LP-STAR emergency lighting power supply in a compact design

Features

Simple installation and reliable power supply

LP-STAR is especially recommended in case of the separate supply of emergency lighting systems of individual fire areas to save on installation costs incurred by installing E30 cabling to cover different fire areas.

The LP-STAR System supplies reliable power to the escape luminaires and exit sign luminaires (230V AC/220V DC) according to EN 50171 and BGV A3. It is suitable for emergency lighting systems according to DIN VDE 0100-718, DIN EN 50172 and E DIN VDE 0108-100.

The system performs an automatic self-check and monitors all CG-S luminaires connected (up to 20 luminaires per circuit) simply through a feed line. The circuit type of each connected CG-S luminaire can be programmed freely in the 50 Hz or 60 Hz supply network with the control module based on the STAR technology. This means that the same power circuit is used for mixed operation including maintained light, switched maintained light and non-maintained light, all this without an additional data cable!

The control module including a non-volatile program memory as well as a big graphical display that monitors and controls the LP-STAR device and checks all functions of the connected emergency luminaires according to EN 62034 and it reports the operating states of the entire system. The integrated search function detects all luminaires addressed during installation automatically. A central monitoring system can be connected using the optional bus interface.

The main scope for the protection of electrical rooms is the protection of the environment against the hazards involved with technical devices, transformer stations and switching stations of over 1 kV. At the same time, for example in case of fire, the operation of safety-relevant systems, central battery systems and fixed power generators must be maintained for a specific period of time.

The LP-STAR System was designed to meet the requirements concerning batteries and these have been verified according to EN 60950 and EN 50272-2.

Features

- No special requirements concerning the housing on functionality in case of installation in separate fire areas
- Cost savings as E30 wiring is not required because devices are installed in separate fire areas
- Natural ventilation is generally sufficient due to the closed form and low capacity of batteries
- Additional safety even in case of fire due to the decentralised arrangement of systems
- Simple operation and commissioning based on a smart programming and operating plan
- 230V AC / 220V DC supply voltage selectable to power the escape luminaires and exit sign luminaires to comply with architectural issues
- Standard integrated phase monitor for monitoring general power supply conditions
- Additional phase monitor input including line monitoring for an external phase monitor
- Standard eight digital 230 V input channels for switching each luminaire separately, for example, freely programmable
- Optional webmodule for the automatic monitoring of LP-STAR according to EN 62034
- Optional CG-S interface for connecting to the CG-S bus for CGVision or master/slave operation for connecting several LP-STAR devices
- Shorter inspection time using the CEWA GUARD technology; automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to the STAR technology, freely programmable mixed operation of switching modes per luminaire in a single circuit without an additional data cable
- Automatic luminaire search function
- Plain text display at the control module for all luminaires
- Flexible data memory for the test log and device configuration using the Secure Digital card
- Absence of retroactive effect of different circuits in case of a short-circuit due to the automatic, selective shut-off function
- EoL shut-off, programmable as standard
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What is STAR?

$S$ = Switching
$T$ = Technology
$A$ = Advanced
$R$ = Revision

Switch to safety!
The continuing development of the CEWA GUARD monitoring system has led to the creation of the Switching Technology Advanced Revision, or STAR for short. This CG-STAR technology allows different switching modes to be implemented in the same circuit, and the switching mode of each individual luminaire can be re-programmed at any time.

As a result, this technology offers not just the proven CEWA Guard safety when it comes to operating a safety lighting system, it also gives planners the confidence and flexibility of knowing that the system can respond and adapt at any time to any changes that are made to a building and its use.
Your Advantages:
The number of outgoing circuits needed can be sharply reduced, since continuously operating, stand-by and switchable permanent lighting can be realised in one common circuit.

This allows the use of shorter cable distances, reduces installation costs and minimises the effects of burning materials. Any mode of operation can be assigned at a later date – **without encroachment in the lighting installation**. This enables simple project planning without having to take all possible types of operation into account.

As with CEWA GUARD technology, the patented STAR technology requires no additional data cable to the luminaires.

**Conventional Installation:**
- Maintained light 1 (DS)
- Non-maintained light 1 (BS)
- Non-maintained light 2 (BS)
- Maintained light 2 (DS)
- Switched maintained light 1 (DLS)
- Switched maintained light (DLS)

- Each type of switching mode requires two circuits
- Only one type of switching mode is possible per circuit
- Any later modifications involve a large amount of work and expense

**ZB-S Installation with STAR-Technology:**
All types of switching modes

- Only two outgoing circuits for all types of switching modes
- Maintained light, non-maintained light and switched maintained light are possible in one common circuit
- Later circuit modifications do not pose any problems
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Construction

Overview of connections

1. **Grid connection terminal**
   - 3-phase feed-in incl. phase monitoring function

2. **Connection for end circuits**
   - Double assignment, 2.5 mm² solid/flexible

3. **Connection for disable switch**
   - Control loop for disabling the system during operating downtimes with differential loop monitoring for short circuit and wire breakage detection. Differential monitoring: Short circuit or interruption lead to the system going into standby.

4. **24 V connection for external phase monitors**
   - 24 V power loop for the emergency luminaires with differential loop monitoring for short circuit and wire breakage detection. Differential monitoring: Short circuit or interruption lead to the system switching on (maintained light) immediately.

5. **Connection for potential-free indicator contacts and buzzer**
   - 4 relays with a separate root, each 1x changeover contact, 24 V 0.5 A.
   - The four potential-free contacts and the buzzer can be assigned freely to one or several of 12 different messages. The DIN VDE specification can be loaded any time and used as a default setting.

6. **Connection for digital inputs**
   - 8 freely assignable inputs 230V, programmable as inverted and non-inverted for example start/stop function test, start/stop duration test, block/release device, manual reset, turn on/off maintained light, turn on emergency lighting as corridor lighting, for light switch query and switching emergency lighting depending on the general lighting conditions (DLS function).

7. **Optional interface (factory-installed)**
   - The interface for connecting to a CGVision can be installed on site, see page 13.

8. **Webmodule connection**

9. **Battery connection, wires 1-4**
   - Maximum 4 sets per 2 battery blocks, 12 V.

Freely programmable control module

1. **Separate buttons for:**
   - Test (emergency luminaire function)
   - Function test
   - Duration test

2. **Three freely assignable function keys**

3. **128 x 64 pixel graphical display**
   - Back-lit, adjustable contrast and brightness

4. **Log book and device configuration**
   - Save the log book and device configuration comfortably on the memory card. Easily programmable on the PC using an SD card reader and the CEAG software.

5. **Seven control buttons for a user-friendly navigation**

6. **Function display using LEDs**