX3018X**
Equipment	**LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures**
Manufacturer	**Cortem S.p.A.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
A3-7466	1 to 6	0	06 May 2020	LifEx-M Luminaires
A4-7467	1 to 6	0	06 May 2020	Technical Note

Issue 1

Drawing No.	Sheets	Rev	Approved date	Title
A3-7466	1 of 6	1	01 Jul 2022	LifEx-M Luminaires Assembly and External Dimensions
A3-7466	2 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of sealing and op is protection
A3-7466	3 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of driver and inverter for LifEx-ME version
A3-7466	4 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram for LifeEx-ME version
A3-7466	5 of 6	1	01 Jul 2022	LifEx-M Luminaires Circuit diagram LifEx-MN and LifEx-MT version
A3-7466	6 of 6	1	01 Jul 2022	LifEx-M Luminaires Detail of battery pack
A3-7729	1 to 3	0	01 Jul 2022	Battery heater for -60°C /-40°C applications Assembly and External Dimensions
A4-7727	1 to 8	0	01 Jul 2022	Technical Note

PART 2 – CERTIFICATION DOSSIER

- Test Record.

- FAT reports - Doc. No. 534.24

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COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV GL
= ISO 9001 =
= ISO 14001 =
= OHSAS 18001 =

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Resoconto di Collaudo Interno / *Factory Test Report* ☒
Resoconto d'Ispezione Cliente / *Client Inspection Report* ☐

Nr. 534.24

Cliente
Customer: ROSETTI MARINO S.p.A.

Comm.
Cortem Job: COV2402693

Ordine
P.Order: 1724001290

Data Resoconto Collaudo interno
Internal Test Report date: 29/08/2024

Stato dell'ordine Parziale ☐ A saldo ☒
Status of order: Not complete ☐ *Complete* ☒

Data ispezione terza parte
Inspection Report third part date: ----

Elenco materiali collaudati
List of inspected materials : As per list of inspected materials herein attached

---

Esito dell'ispezione Soddisfacente ☒ Non conforme ☐ Altro ☐
Inspection result: Satisfactory ☒ *Not conform* ☐ *Other* ☐

Descrizione dei controlli e delle prove / *Description of checks and tests*

1.Corrispondenza con disegni e/o pagine catalogo *Compliance with drawings a/o data sheet*	☒	**9. Controllo targhette e/o marcatura** *Check of nameplate a/o marking*	☒
2. Controllo visivo e dimensionale *Visual & Dimensional check*	☒	**10. Controllo certificazioni Ex-d,Ex-e,Ex-i** *Check of Ex-d, Ex-e, Ex-I certificates*	☒
3. Controllo della quantita' *Check of quantity*	☒	**11. Test di rigidità dielettrica** *Dieletric test* **(SEE TAB. 1-2-3 BELOW)**	☐
4. Controllo delle lavorazioni *Check of machining tolerances*	☐	**12. Funzionamento elettrico** *Electrical performance*	☒
5. Controllo delle filettature *Check of threads*	☐	**13. Resistenza di isolamento** *Insulation resistance >1000 Ω/V minimum*	☐
6. Controllo della verniciatura *Check of painting*	☐	**14. Controllo dei trattamenti superficiali** *Test of surface treatments*	☐
7. Verifica della corretta installazione dei componenti *Check of correct installation of components*	☒	**15. Funzionamento meccanico** *Test of mechanical operation*	☐
8. Verifica del grado di protezione *Check of protection degree*	☒		

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TAB.1 - Test for Power Circuit

Rated insulation voltage Ui	*Dielectric test voltage a.c.*
Ui<60	1000
60<Ui<300	1500
300<Ui<690	1890
690<Ui<800	2000
800<Ui<1000	2200

TAB.2 - Test for auxiliary Circuit

Rated insulation voltage Ui	*Dielectric test voltage a.c.*
Ui<12	250
12<Ui<60	500
Ui>60	2Ui+1000 with a minimun of 1500

TAB.3 - All Cortem products

The test voltage (1800Vac) must be applied between all the active parts and the earth of the apparatus for 10".

cortem s.p.a.
PROJECT / INSPECTION DEPT.

Firma
Signature 28 AUG 2024

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List of Inspected Materials

Cliente:

ROSETTI MARINO S.P.A.
VIA TRIESTE, 230
RAVENNA RA 48100
ITALIA

Destinazione: 102494

ROSETTI MARINO S.P.A.
YARD PIOMBONI
VIA DEL MARCHESATO, 37
MARINA DI RAVENNA RA 48023
ITALIA

Causale: Vendita

Part.IVA: IT 00082100397

OdA Cli.	1724001290	**Ordine**	**COV2402693**	**Data Ordine**	**26/06/2024**
Mod. Spedizione	MEZZO VETTORE	**Nr. Revisione**	**0**	**Data Revisione**	**26/06/2024**
Vettore		**Mod. Consegna (INCOTERMS 2020)**	DAP, ITALY		

Pos	Articolo	Descrizione	U/M	Quantità	Data Consegna Richiesta	Data Consegna Confermata
1	LIFEX-ME-0645-BB/C2402693/10.	ARM.ILL. EX II 2GD EX DE MB ALU	NR	57,000	30/08/2024	30/08/2024
	H.S. Code:	94054239				
ITEM 10 2PLAFPOLEDE66 TAG: LIFEX-ME-0645-BB LED LINEAR LIGHTING FIXTURE						
2	LIFEX-ME-1260N-BB/C2402693/20.	ARM.ILL. EX II 2GD EX DE MB ALU	NR	78,000	30/08/2024	30/08/2024
	H.S. Code:	94054239				
ITEM 20 2PLAFPOLEDE66 TAG: LIFEX-ME-1260N-BB LED LINEAR LIGHTING FIXTURE						
3	SPARESUC/C2402693/30.	SPARE PARTS START UP COMMISSIONING	NR	1,000	30/08/2024	30/08/2024
	H.S. Code:	85389099				
ITEM 30 2SPAREEQPVAL SPARE PARTS FOR START UP AND COMMISSIONING						
4	SPARETY/C2402693/40.	SPARE PARTS FOR TWO YEARS	NR	1,000	30/08/2024	30/08/2024
	H.S. Code:	85389099				

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We remind you that your data shall be processed exclusively for the management and performance of the agreement, and therefore for fiscal, accounting, administrative and commercial purposes.
Il ritardo nei pagamenti comporterà l'addebito degli interessi legali di mora di cui al d.lgs. 231/2002 / Delay in making payments shall entail the application of interests on arrears as per legislative decree 231/2002.
Verificare la correttezza dei dati anagrafici. In mancanza di riscontro verranno considerati validi quelli quivi esposti, esclusa qualsiasi nostra responsabilità.
Verify the correctness of your data. Absent a reply the data herein included shall be considered as valid, any responsibility on our part being excluded.
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Causale: Vendita

Part.IVA: IT 00082100397

OdA Cli.	1724001290	**Ordine**	**COV2402693**	**Data Ordine**	**26/06/2024**
Mod. Spedizione	MEZZO VETTORE	**Nr. Revisione**	**0**	**Data Revisione**	**26/06/2024**
Vettore		**Mod. Consegna (INCOTERMS 2020)**	DAP, ITALY		

Pos	Articolo	Descrizione	U/M	Quantità	Data Consegna Richiesta	Data Consegna Confermata
ITEM 40 2SPAREEQPVAL SPARE PARTS FOR TWO YEARS						
5	SERV0002	Spesa imballo Italia	NR	1,000	30/08/2024	30/08/2024

ORDINE NO. 1724001290 DEL 25/06/2024
ROSETTI JOB REF. 123A90A - Base Load Power Hub Platform
LIGHTING FIXTURES & ACCESSORIES

DESTINAZIONE:
ROSETTI MARINO S.P.A.
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MARINA DI RAVENNA RA 48023
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28 AUG 2024

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