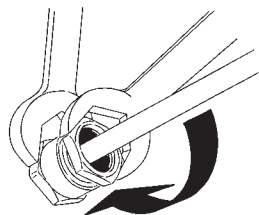




GLAMOX MAX - robust solution



	M20	M25
POLYAMID	5.0 Nm	7.5 Nm
BRASS	7.5 Nm	10.0 Nm



NO

Tilslutt ikke armaturen til midlertidig byggestrøm. Dette kan skade elektronikken. Batteri bør være frakoblet i nødlysarmaturen i bygge- og anleggsperioden.

SE

Anslut inte armaturen till tillfällig byggström. Detta kan skada elektroniken. Batteriet bör vara frånkopplat under byggerioden.

UK

Do not connect to a temporary electricity supply. This may damage the electronics. The emergency light battery should be disconnected during the building period.

FI

Älä kytke väliaikaiseen virtalähteeseen. Tämä voi vioittaa elektronikkaa. Turvalon akku tulee olla irroitettuna rakennusaikana.

DE

Nicht an unsauberes Netz (Baustrom) anschliessen. Die elektronischen Bauteile können dadurch beschädigt werden. Die Notlichtbatterie sollte während der Bau-phase abgeklemmt sein.



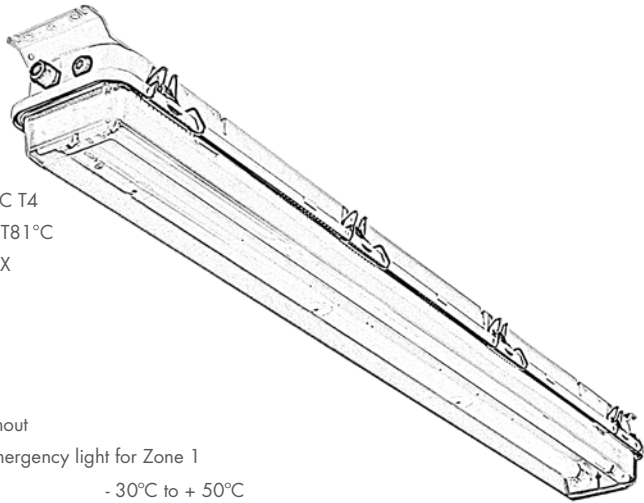
CE0470



II 2G Ex edmb IIC T4
II 2D Ex tD A21 T81°C

NEMKO 09 ATEX 1098X

IECEx pending



Description:

Surface mounted

Ex luminaire with or without

(MAX HF-E/MAX HF) emergency light for Zone 1

Temperature limits (ta): - 30°C to + 50°C

Protection: IP66/67

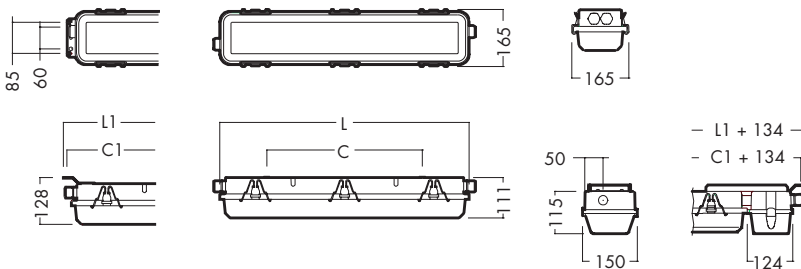
Line voltage: 110 - 127V or 220 - 250V 50/60Hz

Supplied current (mains mode): 0.16A (2 x 18W) or 0.32A (2 x 36W)

Power factor: 0.97

Light tube type: T8 18W, 36W, 58W

Other markings:

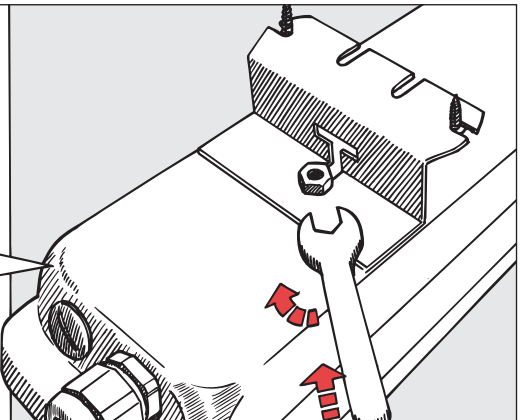
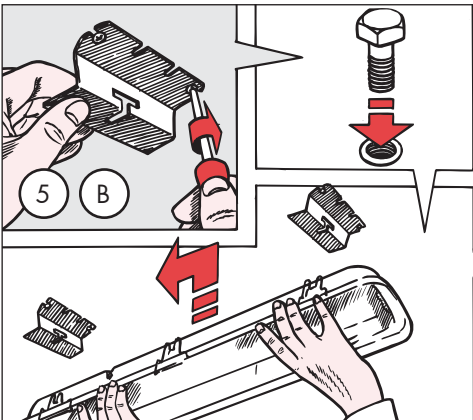
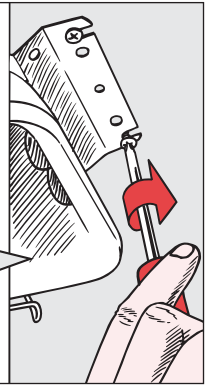
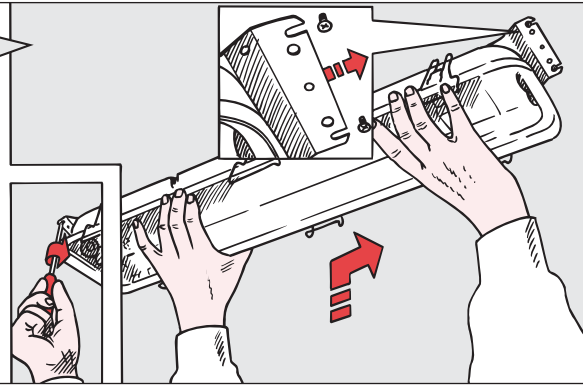
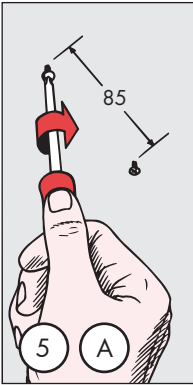
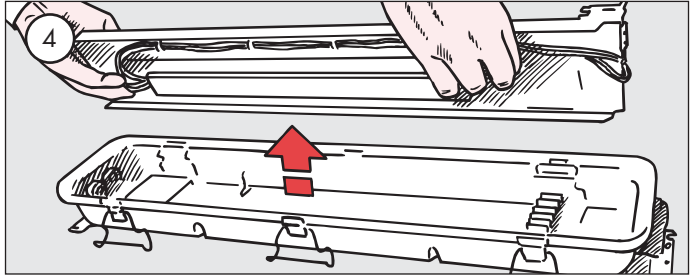
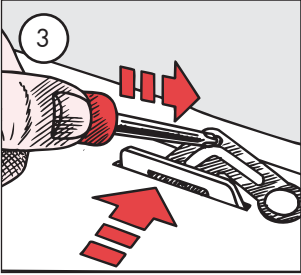
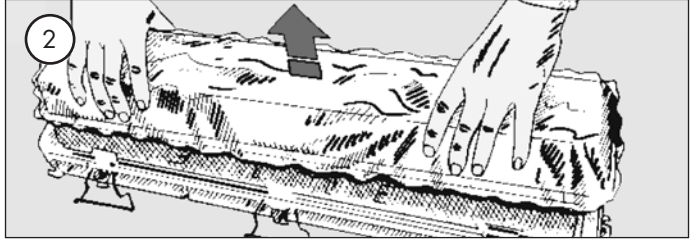
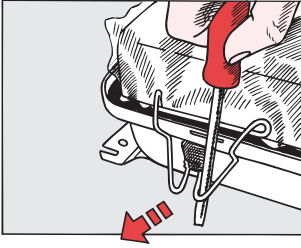


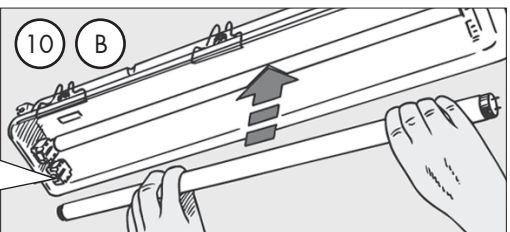
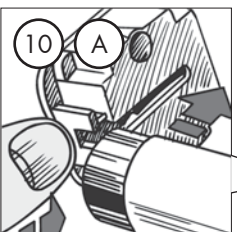
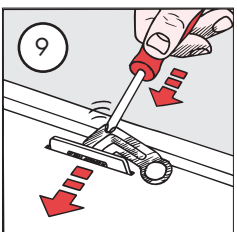
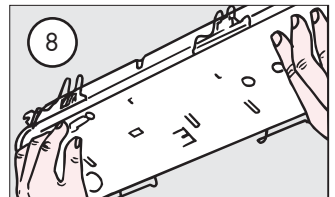
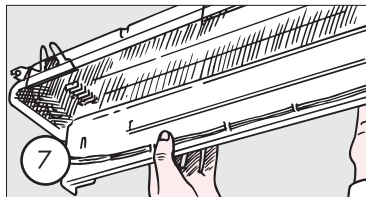
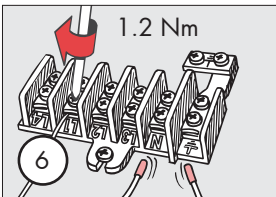
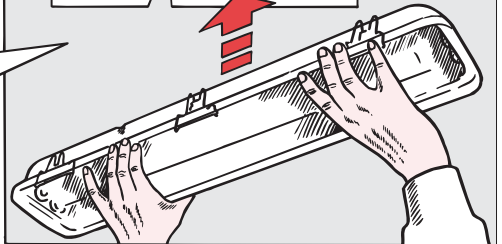
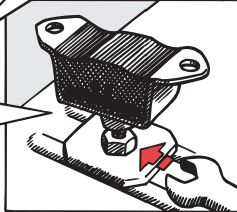
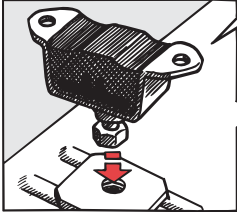
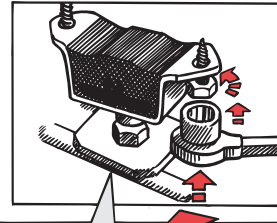
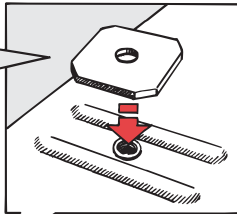
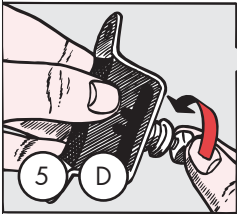
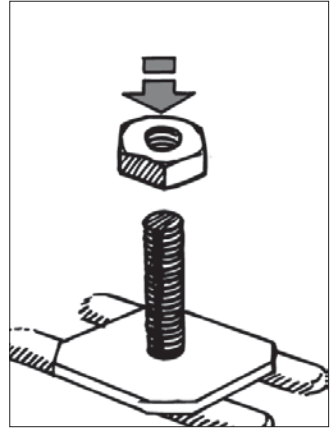
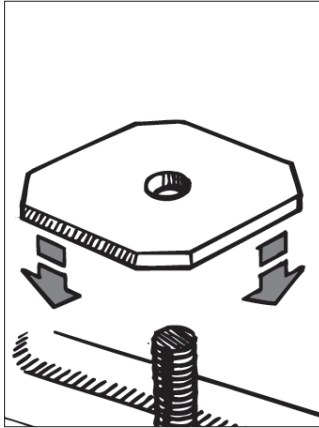
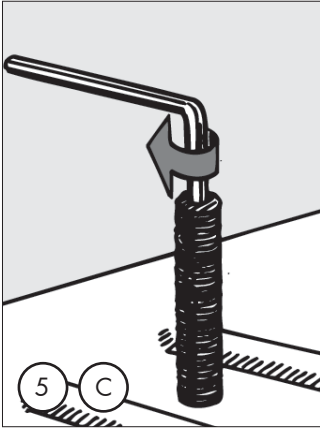
Types	L1	C1	L	C	
18W	724	704	681	400	430 450
36W	1334	1314	1291	800	950
58W	1634	1614	1591	800	950 1100

X: Special conditions for safe use

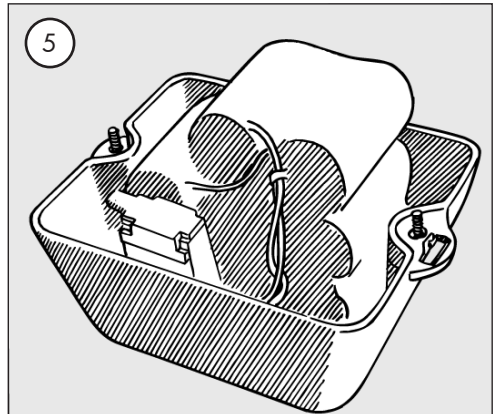
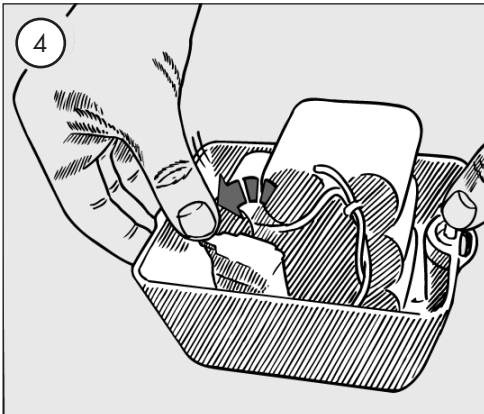
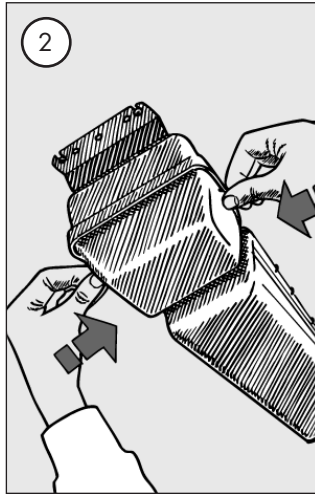
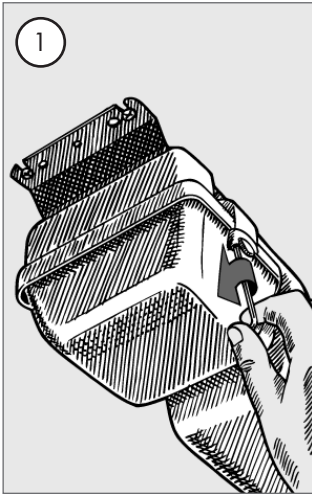
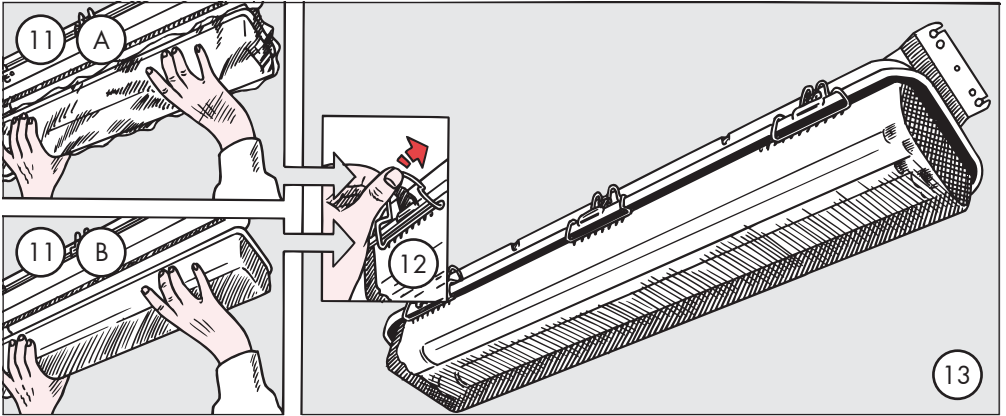
Potential electrostatic charging hazard. Use only moist cloth for cleaning.

GLAMOX MAX





GLAMOX MAX



Declaration of Conformity

**(Directive 2006/95/EEC, EMC directive 2004/108/EEC and
ATEX directive 94/9/EEC)**

Manufacturer: Glamox ASA

Address: Birger Hatlebakksv.15
N-6405 Molde
NORWAY

Product: Ex Luminaires for fluorescent lamps

Product name: **MAX series and MAX-E series**



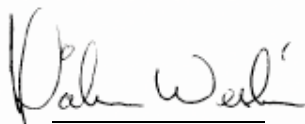
IIGG Ex edmb IIC T4, Ta:-30°C to 50°C
IIGD Ex tD A21 T81°C

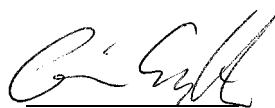
We declare under sole responsibility that above listed products confirms with the standards listed.

<i>Reference</i>	<i>Date of issue</i>	<i>Name</i>
IEC/EN 60079-0	2004	General requirements (Ex)
IEC/EN 60079-7	2006	Increased safety (Ex-e)
IEC/EN 60079-1	2004	Flameproof enclosure (Ex-d)
IEC/EN 60079-18	2004	Encapsulation (Ex-m)
IEC/EN 61241-0	2006	General requirements dust
IEC/EN 61241-1	2004	Dust protection by enclosures (Ex tD)
EN 60598-1	2008	General requirements (lighting)
EN 60598-2-1	1989	General purpose luminaires
EN60598-2-22	2008	Emergency luminaires
EN 60598-2-24	1998	Limited surface temp. (lighting)
EN 61000-3-2	2006	EMC-Harmonic currents
EN 61547	1995/A1:2000	EMC-Immunity requirements
EN 55015	2006	EMC-Emission requirements
IEC 60068-2-6	1982	Vibration
IEC 60092-306	2009	Electrical installations in ships

Place and date: Molde, 25. May 2011

Name and signature of
authorized persons:


Håkan Westin
Factory Manager

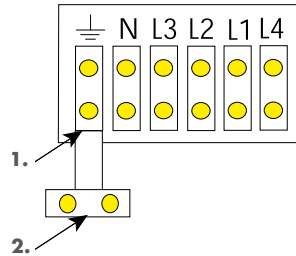

Geir Sylte
Laboratory Manager

Installation and operation

Earthing the luminaire

MAX must be earthed in the terminal block. It can also be earthed externally, to the contact on the luminaire house. The shielded cable must be earthed as in figure.

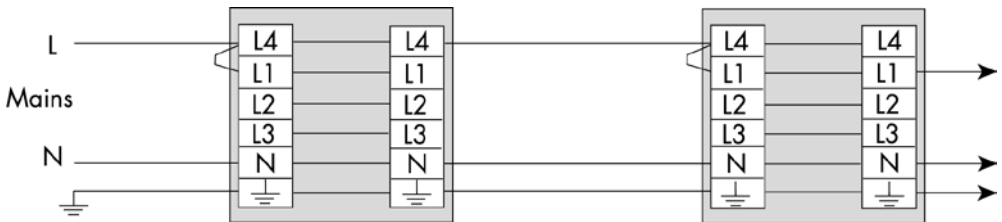
1. Earthing of earth-wire
2. Earthing of cable-shield



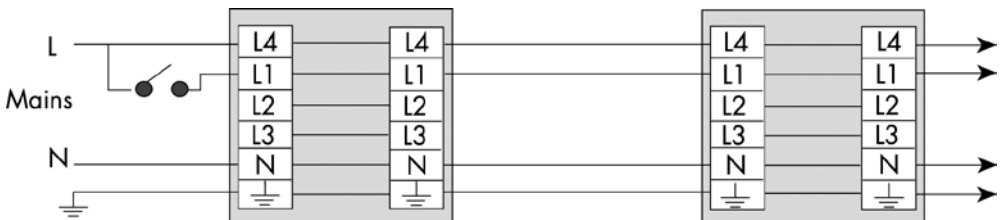
Connection of MAX to the mains

When MAX is connected to other luminaires (See figures below and opposite), the switch will turn on/off all the luminaires. Light in both tubes can be switched while the battery will continue to charge uninterrupted.

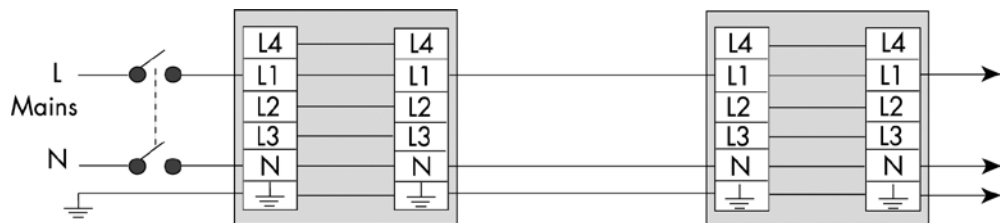
Connection of MAX HF-E in series, without a switch



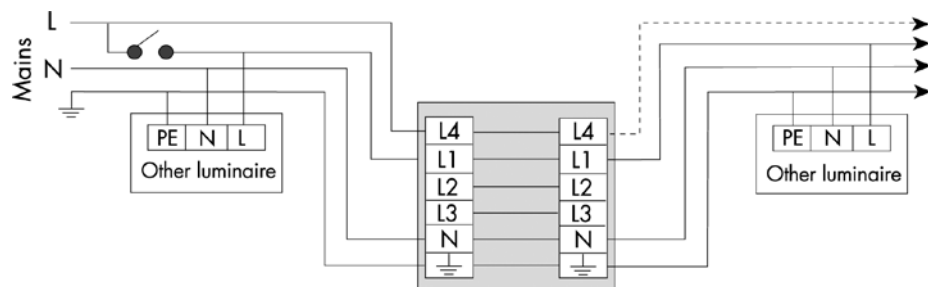
Connection of MAX HF-E in series, with a single pole switch



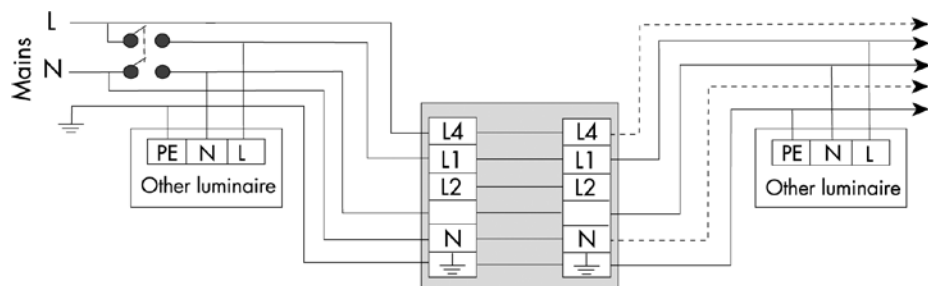
Connection of MAX HF in series, with a double pole switch



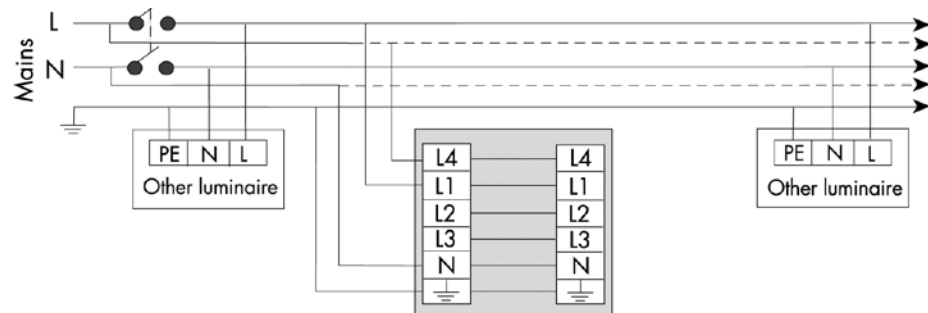
Connection of MAX HF-E in series with other luminaires, with a single pole switch



Connection of MAX HF-E in series with other luminaires, with a double pole switch



Parallel connection of MAX HF-E with other luminaires and a double pole switch



Installation and operation

Remote control of emergency function - light fixtures with HFXE ballast

Luminaires with HFXE ballast can be monitored by external devices via relay contact. OK: Closed, ERROR: Open.

Cables

Mains supply cable must be approved for fixed installation. The external diameter can be 8 - 13 mm (M20 gland) or 12 - 19 mm (M25 gland). Cross sectional area of the wires can be between 1.5 and 6.0 mm².

The cable must have an earth wire and it is recommended that a shielded cable be used.

Operation of the MAX HF-E (emergency light)

The luminaire has normally 2 tubes but only one of them is energized in the emergency mode. The light level is reduced to about 20%.

When mains voltage is switched on, the charging indicator (green LED) will light up, indicating that the battery is charging. If the connection to the battery is disrupted, the indicator will not light up. A new or a discharged battery must charge for 24 hours to be fully charged.

Control

The function of the emergency tube and the emergency function of the ballast should be controlled at least once a month. Full emergency test (switching off N, L1 and L4 to the luminaire) should be performed once a year and the specified emergency lighting time should be observed (1.5 or 3 hours for standard luminaire).

MAINTENANCE

MAX has long lifetime and a minimum need for maintenance. However it may be necessary to clean the cover of the luminaire if it gets dirty or change the NiCd battery after 4 to 6 years (in order to maintain the specified lighting time). The only batteries to be used are Glamox, part no.: PA990529001 (8.4V) or PA990529010 (4.8V).

If other components need replacement it is important to use original Glamox components.

Do never use any solvents for cleaning the polycarbonate diffuser. Due to the risk of generating static charge in the PC diffuser, always use a moist cloth for cleaning.

WHAT TO DO IF...

A. One or both tubes do not light:

- 1) Check that the mains voltage is in the voltage range of the luminaire.
- 2) Check that the cover is mounted and clamps are tightened.
- 3) Open the luminaire and check the following:
 - Light tubes are inserted correctly - change defect tubes.
 - Check the wires, contacts, switches and ballast.
 - Change components if damaged.

B. The charging indicator (LED) does not light:

- 1) Open the luminaire and check the following:
 - The connection of L4, the battery and the charging unit.
 - Check the switch on the minus pole of the battery.
- 2) The ballast might be damaged - contact nearest Glamox sales office.

C. Emergency illuminance level is too low:

- 1) Clean the cover of the luminaire.
- 2) Change the tube or battery

4. Em. light does not last specified time (1.5 hours for standard luminaire):

1. Change the battery.

PS: The mandatory EOL function (End Of Life detection) in the ballast require the light sources to be closer to the nominal values during operation. This means that old light sources that may be operating in a standard luminaire are not good enough for the EOL test in an Ex-luminaire. Therefore more frequent change of light sources may be necessary.

Viktig informasjon/Important information/ Tärkeää tietoa/Wichtige Information



NO

SE

EN

FI

DE

Lyskilder

Sjekk levediden på lyskilden du anvender på www.glamox.no/ lampedata. Det er alltid god økonomi å planlegge gruppeskift av lysrørene.

Ungå skade i lakk-overflate!

Armaturen må ikke settes for metallpartikler fra sliping, skjæring, sveising, sandblåsing e.l. Slike partikler fester seg i lakken og skaper en skjennende overflate. Om armaturen monteres før slitet arbeid er ferdig må armaturen tildekkes!

Fjern plastfolie!

Folien som beskytter armaturens plastskjerm må fjernes før lysrør monteres og spenning påsettes.

Rengjøring

For å unngå/reducere forurensninger på armaturen anbefaler vi at armaturer monteres i maritim eller andre sterkt korrosive miljø regelmessig spyles med ferskvann. Ved spyling (lavt trykk) (IP66/67) og vasking (IP54) må det sørges for at alle lås er forsvarlig lukket, nipler er uskadet og plastskjerm er hel. Spenning må være frakoblet når armaturen spyles!

Det anbefales at armaturen støvørkes og kontrolleres innvendig ved skifte av lyskilde, særlig anleggskant for pakning. Dersom vann trenger inn i armaturen p.g.a dårlig tilskrudd nipler, skadet skjerm, eller urenheter under pakning må armaturen omgående tørkes og feilen utbedres.

Ungå løsemidler

Bruk aldri løsemidler på plastskjerm. En del organiske løsemidler kan reagere med plasten og forårsake sprekkdannelser.

Ljuskällor

Kontrollera livslängden på ljuskällan du använder på www.glamox.se/ljuskalldata. Det lønar seg alltid åt planera ett gruppbyte av ljuskällor.

Undvik ått skada lakken!

Armaturen bör inte utsättas för metallpartiklar från slipning, svetsning, sandblåstring mm. Dessa partiklar fäster sig i lakken och skapar en ojämn yta. Om armaturen monteras i sådana miljöer bör armaturen skyddas!

Ta bort plastfolien!

Plastpåsen som skyddar armaturens kupa måste tas bort innan lysrör monteras och armaturen inkopplas.

Rengöring

För ått unngå/reducera föroreningar på armaturen rekommenderar vi ått armaturer som monteras i maritim eller ått andra sterkt korrosiva miljöer regelbundet spolas med färskvatten. Vid spolning (lått tryck) (IP66/67) och tvätt (IP54) ska dettt kontrolleras ått alla clips är ordentligt stängda, niplar är oskadade och kupa hel. Nättspänningen bör vara frånkopplad när armaturen spolas!

Dettt rekommenderas ått armaturen dammtorkas och kontrolleras ått invidigt vid lysrörbyte, speciellt i spärdtt för kupa packning. I de tillfällen vatten tränger in i armaturen p.g.a dålligt tillskruvade niplar, skadad kupa, eller urenheter under packningen måste armaturen omgående torkas och feilen åttgärdsas.

Undvik lösningsmedel

Använd ått aldrig lösningsmedel på kupa. En del organiske lösningsmedel kan reagere med plasten och orsaka sprickor i kupa.

Tubes

Check the lifetime of the light source you are using on www.glamox.co.uk/lampdata. It always makes sense to plan replacement of tubes as a group.

Avoid damaging the varnished surface!

The luminaires must not be exposed to metal particles from polishing, cutting, welding, sand blasting etc. These particles get stuck and damage the varnished surface. If the luminaires are mounted before this type of work is completed, they must be thoroughly covered.

Remove plastic film!

The plastic film protecting the plastic cover must be removed before inserting the light tubes and turning on power.

Cleaning

In order to avoid/reduce contamination we recommend that luminaires mounted in marine or other highly corrosive environments be regularly hosed down with freshwater. When hosing down (low pressure) (IP66/67) and cleaning (IP54), make sure that all fastenings are properly closed, and that the cable nipples and plastic covers are undamaged. The power must be disconnected when the luminaire is hosed down!

It is also recommended that the luminaire is dusted and cleaned internally when changing light source, especially around the gasket. If water enters the luminaire due to poorly tightened cable nipples, damaged cover or impurities under gasket, the luminaire must be dried immediately and the fault repaired.

Avoid solvents

Solvents must never be used on the plastic cover. Some organic solvents may react with the plastic and cause material splits.

Loisteputkia

Voit tarkistaa lampujen käyttöiän osoitteessa www.glamox.fi/ lampputieto. On aina taloudellisesti kannattavaa vaihtaa loisteputket samanaikaisesti.

Varo naarmuttamasta varnoittamatta!

Valaisinta ei saa altistaa metallihiukkasille kiillotamisesta, leikkaamisesta, hitsauksesta, hiekkapuhalluksesta jne. Näitä huuhtoja voivat kiintyä ja vahaingoitaa valaisimen pintoja. Jos valaisimet asennetaan ennen tämän tyyppisten töiden lopettamista, on ne suojattava kaultaaltaan.

Poista muovikalvo!

Kupua suojaava muovikalvo on poistettava ennen valonlähteiden asennusta ja virran kytkemistä.

Puhdistus

Likaantumisen ja korroosion ehkäisemiseksi suosittelemme merellisiin- tai syövyttävien olosuhteisiin asennettujen valaisimien säännöllistä huuhtelua puhtaalla vedellä. Suihkuttaessa matalalla paineella (IP66/67) ja puhdistettaessa (IP54) valaisimia, varmista että kaikki kiinnikkeet ovat suljettuja, läpiviennit vahingoittumattomia ja kupu on ehjä.

Virta on katkaistava suihkutuksen ajaksi!

On suositeltavaa myös puhdistaa ja tarkistaa valaisimen kanta sisältäpäin vaihdettaessa valonlähteitä, erityisesti läpiviennien lähtäjä. Jos valaisimen on päässyt vettä kiristämättömistä läpiviennistä, vahingoittuneesta kuvusta tai tiivisteen alla olevien epäpuhtauksien kautta, valaisin on vaihdettava kuivattava ja puutettu korjattava.

Vältä liuottimia

Liuottimia ei saa koskaan käyttää muovikalvulle. Jotkin orgaaniset liuottimet saattavat reagoida muovin kanssa ja aiheuttaa halkeamia.

Leuchtröhren

Kontrollieren Sie die Lebensdauer des Leuchtmittels bei www.glamox.de/ lampendaten. Es kann sich immer bezahlen, Leuchtröhren gruppenweise zu tauschen.

Beschädigung auf der lackierten Oberfläche vermeiden!

Die Leuchte sollte vor groben Staub, scharfen Gegenständen etc. während der Bauphase geschützt werden. Die Schutzfolie verhindert in dieser Zeit eine Beschädigung der empfindlichen Oberfläche.

Entfernen der Schutzfolie!

Die Schutzfolie schützt die Abdeckung während der Bauphase. Diese Folie muss entfernt werden, bevor die Leuchtmittel eingesetzt werden und die Leuchte in Betrieb genommen wird.

Reinigung

Um Verunreinigungen zu vermeiden/verringern empfehlen wir, das Leuchten, die im Maritim- oder in anderen aggressiven Umgebungen eingesetzt sind, regelmäßig mit klarem Wasser abgespült werden. Dies gilt natürlich nur für Leuchten ab Schutzart IP54 und höher. Vergewissern Sie sich bitte, dass alle Verschlüsse richtig geschlossen sind, und das die Abdeckung nicht beschädigt ist. Die Leuchte darf während des reinigen nicht unter Spannung sein.

Es wird außerdem empfohlen, dass die Leuchte abgebaut wird und das die inneren Komponenten der Leuchte beim Austausch der Leuchtmittel kontrolliert werden. Die Dichtungen sollten hierbei besonders in Augenschein genommen werden.

Vermeiden Sie bei der Reinigung den Einsatz von Lösungsmitteln

Nutzen Sie bitte keine Lösungsmittel für die Reinigung der Abdeckung, da diese Lösungsmittel zu Rissen und Verbindung der Abdeckung führen können.

Stadig flere armaturer blir i dag bestyktet med HF-forkobling som driver lysrørene med høy frekvens. HF-forkoblingen sparer energi, gir flimmerfritt lys og støyer ikke. I tillegg forlenger man levetiden til lysrørene og sparer brukeren for bytte av tenner i armaturen.

Sikringskurs og jordfeilbryter

Vi anbefaler å benytte automatsikring type C da HF-forkoblingen gir en høyere startstrøm enn konvensjonell forkobling. Se også vår hovedkatalog eller vår Website under belastningstabell. Det bør ikke forekomme mulighet for enfasest sikringsbrudd i et trekant (IT) nett (benytt automatsikringer). Armaturer med HF-forkobling gir max. 1 mA lekasjestrøm til jord. Husk at jordfeilbrytere kan lese ut ved 0,5 x merket utløserstrøm. Derfor kan man kun beregne 15 armaturer på en 30mA jordfeilbryter. Jordfeilbrytere av S-type skal benyttes på lyskurser.

Fukt og temperaturer

HF-forkobling er mer følsom for fukt enn konvensjonell forkoblingen. Skal den anvendes utendørs anbefaler vi å benytte tette armaturer. HF-forkobling klarer normal kulde, men gir svakere lys ved lave temperaturer (pga lavt varmetap). Det kan forekomme tenneproblemer ved meget lav temperatur (<30°C). Levetiden til HF reaktoren vil forverres kraftig ved høye temperaturer.

Levetid

Levetiden til elektronikk påvirkes av temperatur og kvaliteten på nettspenningen. Nominell levetid settes til 50.000 timer ved armaturens høyest tillatte omgivelsestemperatur. En normal utfallsprosent er 2% pr. 10.000 brukstimer, og maksimalt 10% etter 50.000 brukstimer. Transienter og spenningsforstyrrelser samt tilkobling til byggestør av dårlig kvalitet vil drastisk forkorte levetidene.

Megging

Armaturer med HF-forkobling kan megges med max 500V DC. Spenningen påføres mellom jord og de sammenkoblede fasene. OBS: Gjør nuller spenningstest før du eventuelt løser nulleleder.

Monteringstips

Foretatt alltid tilkobling av armaturen når nettet er spenningsløst. Magnetiske (induktive) laster og elektroniske laster må ikke blandes på samme bryterkurs. Benytt ikke HF-forkobling i ekstremt varme miljøer (se armaturens Ta merking).

Idag er de fleste lysrørsarmaturer bestyktede med HF-don som driver lysrøren med høy frekvens. HF-don ger flimmerfritt lys, sparer energi og er helt lyst.HF-don tænder lysrøren uten blinkninger, ger h gre ljusutbytte og forl nger lysr rens livsl ngd.

S kring og jordfeilbryttere

Automats kring type C rekommanderas och dimensioneringen skall anpassas till HF-don, som ger h gre startstr mmer  n konventionella reaktorer. Max antal HF-don per s kring varierar beroende p  typ och fabrikat. Belastningstabell finns p  v r hemsida och i v r huvudkatalog. Ett HF-don ger max 0,5 mA l ckstr m. Alla lysr rsarmaturer, oavsett driftl ngd, f r ge max 1,0 mA l ckstr m. Jordfeilbrytare kan l sa ut vid 0,5 x nominell str m. D rf r kan exempelvis max 15 armaturer anslutas till en 30 mA jordfeilbrytare. Jordfeilbrytare av S-type ska anv ndas ihop med lysr rs-armaturer.

Temperatur och livsl ngd

P  HF-don finns angivet inom vilka temperaturer donet fungerar (Ta = omgivningstemperatur). HF-don av h g kvalitet h ller ca 50 000 timmar vid donets maximalt till ttna temperatur. En normal utfallsprocent  r 2% per 10 000 brinntimmar, maximalt 10% efter 50 000 brinntimmar. D rf r kan en livsl ngd p  11-12  r f rvasntas, n r lysr ren brinner 12 tim/dygn. Om lysr ren  r t nda dygnet runt handlar det om en f rvtandad livsl ngd p  5-6  r. T rnregel: En s nkning med 10 C av den h gsta till ttna temperaturen kan f rduubbla HF-donets livsl ngd. Spikar p  n tet och transienter samt oj mna byggst m vill dramatiskt f rkorta livsl ngden.

Megning

Isolationsm tning kan ske med max 500 V DC. Sp nningen appliceras mellan jord och fas sammankopplad med nolledaren. OBS! Nolledaren f r aldrig lossas f r n armaturen  r sp nningsl sa.

Montering

Anslut alltid armaturen i sp nningsl st tillst nd. Blanda inte elektromagnetiska (induktiva) och elektroniska (kapacitiva) laster p  samma s kring. Undvik att montera armaturer med HF-don i varma milj rer (kontrollera alltid armaturens till ttna omgivningstemperatur).

Valaisimussa k ytet t n y a enemm n elektronista HF-liit ntilaitteita, joka k ytt t  lampuja suurtajavuudella. HF-k yt t  antaa vilkkumatonta valon, s ast t  energiaa ja on  n n t n. Lis ksi lampun k yt t t  kasvaa.

Sulakkeet ja vikavirtasuojajakin

HF-laitteen kanssa suositellaan k ytett v ksi C-k yr n johdonsuojia-automattia. K ynnistysvirtoja on suurempi kuin konventionaalisella kuristimella. Kuormitustalukkoja on painetussa tuoteluettelossa ja nettisivuilla. HF-laitte aiheuttaa suurimmillaan 1 mA vuotovirran ja koska vikavirtasuojia voi lauenta j 0,5-kertaisella nimellisvirralla, voidaan 30mA:n vikavirtasuojalla suojattua rymh ss  k ytt t  enint n 15 HF-liit ntilaitetta. S-type vikavirtasuojajakimie tulee k ytt t  valaistusryhmiss .

Kosteus ja l mp tila

HF-laitte on herkempi kosteudelle kuin konventionaalinen kuristin. T m n takia suosittelemme ulkoilmaisissa k ytett v ksi vesitiiviit  valaisimia. Kylm  ymp rist  ei normaalisti aiheuta ongelmia HF-laitteille, mutta johtuen pienemmist  hukkal mm st  verrattuna konventionaaliseen kuristimeen voi valonotto olla alhaisempi. Kun l mp tila laskee -30 C, voi esiinty  v rtymisongelmia. Korkea ymp rist l mp tila lyhent t  HF-laitteen k yt t iik .

K yt t ik 

HF-laitteen ymp rill  olevan ilman l mp tila ja verkkovirran laatu vaikuttavat laitteen k yt t iik n. Nimellinen k yt t iik  on 50.000 tuntia, kun ymp rivaan ilman l mp tila on valaisimeen merkitty TA-l mp tila. Normaali loppuun kulminen on 2% 10.000 tunnin k yt t  kohden ja maksimi 10% 50.000 tunnin k yt n j lkeen. J nnitepiikit ja -muutokset kuten my s kytkeminen valikoitaiseen virtal hteeseen v hent v t voimakkaasti odotettua elinik .

Eristysvastusmittaus

HF-laitteella varustetun valaisimen eristysvastus voidaan mitata j nniteella max 500V DC. J nnite kytket n maadoitusjohdimeen ja yhteiliitetyien nolla- ja vaihejohtimien v liin.

Asennusvihi

Kytkie rymh johto valaisimeen aina j nniteett m n .  lg k yt  konventionaalista kuristimia ja elektronisia (HF) liit ntilaitteita yhdess .  lg k yt  elektronista (HF) liit ntilaitetta erityisen l mpimiss  olosuhteissa.

More and more luminaires are today equip with HF ballast, that drives the lamps on High Frequency. The HF ballast provides flicker free light, energy savings and does not make any noise. On top of that the lifetime of the lamp is increased.

Fuses and earth leakage switch

We recommend fuses type C when using HF ballast. The startcurrent is higher then with conventionalballast. The number of ballast used on one fuse you can find in our catalogue or on our Website. Luminaires with HF ballast give cure. 1mA earth leakage current. Remember that a leak current switch can be triggered at 0,5 x nominal current value. Because of this the maximum number of luminaires on a 30mA leak current switch is limited to 15. 5 type earthing circuit breakers must be used for light circuits.

Moisture and temperatures

HF ballast is more sensitive to moisture then the conventional ballast. When used outside we therefore recommend a water tight luminaire. Cold environment is normally no problem for the HF ballast but because of less heat loss the light output will be reduced compared to conventional ballast. When temperatures reach down to -30 C ignition problems can occur. Lifetime of the ballast will be reduced when exposed to high temperatures.

Lifetime

HF ballast lifetime is influenced by temperatures surrounding the ballast and the quality of the incoming net. Nominal lifetime is set to 50.000 hours at the maximum allowed temperature for the luminaire (TA). A normal lapse is 2% per 10.000 hours of use, and max. 10% after 50.000 hours of use. Voltage peaks and transients including connection to a temporary electricity supply will will drastically reduce life expectancy.

Megging

Luminaires with HF ballast can be megged with max 500V DC. The voltage is put between Earth and the two connected phases. OBS: Disconnect the nominal voltage before loosening the phases.

Mounting tip

Always connect the luminaires when there is no incoming voltage. Do not attempt to mix magnetic (inductive) ballast and electronic (HF) ballast's. Do not use Electronic (HF) ballast's in extremely warm environments.

Mehr und mehr Leuchten werden heute mit EVG's geliefert. Das EVG erzeugt durch den Hochfrequenz-Betrieb der Lampen ein flackerfreies Licht, ist brummfrei und energie-effizient. Die mittlere Lebensdauer der Lampen wird durch EVG's erh ht.

Sicherung und Ableitstrom

Wenn EVG's eingesetzt werden, empfehlen wir Sicherungen Typ C. Der Einschaltstrom ist h her als bei konventionelle Vorschaltger te. Die Anzahl der Leuchten mit EVG's pro Sicherung entnehmen Sie bitte unserem Katalog oder unserer Internet-Seite. Leuchten mit EVG verursachen einen Ableitstrom zum Schutzleiter von ca. 1mA. Man darf nicht vergessen, dass bei 0,5 x Ausl sestrom der EVG's ausl sen k nnen. Dies bedeutet, dass bei einem Ausl sestrom von 30mA die Anzahl der Leuchten auf 15 St. beschr nkt ist. Wir empfehlen den Einsatz eines Fehlerstromschutzschalter (FI) im Stromkreis der Beleuchtungsanlage.

Feuchtigkeit und Temperatur

EVG's sind anf lliger bei Feuchtigkeit als konventionelle Vorschaltger te. Wenn EVG's im Au enbereich einsetzt, dann empfehlen wir wasserdichte Leuchten. Kalte Umgebungen sind normalerweise kein Problem f r EVG's, zu beachten ist aber, dass durch den W rmeverlust die Lampen einen geringeren Lumenstrom haben. Bei Temperaturen von -30 C kann es zu Z ndproblemen bei den Lampen kommen. Bei erh hter Umgebungstemperatur sinkt die Lebensdauer.

Lebensdauer

Die Lebensdauer der EVG's ist abh ngig von der Umgebungstemperatur und der Qualit t des Stromnetzes. Die mittlere Lebensdauer ist heute 50.000 h bei der angegebenen max. Umgebungstemperatur (TA). In der Regel haben EVG's eine Lebenszeit von 10.000 Betriebsstunden bei einem max. Ausfall von 2% und 50.000 Betriebsstunden bei einem max. Ausfall von 10%.  ber- und Unterspannungen bei einem unsauberen Netz k nnen die Lebensdauer reduzieren.

Isolationsmessung

Isolationspr fung werden bei Leuchten mit EVG's mit max. 500V DC durchgef hrt. Die Spannung wird zwischen Schutzleiter und Phase angeschlossen. Achtung: Die Spannung ist abzuschalten, bevor die Phase abgeklemmt werden.

Montage Tipp

Leuchten d rfen nur an spannungsfreien Netz angeschlossen werden. Es sollte vermieden werden induktive und elektronische Vorschaltger te an einem Stromkreis zu betreiben. In extrem warmen Umgebungen d rfen keine EVG's eingesetzt werden.



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www.glamox.com