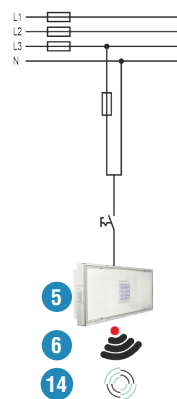
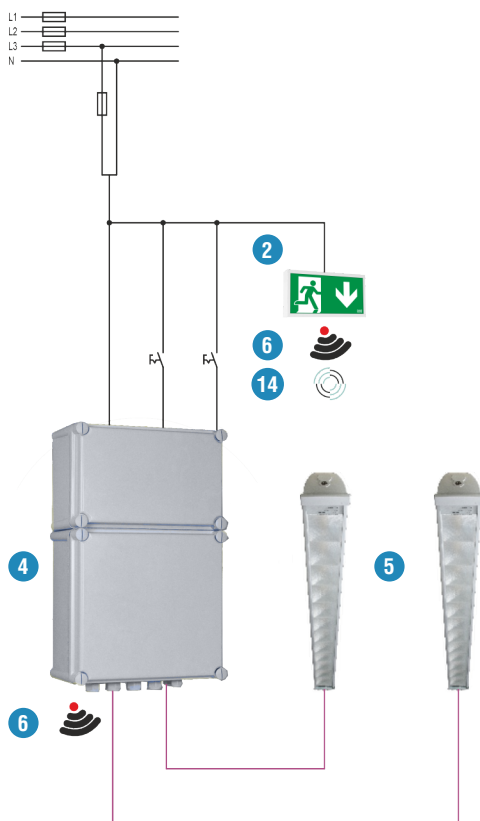
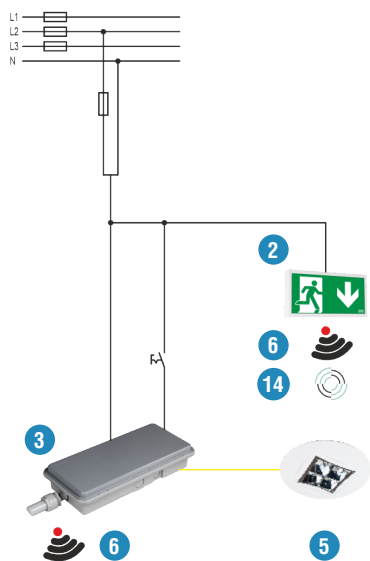
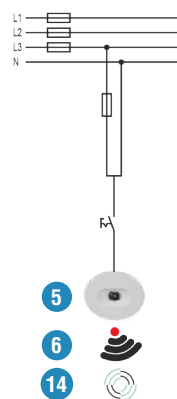
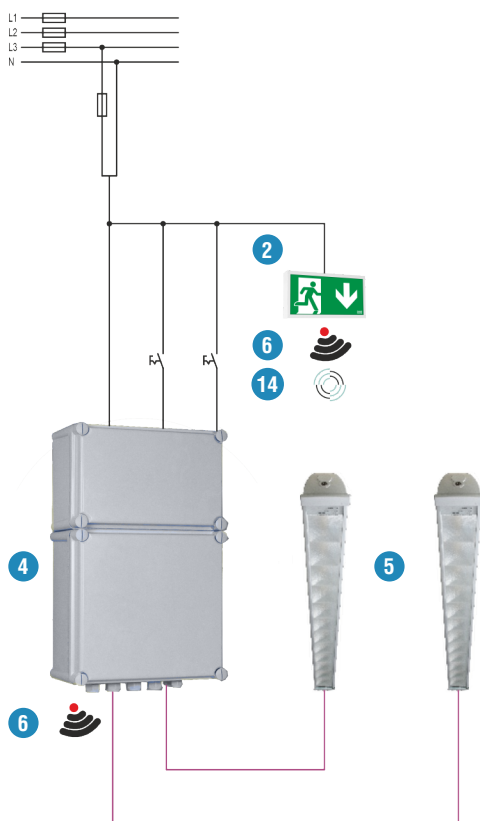
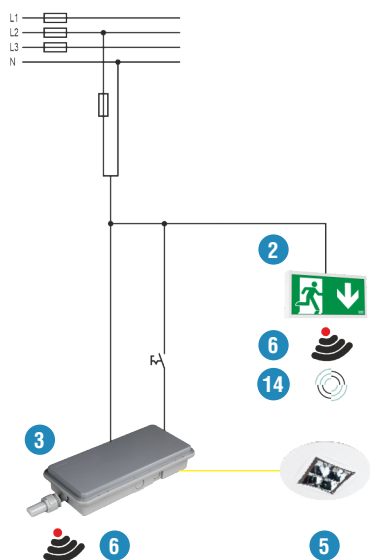


- 1 Test devices Logica FM - 21102
- 2 Escape sign and safety luminaires (FM)
- 3 Supply module (FM)
- 4 Supply device (FM)
- 5 Combined general lighting and safety luminaire (FM)
- 6 Logica FM interface for radio bus (ZigBee®)<sup>1</sup> for max. luminaires / supply modules / supply devices: 320 with 21102

— 230 V AC  
 — 230 V AC / 230 V AC (rectangular-shaped) / 230 V DC  
 — RS485  
 — USB  
 — Ethernet  
 — various voltages (mains voltage / lamp voltage)

\* LAN and WLAN with connection to WAN (internet)  
 \*\* Only one interface per test device possible  
 \*\*\* Cloud NuBe on servers of Beghelli  
 \*\*\*\* For remote access over Logica Visual required VPN connection



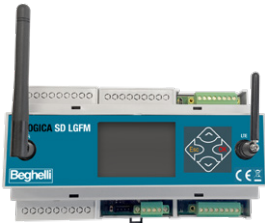
- 7 RS485/USB interface for PC with software Logica Visual<sup>2</sup>
- 8 Ethernet<sup>3</sup>
- 9 PC with software Logica Visual<sup>4</sup>
- 10 PC with software Logica Visual / cloud NuBe<sup>4</sup>
- 11 Smartphone with software B.connect<sup>4</sup>
- 12 Smartphone with cloud NuBe<sup>4</sup>
- 13 Logica FM repeater for amplification of the radio signal
- 14 Optical interface - flashlight of smartphone to light sensor of luminaire (unidirectional)

<sup>1</sup> Maximum distance between Logica FM interface and Logica FM interface: ca. 25 m

<sup>2</sup> Cable (RS485): min. 2 x 2 x 0.8 mm  
Length: max. 1.000 m  
Topology: serial

<sup>3</sup> Cable: min. CAT-5

<sup>4</sup> Compatibility of test device with software resp. cloud must be considered - see page for software resp. cloud



## PROGRAMMING

- System parameters per system<sup>1</sup>
- Test parameters (date, time, cycle) per system
- Operating duration per system, luminaire, supply module and supply device (programming overwrites setting on luminaire, supply module and supply device)
- Switching per luminaire<sup>3</sup> and group<sup>3</sup> (only at maintained mode)
- Free assignment of luminaires to 16 groups per system

## INTERFACES

RS485 bus for communication to

- PC<sup>5</sup>
- Building management system over Modbus RTU (RS485)

RS232 bus for communication to

- Printer

Radio bus / Logica FM interface for communication to

- Luminaires, supply modules and supply devices

LAN (Ethernet), WLAN-AP for communication to

- PC or Smartphone
- Building management system over Modbus TCP (LAN)

2x USB (type A) for

- Download of system configuration
- Download of test results
- Software updates

LTE modem (4G) for communication over

- Mobile radio network<sup>6</sup>

## OPERATION

Operation on the automatic test device or from a PC (option) / smartphone (option).

4 buttons for input and colored 2.2" display with graphic and alphanumeric interface for output of all data and parameters, multilingual (depending on installed software).

## TECHNICAL DATA

<b>Housing:</b>	Polycarbonate, grey (RAL 7035)
<b>Dimensions (H x W x D):</b>	90 x 160 x 75 mm
<b>Division units:</b>	9 DU
<b>Type of protection:</b>	IP20
<b>Protection class:</b>	II
<b>Mounting:</b>	Distributor installation (DIN rail)
<b>Mains supply:</b>	230 V +/- 10 % / 50-60 Hz
<b>Ambient temperature:</b>	0 °C to +40 °C



## CENTRAL TEST DEVICE LOGICA FM

Automatic test device according to DIN EN 62034 for monitoring and control of luminaires, supply modules and supply devices with self-contained supply and integrated Logica FM interface. Communication between test device Logica FM and 320 luminaires max., supply modules and supply devices with self-contained supply and integrated Logica FM interface via radio bus according to the ZigBee® standard. All Logica FM interfaces with integrated repeater. Automatic addressing of the luminaires, supply modules and supply devices.

## FUNCTIONS

### TESTING

- Automatic execution of function and duration tests per system, simultaneous or delayed for the monitoring groups<sup>2</sup>
- Manual execution of function and duration tests per system, luminaire, supply module and supply device or group

### CONTROL

- Manual switching (on / off) in mains operation (only at maintained mode) per system, luminaire or group
- Manual dimming to fixed dimm value in mains operation (only at maintained mode) per system, luminaire or group

### SIGNALLING

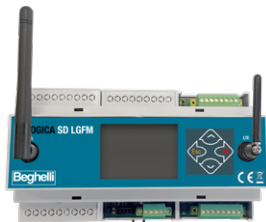
- Faults (lamp, communication fault, battery fault) per system or luminaire, supply module and supply device

### STORAGE

- Tests of the last 2 years per system resp. luminaire, supply module and supply device
- Battery for data retention

### CONTROL INPUTS AND CONTROL OUTPUTS

- 4 control inputs<sup>3</sup> for switching of luminaires or groups (control signal: contact, potential-free)
- 3 control outputs<sup>4</sup> in combination with 1 to 3 fault signalling modules for signalling of collective faults (control output per fault signalling module: 1 changeover, potential-free)



## LOGICA FM FOR DISTRIBUTOR INSTALLATION

<b>Housing:</b>	Polycarbonate, grey (RAL 7035)
<b>Dimensions (H x W x D):</b>	90 x 160 x 75 mm
<b>Division units:</b>	9 DU
<b>Type of protection:</b>	IP20
<b>Protection class:</b>	II
<b>Mounting:</b>	Distributor installation (DIN rail)
<b>Mains supply:</b>	230 V +/- 10 % / 50-60 Hz
<b>Ambient temperature:</b>	0 °C to +40 °C

Order code	Description
21102	Logica FM for distributor installation (DIN rail)



## LOGICA FM FOR SURFACE WALL MOUNTING

<b>Housing:</b>	Polystyrene, grey (RAL 7035)
<b>Dimensions (H x W x D):</b>	458 x 295 x 129 mm
<b>Type of protection:</b>	IP65
<b>Protection class:</b>	II
<b>Mounting:</b>	Surface wall mounting
<b>Mains supply:</b>	230 V +/- 10 % / 50-60 Hz
<b>Ambient temperature:</b>	0 °C to +40 °C

Order code	Description
21102-B	Logica FM for surface wall mounting, with fault signalling module

<sup>1</sup> Only over software Logica Visual / software B.connect / cloud NuBe possible.

<sup>2</sup> Monitoring groups: Division of luminaires in the groups "Even" and "Odd". Defined factory-made through the adicity (even or odd) of the hexadecimal device addresses. The definition can be changed over Logica FM and software B.connect / cloud NuBe (programming overwrites factory-made definition on luminaire).

<sup>3</sup> Only programmable over software SD Manager.

<sup>4</sup> Free programmable over Logica FM and software SD Manager.

<sup>5</sup> For PC possibly additional interface for conversion from RS485 to USB or LAN (Ethernet) required. For smartphone only indirectly possible through conversion to LAN (Ethernet) with WLAN.

<sup>6</sup> The access to internet (WAN) takes place over the mobile radio network through an access point (APN). The data exchange is realized over a web server from Beghelli.