From static to adaptive escape routing
WorkSafe
Protect your people and property

Specify superior escape route management technology in complex buildings with Eaton’s unique adaptive emergency lighting evacuation system.

Risk management for commercial buildings is evolving rapidly. An increasingly urbanised and complex environment, combined with a rising diversity of safety threats, compels the owners and managers of buildings to re-evaluate the way they protect the people, property and business continuity that may be at risk in an emergency. It is not only a legal obligation but a moral, financial and reputational imperative. In situations involving fire, terrorism, major crime, extreme weather and civil unrest, buildings must be able to detect, alert and evacuate. The safe and timely completion of this process is dependent on planning, equipment, training and infrastructure being in place. However, evacuation poses particular challenges when a proportion of occupants are unfamiliar with layout and procedures, and particularly if they are in large, densely-populated, high-risk or complex premises such as railway stations, shopping centres, airports, stadia, government buildings or leisure facilities. Research into crowd behaviour and advances in scenario-modelling technology have highlighted the need for evacuation strategies that are more adaptable to differing circumstances and buildings. In particular, fixed emergency exit routes, indicated by static signage, can lead to congestion, delays and, in some instances, may direct people towards a hazard. Panic is heightened and decision-making can be impaired. Eaton has developed an Adaptive Evacuation System that is capable of identifying the safest exit route in a given circumstance and guiding people towards it via digital signage. The ability of such systems to enhance safety has been confirmed by academic research and technical organisations.

Adaptive evacuation

Adaptive: Capable of changing in response to changes in environment.

Building upon decades of expertise in the delivery of life safety systems, and particularly emergency lighting technologies, Eaton’s Adaptive Evacuation System enables faster, safer and more agile evacuations, particularly when deployed alongside a public address/voice alarm solution that provides additional guidance. When installed, the system is programmed with a range of potential exit routes. Based on information from CCTV, fire detection and other devices that pinpoint the nature and location of a hazard, it can select the safest and fastest route for occupants and an appointed system operator within the building is given the opportunity to accept or reject this recommendation, so that occupants can be directed accordingly. Unlike ‘active’ and ‘dynamic’ systems, Eaton’s technology is fully adaptable and its instructions can be modified in real-time. It has been extensively tested and conforms with current regulatory requirements, although the technology is so new that standards are still to be fully defined.
Adaptive escape sign luminaires for building evacuation as a supportive system-technical measure.

**Aim of protection:**
Safe self-rescue to ensure that rescue forces can take care of injured or disabled persons.

**Benefits:**
- More efficient, quicker and saver evacuation
- Escape routing adapt continuously to the risk
- Assistance to save oneself
- Relief of the rescuers
- Possible compensation measure for constructional scarcities

Facing the diverse risks of fire, terrorism, violent crime, extreme weather and civil unrest, the owners and managers of commercial buildings must ensure the ability to detect, alert and evacuate, which is dependent on planning, equipment, training and infrastructure being in place. However, evacuation poses additional challenges when occupants may include visitors who are not familiar with layout and procedures, and particularly if they are in large, highly-populated, high-risk or complex premises such as railway stations, shopping centres, airports, stadia, government buildings or leisure facilities. Fixed emergency exit routes, denoted by static signage, are inflexible to changing circumstances and may inadvertently direct people towards danger, as in the case of the deadly attack on Nairobi’s Westgate shopping mall in 2013. Building upon decades of expertise in the delivery of life safety systems, Eaton has pioneered the development of an Adaptive Evacuation System, which is capable of switching between a number of predefined routes and guiding people towards the safest available exit in a given scenario.

**Static escape route guidance:**
Exit sign luminaires designate the escape route out of the building always in the same direction, independently of a danger situation.

**Dynamic escape route guidance:**
Exit sign luminaires block unsafe escape routes in evacuation situations, thereby guiding those fleeing out of the building via the safe escape routes.

**Adaptive escape route guidance:**
Exit sign luminaires block unsafe escape routes and release these as soon as they become safe again. This enables dynamic hazard situations (e.g. in case of fire or attacks) to be flexibly responded to.

In hazard situations caused by e.g. fire, attacks, technical plant faults (e.g. gas accidents) and natural catastrophes, only safe escape routes can be used.
Adaptive Evacuation
Benefits of adaptive Evacuation

Representation of an adaptive Evacuation:

Before the occurrence:
Exit sign luminaires shows the fastet exit route.

During the occurrence:
Exit sign luminaires block the unsafe exit route as they receive an information of e.g. a Fire detector, video monitoring, locking systems, evacuation systems. The safest exit route out of the building is now shown.

Alarm e.g. via:
Fire detector, video monitoring, locking systems, evacuation systems

After the occurrence:
Once the exit route is open again, the exit sign luminaires shows it. Therefore it can be flexible and dynamic reacted on hazard e.g. fire or attacks.
Benefits of adaptive Evacuation:

- AE-CU technology in combination with GuideLed DXC exit sign luminaires enable dynamic danger situations such as in cases of fire, attacks or natural catastrophes to be actively responded to.
- Decentral configuration of the AE-CU for up to 240 GuideLed DXC exit sign luminaires. This enables flexible, low-cost planning.
- Short circuit and open circuit resistant loop bus technology. This means no E30 cable routing of the loop bus line is required because these are fail-safe with the first fault case.
- Separate operating units for safety lighting and for the programming of scenarios provide increased safety with subsequent modifications.
- Due to separate cable routing of the 230V end circuits and 24V loop bus line to the adaptive GuideLed DXC exit sign luminaires, the hybrid operation of static and adaptive exit sign luminaires and the integration of escape luminaires and luminaires for general lighting is possible in the same circuit.
- An integrated search function automatically detects all GuideLed DXC exit sign luminaires connected up during installation.
- Self-addressing of the connected DXC luminaires simplifies the process for installation and commissioning.
- The control unit with nonvolatile program memory and large touch display automatically monitors and controls all components in the AE-CU system as well as the functionality of the connected adaptive luminaires.
- Connection of central visualization is possible via an interface.
- Networking the AE-CU with EATON fire detection technology provides system integrity between alerting and evacuation.
- Already installed ZB-S systems could be expanded with the AE-CU.
From static to adaptive escape route guidance

System-technical measures for ensuring self-rescue in cases of evacuation have top priority in dynamic hazard situations. AE-CU technology in combination with GuideLed DXC exit sign luminaires enable dynamic danger situations such as in cases of fire, attacks or natural catastrophes to be actively responded to. The shortest route out of a building is not always the safest.

The AE-CU system reliably triggers up to 240 adaptive exit sign luminaires via a short circuit and open circuit resistant loop bus.

The hazard scenario can be freely assigned to each adaptive exit sign luminaire via the AE-CU.

The control unit with nonvolatile program memory and large touch display automatically monitors and controls all components in the AE-CU system as well as the functionality of the connected adaptive luminaires. Faults occurring are shown on the display, forwarded via signal contacts and saved to an inspection book.

An integrated search function automatically detects all GuideLed DXC exit sign luminaires connected up during installation. Connection of central visualization is possible via an interface.
The solution for simple structured applications

Application example:
**Triggering of GuideLed DX luminaires via potential-free contacts:**
Potential-free signal contacts of fire detectors, CCTV or key switches to indicate areas as „locked, blocked or unsafe“. As an example for areas where entry is forbidden for a specific time due to construction measures. Parallel connection of the DX inputs is not possible.

Application example:
**Actuation of guideLed DXC luminaires via the loop bus:**
Loop bus and power supply via separate cabling. Therefore the hybrid operation of DXC luminaires, static luminaires and third-party luminaires is possible in one circuit.

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The solution for simple and complex structured applications

Application example:
**Actuation of GuideLed DXC luminaires via the loop bus:**
Loop bus and power supply via separate cabling. Therefore the hybrid operation of DXC luminaires, static luminaires and third-party luminaires is possible in one circuit.
Adaptive Evacuation
control matrix

Application example:
Short circuit and open circuit resistant loop bus technology
① short circuit-isolated separation
② still safeguarded via loop communication after isolation of the short circuit

AE-CU control matrix

Example: Client training center at a workplace

<table>
<thead>
<tr>
<th>No.</th>
<th>Luminaire description</th>
<th>Scenario:</th>
<th>SC 1 blocked</th>
<th>Corridor 1 + Cafeteria blocked</th>
<th>Corridor 2 + product rooms blocked</th>
<th>Training room blocked</th>
<th>SC 2 blocked</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Corridor 1, at door to SC 1</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
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<tr>
<td>②</td>
<td>Corridor 1, at door to corridor 2</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>③</td>
<td>Corridor 2, at door to corridor 1</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>④</td>
<td>Corridor 2, at door to training room</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>⑤</td>
<td>Training room at door to corridor 2</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>⑥</td>
<td>Training room middle direction corridor 2</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>⑦</td>
<td>Training room middle direction SC 2</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>⑧</td>
<td>Training room at door to SC 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
Adaptive evacuation – installation example

* Due to simplification, only one circuit is shown per fire zone/staircase/flat

- = adaptive exit sign luminaire
- = active adaptive exit sign luminaire
- = escape luminaire
- = central fire alarm system
- = fire detector
- = meter reader

= Luminaire circuit*
- = loop bus
- = fire detection bus
- = E30 cable
- = detection scenario
AE-CU-W

Adaptive Evacuation Control Unit for wall mounting with integrated battery-supported power supply using loop technique for controlling addressable adaptive exit sign luminaires with 230V / 216V AC/DC technology for safety lighting systems acc. to DIN VDE 0100-560, DIN EN 50172 and V DIN V VDE 0108-100. With automatic testing device and monitoring of loop bus communication and individual display of condition and name of loop BUS connection per GuideLed DXC luminaire.

- Adaptive system – Escape routing adapt continuously to the risk
- Self-addressing of the connected DXC luminaires simplifies the process for installation and commissioning
- Simple handling by Touch Display and optional PC programming software
- AE-CU for the adaptive control of up to 240 GuideLed DXC luminaires
- Four short circuit and open circuit resistant loop lines each with 60 GuideLED DXC luminaires
- Two scenarios freely programmable for building evacuation, factory provided integrated. More than two scenarios on request
- A maximum of six ZB-S/US-S systems can be connected per AE-CU. More than six ZB-S systems on request
- Automatic software address-setting of all GuideLed DXC luminaires for scenario control
- Number of scenarios could be extended via scenario boxes with 8 or 16 scenarios
- Number of scenario inputs individual extendable
- Functionality also at power failure by inbuilted battery supply
- Universal applicable and with hazard alert systems combinable by potential free scenario inputs
- No E30 cable routing of the loop bus line is required because these are fail-safe with the first fault case

Primary rated voltage 230 V AC +10%,-15%
Primary rated current 75 mA
Nominal frequency 50 Hz
Protection rating IP 30
Insulation class I
Ambient temperature -5°C to+40°C
Secondary rated voltage 18.5 V - 29.5 V
Battery 2 x 12 V / 12 Ah
Max. battery current 3.5 A
Charge characteristic Constant voltage temperature-compensated
Min. backup power time 30 h
Weight with battery 14 kg
Dimensions (HxWxD in mm) 395 x 495 x 180
Basic housing material Sheet steel, powder-coated
Material of front Plastic

Inputs
- Addressable loop line 4
- Scenario active inputs 2 (more on request)
- Maximum ring length 2,000 m / I(ST)Y 4 x 2 x 0.8 mm
- Maximum number of GuideLed DX/ DXC luminaires per loop 60

Outputs
- Zero-potential changeover contact 2
- Contact load 24 V / 1 A
- Fuse 1.35 A

Ordering details
<table>
<thead>
<tr>
<th>Type</th>
<th>Scope of supply</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AE-CU-W</td>
<td>Surface- / Recessed mounted wall housing</td>
<td>40071361359</td>
</tr>
</tbody>
</table>
Adaptive Evacuation
AE-CU-W wall housing

1 LED displays:
- Power On, Scenario Active, General Fault, CPU Fault, Power Fault, General Disablement

2 Touch display, operating messages:
- Scenario Active, Fault, Disablement

3 Fault messages:
- Battery fault (AE-CU wall assembly), double address, earth fault, loop short circuit, charge fault, mains fault, loop communication fault, loop driver fault, trouble fault relay, CPU fault, loop overload, loop break at address, break-loop + loop

* At connection of a CGVision the messages ”Scenario active” and ”sum failure AE-CU” are shown on the control unit of the systems and on the CGVision. This messages are also listed in the test book with date and time.
AE-CU-E

Adaptive Evacuation Control Unit for assembly in ZB-S/18-AE units using loop technique for controlling addressable adaptive exit sign luminaires with 230V / 216V AC/DC technology for safety lighting systems acc. to DIN VDE 0100-560, DIN EN 50172 and V DIN V VDE 0108-100. With automatic testing device and monitoring of loop bus communication and individual display of condition and name of loop BUS connection per GuideLed DXC luminaire.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Primary rated voltage</td>
<td>28.5 V/DC</td>
</tr>
<tr>
<td>Primary rated current</td>
<td>4.2 A</td>
</tr>
<tr>
<td>Protection rating</td>
<td>IP 20</td>
</tr>
<tr>
<td>Insulation class</td>
<td>I</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>-5°C to +40°C</td>
</tr>
<tr>
<td>Secondary rated voltage</td>
<td>18.5 V - 29.6 V</td>
</tr>
<tr>
<td>Weight</td>
<td>8 kg</td>
</tr>
<tr>
<td>Dimensions (HxWxD in mm)</td>
<td>200 x 500 x 190</td>
</tr>
<tr>
<td>Material</td>
<td>Sheet steel, powder-coated</td>
</tr>
</tbody>
</table>

**Inputs**
- Addressable loop line: 4
- Scenario active inputs: 2 (more on request)
- Maximum ring length: 2,000 m / (ST)Y 4 x 2 x 0.8 mm
- Maximum number of GuideLed DX/ DXC luminaires per loop: 60

**Outputs**
- Zero-potential changeover contact: 2
- Contact load: 24 V / 1 A
- Fuse: 1.35 A

**Ordering details**

<table>
<thead>
<tr>
<th>Type</th>
<th>Scope of supply</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>*AE-CU-E</td>
<td>Installation variant for ZB-S/18-AE</td>
<td>40071361360</td>
</tr>
</tbody>
</table>

*note: not suitable for AFS+ and LP-STAR systems

1 LED displays:
- Power On, Scenario Active, General Fault, CPU Fault, Power Fault, General Disablement

2 Touch display, operating messages:
- Scenario Active, Fault, Disablement

3 Fault messages:
- Battery fault (AE-CU wall assembly), double address, earth fault, loop short circuit, charge fault, mains fault, loop communication fault, loop driver fault, trouble fault relay, CPU fault, loop overload, loop break at address, break-loop +loop
Relay module

Information units ‘scenario active’ and ‘fault’ are reported to the ZB-S by the AE-CU via the relay module (installed in a ZB-S/US-S). Six ZB-S/US-S can be connected per AE-CU. More on request.

Ordering details

<table>
<thead>
<tr>
<th>Type</th>
<th>Scope of supply</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relay module</td>
<td>Relay module connection set for use per ZB-S/US-S for connection to a AE-CU</td>
<td>40071361422</td>
</tr>
</tbody>
</table>

*Note: Relay module must be mounted externally at substations with functional integrity.*
**AE-CU-W**

Adaptive Evacuation Control Unit AE-CU-W for wall mounting with integrated battery-supported power supply using loop technique for controlling addressable adaptive exit sign luminaires with 230V / 216V AC/DC technology for safety lighting systems acc. to DIN VDE 0100-560, DIN EN 50172 and V DIN V VDE 0108-100. With automatic testing device and monitoring of loop bus communication and individual display of condition and name of loop BUS connection per GuideLed DXC luminaire.

Developed, manufactured and tested according to ISO 9001.

Pre-equipped for connection of 4 short circuit-resistant and open circuit resistant, fail-safe loop lines each for control of 60 adaptive exit sign luminaires and recording of two scenarios (more scenarios on request).

Free assignment of two scenarios for each individual adaptive exit sign luminaire via RS 232 interface and Windows-based configuration software.

Touchscreen display for display of operating states and operation of the controller.

Slot for network card

2 monitored outputs for scenario active for BMS connection

1 potential-free changeover contact General fault for BMS connection

1 x RS 232 interface

1 interface for optional protocol printer

Earth fault monitoring

Technical data:

- Mains voltage: 230 V AC / 50 Hz
- Power supply unit: 24 V DC / 3.0 A
- Emergency power supply: 2 x 12 V / 12 Ah
- Dimensions: W 497 x H 397 x D 180 mm
- Type: CEAG AE-CU-W
- Manufacturer: EATON
**AE-CU-E**

Adaptive Evacuation Control Unit AE-CU-E for assembly in ZB-S/18-AE units using loop technique for controlling addressable adaptive exit sign luminaires with 230V / 216V AC/DC technology for safety lighting systems acc. to DIN VDE 0100-560, DIN EN 50172 and V DIN V VDE 0108-100. With automatic testing device and monitoring of loop bus communication and individual display of condition and name of loop BUS connection per GuideLed DXC luminaire.

Developed, manufactured and tested according to ISO 9001.

Pre-equipped for connection of 4 short circuit-resistant and open circuit resistant, fail-safe loop lines each for control of 60 adaptive exit sign luminaires and recording of two scenarios (more scenarios on request).

Free assignment of two scenarios for each individual adaptive exit sign luminaire via RS 232 interface and Windows-based configuration software.

Touchscreen display for display of operating states and operation of the controller.

Slot for network card 2 monitored outputs for scenario active for BMS connection

1 potential-free changeover contact General fault for BMS connection

1 x RS 232 interface

Earth fault monitoring

Technical data:
- Supply voltage: 28,5 V DC
- Dimensions: W 500 x H 200 x D 180 mm
- Type: CEAG AE-CU-E
- Manufacturer: EATON

**Relay module**

Relay module for top hat rail installation, for connection of a central battery system of type ZB-S to the AE-CU via two zero-potential changeover contacts. With LED display for switching state of the relay.

Technical data:
- Operating voltage: 22 V DC to 26 V DC
- Current consumption: 7 - 9 mA

Ambient temperature: -0°C to +55°C
- SELV protection

Material: PCB material, PC for the plastic parts

Maximum of six relay modules per AE-CU

Dimensions: H 77 x W 45 x D 40 mm

Type: CEAG Relay module

Manufacturer: EATON

**Programming, commissioning and instruction**

Programming and commissioning of the AE-CU by CEAG Service after successful installation by the electrical contractor and presentation of the scenario control matrix. Instruction of operating personnel regarding AE-CU device functionality.

Type: Programming, commissioning and instruction

Manufacturer: EATON
GuideLed DX 10011 CG-S

Wall mounting

GuideLed DX 10011 CG-S

• Escape sign luminaire with LED Lightguide technology for wall-mounting.
• Additional function: Displaying a red ‘X’ to signify an area as closed or blocked
• Activated by a switching input on the supply module.
• Upgraded perception of the exit sign luminaire
• GuideLed 10011DX: connection to local input, e.g. smoke detector or panic switch via potential free contact
• Increased visibility in bright surroundings possible via additional selectable function modes, e.g. flashing red ‘X’.
• Very good perceptibility on account of high luminance of the white contrasting colour > 500 cd/m² in keeping with standard ISO 3864-1 and high uniformity Lmin/Lmax > 0.8
• Reduced battery costs on account of especially low power consumption
• Minimum service requirement due to high service life of the LEDs (50 000 hours)
• Installation of the LED pictogram without tools on the mounting set.
• Without power supply: still visible pictogram

Viewing distance 20 m
Luminous $\Phi_0/\Phi_e$ at the end of rated operating time 100 %
Housing material PC, PMMA
Housing colour Light grey RAL 7035
Weight 0.65 kg
Type of mounting Wall mounting
Connection terminal Mains $3 \times 2 \times 2.5$ mm²
Switch input $2 \times 2 \times 1.5$ mm²
Connection voltage 220 - 240 V AC, 50/60 Hz
176 V - 275 V DC
Current consumption - battery operation (220 V) 16 mA
Power consumption mains operation (apparent power / effective power) 8.0 VA / 3.9 W
Permissible ambient temperature $-20 \, ^\circ C$ to $+40 \, ^\circ C$
Light source LED batten

Ordering details - fastening set

<table>
<thead>
<tr>
<th>Type</th>
<th>Scope of supply (LED pictograms must ordered separate)</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GuideLed DX 10011 CG-S</td>
<td>Wall mounting set for GuideLed DX 10011 CG-S, Surface mounting, including LED supply with additional switching input and CG-S technology (20 addresses)</td>
<td>40071354646</td>
</tr>
</tbody>
</table>

Ordering details - LED pictograms (fastening set required)

<table>
<thead>
<tr>
<th>Type</th>
<th>Scope of supply</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PL acc. ISO 7010 ¹</td>
<td>LED-Piktogramm für GuideLed DX 10011 CG-S, Pfeil links (PL) gem. ISO 7010, 20 m</td>
<td>40071354681</td>
</tr>
<tr>
<td>PR acc. ISO 7010 ¹</td>
<td>LED-Piktogramm für GuideLed DX 10011 CG-S, Pfeil rechts (PR), gem. ISO 7010, 20 m</td>
<td>40071354682</td>
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<tr>
<td>PU acc. ISO 7010 ¹</td>
<td>LED-Piktogramm für GuideLed DX 10011 CG-S, Pfeil unten (PU), gem. ISO 7010, 20 m</td>
<td>40071354683</td>
</tr>
<tr>
<td>PO acc. ISO 7010 ¹</td>
<td>LED-Piktogramm für GuideLed DX 10011 CG-S, Pfeil oben (PO), gem. ISO 7010, 20 m</td>
<td>40071354684</td>
</tr>
</tbody>
</table>

¹ with additional option: red X
GuideLed DXC 10011 CG-S

- Escape sign luminaire with LED Lightguide technology for wall-mounting.
- Additional function: Displaying a red 'X' to signify an area as closed or blocked
- Activated by a switching input on the supply module.
- Upgraded perception of the exit sign luminaire
- GuideLed 10011DXC: connection to Eaton's Adaptive Evacuation with use of the EATON AE-CU via integrated bus interface
- Increased visibility in bright surroundings possible via additional selectable function modes, e.g. flashing red 'X'.
- Very good perceptibility on account of high luminance of the white contrasting colour > 500 cd/m² in keeping with standard ISO 3864-1 and high uniformity Lmin/Lmax > 0.8
- Reduced battery costs on account of especially low power consumption
- Minimum service requirement due to high service life of the LEDs (50 000 hours)
- Installation of the LED pictogram without tools on the mounting set.
- Without power supply: still visible pictogramm

Viewing distance
20 m

Luminous $\Phi_e/\Phi_N$ at the end of rated operating time
100 %

Housing material
PC, PMMA

Housing colour
Light grey RAL 7035

Weight
0.65 kg

Type of mounting
Wall mounting

Connection terminal
Mains 3 x 2 x 2.5 mm²
bus interface 2 x 2 x 1.5 mm²

Connection voltage
220 - 240 V AC, 50/60 Hz
176 V - 275 V DC

Current consumption - battery operation (220 V)
16 mA

Power consumption mains operation
(apparent power / effective power)
8.0 VA / 3.9 W

Permissible ambient temperature
-20 °C to +40 °C

Light source
LED batten

Ordering details - fastening set

<table>
<thead>
<tr>
<th>Type</th>
<th>Scope of supply (LED pictograms must ordered separate)</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GuideLed DXC 10011 CG-S</td>
<td>Wall mounting set for GuideLed DXC 10011 CG-S, Surface mounting, including LED supply and CG-S technology (20 addresses), with integrated bus interface for connection to an AE-CU</td>
<td>40071355085</td>
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Ordering details - LED pictograms (fastening set required)

<table>
<thead>
<tr>
<th>Type</th>
<th>Scope of supply</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PL acc. ISO 7010</td>
<td>LED-Piktogramm für GuideLed DXC 10011 CG-S, Pfeil links (PL) gem. ISO 7010, 20 m</td>
<td>40071354681</td>
</tr>
<tr>
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<td>40071354684</td>
</tr>
</tbody>
</table>

¹ with additional option: red X
GuideLed DX 10011 CG-S

One-sided LED exit sign luminaire in keeping with German / European standards EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838 with additional function for displaying a red 'X' to signify an area as closed or blocked. With wall surface mounting set.

Exit sign in LED lightguide technology for especially uniform and bright illumination of the pictogram:

- Lm >= 500 cd/m² of the white contrasting colour and
- Lm >= 200 cd/m² across the entire pictogram

Uniformity Lmin/Lmax > 0.8.

Additional lightguide for displaying a red 'X'.

Increased visibility possible in bright surroundings with complex visual distractions via additional selectable function modes, e.g. flashing red 'X'. Additionally, the escape sign will be dimmed during display of red 'X'.

High service life ensured by optimised LED operating conditions.

Increased safety ensured by use of high life time LEDs and optimised LED operating conditions.

Minimum service requirement due to high service life of the LEDs (50,000 hours).

With high light efficiency > 110 lm/W for reduced connected load.

Reduced battery costs on account of especially low power consumption.

Without power supply: still visible pictogram.

Slender design with low mounting height of only 44 mm including pictogram and mounting set.

Installation of the LED pictogram without tools on the surface mounting set.

Special LED converter with integrated monitoring module for single luminaire monitoring with 20-digit address switches and additional switch input for connection to Eaton’s Adaptive Evacuation with use of the EATON AE-CU, dataline and bus module or connection to local input, e.g. smoke detector.

Mixed operation of the connection systems (maintained light, non-maintained light and switched maintained light within a circuit without additional data or actuating cables to the luminaire) is possible in combination with suitable group or central battery systems with STAR technology.

Viewing distance: 20 m

Luminous flux at the end of the rated service time: 100%

Housing material: PC, PMMA

Housing colour: light grey RAL 7035

Connection terminal:
- Mains 3 x 2 x 2.5 mm²
- Switch input 2 x 2 x 1.5 mm²

Supply voltage:
- 220-240 VAC, 50/60 Hz / 176-275 VDC

Current consumption:
- Battery operation: 16 mA
- Power consumption- mains operation: 8.0 VA / 3.9 W

Protection Class: II

Degree of protection: IP 20

Permissible ambient temperature: -20° Celsius to +40° Celsius

Dimensions including wall mounting set:
- W = 226, H = 134, D = 44

Type: CEAG GuideLed 10011 DX CG-S

Manufacturer: EATON
**GuideLed DXC 10011 CG-S**

One-sided LED exit sign luminaire in keeping with German / European standards EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838 with additional function for displaying a red 'X' to signify an area as closed or blocked.

With wall surface mounting set. Integrated bus interface for connection to an AE CU controller.

Exit sign in LED lightguide technology for especially uniform and bright illumination of the pictogram:
- \( L_m \geq 500 \text{ cd/m}^2 \) of the white contrasting colour and
- \( L_m \geq 200 \text{ cd/m}^2 \) across the entire pictogram

Uniformity \( L_{min}/L_{max} > 0.8 \).

Additional lightguide for displaying a red 'X'.

Increased visibility possible in bright surroundings with complex visual distractions via additional selectable function modes, e.g. flashing red 'X'. Additionally, the escape sign will be dimmed during display of red 'X'.

High service life ensured by optimised LED operating conditions.

Increased safety ensured by use of high life time LEDs and optimized LED operating conditions.

Minimum service requirement due to high service life of the LEDs (50 000 hours).

With high light efficiency \( > 110 \text{ lm/W} \) for reduced connected load.

Reduced battery costs on account of especially low power consumption.

Without power supply: still visible pictogram.

Slender design with low mounting height of only 44 mm including pictogram and mounting set.

Installation of the LED pictogram without tools on the surface mounting set.

Special LED converter with integrated monitoring module for single luminaire monitoring with 20-digit address switches and additional bus interface for connection to Eaton’s Adaptive Evacuation with use of the Eaton AE-CU.

Mixed operation of the connection systems (maintained light, non-maintained light and switched maintained light within a circuit without additional data or actuating cables to the luminaires) is possible in combination with suitable group or central battery systems with STAR technology.

- Viewing distance: 20 m
- Luminous flux at the end of the rated service time: 100%
- Housing material: PC, PMMA
- Housing colour: light grey RAL 7035
- Connection terminal: Mains \( 3 \times 2 \times 2.5 \text{ mm}^2 \)
- Bus interface \( 2 \times 2 \times 1.5 \text{ mm}^2 \)
- Supply voltage: 220–240 VAC, 50/60 Hz / 176–275 VDC
- Current consumption - battery operation: 16 mA
- Power consumption - mains operation: 8.0 VA / 3.9 W
- Protection Class: II
- Degree of protection: IP 20
- Permissible ambient temperature: -20° Celsius to +40° Celsius
- Dimensions including wall mounting set: \( W = 226, H = 134, D = 44 \)
- Type: CEAG GuideLed DXC 10011 CG-S
- Manufacturer: EATON