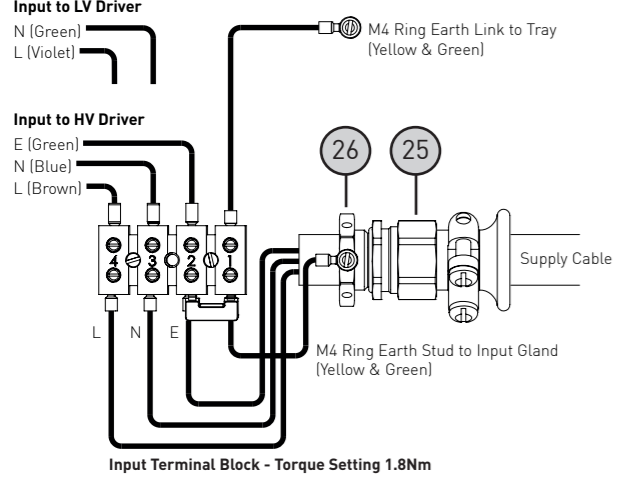
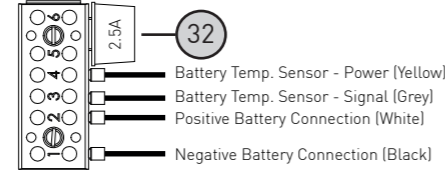


Wiring Diagram

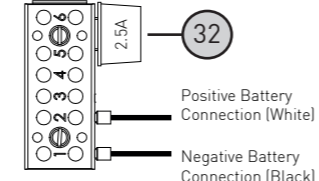


Models with LX-664 or LX-632 driver with LX-447 Battery Pack

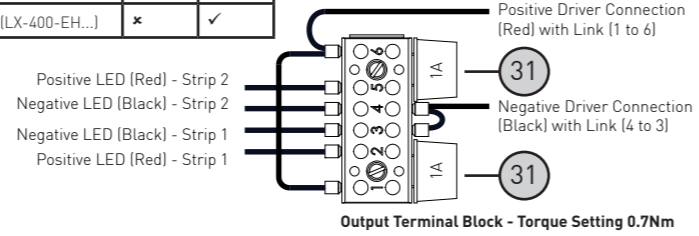


Battery Pack / Driver (LX)	LX-447	LX-440
LX-632 20-55VAC (LX-400-EL...)	✓	✗
LX-633 20-55VAC (LX-400-EL...)	✗	✓
LX-664 95-264VAC (LX-400-EH...)	✓	✗
LX-665 95-264VAC (LX-400-EH...)	✗	✓

Models with LX-665 or LX-633 driver with LX-440 Battery Pack



Battery Terminal Block - Torque Setting 0.7Nm



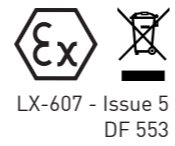
Spare Parts List

Item No.	Part No.	Spare Part Description	Quantity Required per Lamp
1	LX-602	Bump Ring - pack of 2	1
2	LX-304	Tube Seal Ring	1
3	LX-470	Spare Tube with Emergency Label	1
4	LX-622	Plate Seal 5mm and Tube Seal 10mm - 1 of each, for one end of the lamp	1
5	LX-306	Cable Entry End Cap	1
6	LX-656	Input Terminal Block - Ex e Weidmuller MK6 4 Way Terminal Block and Screws M3x22	1
7	LX-316	Blank End Cap Non Link	1
8	LX-310	CEAG Socket Plate	1
9	LX-1043	CEAG Socket 24 Volt	1
10	LX-1044	CEAG Socket 110 Volt	1
11	LX-1045	CEAG Socket 230 Volt	1
12	LX-312	ATX Socket Plate	1
13	LX-1049	ATX Socket 24 Volt	1
14	LX-1050	ATX Socket 110 Volt	1
15	LX-1051	ATX Socket 230 Volt	1
16	LX-315	Stahl Socket Plate Kit	1
17	LX-1350	Stahl Socket 110 Volt	1
18	LX-1351	Stahl Socket 230 Volt	1
19	LX-684	LED Output Terminal Block - 6 Way Weidmuller Terminal Block and Screws M3x20	1
20	LX-664	95-264VAC Emergency Driver - 4 wire battery connection - see wiring diagram above	1
21	LX-632	20-55VAC Emergency Driver - 4 wire battery connection - see wiring diagram above	1
22	LX-665	95-264VAC Emergency Driver - 2 wire battery connection - see wiring diagram above	1
23	LX-633	20-55VAC Emergency Driver - 2 wire battery connection - see wiring diagram above	1
24	LX-619	180° Emergency LED Strip Assembly and Tray	1
25	LL-311	Trumpet Gland	1
26	LX-608	Gland Nut	1
27	LX-658	M6 Bonded Washers, M6x30 Screws, M5 Dornenuts, M5 Bonded Washers, M5x12 Cap Head Screws - 2 of each	1
28	LX-682	M4x5 Pan Head Screws, M4 Nyloc Nut - 4 of each	1
29	LX-680	Magnet Bracket Kit - pack of 2	1
30	LX-1258	M6 External Earth Bonding Stud - Accessory for Earth Bonding	1
31	LX-691	1A LED Fuse - pack of 2	1
32	LX-687	2.5A Battery Current Fuse	1
33	LX-654	Shoulder Strap - pack of 2	1
34	LX-545/3	Protective Films - pack of 3	1
35	LX-447	Battery Pack Assembly with Terminal Block and Screws M4 x 5 - 4 wire battery connection - see wiring diagram above	1
36	LX-440	Battery Pack Assembly with Terminal Block and Screws M4 x 5 - 2 wire battery connection - see wiring diagram above	1
37	LX-621	Anti-Static Protection Cover Kit - pack of 5 (Note: When fitted the maximum ambient temperature lowers from +55°C to +45°C)	1

WOLF SAFETY LAMP COMPANY

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Operation and Maintenance Instructions
Please Retain - Read Before Use

EU Declaration of Conformity

The Wolf ATEX LX-400E LinkEx LED Temporary Emergency Luminaire meets all relevant provisions of the 2014/34/EU Explosive Atmospheres (ATEX Equipment) Directive by virtue of the issued EU type examination certificate, confirming compliance with all relevant harmonised standards and essential health and safety requirements.

The Wolf ATEX LinkEx LED Temporary Emergency Luminaire is a leadlamp with an emergency illumination function powered by a NiMH rechargeable battery and is normally powered by a cabled 18-55AC or 90-264AC power source. It is constructed with a durable enclosure construction of polycarbonate with polyurethane protective rings. Approval is as Group II, Category 2 equipment for use in zone 1 & 2 potentially explosive gases, vapours, mists and dusts where the T4 temperature class/135°C maximum surface temperature permits.

Certification/Approval Code:

Ex II 2GD
Ex eb mb op is IIC T4 Gb
Ex tb op is IIIC T135°C Db IP6X
Ta = -20°C to +55°C
or Ta = -20°C to +45°C when the LX-621 optional Protection Cover is fitted

EU Type examination certificate: **CML 18ATEX3371X**
Notified Body: SGS FIMKO OY, PO Box 30 (Särkiniementie 3), 00211, Helsinki, Finland

EU Notified body number: **0598**

Harmonised standards applied:
EN60079-0:2018, EN60079-7:2015+A1:2018, EN60079-11:2012, EN60079-18:2015+A1:2017, EN60079-28:2015, EN60079-31:2014

Ingress protection level IP67 to EN60529:1992
Some variants of plugs/sockets may reduce the Ingress Protection rating, e.g. ATX & CEAG IP66.

ATEX LinkEx LED Leadlamps are certified compliant with the 2014/30/EU EMC Directive to the harmonised standards: - EN 55015: 2013 +A1:2015, EN 61547: 2009, EN 61000-3-2:2014, EN 61000-3-3:2013
This declaration is issued under the sole responsibility of Wolf Safety Lamp Company.

Alex Jackson Alex Jackson – Managing Director
Wolf Safety Lamp Company Ltd.

IECEx Scheme Certification

Certificate number: **IECEx CML 18.0197X**
Certification/Approval Code: Ex eb mb op is IIC T4 Gb
Ex tb op is IIIC T135°C Db IP6X

Ta = -20°C to +55°C
or Ta = -20°C to +45°C when the LX-621 optional Protection Cover is fitted

Standards applied: IEC60079-0:2017, IEC60079-7:2017, IEC60079-11:2011, IEC60079-18:2017, IEC60079-28:2015, IEC60079-31:2013

IMPORTANT: SPECIAL CONDITIONS OF USE (X)

- The user/installer shall ensure that, when the Luminaire is fitted with a previously certified plug or socket that has associated special conditions for safe use, they shall take into account any restrictions or conditions for safe use that are applicable to these devices.
- Linkable lamps fitted with Marechal sockets are certified for low impact risk use only, do not expose to shocks greater than 4 joules.

PHOTOBIOLOGICAL SAFETY

Floodlites are risk group 1 - No photobiological hazard under normal behavioural conditions.

EQUIPMENT USE

- This product incorporates an emergency function which allows the lamp to illuminate at a reduced level in the event of supply failure. The batteries will charge when the lamp is powered.
- Check the rating label to ensure the LinkEx LED leadlamp is suitable for the supply provided, ambient temperature present and the environmental conditions.
- In areas where processes that induce circulating currents in the earth system are being undertaken, such as welding, it is the user's responsibility to ensure there is no potential difference between the supply earth and the earth

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local to the luminaire. If a potential difference exists there is a risk of arcing should the lamp's end cap fixings or metal gland come into contact with local metal work. In these situations, the luminaire should also be locally earth bonded with a flexible cable, no longer than 2 metres, with a conductor area of 6mm² minimum. The luminaire must be de-energised from the mains supply during connection or disconnection of the local earth bond. An external Earth Bonding Stud is available in the spares list and can be retro fitted in place of one of the end cap retaining screws.

4. Safe Optimal Voltage Indicator (SOVI). The Wolf LX-400E LED Leadlamp incorporates SOVI technology to highlight to the user if the product is operating outside of the certified maximum and recommended minimum voltage range. The diagram below represents the SOVI function, it demonstrates that when the voltage is not within the "Safe/Optimal Voltage" the light output will change from a constant uninterrupted beam to a pulse.

SOVI	EMERGENCY MODE	SAFE NON-OPTIMAL VOLTAGE	SAFE OPTIMAL VOLTAGE	UNSAFE VOLTAGE
LX-400EL LX-400EH	< 18V < 90V	18-20V 90-95V	20-55V 95-264V	55V > 264V >
LIGHT OUTPUT	REDUCED LIGHT OUTPUT	PULSE	ON	PULSE

If connecting a large number of lamps check for SOVI indication on all the lamps in the string. Guidance on lamp connection and extensions can be found on the Wolf website: www.wolfsafety.com. If a lamp is indicating an unsafe voltage, it is recommended that the lamp be switched off until it can be made to operate at a correct voltage.

- The LinkEx LED leadlamp enclosure is constructed from polycarbonate, the end user must ensure suitability of the atmosphere the LinkEx LED leadlamp will be used in.
- The LinkEx LED leadlamp is class 1 earthed electrical equipment, using 3 core cable. This product must be earthed.
- Ex e terminal blocks must have all terminals fully tightened down even if a conductor is not fitted. On the six way terminal block, tighten screws to 0.7Nm, on the 4 way terminal block tighten to 1.8Nm.
- ATEX/IECEx certified cable glands must be used and be suitable for the type of cable used.
- Ensure cable is rated for the ambient temperature the LinkEx LED leadlamps will be used in, standard SY cable is not rated for use below 0°C.
- Inspect cable at regular intervals.
- Damaged equipment should be withdrawn and repaired as necessary before being put back in to service, in accordance with EN60079-17.
- Lamps must not be opened in Hazardous Areas.
- When the LinkEx LED leadlamp is used in temporary installations two mounting points must be used, see Wolf clamp rings and associated accessories.
- LinkEx LED leadlamps can be carried whilst energised/illuminated.
- Plugs must be connected and fully engaged in the correct socket to maintain the IP rating of the plug and socket. Wolf LinkEx™ LED Temporary Luminaire and any connected power distribution equipment, fitted with a socket, must have the socket covers closed when not in use to maintain IP rating of the socket housing.

MAINTENANCE

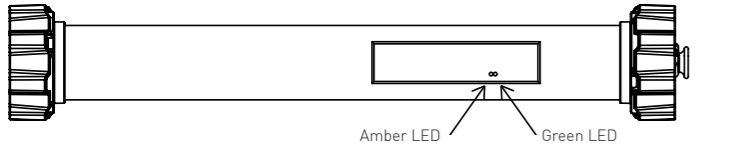
- IMPORTANT. Any maintenance work should be carried out in the safe area only.
- IMPORTANT. No modifications are permitted to the LinkEx LED leadlamps, use only genuine Wolf spare parts and accessories, unauthorised modifications, spare parts or accessories will invalidate certification.
- Isolate the LinkEx LED leadlamps from the power supply before carrying out any maintenance work. Please note that the battery pack will remain live after the leadlamp is isolated from the power supply, even when in deep discharge mode.
- In case of fault indication, remove and restore external power. If fault indication persists, contact Wolf noting the LED indications both whilst external power is applied and whilst disconnected. Any faults should be repaired prior to storage.
- To replace LED strip, replace entire tray (see spares list).
- External plastic components have an anti-static coating. Use only a dilute water/detergent mix to clean.
- Insulation testing must be carried out to IEC, EN standards to the correct rating i.e. 250V DC for 18-55V and 500V DC for 90-264V versions. Live and neutral cables must be shorted together and the voltage applied between earth and this connection.



Wolf LinkEx™ LED Temporary Emergency Luminaire

BATTERY CHARGE INDICATION

The battery status is indicated by two LED indicators that are situated on the top of the driver. These LEDs are visible through the outer tube. See below for charge indication breakdown.

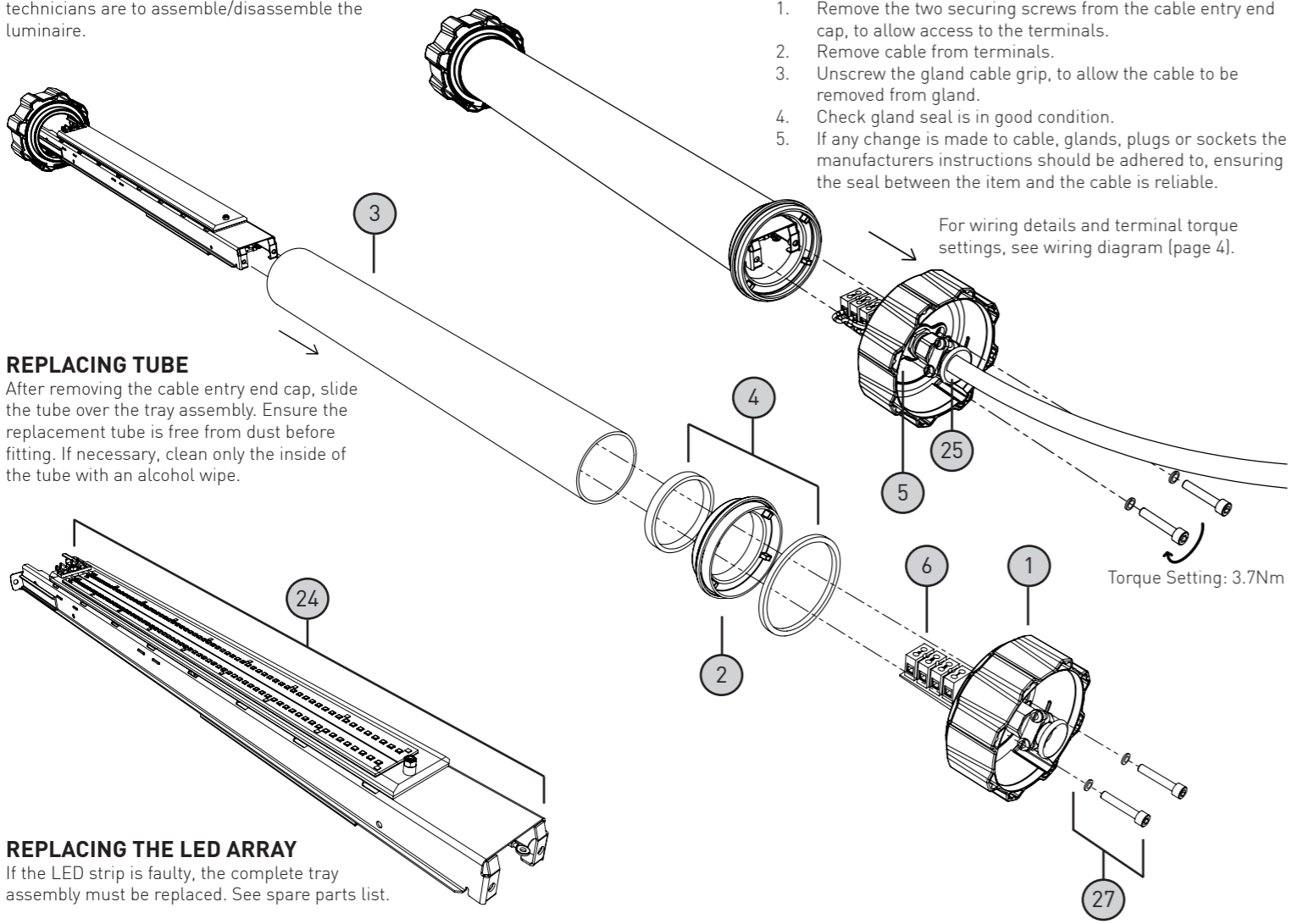


Status	Green LED	Amber LED	LED Array
Driver Initialisation	ON	ON	10%
Maintenance Charge / Battery Full	ON	OFF	100%
Battery Charging	FLASH	OFF	N/A
Supply On			
Non-Optimal Voltage	N/A	OFF	Pulsing - 50%
Replace Battery	FLASH	FLASH	100%
Battery Fault	OFF	ON	10%
Battery Fault	OFF	ON	10%
Supply Off			
Em. Mode - Discharging	OFF	OFF	50%
Em. Mode - Discharging Low Battery	OFF	FLASH	25%
Deep Discharge Protection	OFF	OFF	OFF

If this emergency luminaire is relied upon for the safe evacuation of personnel, it is the user's responsibility to ensure that the performance of the emergency mode is suitable for their needs. It is recommended that the duration of the discharge is tested regularly and upon powering up, the luminaire indicates "Battery Charging". The full capacity of the battery is not available until the unit indicates "Maintenance Charge / Battery Full". Contact Wolf for further information.

Product Breakdown

Only suitably qualified and experienced technicians are to assemble/disassemble the luminaire.



REPLACING TUBE

After removing the cable entry end cap, slide the tube over the tray assembly. Ensure the replacement tube is free from dust before fitting. If necessary, clean only the inside of the tube with an alcohol wipe.

REPLACING THE LED ARRAY

If the LED strip is faulty, the complete tray assembly must be replaced. See spare parts list.

Battery Duration: 3 hrs from fully charged
 Battery Charge Time: 16 hrs

Deep Discharge Protection - The lamp will automatically cut off when the battery reaches a pre-determined low voltage. The battery will need to be re-charged before the emergency mode is functional again.

Battery Storage - To maximise the performance of the emergency function it is recommended that the battery is charged (for 16 hours) once a month. It is imperative that the unit is charged every six months, otherwise permanent loss of capacity might occur. In this case, the unit will not function as an emergency luminaire and will indicate "Replace Battery".

Recommended battery storage temp.: +5 to +25°C

ELECTRICAL DATA

Maximum current on a linked lamp configuration not to exceed 16A.

MODEL	Safe Optimal Voltage Range	Freq Hz	Power Watt	VA
LX-400EL../T4	20-55VAC	50-60	24.5	26
	20-55VDC		25	
LX-400EH../T4../110V	95-264VAC	50-60	24	25
	95-264VDC		25	
LX-400EH../T4../230V	95-264VAC	50-60	25	30
	95-264VDC		25	

DISPOSAL OF WASTE MATERIAL

Disposal of packaging, LinkEx LED products, old LED trays and drivers should be carried out in accordance with applicable regulations. (WEEE)

CHANGING CABLE

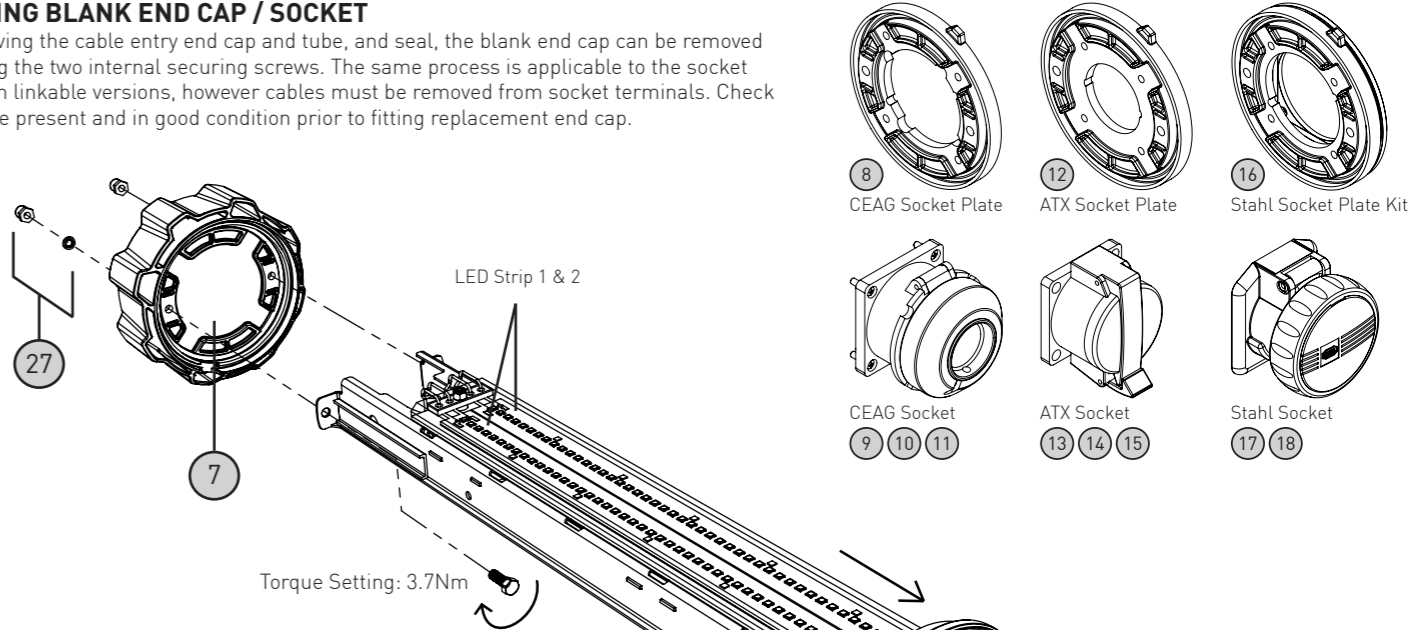
1. Remove the two securing screws from the cable entry end cap, to allow access to the terminals.
2. Remove cable from terminals.
3. Unscrew the gland cable grip, to allow the cable to be removed from gland.
4. Check gland seal is in good condition.
5. If any change is made to cable, glands, plugs or sockets the manufacturers instructions should be adhered to, ensuring the seal between the item and the cable is reliable.

For wiring details and terminal torque settings, see wiring diagram (page 4).

Wolf LinkEx™ LED Temporary Emergency Luminaire

REPLACING BLANK END CAP / SOCKET

After removing the cable entry end cap and tube, and seal, the blank end cap can be removed by removing the two internal securing screws. The same process is applicable to the socket end caps on linkable versions, however cables must be removed from socket terminals. Check all seals are present and in good condition prior to fitting replacement end cap.



REPLACING TRAY COMPONENTS

Once the tray is removed, all tray components, other than the LED array, can be accessed and removed by removing the fixing nuts/screws.

FAULT FINDING

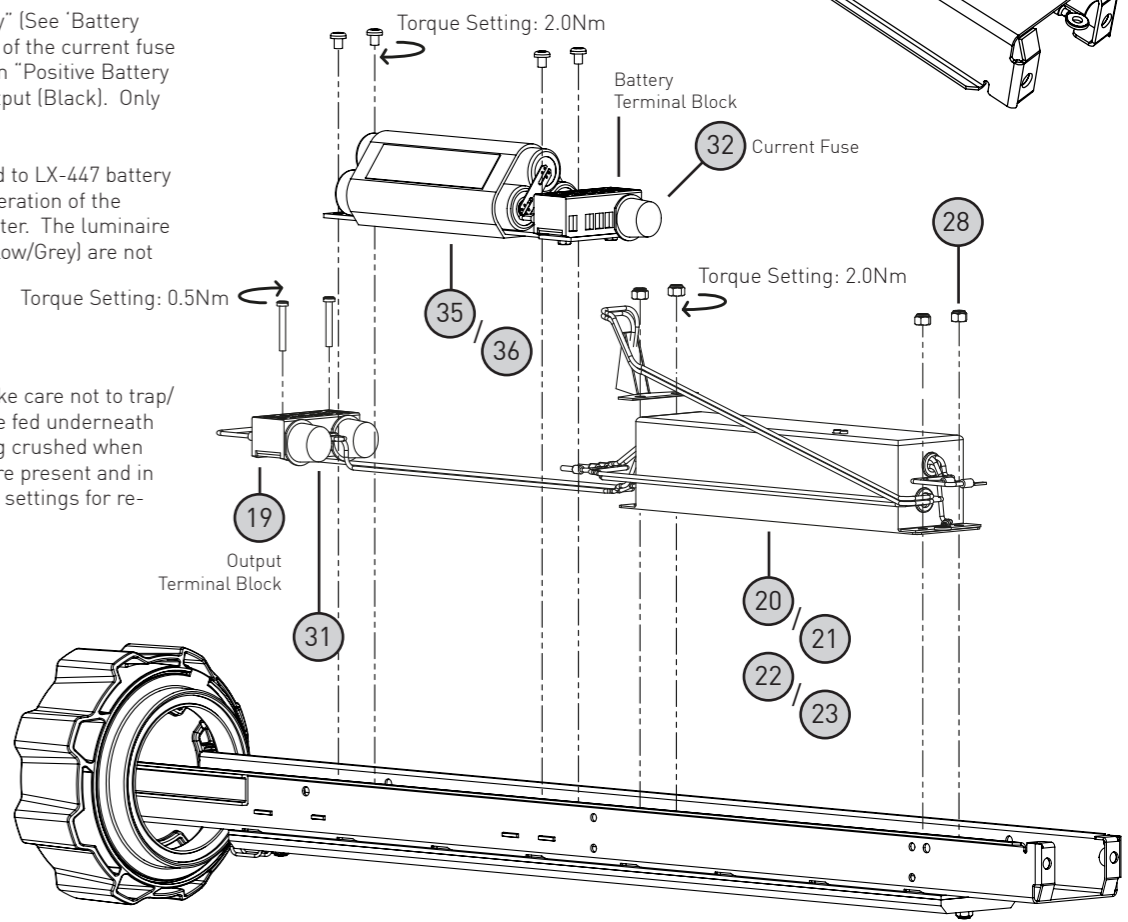
If a Wolf LinkEx™ LED Temporary Luminaire fails to function, check input cable continuity and terminations. If satisfactory, test the output fuse to each LED strip. If any fuse is found to be open circuit, then both fuses must be replaced. Only replace with Wolf encapsulated fuse of the correct rating.

When the lamp indicates "Replace Battery" (See "Battery Charge Indication" above) verify continuity of the current fuse (32) and there is a minimum of 2V between "Positive Battery Output (White)" and "Negative Battery Output (Black)". Only replace with Wolf approved parts.

NB The Battery Temp. Sensor Signal fitted to LX-447 battery packs only is digital and so the correct operation of the sensor cannot be verified with a multi-meter. The luminaire will indicate a fault if the connections (Yellow/Grey) are not connected correctly.

RE-ASSEMBLY

Re-assembly is the reverse procedure. Take care not to trap/crush wires. Driver output wires should be fed underneath tray brackets to prevent them from getting crushed when installing battery pack. Ensure all seals are present and in good condition. The recommended torque settings for re-assembly are shown on diagrams.



The Wolf Safety Lamp Co. Ltd has a policy of continuous product improvement. Changes in design details may be made without prior notice. Prices and design are subject to alteration without notice. All products sold are subject to our conditions of sale. A copy of these instructions with any relevant revisions can be found at www.wolfsafety.com

