1 **Test devices Logica FM** - 21102 (above) / 12128C (below)
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®)[1] for max. luminaires / supply modules / supply devices: 320 with 21102 or 256 with 12128C

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

Rev.-No. S2024-02
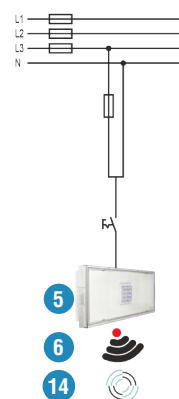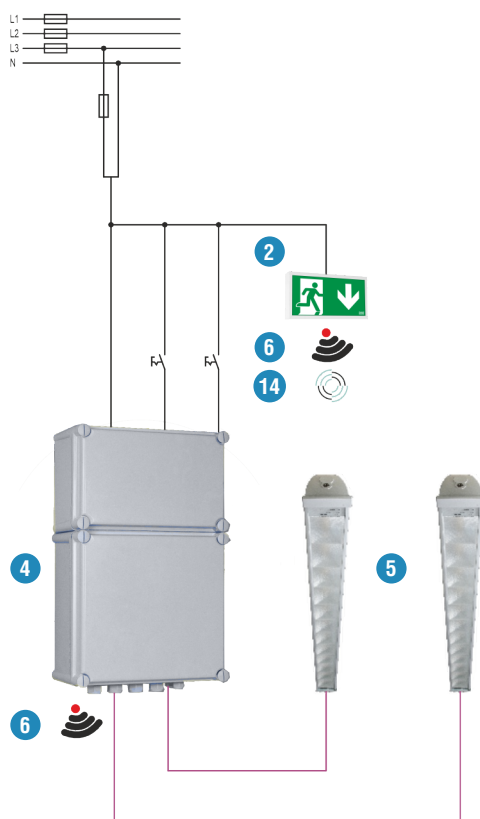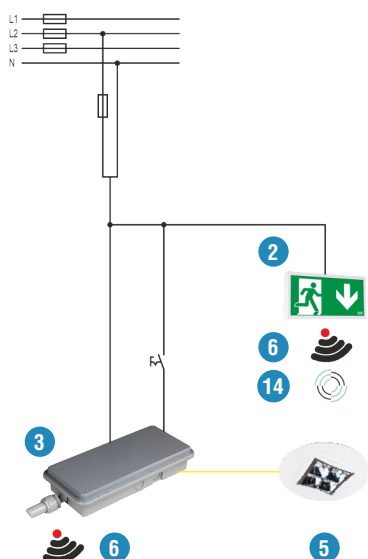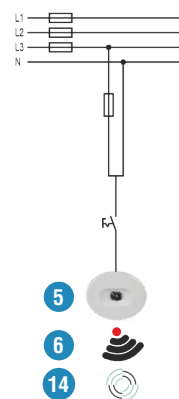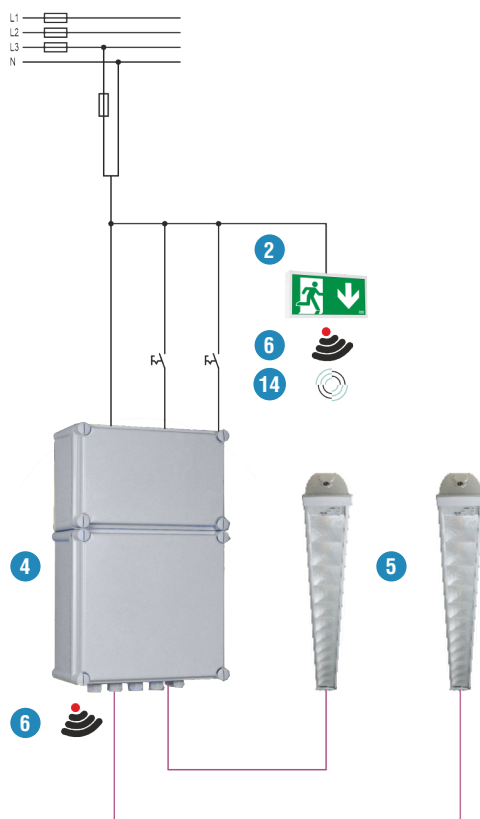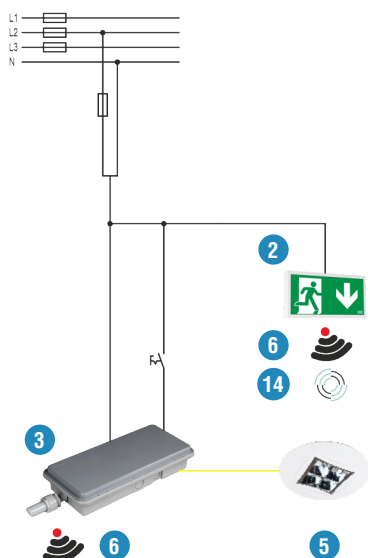
7 **RS485/USB interface** for PC with software Logica Visual[2]

8 **Ethernet**[3]

9 **PC** with software Logica Visual[4]

10 **PC** with software Logica Visual / cloud NuBe[4]

11 **Smartphone** with software B.connect[4]

12 **Smartphone** with cloud NuBe[4]

13 **Logica FM repeater** for amplification of the radio signal

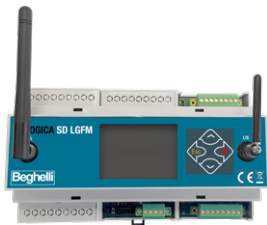14 **Optical interface** - flashlight of smartphone to light sensor of luminaire (unidirectional)

[1] Maximum distance between Logica FM interface and Logica FM interface: ca. 25 m

[2] Cable (RS485): min. 2 x 2 x 0.8 mm
Length: max. 1.000 m
Topology: serial

[3] Cable: min. CAT-5

[4] Compatibility of test device with software resp. cloud must be considered - see page for software resp. cloud

PROGRAMMING

- System parameters per system[1]
- 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[3] and group[3] (only at maintained mode)
- Free assignment of luminaires to 16 groups per system

INTERFACES

RS485 bus for communication to

- PC[5]
- 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[6]

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

Housing:	Polycarbonate, grey (RAL 7035)
Dimensions (H x W x D):	90 x 160 x 75 mm
Division units:	9 DU
Type of protection:	IP20
Protection class:	II
Mounting:	Distributor installation (DIN rail)
Mains supply:	230 V +/- 10 % / 50-60 Hz
Ambient temperature:	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[2]
- 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[3] for switching of luminaires or groups (control signal: contact, potential-free)
- 3 control outputs[4] 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

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

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

LOGICA FM FOR SURFACE WALL MOUNTING

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

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

[1] Only over software Logica Visual / software B.connect / cloud NuBe possible.

[2] 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).

[3] Only programmable over software SD Manager.

[4] Free programmable over Logica FM and software SD Manager.

[5] 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.

[6] 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.

CENTRAL TEST DEVICE LOGICA FM COMPACT

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 Compact and 256 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.

PROGRAMMING

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

INTERFACES

RS485 bus for communication to
- PC[4]
- Building management system over Modbus RTU (RS485)

Radio bus / Logica FM interface for communication to
- Luminaires, supply modules and supply devices

LAN (Ethernet), WLAN-AP/STA for communication to
- PC or Smartphone
- Building management system over Modbus TCP (LAN)

USB (type A) for
- Download of system configuration
- Download of test results
- Software updates

OPERATION

Operation on the automatic test device and additionally from a PC / smartphone.

2 buttons for input and 8 LEDs with alphanumeric labelling for output of all data and parameters.

FUNCTIONS

TESTING

- Automatic execution of function and duration tests per system, simultaneous or delayed for the monitoring groups[2]
- Manual execution of function and duration tests per system, luminaire[1], supply module[1] and supply device[1] or group[1]

CONTROL

- Manual switching (on / off) in mains operation (only at maintained mode) per system[1], luminaire[1] or group[1]
- Manual dimming to fixed dimm value in mains operation (only at maintained mode) per system[1], luminaire[1] or group[1]

SIGNALLING

- Faults (lamp, communication fault, battery fault) per system or luminaire[1], supply module[1] and supply device[1]

STORAGE

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

CONTROL INPUTS AND CONTROL OUTPUTS

- 4 control inputs[3] for switching of luminaires or groups (control signal: contact, potential-free)
- 1 control input[3] for sub distribution monitoring (control signal: 230 V / 50-60 Hz, 1-phase)
- 1 control output[3] for signalling of collective faults (control output: 1 changeover, potential-free)

TECHNICAL DATA

Housing:	Polycarbonate, grey (RAL 7035)
Dimensions (H x W x D):	90 x 71 x 60 mm
Division units:	4 DU
Type of protection:	IP20
Protection class:	II
Mounting:	Distributor installation (DIN rail)
Mains supply:	230 V +/- 10 % / 50-60 Hz
Ambient temperature:	0 °C to +40 °C

IP20

LOGICA FM COMPACT
FOR DISTRIBUTOR INSTALLATION

Housing:	Polycarbonate, grey (RAL 7035)
Dimensions (H x W x D):	90 x 71 x 60 mm
Division units:	4 DU
Type of protection:	IP20
Protection class:	II
Mounting:	Distributor installation (DIN rail)
Mains supply:	230 V +/- 10 % / 50-60 Hz
Ambient temperature:	0 °C to +40 °C

Order code	Description
12128C	Logica FM Compact for distributor installation (DIN rail),

[1] Only over software Logica Visual / software B.connect / cloud NuBe possible.

[2] 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 software B.connect / cloud NuBe (programming overwrites factory-made definition on luminaire).

[3] Only programmable over software SD Manager.

[4] 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.

Rev.-No. S2024-02