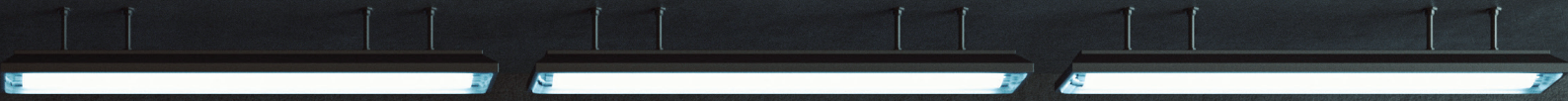




SIBELON

Emergency lighting monitoring
system for AC and DC systems



UTSON
240-40V
8.00A
22.00 °C

SIBELON CPS – The system

The SIBELON system is not a central battery system in the classic sense, it is far more than that. It is an emergency lighting system of the latest generation that, for example, does not set any restrictions for the choice of power source. SIBELON adapts to your requirements, and not vice versa.

The power source for safety purposes does not necessarily have to be a battery system, which supplies the loads in the event of a mains failure. This provision of the power can be provided alternatively by an emergency standby power unit. In short: SIBELON is suitable not only for AC but also for DC systems.

Further, within the system, you have the opportunity to combine the power sources. For example, central unit can be supplied from a battery system and the connected substations from an emergency standby power unit.

SIBELON is produced to the industrial standard. It has a processor core made by Wago with Modbus-IP, which enables open interfaces such as BACnet for the provision of system messages to the BCS. This interface flexibility makes the SIBELON system the first choice in large projects.

Another advantage is that only one supply cable from the central unit is required to supply SIBELON substations. This reduces the wiring required and the fire load by 50%.

The SIBELON address module required to monitor the connected luminaires is not only suitable for AC systems but also for DC systems.

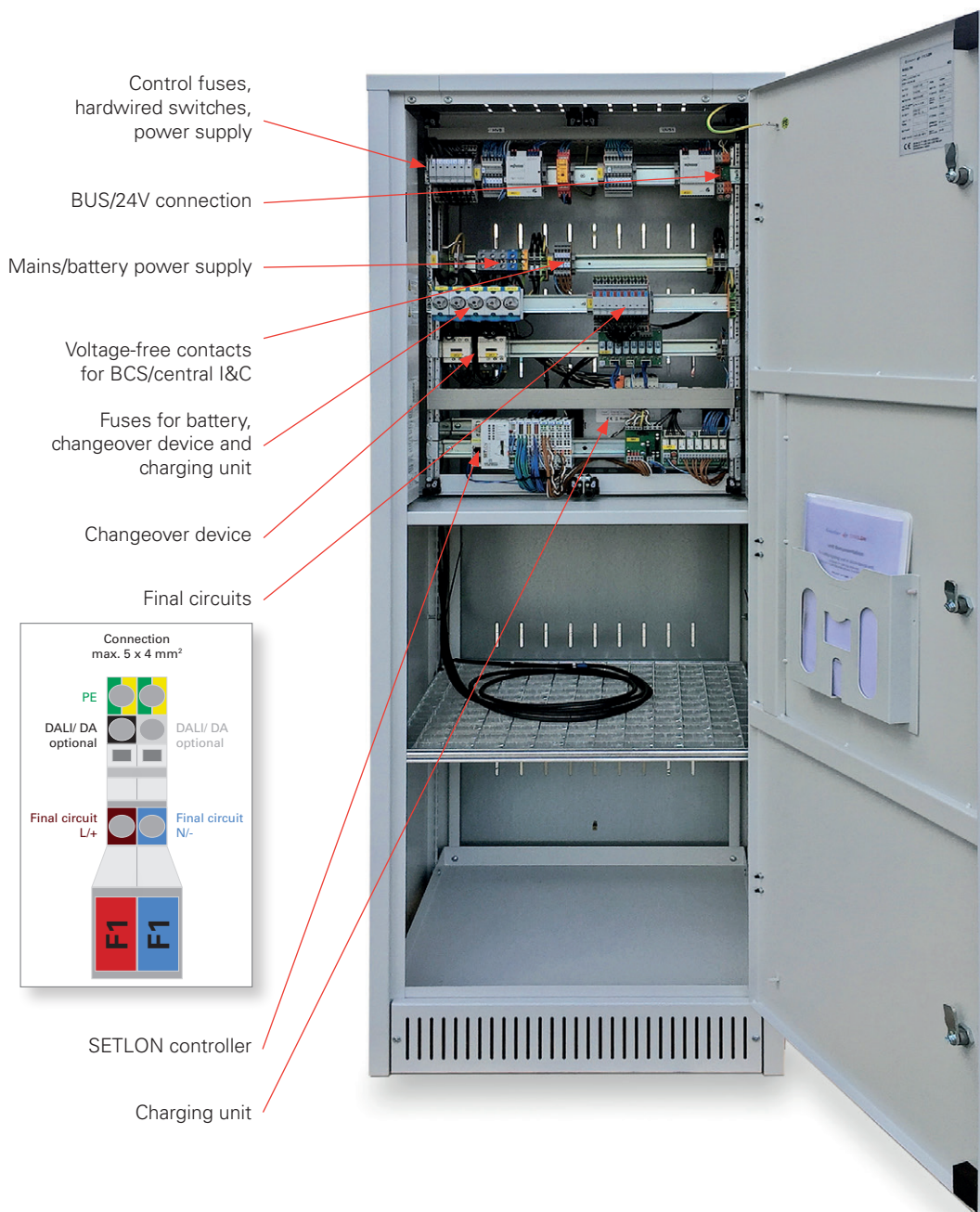
All final circuits are pre-equipped for mixed technology (escape route and emergency luminaires in one circuit) and can be loaded by up to max. 815 VA. Communication with the luminaires takes place on the supply line (without additional BUS cable). Each address can be assigned a clear, unique location text to enable a luminaire to be localised quickly and conveniently in case of a fault.

Due to the many advantages compared to a pure CPS system, we have given SIBELON a new system description:

Emergency lighting monitoring system for AC and DC systems

The SIBELON system is naturally produced in accordance with the respective current legal standards. TÜV Rheinland has checked and certified the system in accordance with EN 50171. This confirms use of the system for emergency lighting in accordance with DIN VDE V 0108-100-1.

We have summarised the large number of different SIBELON system options for you on the following catalogue pages.



TECHNICAL DATA

- Max. power: 150 kVA, Output voltage: 230 V AC/DC
- Standard single luminaire monitoring using address modules
- Freely programmable final circuits for maintained and non-maintained light and mixed technology
- Microprocessor-controlled functional and duration test
- 7" touchscreen operation
- Ethernet connection for web browser visualisation
- Autom. test equipment with logging/recording of results
- LON system BUS
- One system for AC and DC systems
- Optional: Higher-level visualisation via WEB-MASTER
- Optional: DALI system technology for DALI luminaires

SIBELON CPS

SYSTEM DESCRIPTION

Central battery systems use a battery system as a standby electricity source, to supply the connected loads in emergency mode. This SIBELON system option is named **SIBELON CPS**.

How it works

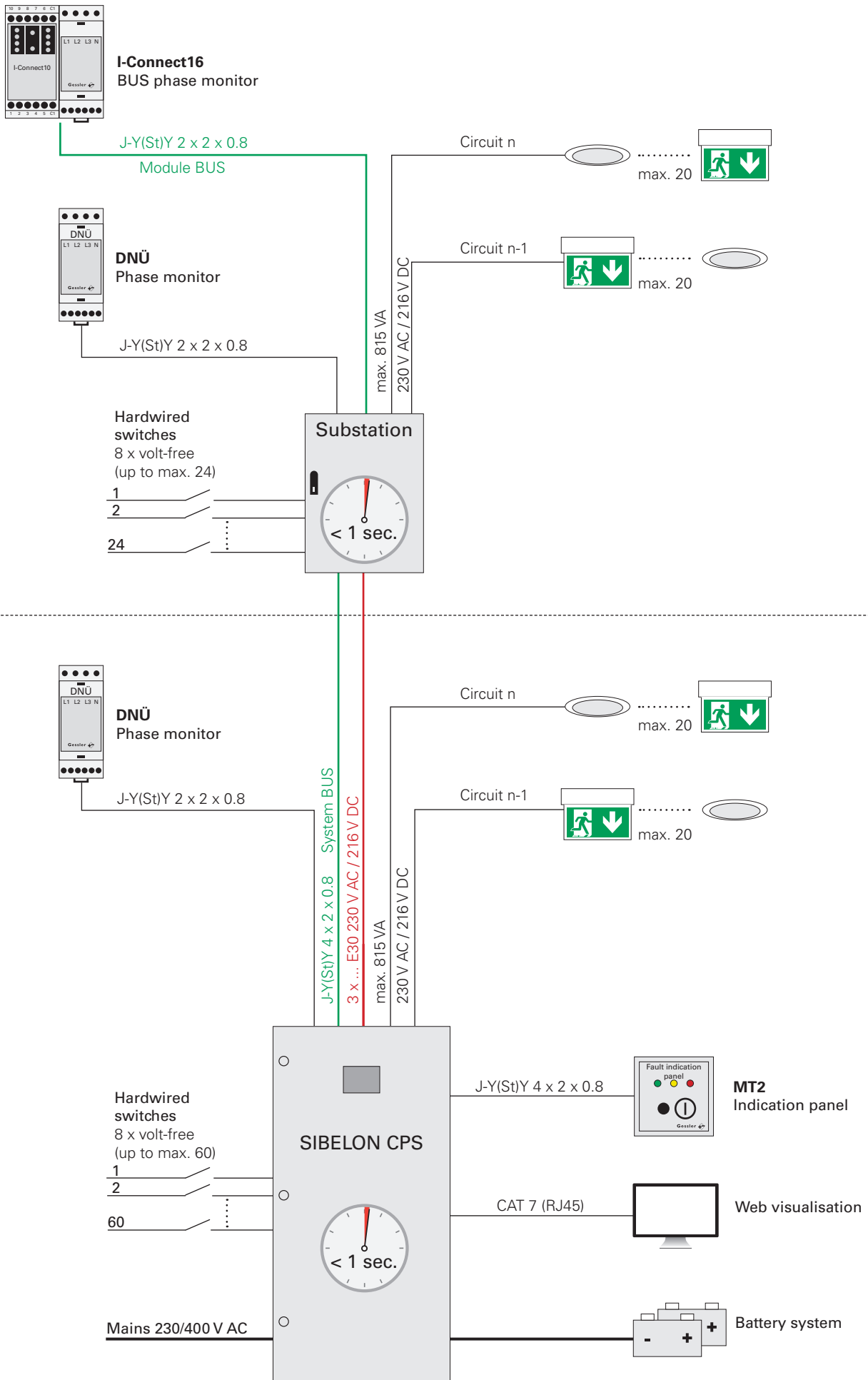
If a mains voltage is applied the loads are supplied from the mains and the battery system is charged. By monitoring the general lighting, it is ensured that in the event of a failure, the emergency lighting is switched on for the area concerned. In the event of failure or a fall in the mains voltage by more than 15%, the system switches to battery mode (DC mode). As a result, the connected escape route and emergency luminaires are switched on automatically.

As soon as a returning mains voltage is detected, SIBELON CPS switches to normal mode and again charges the battery system.

The luminaire test required by the standards is performed by the SIBELON CPS automatically and it records the result in the standard, integrated test log of the control unit.

REFERENCE: "Franz Josef Strauß" airport – Munich





SIBELON CPS/ESPS

SYSTEM DESCRIPTION

If the central battery system uses a battery system as a standby electricity source, however, other system-oriented emergency lighting substations are supplied via ESPS (AC), the system is a **SIBELON CPS/ESPS** system. This option is only used if the transfer time requirements differ due to the use of the building (example: meeting places and workplaces).

How it works

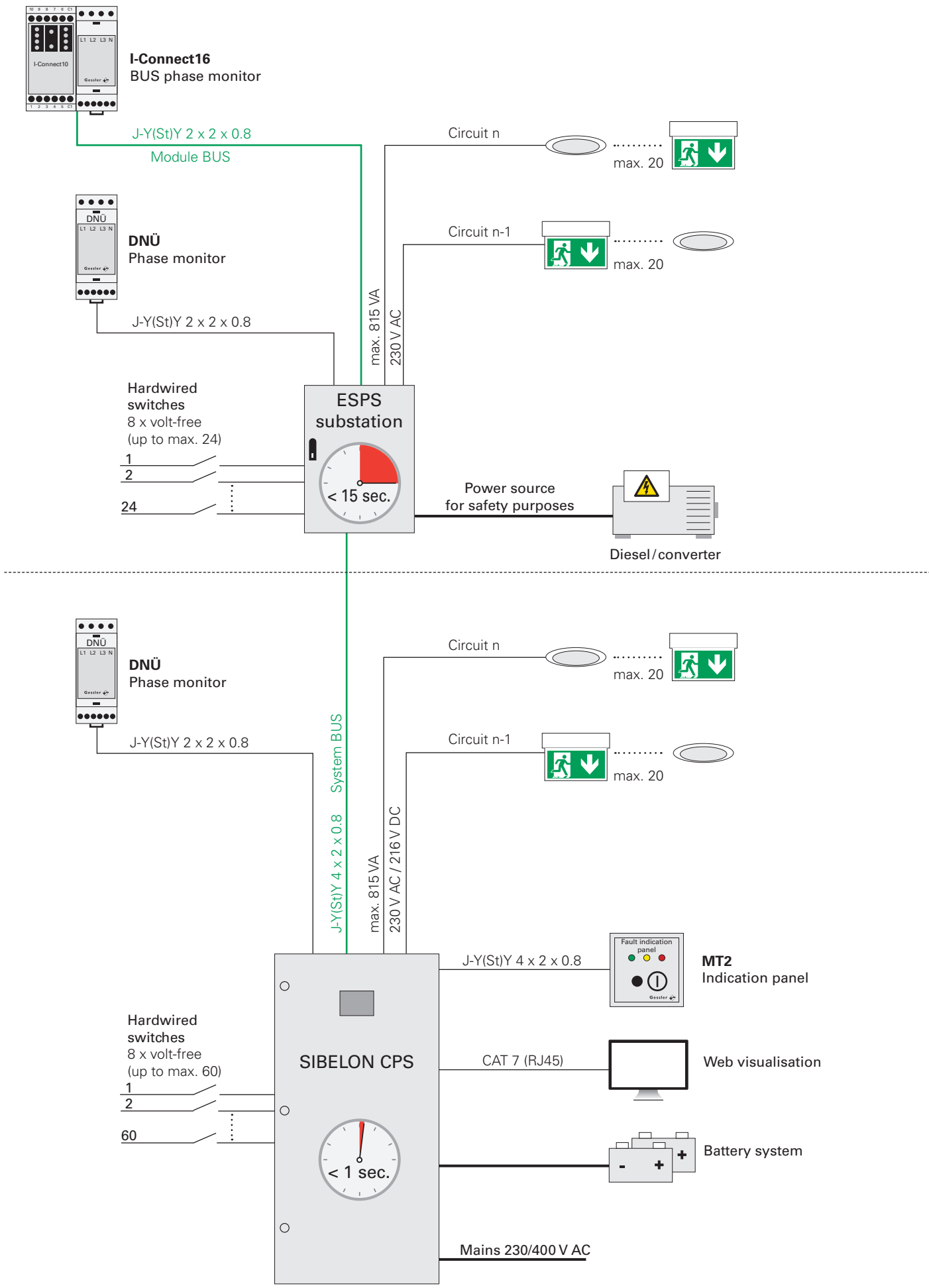
If a mains voltage is applied the loads are supplied from the mains and the battery system is charged. By monitoring the general lighting, it is ensured that in the event of a failure, the emergency lighting is switched on for the area concerned. In the event of failure or a fall in the mains voltage by more than 15 %, the central unit switches to battery mode (transfer time < 1 second). The loads of the ESPS substation are not supplied with AC voltage until the emergency standby power unit has switched on (transfer time < 15 seconds).

When the mains returns, the substation and the central unit switch back to normal mode automatically. The latter once again charges the previously discharged battery system. The luminaire test required by the standards is performed by the SIBELON CPS automatically and it records the result in the standard, integrated test log of the control unit.

Special feature: Identical address module for single luminaire monitoring, not only in AC systems but also in DC systems. There is no need for a BUS cable to the luminaires. Communication takes place via the supply cable.

REFERENCE: The Squaire – Frankfurt am Main





SIBELON ESPS

SYSTEM DESCRIPTION

System solutions in which emergency standby power units are used as the only standby electricity source, are always implemented if use of the building allows a transfer time of < 15 seconds (example: workplace).

This system option is named **SIBELON-ESPS**.

The central ESPS control serves as higher-level test equipment, which communicates with the autonomous ESPS substations via a BUS cable.

How it works

If a mains voltage is applied, all loads are supplied from the mains.

By monitoring the general lighting, it is ensured that in the event of a failure, the emergency lighting is switched on for the area concerned.

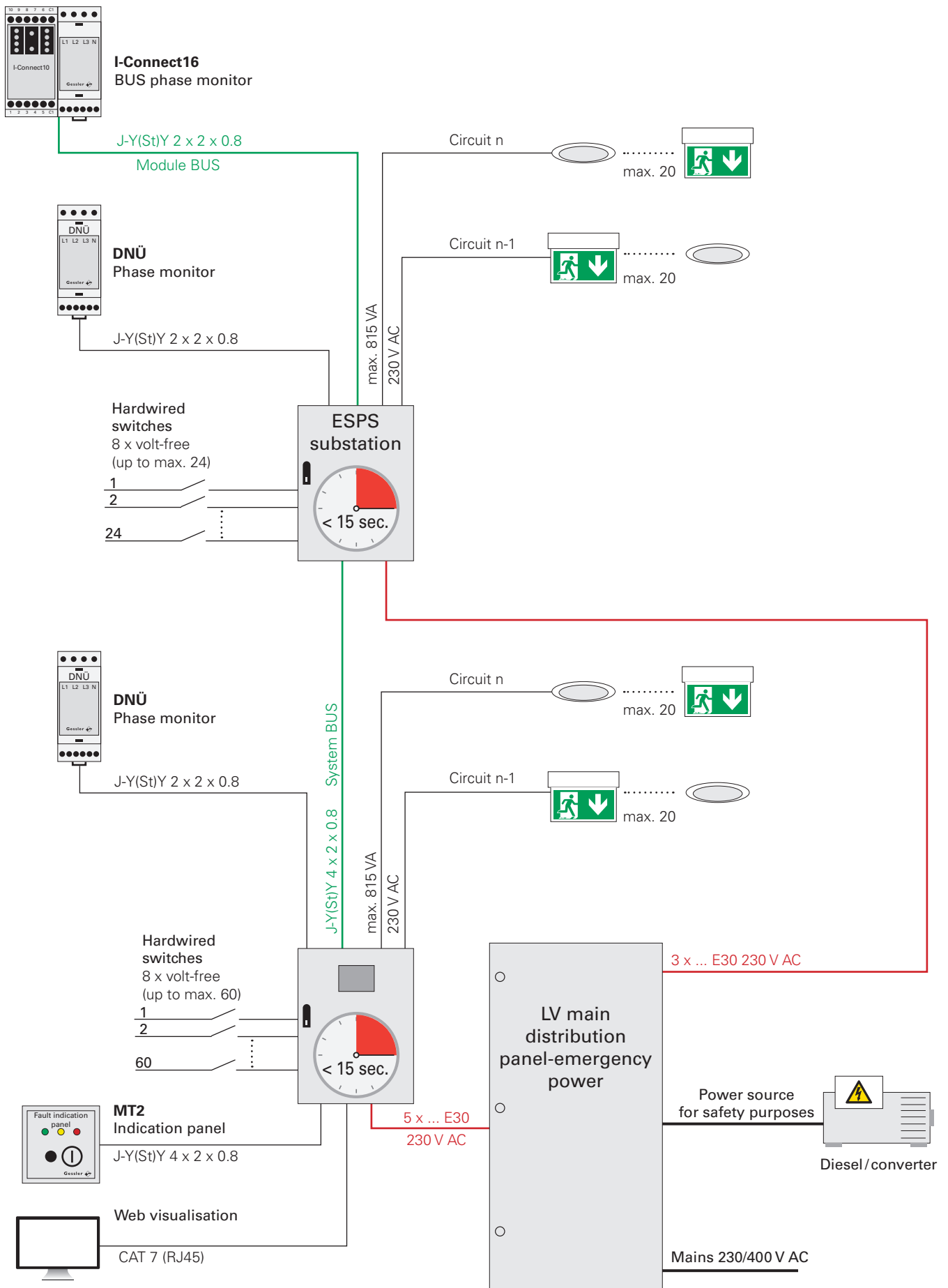
In the event of a failure or drop in mains voltage by more than 15%, the central ESPS unit and the ESPS substations switch on the exit sign and emergency luminaires automatically. In the event of a total mains failure, these loads are supplied via the now applied standby system. Return of the mains is detected by means of the mains monitor.

The luminaire test required by the standards is performed by the SIBELON ESPS automatically and it records the result in the standard, integrated test log of the control unit.

Special feature: There is no need for a BUS cable to the luminaires. Communication takes place via the supply cable.

REFERENCE: Klinikum am Gesundbrunnen – Heilbronn





SIBELON DALI

SYSTEM DESCRIPTION

A DALI light control in the general lighting is the standard in many projects. Why can't these DALI luminaires be part of the emergency lighting? We have found the right answer to this question: **SIBELON DALI**.

Gessler DALI exit sign luminaires are monitored together with DALI general lighting luminaires on site and, in emergency mode, they are supplied and controlled via the central battery system. The latter do not require an additional address module in the luminaires.

How it works

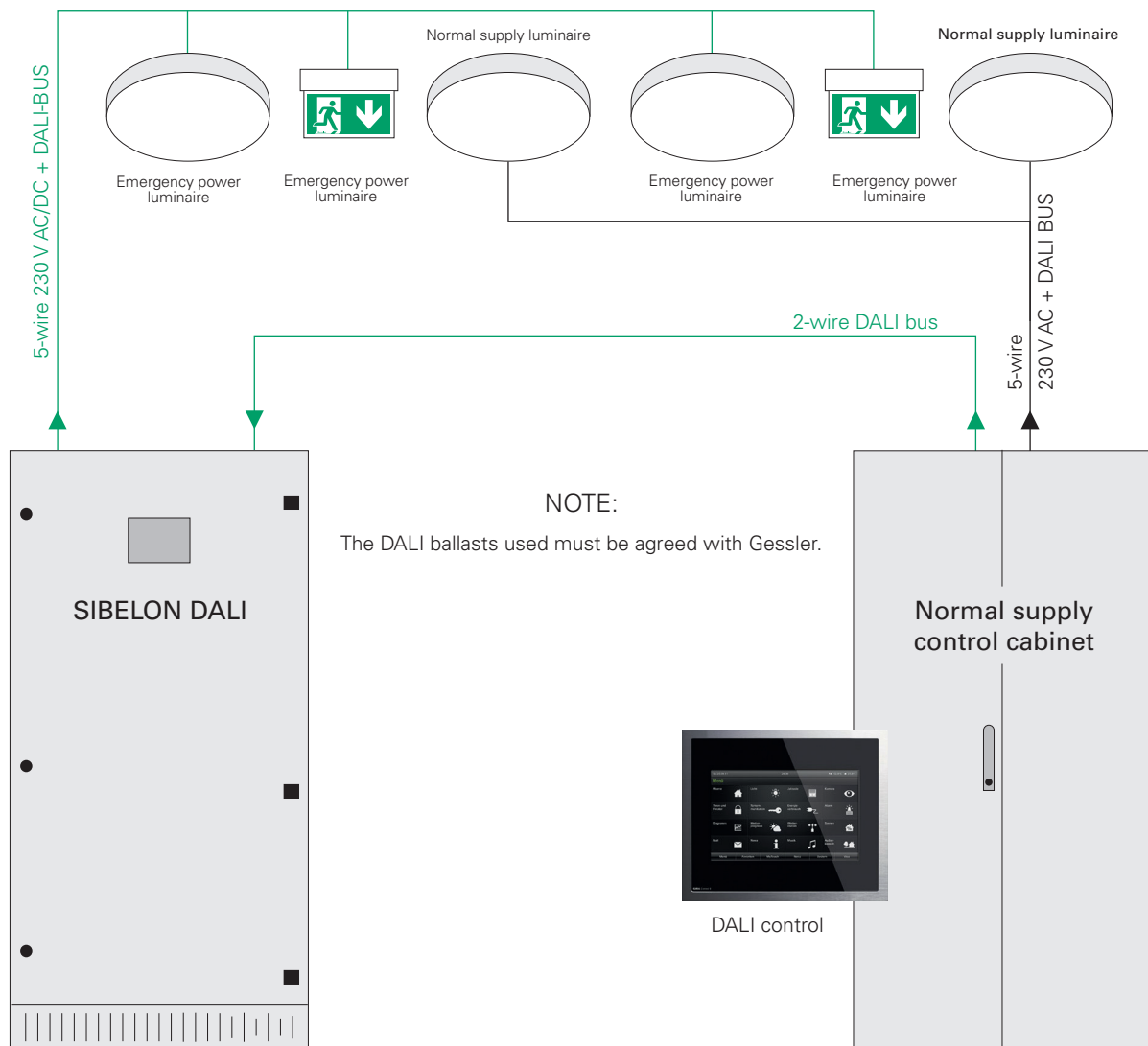
In normal mode, SIBELON DALI passes on the DALI signal of the general control directly to the connected DALI loads. The DALI luminaires additionally used as emergency luminaires can be controlled together with the DALI general lighting without limitation and without time delay. In the event of failure or a fall in the mains voltage by more than 15 %, the system switches to battery mode (DC mode) or emergency standby power mode (ESPS mode). The SIBELON DALI now controls the connected DALI exit sign and emergency luminaires, which control a pre-programmed emergency lighting level.

As soon as a returning mains voltage is detected, SIBELON-DALI switches to normal mode (all luminaires are again controlled via normal supply DALI) and charges the previously discharged battery system. After the mains returns, all DALI luminaires provided with emergency supply require an updated setpoint for the normal supply DALI control. This updated setpoint is also required after each weekly luminaire test. To this end, the central SIBELON DALI unit provides a voltage-free "Test/emergency mode" contact. The luminaire test required by the standards is performed by the SIBELON DALI automatically and it records the result in the standard, integrated test log of the control unit.

REFERENCE: European Central Bank – Frankfurt am Main



DALI BUS TOPOLOGY



NORMAL OPERATION

The DALI BUS is tunnelled via SIBELON DALI to the exit sign and emergency luminaires. The standard DALI functionalities are therefore maintained.

NORMAL OPERATION

In emergency mode, SIBELON DALI disconnects the DALI BUS and controls the Gessler DALI exit sign and emergency luminaires.

The SIBELON system is accessed via the user-friendly 7" touchscreen control unit, the I-VIEW. The graphic menu navigation for operating and programming the system is intuitive and is set up to be self-explanatory. The standard IP connection provided enables the control unit display to be transferred by means of a standard web browser on any computer with authorised access.

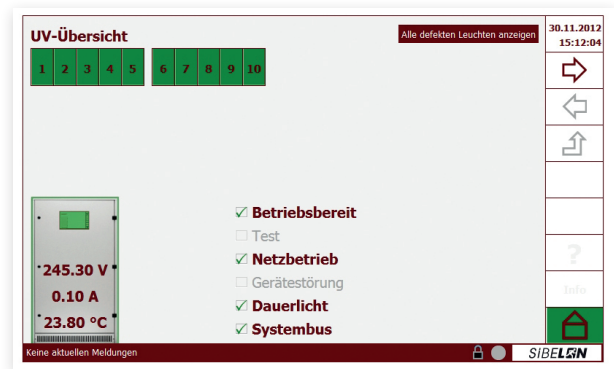
The following settings, fault messages and system data can be called up and changed directly at the I-VIEW or securely via the IT interface:

- Visual display of all system information
- Display of each circuit with details of the configuration
- Display of defective luminaires
- Continuous compilation and saving of the test log
- Display and printout of the test log
- Programming of the destination location for each luminaire
- Fault indication with detailed fault information
- System overview with free naming for all subdistribution panels and circuits (installation site)
- Remote control of the system (ON/OFF, maintained luminaires ON/OFF, test initiation, circuit calibration)
- Integrated service module for programming the system and outgoing circuits

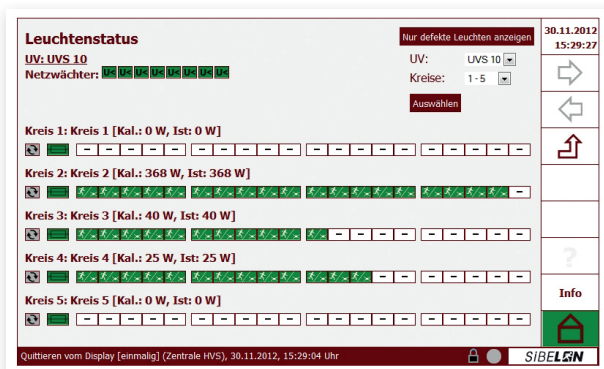
DISPLAYS



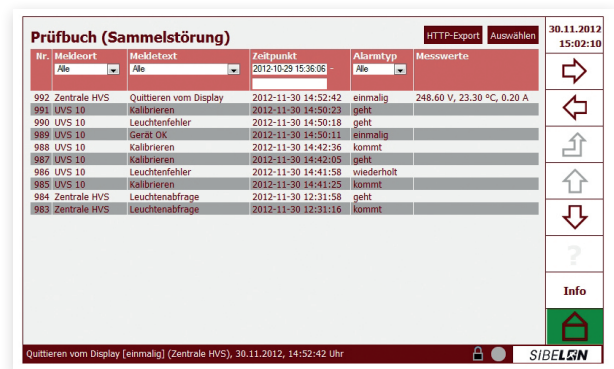
Start page, system overview



Overview of the connected substations



Overview of luminaire status



Test log display, collective faults

Higher-level visualisation of networked emergency lighting systems over the internet/intranet

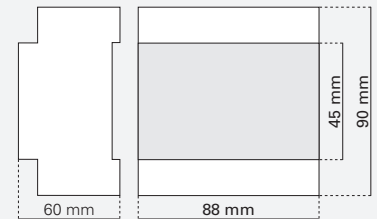
WEB-MASTER

Central visualisation via TCP-IP

The web-master manages and monitors up to 1,000 Gessler emergency lighting systems conveniently by means of central visualisation via TCP-IP. In case of a fault, if necessary, the integrated email client sends a status message. Use of the web-master only requires an up-to-date browser.



VISUALISATION	WEB-MASTER
Enclosure material	Plastic
Interface	Ethernet
Supply voltage	230 V AC/DC
Connected load (AC)	max. 20 VA
Degree of protection	IP20
Class	I
System	SIBELON + MERLIN + KV2000 + QUATTRO + NANO2 + EZ2 + POWERPACK



Top-hat rail mounting 5 HP

CENTRAL VISUALISATION

- Intuitive operation
- Live status request
- Start functional and duration test
- Read out/save test log
- Login with rights management
- Password protection



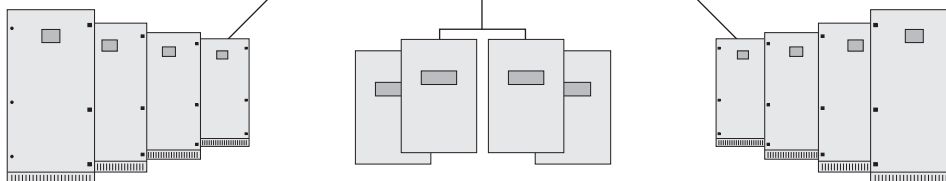
Internet/Intranet



Location: Frankfurt

Location: Mannheim

Location: Munich

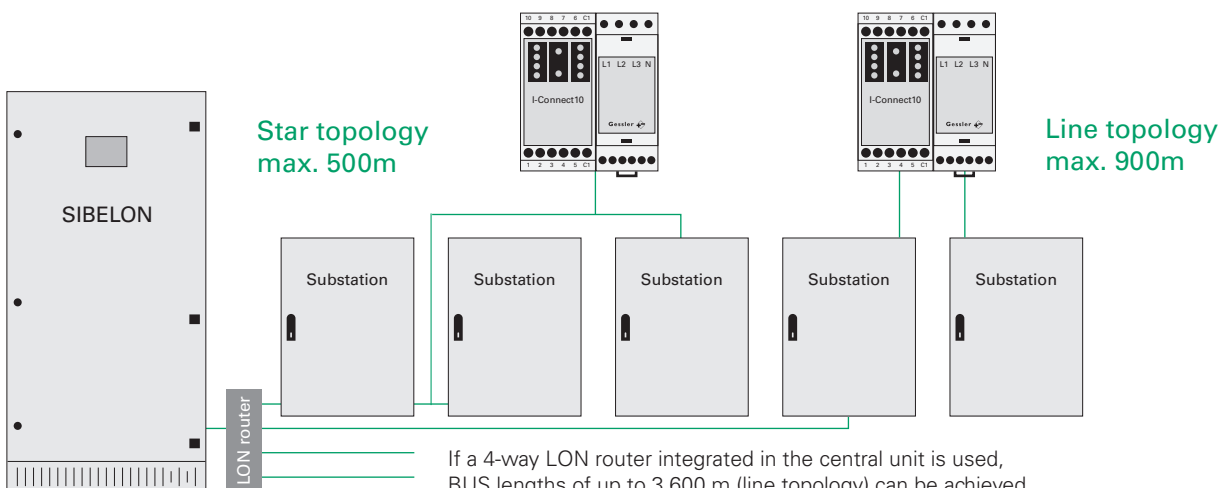
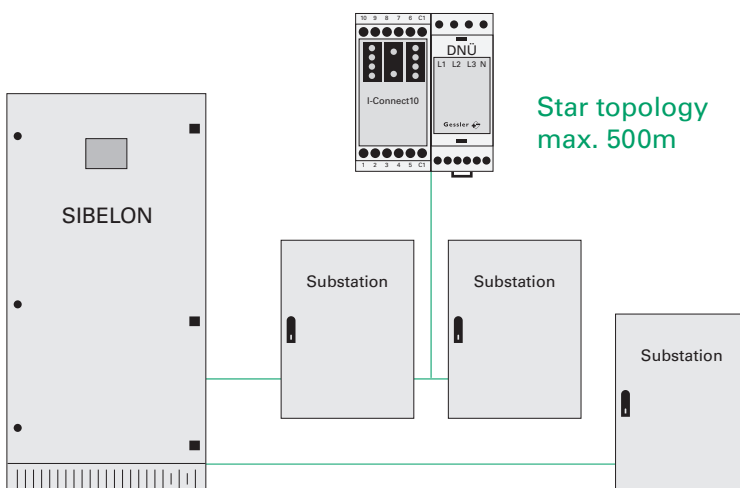
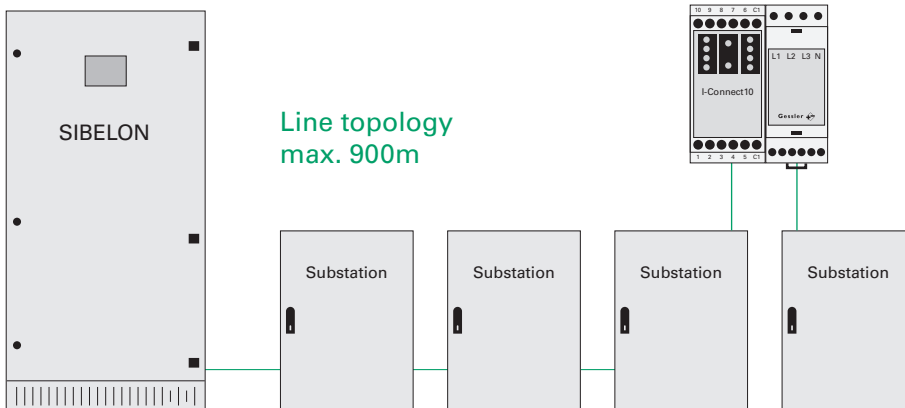


WEB-MASTER

- Manages up to 1,000 emergency lighting systems
- Integrated web server
- Integrated email client
- Grouping function (e.g. Plant I)

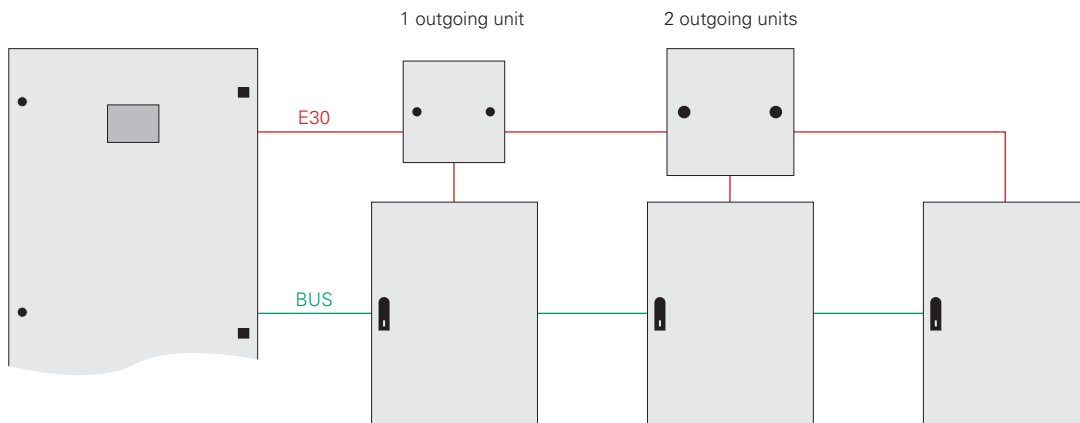
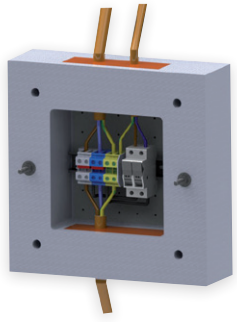
BUS CABLE LENGTHS

SIBELON



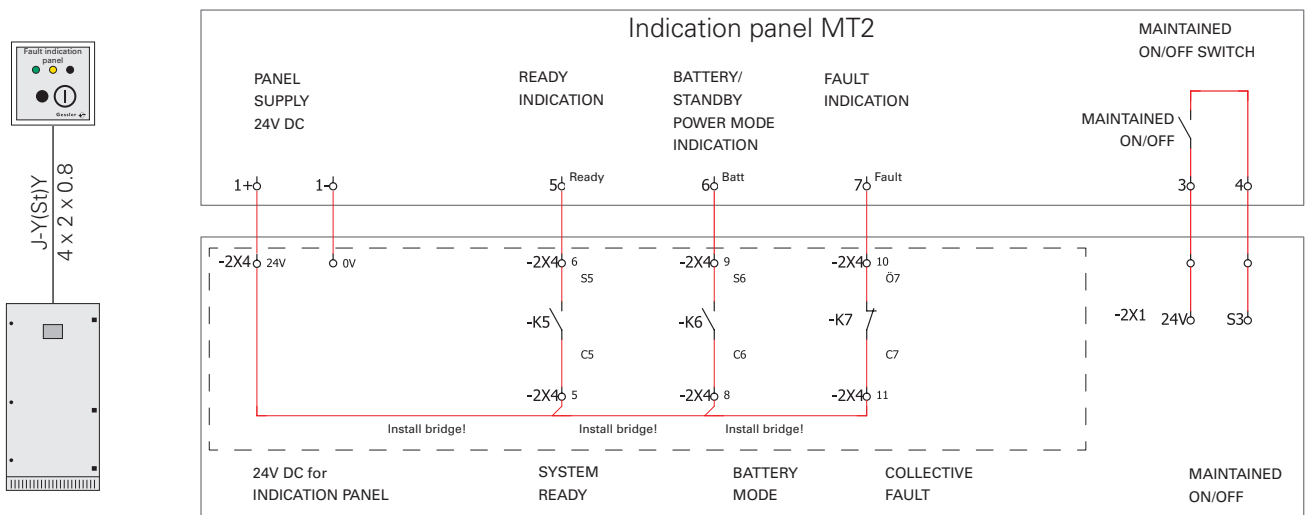
If a 4-way LON router integrated in the central unit is used, BUS lengths of up to 3,600 m (line topology) can be achieved. A maximum of 2 4-way LON routers can be integrated.

RISER JUNCTION BOX in E30



INDICATION PANEL MT2

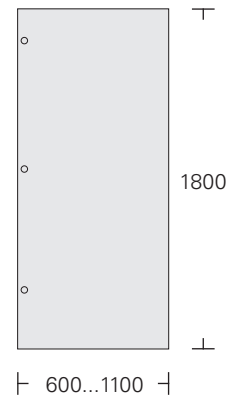
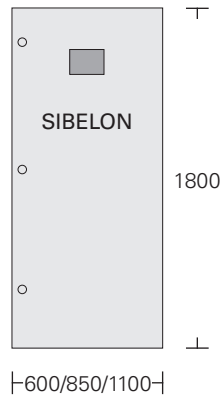
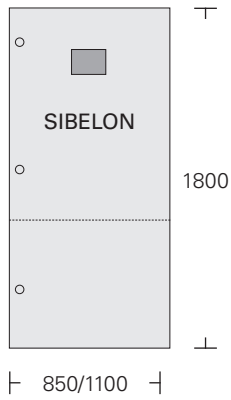
CONNECTION PLAN FOR SIBELON



DIMENSIONS

SIBELON main devices and substations

MAIN DEVICES



TECHNICAL DATA – COMBINED CABINET

Dimensions H x W x D [mm]	max. circuits (2-pole)
1800 x 850 x 600	40
1800 x 1100 x 600	60

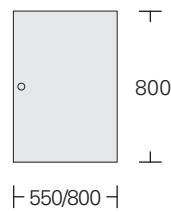
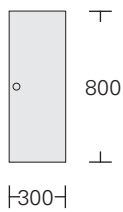
TECHNICAL DATA – EQUIPMENT CABINET

Dimensions H x W x D [mm]	max. outgoing units (2-pole)
1800 x 600 x 600	40
1800 x 850 x 600	60
1800 x 1100 x 600	80

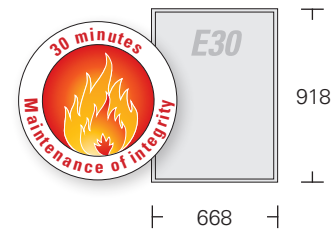
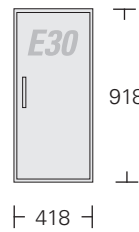
TECHNICAL DATA – BATTERY CABINET

Dimensions H x W x D [mm]
1800 x 600 x 600
1800 x 850 x 600
1800 x 950 x 600
1800 x 1100 x 600

SHEET STEEL SUBSTATIONS (E0)



SUBSTATIONS IN MAINTENANCE OF INTEGRITY (E30*)



TECHNICAL DATA – SUBSTATIONS in E0

Dimensions H x W x D [mm]	max. circuits (2-pole)	Version
800 x 300 x 161	20	Wall-mounted cabinet
800 x 550 x 161	40	Wall-mounted cabinet
800 x 800 x 161	60	Wall-mounted cabinet

Colour: RAL 9010

Degree of protection: IP44

TECHNICAL DATA – SUBSTATIONS in MAINTENANCE OF INTEGRITY

Dimensions H x W x D [mm]	max. circuits (2-pole)	Version
918 x 418 x 396	20	Wall-mounted cabinet
918 x 668 x 396	40	Wall-mounted cabinet
on request	60	Wall-mounted cabinet

Colour: RAL 7035

Degree of protection: IP42

* According to MLAR 11/2005 (Section 5.2.2), a "verification of function in case of fire" must exist. The verification for the maintenance of integrity (fire resistance) of the electrical installations is provided by a type test in combination with an approved empty enclosure.

ASSEMBLIES | MODULES SIBELON

The following assemblies and modules are compatible with SIBELON:



LB1/009

Address module for SIBELON systems



DNÜ

Phase monitor



LB1/009DD

Address module with DALI disconnection for SIBELON systems



I-CONNECT 16

BUS phase monitor for SIBELON systems



MT2

Indication panel



WEB-MASTER

High-level visualisation