Attention:
This download consists of two Operating Instructions!

First instruction:
For Explosion-proof LED-Emergency Light Fitting type
nD867... with **NiCd** Emergency battery
until year of construction 05/2025
(Page 3-18 of the download)

Second instruction:
For Explosion-proof LED-Emergency Light Fitting type
nD867... with **NiMH** Emergency battery
(from year of construction 06/2025)
(Page 19-34 of the download)

Operating Instructions

Explosion-proof Self-contained
LED-Emergency Light Fitting

ExeLED 2 N

Series nD867…

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The safety of people and equipment in hazardous areas depends on the observance of all safety standards. Exact knowledge about all applicable regulations and standards is mandatory for installation maintenance and repair of explosion proof equipment, especially

- the determinations of IEC/EN 60079-14 and IEC/EN 60079-17 for maintenance of explosion-proof appliances
- the generally accepted rules of the technical side
- the national rules for prevention of accidents and for safety standards
- the safety instructions of these operating instructions
- the characteristic data on the type plate and the instruction plates

1. Safety Instructions

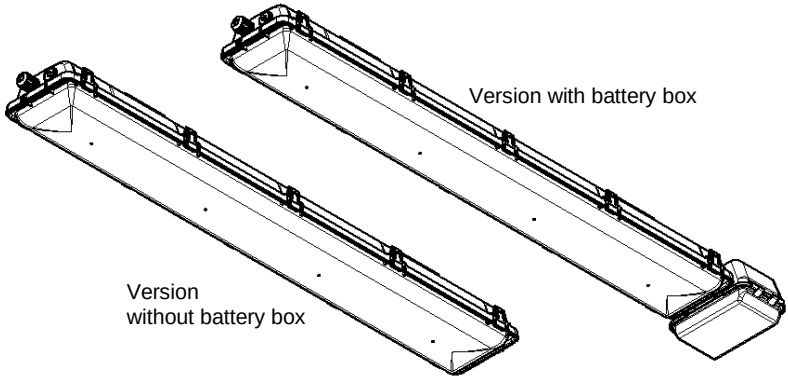
- Mounting and installation must be done in accordance with the respective regulations.
- The light fitting must be protected against overvoltage, overcurrent, short circuits and other electrical failures.
- The light fitting must be operated in an undamaged condition only.
- It is allowed to open the light fitting in a non-explosive (non hazardous) atmosphere only.
- The non-stationary use of the light fitting as well as any other inappropriate usage is prohibited.
- The operation of the light fitting is allowed within its assessment thresholds only.
- In regard to the minimum and maximum admissible ambient temperature potential sources of cold and heat (e.g. direct heat or solar radiation, cooling units) have to be considered.
- If the light fitting is subject to particular stresses - chemical, mechanical, thermal and electrical, as well as vibrations or moisture - prior consultation with Adolf Schuch GmbH is required.
- Every structural modification will cause dangerous situations and consequently the certification of this light fitting will be null and void.
- **Caution - Risk of electrostatic discharge! Fitting to be cleaned with damp cloth only!**
- **In areas with risk of accidental electrostatic charge (e.g. by passing by) the light fitting must be protected by appropriate measures.**
- **The light fitting is not allowed to be installed in process areas where strong electrical fields may occur (i.e. HV Sparkling Electrodes or Particle Streams). Reason is to avoid any electrostatic charge of the light fitting itself.**
- Replace damaged parts by original spare parts from the Adolf Schuch GmbH only.
- The LED-reflector with the LED-modules attached to it and the control gear of this light fitting must be replaced by Adolf Schuch GmbH, by a service technician who is instructed from Schuch or by any other person with equivalent qualification only.

2. Operating Advice

- Because of the chemical resistance use only a damp cloth for cleaning the light fitting. If necessary with a mild and solvent-free cleaning agent.
- Against penetration of humidity into the light fitting a special Ex breathing gland is often quite effective. It is allowed to use an Ex breathing gland which is released by the Adolf Schuch GmbH only. If using such a gland, its operating instructions must be taken into account, as well as the influence on the permissible ambient temperature and the Ingress protection of the light fitting.
- Any application of the light fitting that is incorrect or even forbidden will lead to the fact that the manufacturer's warranty is lost.
- In case of light fittings without through-wiring, the connection cable must be inserted on the side that is closest to the connection terminal. If this is not possible, original through-wiring from Adolf Schuch GmbH must be installed subsequently.
- Through-wiring in light fitting nD867. 12L60 / . / . without battery box lowers the permitted ambient temperature of the fitting from +40 °C (without through-wiring) to +35 °C (with through-wiring). Please also refer to the corresponding instructions on the type plate of the light fitting.
- Opening the LED compartment is allowed for repair work only.
- LED are sensitive electronic components. Please ensure that the LED are protected against mechanical and electrostatic attacks whenever the light fitting is open. For this reason the LED must not be touched either. Likewise, ends of LED conductors that are detached from their terminals must be protected from electrostatic influences!
- Due to harmful gases and other corrosive substances (e.g. ammoniac, sulphur- or chlorine compounds) it may come to damages of the LEDs. Depending on the substance, the concentration, the temperature and the dwell time, damages up to total black-out are possible. This may occur

also to fittings with high degree of protection. The suitability of the light fitting for the respective application can only be checked by running a test at site.

- Due to a high inrush current when switching on the light fitting, the number of light fittings which can be connected to a single fused circuit is limited (Possible number of light fittings per circuit breaker see section 3, Technical Data).
- LED modules are built up of a series connection, which itself is built up of parallel connections of single LEDs. Failures of LEDs do not necessarily lead to a change in the power consumption, which is recognized by the emergency light unit.



2.1 Use at high and low temperatures

The explosion protection of the light fitting is guaranteed between -30°C up to +40°C/+55°C.
At temperatures below 0 °C, it must be taken into account that the emergency battery will take longer to charge and the operational life of the emergency lighting mode will be reduced. Testing the duration of the battery life in lower ambient temperatures can therefore lead to a misleading result.
The battery life test should be repeated manually at a more appropriate time (please refer to the section about operational life testing in section 2.2).
Versions of light fittings for high ambient temperatures (with battery box): A reduction of the lifetime of the emergency battery can be expected if the ambient temperature is permanent above +45°C.

2.2 Automatic test of the emergency light unit

The functionality of the light fitting and the operational life in emergency lighting mode is tested automatically by the emergency light unit at specified intervals. During the tests, the light fitting lights up and its signal LED shows a blinking green light.

Functionality test
Functionality tests are carried out at 7 day intervals and last one minute.
The first test of functionality is carried out one hour after the light fitting has been setup. Before this can happen, it is necessary to separate the emergency light unit built into the light fitting from the mains power supply before switching on the power, and the emergency battery must have been charged continuously for one hour.

Operational life test
During the operational life test, the emergency light unit checks whether the capacity of the emergency battery is sufficient for the indicated nominal operating time should the emergency light being required.

For the operational life test to be carried out, the emergency battery must be fully charged and connected. For special versions with the option to deactivate the emergency light function, the remote cutoff switch must also be closed.

Automatic operational life tests:
The first operational life test carried out automatically by the emergency light unit takes place at random within a period of 5 to 28 days after the light fitting has been setup. All further automatic operational life tests are then carried out at 52 week intervals, so long as the energy supply to the emergency light unit was not interrupted during this period.
A complete interruption of the energy supply to the emergency light unit occurs when the outage of the power supply exceeds the specified nominal operating time for the emergency light.
Reconnecting the power supply to the emergency light unit after a complete interruption will lead to a new setup procedure of the emergency light with a subsequent operational life test between 5 and 28 days later.
Should a fault in the battery capacity be indicated before a complete interruption of the power supply to the emergency light unit, a operational life test will be carried out within 24 hours of reconnection to the power supply.
If the prerequisites stated above for carrying out an automatic operational life test are not satisfied, the test will be deferred until these requirements are fulfilled.
Automatic operational life tests that could not be completed successfully will be repeated once after 60 hours, subject to the same prerequisites stated above.

Manual operational life tests:
Operational life tests can be triggered manually in 2 ways. Models with battery box can be triggered manually in 3 ways:

1.) By switching the power supply off and on at the L1 terminal.

2.) By switching the supply on and off at the L1` terminal.

Switch the power supply at the L1 terminal resp. the supply at L1' terminal off and on again 5 times. Leave at least 2 seconds between each switch.

In both cases, the sequence of switches must be completed within 60 seconds.
Under the above mentioned preconditions, after a correctly performed switching sequence at L1' terminal, an operational life test is immediately initiated.
If the switching sequence is correctly carried out on L1 terminal, an operational life test is initiated after the time that is required to fully charge the battery after the switching sequence.
If the switch sequence has not been carried out correctly, or the aforementioned requirements have not been satisfied, the operational life test will not be conducted.
If there was an error in the switching procedure, the entire switch sequence can only be repeated after 60 seconds have elapsed.
The points at which regular operational life tests are carried out are not affected by conducting a manual test using either of these methods.

3.) For models with a battery box by means of disconnecting and reconnecting the battery:
Open and close the lid of the battery box twice within a 60-second period. Opening and closing the case must occur within 10 seconds of each other.
If this procedure is done correctly, immediately after the battery box is closed for the second time, the signal LED will display an acknowledgement light. The five-second long red-green acknowledgement light confirms that a operational life test will be conducted 24 hours later.
Should a battery capacity fault be present when the acknowledgement light is displayed, more operational life tests will then be carried out at 52 week intervals. If no fault was detected in the battery capacity, the interval until the next regular operational life test is unaffected.



- During the functionality and operational life tests, the light fitting will switch on even if it was previously switched off!

2.3 Ascertainable faults and reset of the display

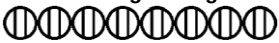
LED failure
If a fault in the LED is detected by the emergency light unit during a functionality test, the LEDs will be switched off and the fault will be indicated by a permanent red light on the signal LED.
An LED fault will be reset if a functionality test produces a positive result or if the emergency light unit is completely separated from the battery and power supply.

Battery capacity failure
If the emergency light unit detects during a operational life test that the capacity of the emergency light battery is insufficient to maintain the light fitting for the nominal operating time in the case of an emergency, the signal LED will display a red blinking light.
An emergency battery that no longer has sufficient capacity must be replaced immediately (see section 6.3).
The display indicating a fault in the battery capacity can only be reset by means of a successful operational life test.

Battery contact failure
When the electrical connection between the emergency light unit and the emergency battery is broken, the signal LED will display a red flashing light.
A battery contact failure and its signal are automatically reset as soon as the connection between the emergency light unit and the battery is re-established.

2.4 LED-Signals

The two-colored LED (red/green) which is integrated in the reflector of the light fitting does show the working condition and the error state of the fitting. The following states are possible:

Continuous green light:

Permanent charging mode –
light fitting at mains operation,
the emergency battery is being charged

Blinking green light:

Functionality test or operational life test (check of the capacity of the battery)

Alternating green and red light:

Light fitting deactivated / remote cutoff switch

Red flashlight:

Battery contact failure -
the battery is not connected to the emergency light unit

Blinking red light:

Insufficient capacity of the battery –
the battery must be replaced

Continuous red light:

LED failure

Acknowledgement light:

Indicator signal (not with light fittings with DALI connection) in lighting models with battery box that battery change was successfully carried out

 means:
red light for ½ second, green light for ½ second and no light for ½ second

2.5 Instructions for special versions with remote cutoff switch

Special versions of these lighting fixtures are equipped to be connected to a remote cutoff switch. Through a remote cutoff switch (isolated switching contact) it is possible to remove the light fitting from operation, e.g. during maintenance. With a remote cutoff switch it is possible to connect up to 30 light fittings (cable cross-section: 1.5 mm², cable length: max. 500 m).
The remote cutoff switch must be closed during normal operation of the special light fitting.
If the remote switch is open, there will be no emergency lighting in the case of a power outage.
A change to the switch position of the remote cutoff switch is only indicated if the fixture is connected to a power supply.

- If no power supply is present, when the remote switch is closed (resetting the deactivation) the light fitting will not enter emergency lighting mode!

Functionality and operational life tests that are due to be carried out when the remote cutoff switch is deactivated will be postponed until the deactivation is reset, and will be conducted when the necessary requirements for the respective test are satisfied.
The interval of functionality and operational life tests are not affected by deactivating the light fitting.

3. Technical Data

Series:	nD867. .. L .. / . / . └ Capacity of emergency battery └ Nominal operating time in case of emergency └ Index of luminous flux └ Light fitting length Explosion-proof LED-Emergency Light Fittings for operating in hazardous areas of zones 2 and 22.
Explosion protection:	Ⓔx II 3 G Ex ec IIC T4 Gc (Version without battery box) Ⓔx II 3 G Ex db ec IIC T4 Gc (Version with battery box) Ⓔx II 3 D Ex tc IIIC T80 °C Dc
Certification:	IBExU 16 ATEX B006 IECEx IBE15.0015
Rated voltage:	220…240 V AC; 50...60 Hz Switching from mains to battery operation at approx. 180 V Switching from battery to mains operation at approx. 195 V
Isolation class:	I
Ingress protection:	IP66 (When using an Ex breathing gland see section 2)
Ambient temperatur:	Version without battery box: -30 °C ... +35 °C / +40 °C (see type plate) 0 °C ... +35 °C / +40 °C (Nominal range according to EN 60598-2-22) -30 °C ... 0 °C (Emergency duration may be limited) Version with battery box: -30 °C ... +55 °C 0 °C ... +45 °C (Nominal range according to EN 60598-2-22) -30 °C ... 0 °C (Emergency duration may be limited)
Energy efficiency class:	This light fitting contains a light source of the energy efficiency class: C
Power consumption:	The power consumption of the LED is dependent on production fluctuations as well as on the service temperature. This is why just reference values can be given as follows: nD867F 06L22 / . / . : 17 W nD867F 06L42 / . / . : 29 W nD867. 12L42 / . / . : 29 W nD867. 12L60 / . / . : 41 W
Locking:	Clamp lockings (to be opened by hand) as well as one safety closure at each side (to be opened with a suitable screw driver)
Operation position:	in any direction - except upwards light output

Cable entry:

Bore: 25 mm -0/+0,5; Wall thickness: front side 5 mm, long side 3 mm
If supplied: Ex cable gland with thread size M25 x 1.5
Sealing range: 8 - 17 mm (for 10 - 17 mm remove the small sealing ring)
Torques: Connection thread 3 Nm; Pressing screw 2 Nm
Torque of Ex locking screw: 5 Nm

If other cable glands are used, their operating instructions must be observed!

Connection per terminal:

Ampacity: 16 A max. (At maximum current load, a cross section of 2.5 mm² is required)
Clamping range: 2 x 0.75 - 2.5 mm² (solid core or stranded)
2 x 1.5 - 2.5 mm² (flexible)
Required stripping length: 8 - 9 mm

For special versions, the information on the enclosed information sheet must be observed!

Rated luminous flux:

nD867F 06L22 / . / . : ca. 32 %
nD867F 06L42 / . / . : ca. 17 %

nD867. 12L42 / . / . : ca. 17 %
nD867. 12L60 / . / . : ca. 13 %

Possible number of light fittings per circuit breaker:

Type	B 10 A	B 16 A	C 10 A	C 16 A
nD867...	11	18	18	30

*) Typical values; possible deviations depending on make, cable impedance and temperature

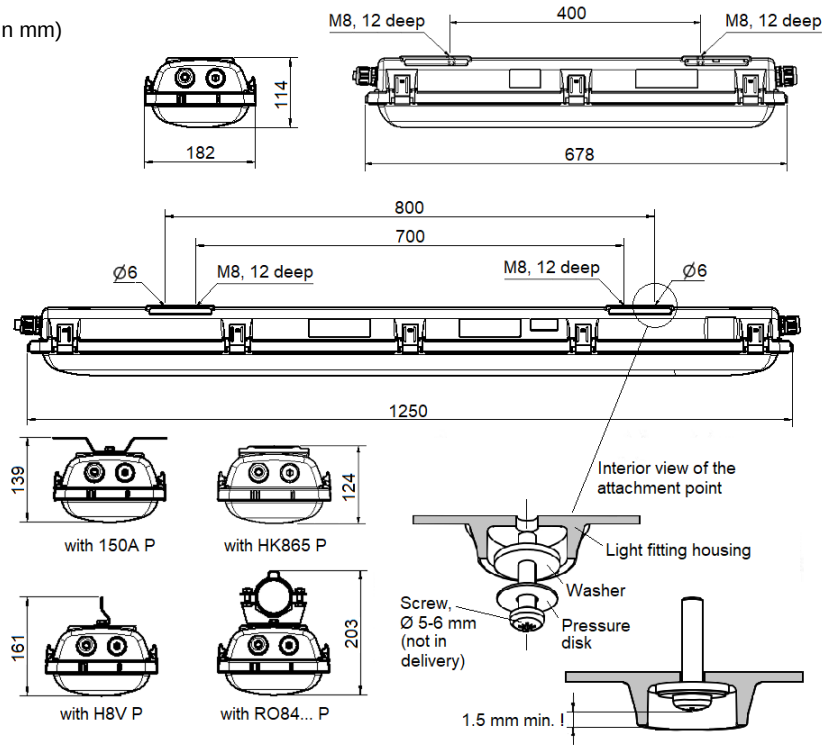
Spare battery:

Version without battery box:
Type/ Art.-Nr.: 90222 9031,
6 V, 4 Ah, NiCd;

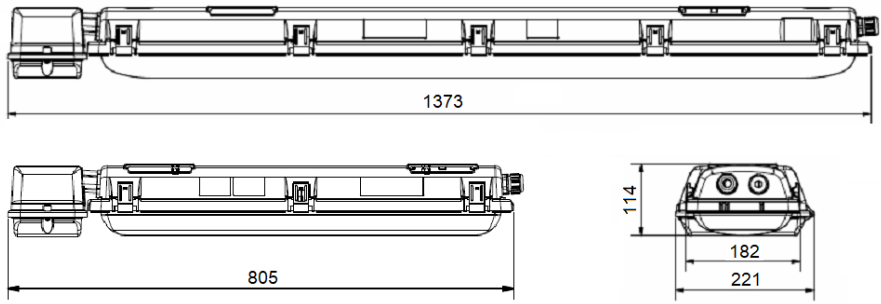
Version with battery box:
Typ 8020, 6 V, 1,6 Ah, NiCd;
1 hour emergency light time
Art.-Nr. 90222 9023

Typ 2627, 6 V, 4 Ah, NiCd;
3 hours emergency light time
Art.-Nr. 90222 9021

Dimensions:
(all measures in mm)



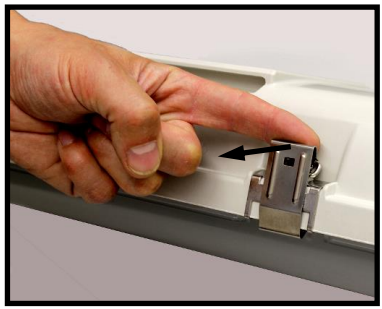
Version with battery box:



4. Installation

- The safety of this light fitting is only guaranteed as long as it is operated within its assessment threshold. Installation and maintenance must be done in accordance with the respective regulations!
- The installation of explosion-proof light fittings must be done by Ex-skilled electricians only!
- In regard to the minimum and maximum admissible ambient temperature potential sources of cold and heat (e.g. direct heat or solar radiation, cooling units) have to be considered!
- The application of this light fitting in an explosive dust atmosphere is depending on the properties of the surrounding dust. Please ensure that there will be an adequate difference between the maximum surface temperature of the fitting and the glowing and the ignition temperature of the respective dust!
- If there is a risk of accidental electrostatic charge the light fitting must be protected by appropriate measures!
- The light fitting must be mounted in the instructed operation position (see section 3, Technical Data)!

4.1 How to open the light fitting



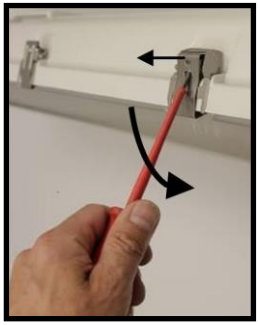
Open outer clamp lockings by hand.



There is a safety closure in the middle at each long side, which can be opened with a screw driver (3 – 6 mm blade size) only (see drawing).



Safety closure



– remove the diffuser with the included reflector.

4.2 Electrical connection

- Screw the Ex cable glands and Ex locking screw supplied with the fitting into the borings of the housing by using the lock nuts (Torques see section 3, Technical Data).
- After mounting the light fitting housing insert the connection cable through the Ex cable gland. An inlaid dust protective disc, if existing, must be removed before.
- Fasten the pressing screw of the Ex cable gland (Torque see section 3, Technical Data).



- Outside the light fitting appropriate measures (e.g. pull relief clips) must be taken to protect the connection cable from twist and it must be ensured that no tensile forces react on the wiring and the Ex cable gland!
- The diameter of the connection cable must correspond to the sealing range of the Ex cable gland (see section 3, Technical Data)!
- Ex cable glands that are not used for cable entry must be closed with the enclosed closure plug! An inlaid dust protective disc, if existing, must be removed before.
- The conductors must not be damaged when skinning resp. stripping the cable!
- When stripping the cable special attention needs to be paid to the correct length of the conductor end sections (see section 3, Technical Data)!

- Connect the conductors of the connection cable to the right terminals as per marking.

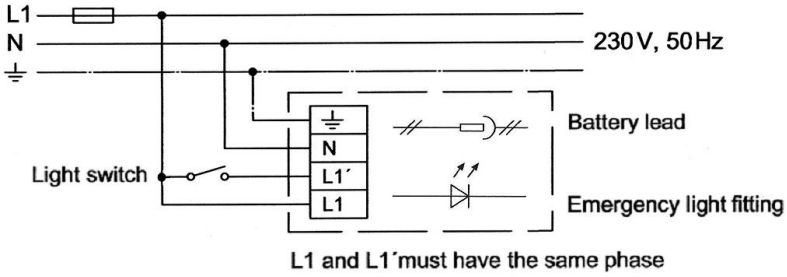


- It is important to ensure that the bare conductor is fully inserted into the terminal and that no cable insulation is clamped!

Modes of operation

Stand-by operation:
The light fitting switches on automatically in case of a mains failure.
Only the direct phase (L1) will be connected to connecting point L1 as mains supply monitor.

Maintained operation:
The light fitting switches on automatically and it may be used as a standard light fitting if mains voltage is on.
The same direct phase (L1) will be connected to connecting point L1 as mains supply monitor and to connecting point L1' as switched phase.



Connecting an emergency battery

In its delivery state, there is no electrical connection between the emergency battery and the emergency light unit.



- The electrical connection between the battery and the unit may only be established or broken in a non-explosive atmosphere!
- If no power supply is present, even if the light fitting is connected to the emergency battery, it will not enter emergency lighting mode!

The electrical connection between the emergency battery and emergency light unit should be established as follows:

Version without battery box:

– Attach the connector of the red battery cable leading to the emergency light unit to the positive pole of the emergency battery.

Version with battery box:

– Open the battery box by loosening the locking screws and flip open the lid.

– Remove the protective cap from the connector of the battery cable.

– Attach the connector of the battery cable to the socket in the battery box. Check the catch mechanism of the plug connection.

– Close the lid of the battery box and tighten the locking screws.

4.3 How to close the light fitting

– Join diffuser with included reflector and housing together.

– Hook the clamp lockings into the diffuser and fix it.

– After closing the light fitting take care that the whole gasket is effective.

5. Commissioning

If a power supply is present, the battery connected to the emergency light unit will be charged. The signal LED will indicate this state by means of a steady green light.



- After the initial setup, the emergency battery must be charged for 24 hours. From a physical point of view, the full capacity of the battery is only available after 3 or 4 charge-discharge cycles.

If a battery contact failure is indicated despite an existing connection to a power supply and to the emergency battery, the emergency battery may be the cause, which might contain insufficient charge to be charged in the potentially explosive atmosphere.
In this case, the emergency battery is to be removed as described in section 6.4 and to be charged separately from the light fitting. A charging voltage of 6 V and a charging current of 80 mA must not be exceeded. Under these conditions is a discharged emergency battery sufficiently charged within just 5 minutes for it to be reinserted into the light fitting, where it can continue to charge.

Before commissioning this explosion-proof lighting fitting please check and ensure that:

– the light fitting has been installed according to the regulations and in the allowed operating position.

– the Ex cable glands resp. Ex locking screws are securely fixed in the housing (Torques see section 3, Technical Data).

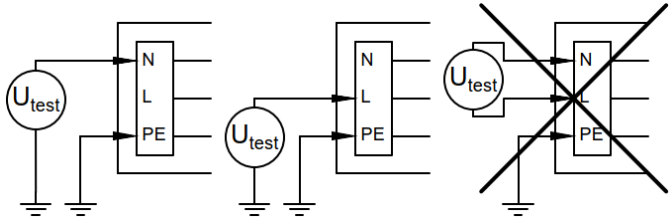
– the pressing screw of every Ex cable gland is tightened with the required torque (Torques see section 3, Technical Data).

– the connection cable has been firmly installed and is not subject to any tension whatsoever.

– the bare conductor is fully inserted into the terminal and that no cable insulation is clamped.
– the light fitting is closed correctly.
– all gaskets are effective.
– the light fitting is not damaged whatsoever.

5.1 Isolation measurement

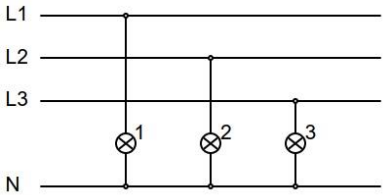
For measuring the isolating resistance the test voltage must be put on between the outer conductor and the earth conductor or between the neutral conductor and the earth conductor only.



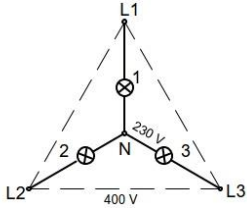
After finishing the isolation test the conductor between the mains and the light fitting must be reconnected safely. Before starting operation the connection of the neutral conductor must be safe for avoiding any damage whatsoever of the electronic control gear caused by any inadmissible excess-voltage in case of an unbalanced mains load. (see section 5.2)

5.2 Emergency light unit in 3-phase-operation

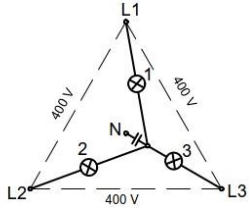
The diagram shows the wiring for light fittings or light fitting groups in 3-phase circuits and with a common neutral conductor N.



Light fittings with emergency light unit



OK



fault

If the common neutral conductor is interrupted and voltage is present, then light fittings or groups of light fittings may be exposed to unacceptably high voltages and consequently the emergency light unit may be destroyed.

6. Maintenance

6.1 Repair- and maintenance works

- Before opening the light fitting and before opening the battery box, the light fitting must be disconnected from the mains supply completely!
- It is allowed to open the light fitting in a non-explosive (non hazardous) atmosphere only!
- For applications in dusty atmospheres the light fitting must be cleaned before opening!
- Ensure that no dust can get into the light fitting when it is open!
- Replace damaged parts by original spare parts from the Adolf Schuch GmbH only!

Spare Parts:
Due to the rapid development of LED technology, LED components quickly become obsolete and are no longer available. In order to be able to determine and offer suitable components nevertheless, in addition to the complete type designation the serial number of the light fitting must be stated when enquiring about spare parts. The serial number is printed on the type plate of the light fitting – on the bottom left.

6.2 Cleaning the light fitting



- At the plastic parts of the light fitting there is a danger of ignition due to electrostatic charging! For cleaning the housing and cover outside and inside and for cleaning internal plastic components use only cold or lukewarm water (if necessary with a mild cleaning agent) together with a viscose sponge or a soft fibrous-free cloth!

Pay attention to the following in case of application of this light fitting in dusty atmospheres:
Dust deposits show heat-insulating properties and thus reduce the service life of the light fitting. It is necessary to clean the fitting from dust regularly. In case the dust layer may be higher than 5 mm it must be ensured that the surface temperature of the light fitting does not exceed the maximum permissible surface temperature of the specific dust considering the thickness of the dust layer. The dust layer must not exceed 50 mm at any time.

6.3 Regular maintenance work



- Follow the instructions of section 6.1!

Explosion-proof light fittings need regular maintenance according to the national rules of the country they are installed. Especially components which are important for the Explosion Category have to be carefully checked. Therefore it must to be checked very carefully:

- diffuser, housing and gaskets for any kind of damages
- the correct installation and tightness of Ex cable glands and Ex locking screws (Torques see section 3, Technical Data).
- all parts of plastic inside the light fitting to attend to colour change, deformation and damaging.
- the tight fit of the conductor and the condition of the cable insulation.
- that the light fitting is closed correctly and the gasket is effective.

The maintenance of the fitting as an emergency light fitting has to be done following the actual international and national regulations.

6.4 How to replace the emergency battery



- Follow the instructions of section 6.1!
- Only original batteries as per the type plate on the battery must be used for replacing the battery (see section 3, Technical Data)!

Version without battery box:

- Separate the emergency battery electrically and remove it from the light fitting (see section 4.2 section: Connecting an emergency battery).
- Insert a new emergency battery and establish an electrical connection.

If a battery capacity failure was indicated before the light fitting was switched off, a operational life test will be carried out 24 hours after the power supply is re-established. The subsequent operational life tests will be conducted at 52 week intervals.
If no battery capacity failure was indicated before the battery was changed, the interruption of the

energy supply to the emergency light unit will result in a operational life test between 5 and 28 days later. The subsequent operational life tests will be conducted at 52 week intervals.
Version with battery box:

- Loosen the locking screws of the battery box.
- The emergency battery is located in the lid of the battery box. Take care when opening it.
- Press down the catch on the plug connection and pull the connector of the battery cable out of the socket.
- Insert the protective cap hanging on the connector of the battery cable into the battery connector.
- Loosen but do not fully unscrew the locking screws of the battery fixing bracket.
- Slide the fixing bracket in the keyhole towards the hinge until the battery is released.
- Remove the emergency battery from the lid.
- Insert a new emergency battery into the lid.
- Return the battery fixing bracket to the original position and screw down. Check that the battery is positioned securely.
- Remove the protective cap of the battery connector.
- Attach the battery connector to the socket in the battery box. Check the catch mechanism of the plug connection.
- Alert the emergency light unit to the presence of a new battery:
  Open and close the lid of the battery box twice within a 60-second period. Opening and closing must occur within 10 seconds of each other.
  If this procedure is done correctly, immediately after the battery box is closed for the second time, the signal LED will display an acknowledgement light. The five-second long red-green acknowledgement light confirms that a operational life test will be conducted 24 hours later.
- Close the lid of the battery box with the screw plug.

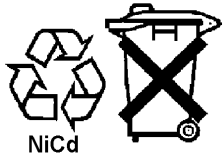
Should a battery capacity fault be present when the acknowledgement light is displayed, more operational life tests will then be carried out at 52 week intervals. If no fault was detected in the battery capacity, the interval until the next regular operational life test is unaffected.

6.5 Replacing LED circuit boards and emergency light unit

Replacement of the LED boards and of the emergency light unit has been described in the separate instructions which can be found attached to the spare parts to be supplied.

6.6 Environmental advice

This device has got an accumulator which among other things contains cadmium which is ecologically dangerous. There is a particular designation for this purpose.
The people operating this device are obliged by law to return accumulators which have become waste and which contain any pollutant materials to organizations which are in the hands of the vendors or waste disposal holders being under public law.



6.7 Placing the fitting out of operation

To place the light fitting out of operation the battery must be separated from the emergency light unit. In order to avoid unnecessarily removing the emergency battery, disconnection should take place immediately after the interruption of the power supply.

During storage there will also be a gradual discharge of the battery. If the voltage drops below a certain level the battery will no longer be detected by the emergency light unit. Thus a battery contact failure will be indicated although the connection to the battery still exists. In this case, the emergency

battery is to be removed as described in section 6.3 and to be charged separately from the light fitting. A charging voltage of 6 V and a charging current of 80 mA must not be exceeded. Under these conditions is a discharged emergency battery sufficiently charged within just 5 minutes for it to be reinserted into the light fitting, where it can continue to charge.



- To avoid any damages the battery should not be stored for more than 6 months without being re-charged periodically!

EU-Konformitätserklärung
EU-Declaration of Conformity
Déclaration UE de Conformité

SCHUCH

Bezeichnung des Betriebsmittels Name of product Nom du produit	nD 867...
Beschreibung des Betriebsmittels Description of product Description du produit	Explosionsgeschützte Leuchte Explosion-proof luminaire Luminaire antidéflagrant
EG/EU-Konformitätsaussage EC/EU-Statement of Conformity Déclaration CE/UE de Conformité	IBExU 16 ATEX B006
Relevante EU-Richtlinie Relevant EU directive Directive UE importante	2014/34/EU ATEX-Richtlinie (ABL L 96 29.03.2014 S. 309) 2014/34/EU ATEX Directive (OJ L 96 29.03.2014 S. 309) 2014/34/UE Directive ATEX (JOUE L 96 29.03.2014 S. 309)
Angewandte Normen Applied standards Normes appliquées	EN IEC 60079-0:2018/AC:2020-02, EN IEC 60079-7:2015+A1:2018, EN 60079-31:2014 EN 60598-1:2015+A1:2018, EN IEC 60598-2-1:2021, EN 60598-2-22:2014+AC:2016-05+AC:2016-09+A1:2020
Relevante EU-Richtlinie Relevant EU directive Directive UE importante	2014/30/EU EMV-Richtlinie (ABL L 96 29.03.2014 S. 79) 2014/30/EU Electromagnetic compatibility (OJ L 96 29.03.2014 S. 79) 2014/30/UE Compatibilité électromagnétique (JOUE L 96 29.03.2014 S. 79)
Angewandte Normen Applied standards Normes appliquées	EN IEC 55015:2019+A11:2020, EN IEC 61000-3-2:2019+A1:2021-04, EN 61000-3-3:2013+A1:2019, EN 61547:2009
Relevante EU-Richtlinie Relevant EU directive Directive UE importante	2011/65/EU RoHS-Richtlinie (ABL L 174 01.07.2011 S. 88) 2011/65/EU RoHS-Directive (OJ L 174 01.07.2011 S. 88) 2011/65/UE Directive RoHS (JOUE L 174 01.07.2011 S. 88)
Angewandte Normen Applied standards Normes appliquées	EN IEC 63000:2018

Hiermit erklären wir in alleiniger Verantwortung, dass das oben aufgeführte Produkt mit den Anforderungen der angegebenen Richtlinien und Normen übereinstimmt.
We hereby declare in our sole responsibility that the product above complies with the requirements of the specified directives and standards.
Nous déclarons de notre seule responsabilité que le produit mentionné ci-dessus est conforme aux exigences des directives et des normes indiquées.

Adolf Schuch GmbH - Mainzer Str. 172, 67547 Worms, GERMANY

Worms, 17.02.2022
Ort und Datum
Place and date
Lieu et date

ppa. Prof. Dr. Bruno Weis
Technischer Leiter
Technical Director
Directeur de technique

IBExU 16 ATEX B006-04/SB-01

The test certificates are ready to be loaded down from our homepage - www.schuch.de - or we shall send it on request.

Operating Instructions

Explosion-proof Self-contained
LED-Emergency Light Fitting

ExeLED 2 N

Series nD867… with NiMH-Emergency Battery

Adolf Schuch GmbH
Mainzer Str. 172 • D-67547 Worms
+49 6241 4091-0 • info@schuch.de
www.schuch.de



The safety of people and equipment in hazardous areas depends on the observance of all safety standards. Exact knowledge about all applicable regulations and standards is mandatory for installation maintenance and repair of explosion proof equipment, especially

- the determinations of IEC/EN 60079-14 and IEC/EN 60079-17 for maintenance of explosion-proof appliances
- the generally accepted rules of the technical side
- the national rules for prevention of accidents and for safety standards
- the safety instructions of these operating instructions
- the characteristic data on the type plate and the instruction plates

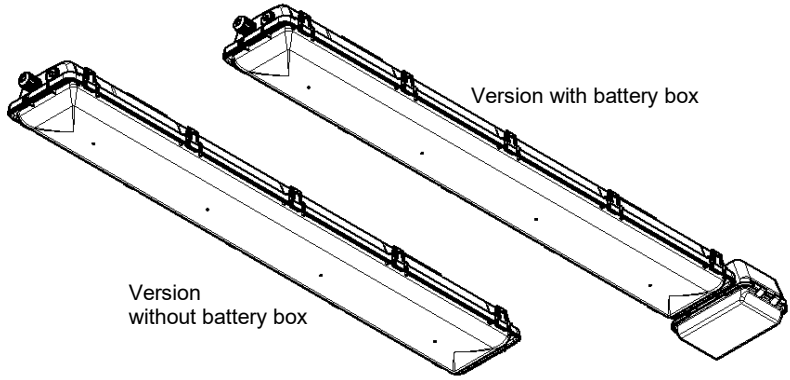
1. Safety Instructions

- The light fitting must be selected in accordance with the specified protection rating and installed in compliance with the installation regulations.
- The light fitting must be protected against overvoltage, overcurrent, short circuits and other electrical failures and must be maintained in accordance with the applicable regulations.
- The light fitting must be operated in an undamaged condition only.
- It is allowed to open the light fitting in a non-explosive (non hazardous) atmosphere only.
- The non-stationary use of the light fitting as well as any other inappropriate usage is prohibited.
- The operation of the light fitting is allowed within its assessment thresholds only.
- In regard to the minimum and maximum admissible ambient temperature potential sources of cold and heat (e.g. direct heat or solar radiation, cooling units) have to be considered.
- If the light fitting is subject to particular stresses - chemical, mechanical, thermal and electrical, as well as vibrations or moisture - prior consultation with Adolf Schuch GmbH is required.
- Every structural modification will cause dangerous situations and consequently the certification of this light fitting will be null and void.
- **Caution - Risk of electrostatic discharge! Fitting to be cleaned with damp cloth only!**
- **In areas with risk of accidental electrostatic charge (e.g. by passing by) the light fitting must be protected by appropriate measures.**
- **The light fitting is not allowed to be installed in process areas where strong electrical fields may occur (i.e. HV Sparkling Electrodes or Particle Streams). Reason is to avoid any electrostatic charge of the light fitting itself.**
- Replace damaged parts by original spare parts from the Adolf Schuch GmbH only.
- The LED-reflector with the LED-modules attached to it and the control gear of this light fitting must be replaced by Adolf Schuch GmbH, by a service technician who is instructed from Schuch or by any other person with equivalent qualification only.

2. Operating Advice

- The light fitting must be protected from moisture and transported and stored within its permissible ambient temperature range (see section 3, Technical Data). Temperature fluctuations and vibrations must be avoided.
- Emergency light batteries must be stored in a protected, dry place and under the most constant ambient conditions possible. A temperature of +5°C ... +25°C and a relative humidity of up to max. 60% is recommended.
- Because of the chemical resistance use only a damp cloth for cleaning the light fitting. If necessary with a mild and solvent-free cleaning agent.
- Against penetration of humidity into the light fitting a special Ex breathing gland is often quite effective. It is allowed to use an Ex breathing gland which is released by the Adolf Schuch GmbH only. If using such a gland, its operating instructions must be taken into account, as well as the influence on the permissible ambient temperature and the Ingress protection of the light fitting.
- Any application of the light fitting that is incorrect or even forbidden will lead to the fact that the manufacturer's warranty is lost.
- In case of light fittings without through-wiring, the connection cable must be inserted on the side that is closest to the connection terminal. If this is not possible, original through-wiring from Adolf Schuch GmbH must be installed subsequently.
- Through-wiring in light fitting nD867. 12L60 / . / . without battery box lowers the permitted ambient temperature of the fitting from +40 °C (without through-wiring) to +35 °C (with through-wiring). Please also refer to the corresponding instructions on the type plate of the light fitting.
- Opening the LED compartment is allowed for repair work only.

- LED are sensitive electronic components. Please ensure that the LED are protected against mechanical and electrostatic attacks whenever the light fitting is open. For this reason the LED must not be touched either. Likewise, ends of LED conductors that are detached from their terminals must be protected from electrostatic influences!
- Due to harmful gases and other corrosive substances (e.g. ammoniac, sulphur- or chlorine compounds) it may come to damages of the LEDs. Depending on the substance, the concentration, the temperature and the dwell time, damages up to total black-out are possible. This may occur also to fittings with high degree of protection. The suitability of the light fitting for the respective application can only be checked by running a test at site.
- Due to a high inrush current when switching on the light fitting, the number of light fittings which can be connected to a single fused circuit is limited (Possible number of light fittings per circuit breaker see section 3, Technical Data).
- LED modules are built up of a series connection, which itself is built up of parallel connections of single LEDs. Failures of LEDs do not necessarily lead to a change in the power consumption, which is recognized by the emergency light unit.



2.1 Use at high and low temperatures

The explosion protection of the light fitting is guaranteed between -30°C up to +40°C/+55°C.
At temperatures below 0 °C, it must be taken into account that the emergency battery will take longer to charge and the operational life of the emergency lighting mode will be reduced. Testing the duration of the battery life in lower ambient temperatures can therefore lead to a misleading result.
The battery life test should be repeated manually at a more appropriate time (please refer to the section about operational life testing in section 2.2).
Versions of light fittings for high ambient temperatures (with battery box): A reduction of the lifetime of the emergency battery can be expected if the ambient temperature is permanent above +45°C.

2.2 Automatic test of the emergency light unit

The functionality of the light fitting and the operational life in emergency lighting mode is tested automatically by the emergency light unit at specified intervals. During the tests, the light fitting lights up and its signal LED shows a blinking green light.

Functionality test
Functionality tests are carried out at 7 day intervals and last one minute.
The first test of functionality is carried out one hour after the light fitting has been setup. Before this can happen, it is necessary to separate the emergency light unit built into the light fitting from the mains power supply before switching on the power, and the emergency battery must have been charged continuously for one hour.

Operational life test
During the operational life test, the emergency light unit checks whether the capacity of the emergency battery is sufficient for the indicated nominal operating time should the emergency light being required.

For the operational life test to be carried out, the emergency battery must be fully charged and connected. For special versions with the option to deactivate the emergency light function, the remote cutoff switch must also be closed.

Automatic operational life tests:

The first operational life test carried out automatically by the emergency light unit takes place at random within a period of 5 to 28 days after the light fitting has been setup. All further automatic operational life tests are then carried out at 52 week intervals, so long as the energy supply to the emergency light unit was not interrupted during this period.
A complete interruption of the energy supply to the emergency light unit occurs when the outage of the power supply exceeds the specified nominal operating time for the emergency light.
Reconnecting the power supply to the emergency light unit after a complete interruption will lead to a new setup procedure of the emergency light with a subsequent operational life test between 5 and 28 days later.
Should a fault in the battery capacity be indicated before a complete interruption of the power supply to the emergency light unit, a operational life test will be carried out within 24 hours of reconnection to the power supply.
If the prerequisites stated above for carrying out an automatic operational life test are not satisfied, the test will be deferred until these requirements are fulfilled.
Automatic operational life tests that could not be completed successfully will be repeated once after 60 hours, subject to the same prerequisites stated above.

Manual operational life tests:

Operational life tests can be triggered manually in 2 ways. Models with battery box can be triggered manually in 3 ways:

1.) By switching the power supply off and on at the L1 terminal.

2.) By switching the supply on and off at the L1` terminal.

Switch the power supply at the L1 terminal resp. the supply at L1' terminal off and on again 5 times. Leave at least 2 seconds between each switch.

In both cases, the sequence of switches must be completed within 60 seconds.
Under the above mentioned preconditions, after a correctly performed switching sequence at L1' terminal, an operational life test is immediately initiated.
If the switching sequence is correctly carried out on L1 terminal, an operational life test is initiated after the time that is required to fully charge the battery after the switching sequence.
If the switch sequence has not been carried out correctly, or the aforementioned requirements have not been satisfied, the operational life test will not be conducted.
If there was an error in the switching procedure, the entire switch sequence can only be repeated after 60 seconds have elapsed.
The points at which regular operational life tests are carried out are not affected by conducting a manual test using either of these methods.

3.) For models with a battery box by means of disconnecting and reconnecting the battery:
Open and close the lid of the battery box twice within a 60-second period. Opening and closing the case must occur within 10 seconds of each other.
If this procedure is done correctly, immediately after the battery box is closed for the second time, the signal LED will display an acknowledgement light. The five-second long red-green acknowledgement light confirms that a operational life test will be conducted 24 hours later.
Should a battery capacity fault be present when the acknowledgement light is displayed, more operational life tests will then be carried out at 52 week intervals. If no fault was detected in the battery capacity, the interval until the next regular operational life test is unaffected.



➢ During the functionality and operational life tests, the light fitting will switch on even if it was previously switched off!

2.3 Ascertainable faults and reset of the display

LED failure
If a fault in the LED is detected by the emergency light unit during a functionality test, the LEDs will be switched off and the fault will be indicated by a permanent red light on the signal LED.
An LED fault will be reset if a functionality test produces a positive result or if the emergency light unit is completely separated from the battery and power supply.

Battery capacity failure
If the emergency light unit detects during a operational life test that the capacity of the emergency light battery is insufficient to maintain the light fitting for the nominal operating time in the case of an emergency, the signal LED will display a red blinking light.
An emergency battery that no longer has sufficient capacity must be replaced immediately (see section 6.4).
The display indicating a fault in the battery capacity can only be reset by means of a successful operational life test.

Battery contact failure
When the electrical connection between the emergency light unit and the emergency battery is broken, the signal LED will display a red flashing light.
A battery contact failure and its signal are automatically reset as soon as the connection between the emergency light unit and the battery is re-established.

2.4 LED-Signals

The two-colored LED (red/green) which is integrated in the reflector of the light fitting does show the working condition and the error state of the fitting. The following states are possible:

Continuous green light:

Permanent charging mode –
light fitting at mains operation,
the emergency battery is being charged

Blinking green light:

Functionality test or operational life test (check of the capacity of the battery)

Alternating green and red light:

Light fitting deactivated / remote cutoff switch

Red flashlight:

Battery contact failure -
the battery is not connected to the emergency light unit

Blinking red light:

Insufficient capacity of the battery –
the battery must be replaced

Continuous red light:

LED failure

Acknowledgement light:

Indicator signal (not with light fittings with DALI connection) in lighting models with battery box that battery change was successfully carried out

 means:
red light for ½ second, green light for ½ second and no light for ½ second

2.5 Instructions for special versions with remote cutoff switch

Special versions of these lighting fixtures are equipped to be connected to a remote cutoff switch. Through a remote cutoff switch (isolated switching contact) it is possible to remove the light fitting from operation, e.g. during maintenance. With a remote cutoff switch it is possible to connect up to 30 light fittings (cable cross-section: 1.5 mm², cable length: max. 500 m).
The remote cutoff switch must be closed during normal operation of the special light fitting.
If the remote switch is open, there will be no emergency lighting in the case of a power outage.
A change to the switch position of the remote cutoff switch is only indicated if the fixture is connected to a power supply.



➢ If no power supply is present, when the remote switch is closed (resetting the deactivation) the light fitting will not enter emergency lighting mode!

Functionality and operational life tests that are due to be carried out when the remote cutoff switch is deactivated will be postponed until the deactivation is reset, and will be conducted when the necessary requirements for the respective test are satisfied.
The interval of functionality and operational life tests are not affected by deactivating the light fitting.

3. Technical Data

Series:	nD867. .. L .. / . / . └ Capacity of emergency battery └ Nominal operating time in case of emergency └ Index of luminous flux └ Light fitting length Explosion-proof LED-Emergency Light Fittings for operating in hazardous areas of zones 2 and 22.
Explosion protection:	Ⓔx II 3 G Ex ec IIC T4 Gc (Version without battery box) Ⓔx II 3 G Ex db ec IIC T4 Gc (Version with battery box) Ⓔx II 3 D Ex tc IIIC T80 °C Dc
Certification:	IBExU 16 ATEX B006X IECEx IBE15.0015X
Rated voltage:	220…240 V AC; 50...60 Hz Switching from mains to battery operation at approx. 180 V Switching from battery to mains operation at approx. 195 V
Isolation class:	I
Ingress protection:	IP66 (When using an Ex breathing gland see section 2)
Ambient temperatur:	Version without battery box: -30 °C ... +35 °C / +40 °C (see type plate) 0 °C ... +35 °C / +40 °C (Nominal range according to EN 60598-2-22) -30 °C ... 0 °C (Emergency duration may be limited) Version with battery box: -30 °C ... +55 °C 0 °C ... +45 °C (Nominal range according to EN 60598-2-22) -30 °C ... 0 °C (Emergency duration may be limited)
Energy efficiency class:	This light fitting contains a light source of the energy efficiency class: C

Power consumption:

The power consumption of the LED is dependent on production fluctuations as well as on the service temperature. This is why just reference values can be given as follows:
nD867F 06L22 / . / . : 17 W
nD867F 06L42 / . / . : 29 W

nD867. 12L42 / . / . : 29 W
nD867. 12L60 / . / . : 41 W

Locking:

Clamp lockings (to be opened by hand) as well as one safety closure at each side (to be opened with a suitable screw driver)

Operation position:

in any direction - except upwards light output

Cable entry:

Bore: 25 mm -0/+0,5; Wall thickness: front side 5 mm, long side 3 mm
If supplied: Ex cable gland with thread size M25 x 1.5
Sealing range: 8 - 17 mm (for 10 - 17 mm remove the small sealing ring)
Torques: Connection thread 3 Nm; Pressing screw 2 Nm
Torque of Ex locking screw: 5 Nm

If other cable glands are used, their operating instructions must be observed!

Connection per terminal:

Ampacity: 16 A max. (At maximum current load, a cross section of 2.5 mm² is required)
Clamping range: 2 x 0.75 - 2.5 mm² (solid core or stranded)
2 x 1.5 - 2.5 mm² (flexible)
Required stripping length: 8 - 9 mm

For special versions, the information on the enclosed information sheet must be observed!

Rated luminous flux:

nD867F 06L22 / . / . : ca. 32 %
nD867F 06L42 / . / . : ca. 17 %

nD867. 12L42 / . / . : ca. 17 %
nD867. 12L60 / . / . : ca. 13 %

Possible number of light fittings per circuit breaker:

Type	B 10 A	B 16 A	C 10 A	C 16 A
nD867...	11	18	18	30

*) Typical values; possible deviations depending on make, cable impedance and temperature

Spare battery:

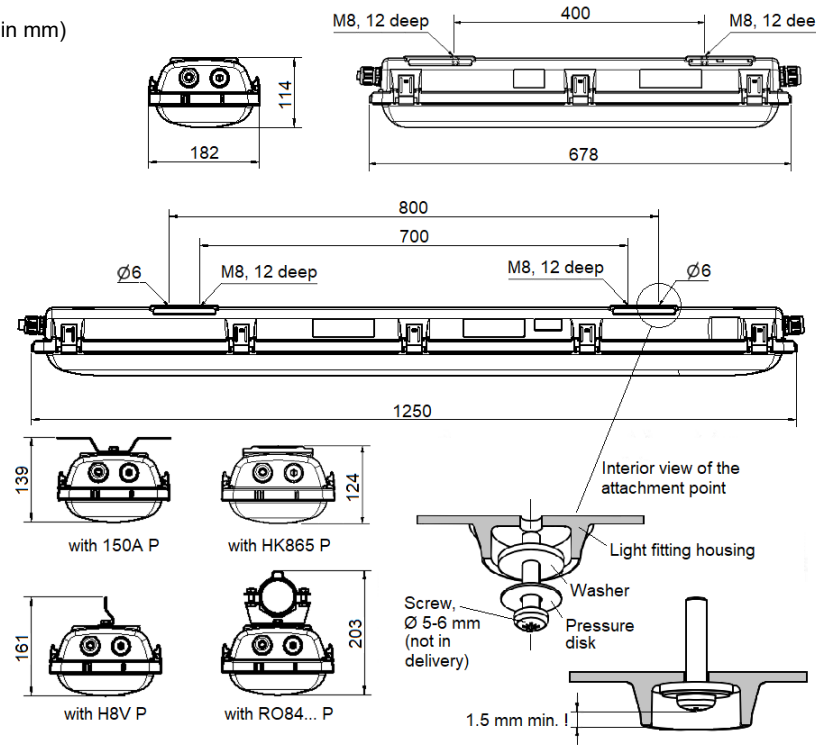
Version without battery box:

Type/ Art.-Nr.: 90222 9034,
6 V, 4 Ah, NiMH;

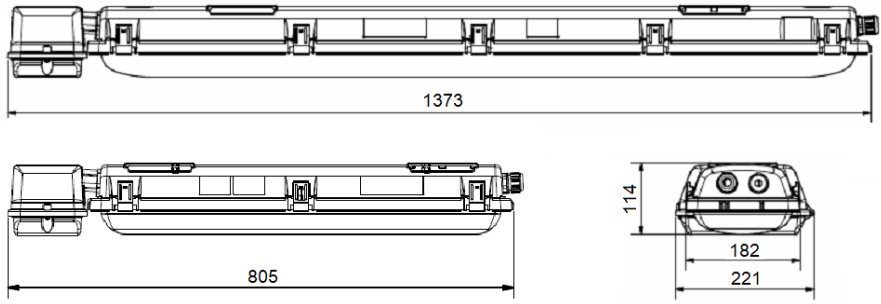
Version with battery box:

Typ 8024,
6 V, 4 Ah, NiMH;
Art.-Nr. 90222 9036

Dimensions:
(all measures in mm)



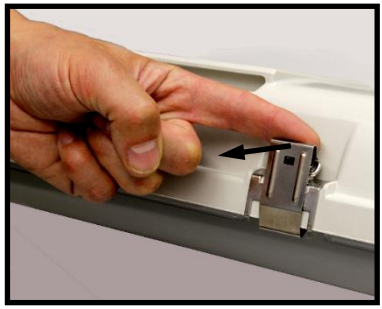
Version with battery box:



4. Installation

- The safety of this light fitting is only guaranteed as long as it is operated within its assessment threshold. Installation and maintenance must be done in accordance with the respective regulations!
- The installation of explosion-proof light fittings must be done by Ex-skilled electricians only!
- In regard to the minimum and maximum admissible ambient temperature potential sources of cold and heat (e.g. direct heat or solar radiation, cooling units) have to be considered!
- The application of this light fitting in an explosive dust atmosphere is depending on the properties of the surrounding dust. Please ensure that there will be an adequate difference between the maximum surface temperature of the fitting and the glowing and the ignition temperature of the respective dust!
- If there is a risk of accidental electrostatic charge the light fitting must be protected by appropriate measures!
- The light fitting must be mounted in the instructed operation position (see section 3, Technical Data)!

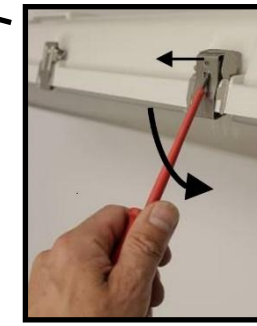
4.1 How to open the light fitting



Open outer clamp lockings by hand.



Safety closure



- There is a safety closure in the middle at each long side, which can be opened with a screw driver (3 – 6 mm blade size) only (see drawing).

– remove the diffuser with the included reflector.

4.2 Electrical connection

- Screw the Ex cable glands and Ex locking screw supplied with the fitting into the borings of the housing by using the lock nuts (Torques see section 3, Technical Data).
- After mounting the light fitting housing insert the connection cable through the Ex cable gland. An inlaid dust protective disc, if existing, must be removed before.
- Fasten the pressing screw of the Ex cable gland (Torque see section 3, Technical Data).



- Outside the light fitting appropriate measures (e.g. pull relief clips) must be taken to protect the connection cable from twist and it must be ensured that no tensile forces react on the wiring and the Ex cable gland!
- The diameter of the connection cable must correspond to the sealing range of the Ex cable gland (see section 3, Technical Data)!
- Ex cable glands that are not used for cable entry must be closed with the enclosed closure plug! An inlaid dust protective disc, if existing, must be removed before.
- The conductors must not be damaged when skinning resp. stripping the cable!
- When stripping the cable special attention needs to be paid to the correct length of the conductor end sections (see section 3, Technical Data)!

- Connect the conductors of the connection cable to the right terminals as per marking.

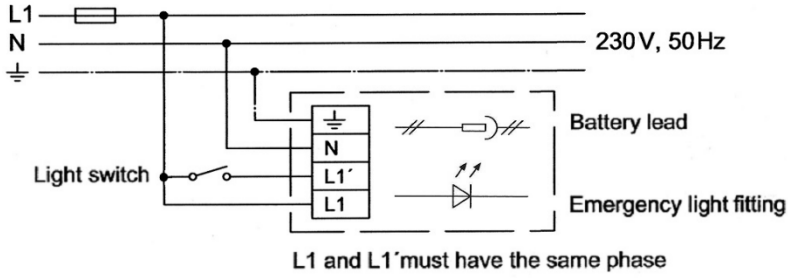


- It is important to ensure that the bare conductor is fully inserted into the terminal and that no cable insulation is clamped!

Modes of operation

Stand-by operation:
The light fitting switches on automatically in case of a mains failure.
Only the direct phase (L1) will be connected to connecting point L1 as mains supply monitor.

Maintained operation:
The light fitting switches on automatically and it may be used as a standard light fitting if mains voltage is on.
The same direct phase (L1) will be connected to connecting point L1 as mains supply monitor and to connecting point L1' as switched phase.



Connecting an emergency battery

In its delivery state, there is no electrical connection between the emergency battery and the emergency light unit.



- The electrical connection between the battery and the unit may only be established or broken in a non-explosive atmosphere!
- If no power supply is present, even if the light fitting is connected to the emergency battery, it will not enter emergency lighting mode!

The electrical connection between the emergency battery and emergency light unit should be established as follows:

Version without battery box:

– Plug the emergency light unit and emergency battery together.

Version with battery box:

– Open the battery box by loosening the locking screws and flip open the lid.
– Remove the protective cap from the connector of the battery cable.
– Attach the connector of the battery cable to the socket in the battery box. Check the catch mechanism of the plug connection.
– Close the lid of the battery box and tighten the locking screws.

4.3 How to close the light fitting

– Join diffuser with included reflector and housing together.
– Hook the clamp lockings into the diffuser and fix it.
– After closing the light fitting take care that the whole gasket is effective.

5. Commissioning

If a power supply is present, the battery connected to the emergency light unit will be charged. The signal LED will indicate this state by means of a steady green light.



- After the initial setup, the emergency battery must be charged for 24 hours. From a physical point of view, the full capacity of the battery is only available after 3 or 4 charge-discharge cycles.

If a battery contact failure is indicated despite an existing connection to a power supply and to the emergency battery, the emergency battery may be the cause, which might contain insufficient charge to be charged in the potentially explosive atmosphere.
In this case, the emergency battery is to be removed as described in section 6.4 and to be charged separately from the light fitting. A charging voltage of 6 V and a charging current of 80 mA must not be exceeded. Under these conditions is a discharged emergency battery sufficiently charged within just 5 minutes for it to be reinserted into the light fitting, where it can continue to charge.

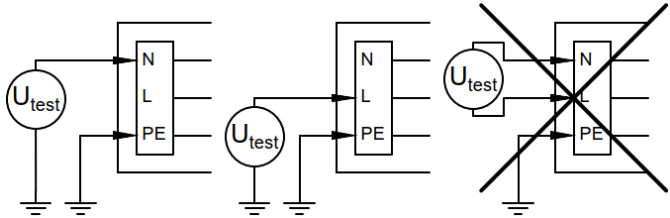
Before commissioning this explosion-proof lighting fitting please check and ensure that:

– the light fitting has been installed according to the regulations and in the allowed operating position.
– the Ex cable glands resp. Ex locking screws are securely fixed in the housing (Torques see section 3, Technical Data).
– the pressing screw of every Ex cable gland is tightened with the required torque (Torques see section 3, Technical Data).
– the connection cable has been firmly installed and is not subject to any tension whatsoever.
– the bare conductor is fully inserted into the terminal and that no cable insulation is clamped.

– the light fitting is closed correctly.
– all gaskets are effective.
– the light fitting is not damaged whatsoever.

5.1 Isolation measurement

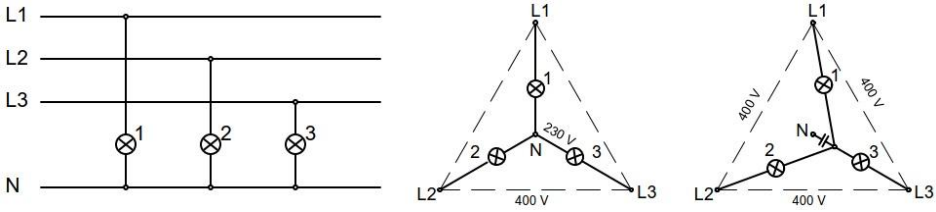
For measuring the isolating resistance the test voltage must be put on between the outer conductor and the earth conductor or between the neutral conductor and the earth conductor only.



After finishing the isolation test the conductor between the mains and the light fitting must be reconnected safely. Before starting operation the connection of the neutral conductor must be safe for avoiding any damage whatsoever of the electronic control gear caused by any inadmissible excess-voltage in case of an unbalanced mains load. (see section 5.2)

5.2 Emergency light unit in 3-phase-operation

The diagram shows the wiring for light fittings or light fitting groups in 3-phase circuits and with a common neutral conductor N.



Light fittings with emergency light unit | OK | fault

If the common neutral conductor is interrupted and voltage is present, then light fittings or groups of light fittings may be exposed to unacceptably high voltages and consequently the emergency light unit may be destroyed.

6. Maintenance

6.1 Repair- and maintenance works



- Before opening the light fitting and before opening the battery box, the light fitting must be disconnected from the mains supply completely!
- It is allowed to open the light fitting in a non-explosive (non hazardous) atmosphere only!
- For applications in dusty atmospheres the light fitting must be cleaned before opening!
- Ensure that no dust can get into the light fitting when it is open!
- Replace damaged parts by original spare parts from the Adolf Schuch GmbH only!

Spare Parts:
Due to the rapid development of LED technology, LED components quickly become obsolete and are no longer available. In order to be able to determine and offer suitable components nevertheless, in addition to the complete type designation the serial number of the light fitting must be stated when enquiring about spare parts. The serial number is printed on the type plate of the light fitting – on the bottom left.

6.2 Cleaning the light fitting



➤ At the plastic parts of the light fitting there is a danger of ignition due to electrostatic charging! For cleaning the housing and cover outside and inside and for cleaning internal plastic components use only cold or lukewarm water (if necessary with a mild cleaning agent) together with a viscose sponge or a soft fibrous-free cloth!

Pay attention to the following in case of application of this light fitting in dusty atmospheres:
Dust deposits show heat-insulating properties and thus reduce the service life of the light fitting. It is necessary to clean the fitting from dust regularly. In case the dust layer may be higher than 5 mm it must be ensured that the surface temperature of the light fitting does not exceed the maximum permissible surface temperature of the specific dust considering the thickness of the dust layer. The dust layer must not exceed 50 mm at any time.

6.3 Regular maintenance work



➤ Follow the instructions of section 6.1!

Explosion-proof light fittings need regular maintenance according to the national rules of the country they are installed. Especially components which are important for the Explosion Category have to be carefully checked. Therefore it must to be checked very carefully:

- diffuser, housing and gaskets for any kind of damages
- the correct installation and tightness of Ex cable glands and Ex locking screws (Torques see section 3, Technical Data).
- all parts of plastic inside the light fitting to attend to colour change, deformation and damaging.
- the tight fit of the conductor and the condition of the cable insulation.
- that the light fitting is closed correctly and the gasket is effective.

The maintenance of the fitting as an emergency light fitting has to be done following the actual international and national regulations.

6.4 How to replace the emergency battery



➤ Follow the instructions of section 6.1!

➤ Only original batteries as per the type plate on the battery must be used for replacing the battery (see section 3, Technical Data)!

Version without battery box:

- Separate the emergency battery electrically and remove it from the light fitting (see section 4.2 section: Connecting an emergency battery).
- Insert a new emergency battery and establish an electrical connection.

If a battery capacity failure was indicated before the light fitting was switched off, a operational life test will be carried out 24 hours after the power supply is re-established. The subsequent operational life tests will be conducted at 52 week intervals.

If no battery capacity failure was indicated before the battery was changed, the interruption of the energy supply to the emergency light unit will result in a operational life test between 5 and 28 days later. The subsequent operational life tests will be conducted at 52 week intervals.

Version with battery box:

- Loosen the locking screws of the battery box.
- The emergency battery is located in the lid of the battery box. Take care when opening it.
- Press down the catch on the plug connection and pull the connector of the battery cable out of the socket.
- Insert the protective cap hanging on the connector of the battery cable into the battery connector.
- Loosen but do not fully unscrew the locking screws of the battery fixing bracket.
- Slide the fixing bracket in the keyhole towards the hinge until the battery is released.
- Remove the emergency battery from the lid.
- Insert a new emergency battery into the lid.
- Return the battery fixing bracket to the original position and screw down. Check that the battery is positioned securely.
- Remove the protective cap of the battery connector.
- Attach the battery connector to the socket in the battery box. Check the catch mechanism of the plug connection.
- Alert the emergency light unit to the presence of a new battery:
  Open and close the lid of the battery box twice within a 60-second period. Opening and closing must occur within 10 seconds of each other.
  If this procedure is done correctly, immediately after the battery box is closed for the second time, the signal LED will display an acknowledgement light. The five-second long red-green acknowledgement light confirms that a operational life test will be conducted 24 hours later.
- Close the lid of the battery box with the screw plug.

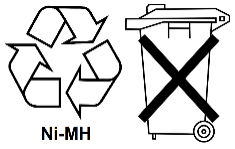
Should a battery capacity fault be present when the acknowledgement light is displayed, more operational life tests will then be carried out at 52 week intervals. If no fault was detected in the battery capacity, the interval until the next regular operational life test is unaffected.

6.5 Replacing LED circuit boards and emergency light unit

Replacement of the LED boards and of the emergency light unit has been described in the separate instructions which can be found attached to the spare parts to be supplied.

6.6 Environmental advice

This device has got an accumulator which contains ecologically dangerous materials. There is a particular designation for this purpose. The people operating this device are obliged by law to return accumulators which have become waste and which contain any pollutant materials to organizations which are in the hands of the vendors or waste disposal holders being under public law.



6.7 Placing the fitting out of operation

To place the light fitting out of operation the battery must be separated from the emergency light unit. In order to avoid unnecessarily removing the emergency battery, disconnection should take place immediately after the interruption of the power supply.

During storage there will also be a gradual discharge of the battery. If the voltage drops below a certain level the battery will no longer be detected by the emergency light unit. Thus a battery contact

failure will be indicated although the connection to the battery still exists. In this case, the emergency battery is to be removed as described in section 6.3 and to be charged separately from the light fitting. A charging voltage of 6 V and a charging current of 80 mA must not be exceeded. Under these conditions is a discharged emergency battery sufficiently charged within just 5 minutes for it to be reinserted into the light fitting, where it can continue to charge.



➤ To avoid any damages the battery should not be stored for more than 6 months without being re-charged periodically!

EU-Konformitätserklärung
EU-Declaration of Conformity
Déclaration UE de Conformité

SCHUCH

Bezeichnung des Betriebsmittels Name of product Nom du produit	nD 867...
Beschreibung des Betriebsmittels Description of product Description du produit	Explosionsgeschützte Leuchte Explosion-proof luminaire Luminaire antidéflagrant
EG/EU-Konformitätsaussage EC/EU-Statement of Conformity Déclaration CE/UE de Conformité	IBExU 16 ATEX B006X
Relevante EU-Richtlinie Relevant EU directive Directive UE importante	2014/34/EU ATEX-Richtlinie (ABL L 96 29.03.2014 S. 309) 2014/34/EU ATEX Directive (OJ L 96 29.03.2014 S. 309) 2014/34/UE Directive ATEX (JOUE L 96 29.03.2014 S. 309)
Angewandte Normen Applied standards Normes appliquées	EN IEC 60079-0:2018/AC:2020-02, EN IEC 60079-7:2015+A1:2018, EN IEC 60079-31:2024 EN IEC 60598-1:2021, EN IEC 60598-2-1:2021, EN IEC 60598-2-22:2022
Relevante EU-Richtlinie Relevant EU directive Directive UE importante	2014/30/EU EMV-Richtlinie (ABL L 96 29.03.2014 S. 79) 2014/30/EU Electromagnetic compatibility (OJ L 96 29.03.2014 S. 79) 2014/30/UE Compatibilité électromagnétique (JOUE L 96 29.03.2014 S. 79)
Angewandte Normen Applied standards Normes appliquées	EN IEC 55015:2019+A11:2020, EN IEC 61000-3-2:2019+A1:2021-04, EN 61000-3-3:2013 +A1:2019+A2:2021 +A2:2021/AC:2022, EN 61547:2009
Relevante EU-Richtlinie Relevant EU directive Directive UE importante	2011/65/EU RoHS-Richtlinie (ABL L 174 01.07.2011 S. 88) 2011/65/EU RoHS-Directive (OJ L 174 01.07.2011 S. 88) 2011/65/UE Directive RoHS (JOUE L 174 01.07.2011 S. 88)
Angewandte Normen Applied standards Normes appliquées	EN IEC 63000:2018

Hiermit erklären wir in alleiniger Verantwortung, dass das oben aufgeführte Produkt mit den Anforderungen der angegebenen Richtlinien und Normen übereinstimmt.
We hereby declare in our sole responsibility that the product above complies with the requirements of the specified directives and standards.
Nous déclarons de notre seule responsabilité que le produit mentionné ci-dessus est conforme aux exigences des directives et des normes indiquées.

Adolf Schuch GmbH - Mainzer Str. 172, 67547 Worms, GERMANY

Worms, 28.03.2025
Ort und Datum
Place and date
Lieu et date

Nicolai Wolf
Geschäftsleitung
Management
La direction

IBExU 16 ATEX B006X-07/SB-03

The test certificates are ready to be loaded down from our homepage - www.schuch.de - or we shall send it on request.