

INSTRUCTION & SERVICE MANUAL

L101X Range - Xenon Strobe Beacon

High Powered Xenon Tube Beacon

5J Xenon Flash Tube
 Three modes : Flashing 1 Hz, Flashing 1.5Hz (DC units Only),
 Double Strike (DC Units Only)
 IP Rating: Type 4 / 4X / 3R / 13, IP66
 Temp: -40°C/F to +66°C/+151°F

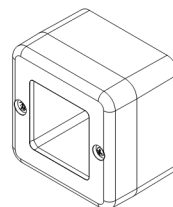
General Signaling Canada:
 L101XDC: -40°C/F to +55°C/+131°F
 L101XAC: -40°C/F to +40°C/+104°F
 EN54-23: -25°C/-13°F to +55°C/+131°F

Unit weight: 200g

CE, UKCA & UL Approved

VdS/CPR Approval for EN54-23 (24/48Vdc Application Only)
 General Signalling for US & Canada - UL1638A & CSA22.2-205-17
 Private Mode Fire for US & Canada - UL1638, CAN/ULC-S526

Dimensions : 86.0 x 86.0mm
 0.5-4.0mm² terminals
 AWG22-AWG12
 Cable entry: M20 cable entry (IP66)
 Dependent on Back Box selected



L101X



| Model No. | Nominal Voltage | Voltage Range | Nominal Operating Current† | Max Operating RMS# |
|-------------------------|-----------------|------------------------|----------------------------|-----------------------------|
| L101XDC012[Z]...[X]/[Y] | 12V dc/ac | 11.5-14V dc/ac | 500mA/380mA | 531mA @14Vdc / 341mA @14Vac |
| L101XDC024[Z]...[X]/[Y] | 24V dc/ac | 20-28V dc/ac | 250mA/300mA | 271mA @20Vdc / 426mA @28Vac |
| L101XDC048[Z]...[X]/[Y] | 48V dc | 42-54V dc | 170mA | 170mA @42Vdc |
| L101XAC048[Z]...[X]/[Y] | 48V ac | 42-54V ac | 250mA | 360mA @52.8Vac |
| L101XAC115[Z]...[X]/[Y] | 115V ac | 115V ac +/-10% 50/60Hz | 70mA | 101mA @126.5Vac |
| L101XAC230[Z]...[X]/[Y] | 230V ac | 230V ac +/-10% 50/60Hz | 35mA | 58mA @253Vac |

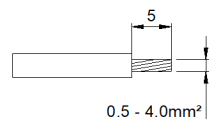
[Z] Denotes Backbox Type: B = Standard L101; S = Sonora; M = Multi-purpose (with Lugs)

[X] Denotes Housing Colour: R = Red; G = Grey; W = White

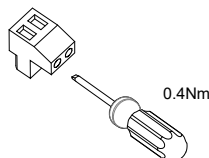
[Y] Denotes Lens Colour*: R = Red; G = Green; A = Amber; B = Blue; C = Clear; M = Magenta

*Only Red & Clear Lens VdS/CPR Approved.

†Nominal Voltage, 1Hz Flash Pattern & Tone 12; #Worst-case input voltage and worst case flash pattern



Use suitable conduit or cable glands with suitable IP or type rating



Terminal Connections

Attention: Installation must be carried out by an electrician in compliance with the latest codes and regulations.

Attention: L'installation doit être effectuée par un électricien conformément aux derniers codes et réglementations.

Achtung: Die Installation muss von einem Elektriker gemäß den neuesten Vorschriften und Bestimmungen durchgeführt werden.

Attenzione: L'installazione deve essere eseguita da un elettricista in conformità con i codici e le normative più recenti.

Atención: La instalación debe ser realizada por un electricista de acuerdo con los últimos códigos y regulaciones.

Atenção: A instalação deve ser realizada por um electricista de acordo com os códigos e regulamentos mais recentes.

Внимание: установка должна выполняться электриком в соответствии с последними нормами и правилами.

Attention: Disconnect from power source before installation or service to prevent electric shock

Attention: Débranchez-le de la source d'alimentation avant l'installation ou l'entretien pour éviter tout choc électrique.

Achtung: Vor Installation oder Wartung von der Stromquelle trennen, um einen Stromschlag zu vermeiden.

Attenzione: scollegare dall'alimentazione prima dell'installazione o dell'assistenza per evitare scosse elettriche.

Atención: desconéctelo de la fuente de alimentación antes de la instalación o el servicio para evitar descargas eléctricas.

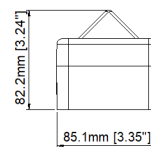
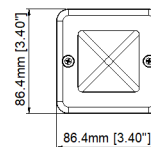
Atenção: Desconecte da fonte de alimentação antes da instalação ou serviço para evitar choque elétrico

Внимание: отключите от источника питания перед установкой или обслуживанием, чтобы предотвратить поражение электрическим током.

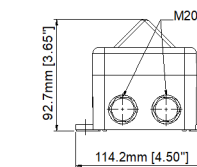
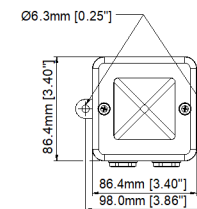


Backbox Type See D185-05-001

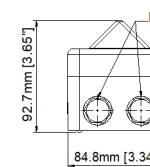
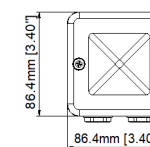
Standard L101 Backbox [B]



Multi-purpose Backbox [M]



Sonora Backbox [S]



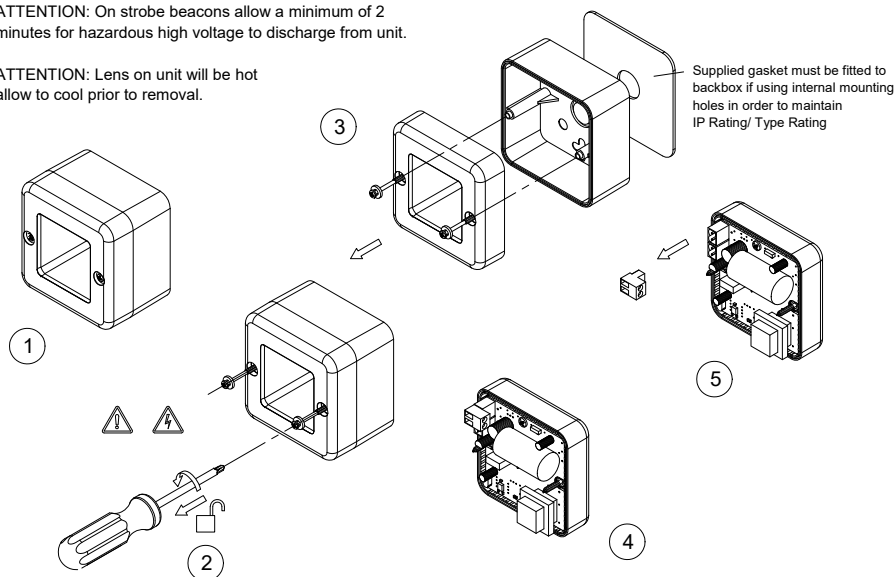
Access to Enclosure



ATTENTION: On strobe beacons allow a minimum of 2 minutes for hazardous high voltage to discharge from unit.

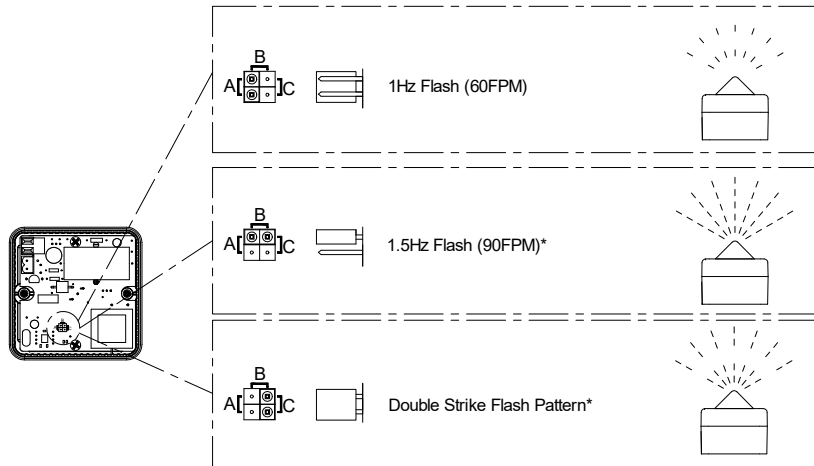


ATTENTION: Lens on unit will be hot allow to cool prior to removal.



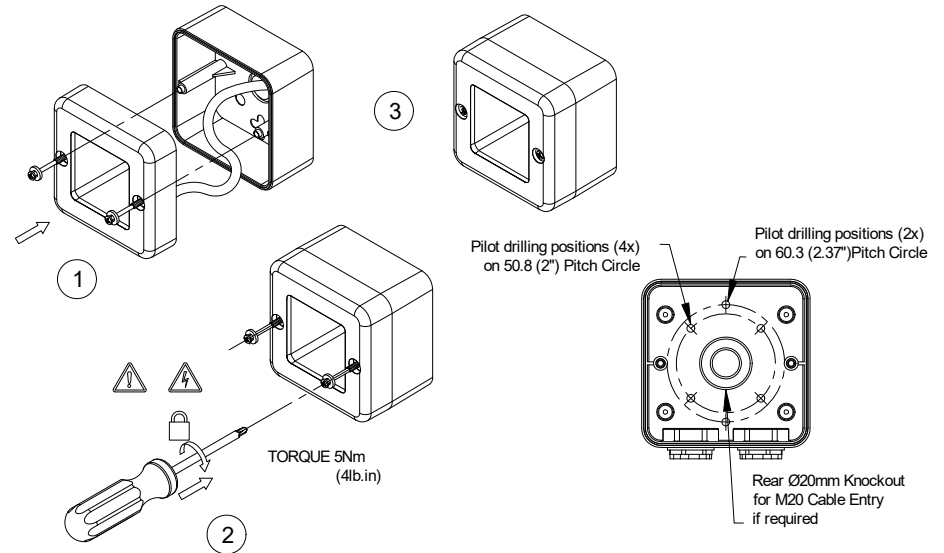
Supplied gasket must be fitted to backbox if using internal mounting holes in order to maintain IP Rating/ Type Rating

Header Pin Settings for Flashing modes

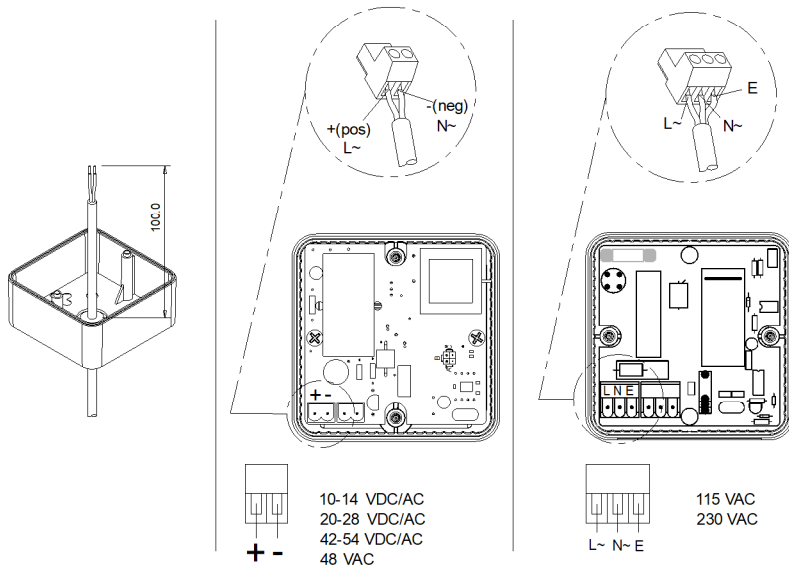


*Flashing 1.5Hz and Double Strike modes are not available on the following units: L101XDC012[b][x][y] when used with an AC supply; L101XAC048[b][x][y]; L101XAC115[b][x][y] & L101XAC230[b][x][y].

Re-assembly



Wiring See D185-06-001

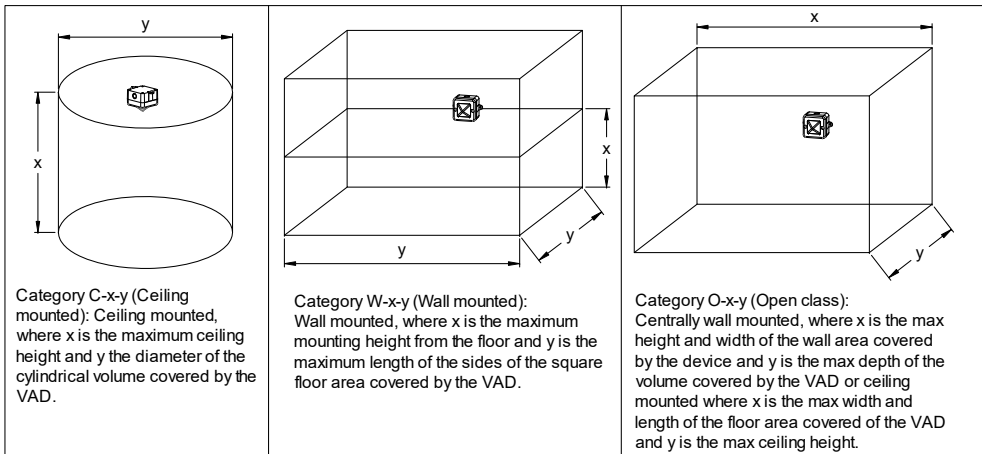





10-14 VDC/AC
20-28 VDC/AC
42-54 VDC/AC
48 VAC

115 VAC
230 VAC

Coverage Area According to EN54-23

| Unit | Category C | Category W | Category O | Power |
|--------------------|----------------------------------|-----------------------------------|-----------------------------------|-------|
| L101XDC024[z][x]/C | C-9-6.8 V=326.9m ² | W-2-4-4.8 V=55.3m ² | O-4-8-10 V=230.4m ² | 6W |
| L101XDC024[z][x]/R | C-3-2.6 V=15.9m ² | N/A | O-1-9-3.6 V=13.0m ² | 6W |
| L101XDC048[z][x]/C | C-9-7 V=346.4m ² | W-2-5-5 V=62.5m ² | O-5-10 V=250.0m ² | 8.4W |
| L101XDC048[z][x]/R | C-3-3 V=21.2m ² | N/A | O-2-4 V=16.0m ² | 8.4W |



-  Attention: Installation must be carried out by an electrician in compliance with the National Electrical Code, NFPA 70, and the National Fire Alarm Signaling Code, NFPA 72 or CSA 22.1 Canadian Electrical Code, Part I, Safety Standard for Electrical Installations, Section 32. / L'installation doit exclusivement être réalisée par du personnel qualifié, conformément au code national d'électricité américain, NFPA 70, et le code national d'alarme incendie et de signalisation NFPA 72 ou CSA 22.1 Code canadien de l'électricité, première partie, norme de sécurité relative aux installations électriques, Section 32
-  Attention: Disconnect from power source before installation or service to prevent electric shock / Débranchez-le de la source d'alimentation avant l'installation ou l'entretien pour éviter tout choc électrique.
-  Attention: Do not paint / Ne pas Peinturer

- -40°C to +66°C / -40°F to +151°F
- Units can be mounted using the 2-off ø6mm holes in the mounting lugs or through the back of the housing using the supplied gasket seal.
- L101XDC024 is approved for use as a Visual signal appliance for fire alarm use – Private Mode. (UL1638 & CAN/ULC-S526).
- For private mode fire alarm use, the beacon must be set to the certified flash pattern of 1Hz.

| On-axis light output rating per UL1638 & Emergency Warning | | | |
|--|-------------|---|---|
| Model | Lens Colour | UL1638 Intensity (cd) at 1Hz flash rate | Emergency Warning Intensity (cd) at 1Hz |
| L101XDC024 | Clear | 86.5 | 69.2 |
| | Amber | 38.12 | 30.5 |
| | Blue | 11.75 | - |
| | Green | 32.62 | 26.1 |
| | Magenta | 11.75 | - |
| | Red | 8.62 | - |
| | Yellow | 77.0 | 61.6 |

- For light output ratings see below:
- Connection Terminals: Pluggable
AC: 1.0 - 2.5mm² / AWG18 - AWG12
DC: 0.2 - 2.5mm² / AWG24 - AWG12
- Terminal Tightening torque 0.4Nm
- To maintain Ingress Protection, cable entries must be fitted with suitably rated cable glands or stopping plugs
- Units can be located indoor or outdoor wet use, wall or ceiling mounted and there are no limitations on orientation

| Surge current ratings for use in fire alarm systems | | | | | |
|---|-----------------|---------------|------------|-------------------|------------------|
| Model | Nominal Voltage | Voltage Range | Flash Rate | Initial Peak (mA) | Initial RMS (mA) |
| L101XDC024 | 24Vdc | 20-28Vdc | 1 Hz | 426 | 300 |

- Factory finishes are not intended to be modified

SIL 2 Reliability Data

Reliability and Functional safety IEC/EN61508 which has been assessed and is considered suitable for use in low demand safety function:

1. Random Hardware Failures and Systematic Failures and (route 2_H).
2. As an unvoted item (i.e. hardware fault tolerance of 0) at SIL 2.

The product was assessed against failure modes:

- Failure respond to an input by lighting a beacon.
- Spurious light output despite no input.

3. When employing the device in a SIL2 compliant system the user should ensure frequent or continuous automatic monitoring of continuity and current draw, refer to specific model nominal current draw data.

| | |
|---|------------------------|
| Integrity in respect of failure to function | SIL2 & SIL1 |
| Total Failure rate | 0.12 pmh |
| "Hazardous" failure rate (revealed) | 0 pmh |
| "Hazardous" failure rate (unrevealed) | 0.12 pmh |
| "Safe" failure rate (revealed) | 0 pmh |
| "Safe" failure rate (unrevealed) | 0 pmh |
| System type | B |
| Hardware Fault Tolerance | 0 |
| Diagnostic Coverage | >60% |
| PFD (hazardous failure) | 5.3 x 10 ⁻⁴ |
| Proof Test Interval | Up to 1 year |

DNV TA Approval

L101X units have been tested and approved for the installation on ships in the following locations:

- Temperature: Class A,B,C & D (all locations including open decks and masts)
- Humidity: Class A & B (all locations)
- Vibration: Class A (all locations except installation on machinery such as combustion engines, compressors, pumps, including piping on such machinery, and masts)
- EMC: Class A & B (all locations including open decks and bridge)
- Enclosure: Class A, B & C – IP66 (all locations expect submerged applications and bilges)

All L101X units in all voltage and lens colour options carries Type Approval by DNV to the following guidelines:

Class Guideline DNV-CG-0339:

Environmental test specification for electrical, electronic and programmable equipment and systems