LB PLUS DATA

BUSBAR TRUNKING FOR LIGHTING MANAGEMENT





BPLUS DATA

LB PLUS DATA THE NEW LIGHTING MANAGEMENT BUSBAR TRUNKING SYSTEM The management of artificial light is essential for ensuring both better comfort and energy savings, with consequent reduction of operating costs. It is with these 2 objectives in mind that LB PLUS DATA was developed, the new busbar trunking system with an internal BUS that can be used for the management of DALI or 1-10V protocol based lighting. EFFICIENT DISTRIBUTION OF POWER AND MANAGEMENT OF LIGHTING





THE ADVANTAGES OF LIGHTING MANAGEMENT IN THE COMMERCIAL SECTOR.









ENERGY SAVING

A lighting management system provides significant reduction in energy costs due to the use of artificial lighting. It is possible to reduce energy waste and automatically manage ambient lighting, taking advantage of artificial light only when necessary.

REDUCTION IN OPERATING COSTS

Operating system maintenance and management costs, as well as energy costs, are reduced significantly with an economic return on investment in the short term. Lighting management systems are among the most advantageous investments, as they pay back quickly and represent a significant gain for public and private organisations.

COMPLIANCE WITH STANDARDS

Lighting management systems ensure compliance with the EU Directives on energy efficiency for new or refurbished buildings is ensured. Consumption and operating cost reductions in line with the provisions of the Directives is not a heavy burden for the Organisation, but rather an unmissable opportunity to requalify its own structures by accessing energy efficiency classes that bring further economic value.

ENVIRONMENTAL SUSTAINABILITY

With the reduction of energy consumption, there is also an important reduction in the emission of polluting gases in the atmosphere, particularly CO₂, which is responsible for global warming. Renewable energy sources are not the only means for reaching environmental sustainability objectives: the starting point is certainly the reduction of existing consumptions, which is definitely possible when lighting management systems are implemented!

the NEW smart busbar trunking

THE SAME PERFORMANCE AND ACCESSORIES

LB PLUS DATA has the same electrical and mechanical features as the standard range. It can distribute rated currents from 25 to 63A, and uses the same installation accessories as LB PLUS.

The difference with this new busbar trunking is the presence of two specific conductors, which can be used as a lighting management BUS.

LB PLUS DATA

FLEXIBILITY MEANS SAFETY

Reconfiguring a system using the LB PLUS DATA solution is easy, quick and safe. The construction characteristics ensure that whenever it is necessary to combine energy distribution with lighting management, LB PLUS DATA is the optimum solution.

NEW DEDICATED PLUGS

LB PLUS DATA has new tap-off plugs for drawing energy and for the connection of the BUS. With these new plugs, power and data can be accessed with one combined tap-off.







MAXIMUM FLEXIBILITY OF USE

The certified protocols that can be used with LB PLUS DATA are the DALI and the 1-10V protocols.

FULLY ADDRESSABLE DALI

All the lamps are connected to the same output of the DALI gateway and can be managed independently. It is also possible to manage all the lamps in the same way (ON, OFF, dimmed), and create independent sub-groups. The main advantage is the extreme versatility, and the configuration flexibility. This solution is suitable for offices, shopping centres with shops and display areas, supermarket corridors, and in those cases with specific lighting management and reconfiguration flexibility requirements.

BROADCAST DALI

All the lamps connected to the same DALI interface output are controlled in the same way (ON, OFF, dimmed). This does not allow single ballasts to be managed separately, and wiring groups with simplified configuration may be created. The system feedback functions are, however, maintained. This solution is suitable for installation in warehouses, or systems with corridors that do not need the management of lamp sub-groups or individual ballasts.

1-10V

This technology gives the possibility of adjusting lighting devices and dimmers using an analogue voltage signal between 1V, the minimum light level, and 10V, the maximum light level. The switching on and off of the devices is performed by adjusting the feed unit. All the lamps connected to the same 1-10V dimmer output are managed in the same way; it is not possible to have sub-groups, or to manage ballasts independently. This solution is suitable for installation in warehouses, or systems with corridors that do not need the management of lamp sub-groups or individual ballasts.

DALI is a uniform standard shared by the whole lighting sector, which defines a type of interface for digital communication between control modules and electronic feed units. Included in the EN 60929 standards, it ensures interchangeability of electronic feed units from different manufacturers. For further information on the DALI protocol visit the following website: www.dali-ag.org



the SAVINGS achievable with LB PLUS Example of Installation

Below is an example of a practical application of LB PLUS DATA, with indications of the possible savings. The area of reference is a galvanic treatment area which is part of a plant of approximately 400 sqm, with skylights fitted on the roof.



MAIN DESIGN DATA

- Lighting system: 3 rows of 18 lamps each. Each row is made up of 2 fluorescent tubes 80W each. Total installed power: 6.3 KW.
- Control system: lamps controlled by DALI ballast and connected in groups of 9 to the KNX/DALI interface, for a total of 6 groups of 9 lamps each, and each of them is connected to a different interface output.
- **Type of management**: DALI broadcast: each of the 9 lamps in each group is fully automatically controlled on the basis of movement detection and the contribution of natural light detected by the KNX sensors.

MAIN OPERATING DATA

- Working days per year: 240
- Operating hours per day: 16 (in two shifts)
- Operations carried out: Line load: twice a day; the whole line is illuminated for approximately 2h Line unload: four times a day; the unloading line is illuminated for approximately 0.5h
 - Production: the whole line is off



EXAMPLE OF INSTALLATION DIAGRAM



KNX BUS

The DALI BUS is integrated in the LB PLUS DATA busbar trunking, while the KNX BUS is outside the busbar trunking. The lamps receive the feed unit and the DALI signal through the dedicated tap-off plug.

All the other KNX devices are connected directly to the KNX BUS, and are installed on the board, or wherever necessary around the department.

The data on energy consumption and savings that can be obtained is valid for the installation example, using the same number and the same size loads, with the type of control described, and complying with the types and times of operation described.

| TYPE OF CONTROL SOLUTION | TOTAL ELECTRICITY CONSUMED IN ONE YEAR (KWH/Y) | TOTAL ELECTRICITY SAVINGS IN ONE YEAR |
|---|---|--|
| LB PLUS without control | 19,043 | - |
| LB PLUS DATA with broadcast KNX/DALI control | 8,268 | 57% |

By further refining the management possibilities, the implementation of a fully addressable DALI control solution **makes it** possible to further maximise savings, reaching up to 61%.

For the details of the project contact your representative.



LB PLUS DATA In= 25-40-63 A





75221261D

| ltem | STRAIGHT LENGTHS WITH BUS | | | | | |
|-----------|---------------------------|----------|------------|------------|---------|-------------|
| | Туре | In (A) | Length (m) | Conductors | Outlets | Weight (kg) |
| 75160102D | | | | <u>،</u> | 4 | 3.2 |
| 75160104D | LEDZ22 | | | 2 | 3 | 3.05 |
| 75170102D | | 25 | 3 4 6 | | 4+4 | 3.2 |
| 75170104D | LBD254 | | | 4 | 3+3 | 3.86 |
| 75180102D | 100254 | | | 4+4 | 3.85 | |
| 75180104D | LBD256 | | | 6 | 3+3 | 3.86 |
| 75200102D | LBD402 | | 3 | 2 | 4 | 3.65 |
| 75200104D | | | | | 3 | 3.63 |
| 75200111D | | 40 | 1.5 | | | 2 |
| 75220102D | | 40 | 2 | | 4+4 | 4.8 |
| 75220104D | LBD406 | | 3 | 6 | 3+3 | 4.78 |
| 75220111D | | | 1.5 | | 1+1 | 2.5 |
| 75240102D | 100(22 | () | 3 | 2 | 4+2 | 4.8 |
| 75240111D | LRD035 | BD632 63 | 1.5 | 2 | 1+1 | 2.5 |

| ltem | FLEXIBLE JOINTS | |
|-----------|-----------------------------|-------------|
| | | Weight (kg) |
| 75201261D | 25/40 A 4-conductor version | 2.25 |
| 75221261D | 25/40 A 8-conductor version | 2.35 |
| 75241261D | 63 A 4-conductor version | 2.45 |



Item FEED UNITS

Feed units can send both electricity and DATA signals through the LB PLUS cable line, they have clamps for connection to rigid or flexible copper cable with tag terminal. The end cap feed unit already includes its own closures (right feed unit + right closure, left feed unit + left closure). The centre feed unit gives the possibility of powering the busbar from the middle of the line, reducing voltage drops at the end of the line, and/or making installation easier when the electricity supply point is near the centre of the line.

| | In (A) | Conductors | Description | Weight (kg) |
|-----------|--------|------------|-----------------------------|-------------|
| 75161001D | 25 | 4 | RH feed unit + RH end cover | 0.45 |
| 75201001D | | | RH feed unit + RH end cover | 0.85 |
| 75201002D | | 4 | LH feed unit + LH end cover | 1.2 |
| 75201151D | 10 | | centre feed unit* | 4.0 |
| 75221001D | 40 | | RH feed unit + RH end cover | 0.9 |
| 75221002D | | 8 | LH feed unit + LH end cover | 1.2 |
| 75221151D | | | centre feed unit* | 4.15 |
| 75241001D | | | RH feed unit + RH end cover | 0.9 |
| 75241002D | 63 | 4 | LH feed unit + LH end cover | 1.2 |
| 75241151D | | | centre feed unit* | 4.25 |





75005014D

75005008D

| ltem | POWER AND DATA TAP-OFF PLUGS | | |
|-------------|---|-------------|--|
| | | Weight (kg) | |
| 75005005D | 16 A plug with DATA BUS - cable 1 m L1-N H05VVF | 0.16 | |
| 75005006D | 16 A plug with DATA BUS - cable 1 m L1-N FG7OM1 | 0.16 | |
| 75005007D | 16 A plug with phase selection and DATA BUS - cable 1 m H05VVF | 0.16 | |
| 75005008D | 16 A plug with phase selection and DATA BUS - cable 1 m FG7OM1 | | |
| | TAP-OFF PLUGS WITH DATA BUS ONLY | | |
| | | Weight (kg) | |
| 75005014D | 10 A plug DATA BUS only - cable 1 m D1-D2 H05VVF | 0.14 | |
| 75005064D 📒 | 10 A plug DATA BUS only - cable 1 m D1-D2 FG7OM1 | U.16 | |

* Centre feed units are supplied with both end caps (left and right).

Finishes: LB PLUS DATA in a painted version is available on request

Red codes: new items



LB PLUS DATA Standard tap-off plugs (power only)



| | | Weight (kg) |
|----------|--------------------------------------|-------------|
| 75005011 | 10 A plug with 1 m cable L1-N H05VVF | |
| 75005012 | 10 A plug with 1 m cable L2-N H05VVF | 0.16 |
| 75005013 | 10 A plug with 1 m cable L3-N H05VVF | 0.10 |
| 75005014 | 10 A plug with 1 m cable L-N2 H05VVF | |
| 75005021 | 10 A plug with 3 m cable L1-N H05VVF | |
| 75005022 | 10 A plug with 3 m cable L2-N H05VVF | |
| 75005023 | 10 A plug with 3 m cable L3-N H05VVF | 0.56 |
| 75005024 | 10 A plug with 3 m cable L-N2 H05VVF | |
| 75005061 | 10 A plug with 1 m cable L1-N FG70M1 | |
| 75005062 | 10 A plug with 1 m cable L2-N FG70M1 | 0.2 |
| 75005063 | 10 A plug with 1 m cable L3-N FG70M1 | 0.2 |
| 75005064 | 10 A plug with 1 m cable L-N2 FG70M1 | |
| 75005071 | 10 A plug with 3 m cable L1-N FG70M1 | |
| 75005072 | 10 A plug with 3 m cable L2-N FG70M1 | 0.19 |
| 75005073 | 10 A plug with 3 m cable L3-N FG70M1 | 0.40 |
| 75005074 | 10 A plug with 3 m cable L-N2 FG70M1 | |

PHASE SELECTION TAP-OFF PLUGS

| | | Weight (kg) |
|-----------|---|-------------|
| 75005000 | 16 A phase selection plug | 0.12 |
| 75005100 | 16 A plug + 1x(5x20-6.3 A) - phase selection fuse included | 0.13 |
| 75005200* | 16 A plug + 1x(CH8) - phase selection | 0.13 |
| 75005220* | 16 A plug + 1x(CH8) - phase selection + CABLE 3 m H05VVF | 0.64 |
| 75005270* | 16 A plug + 1x(CH8) - phase selection + CABLE 3 m FG70M1 | 0.68 |

THREE-PHASE TAP-OFF PLUGS

| | | Weight (kg) |
|-----------|--|-------------|
| 75005005 | 16 A plug | 0.13 |
| 75007005 | 25 A three-phase plug | 0.12 |
| 75007205* | 25 A three-phase plug with fuse CH8 | 0.12 |
| 75007206* | 25 A three-phase plug + fuse CH8 + 4 Din Tap-off | 0.63 |
| 75007207 | 25 A three-phase plug with 8 Din Tap-off | 0.80 |
| 75007006 | 25 A three-phase plug with 4 Din Tap-off | 0.63 |
| | | |

| | ACCESSORIES |
|----------|---|
| 75105000 | 16 A mobile contact |
| 75105001 | kit for the plug coding (it consists of 10 black codes for right side plugs and 10 grey codes for left side plugs and identification stickers). |

Item 75005000 associated to 2 mobile contacts (75105000) gives the possibility of installing a three-phase plug (75005005).

*Fuses not supplied

Brackets and accessories







75003006





Weight (kg)

71000104

RRACK

Item

| BRACKETS |
|----------|
| |

| | | weight (kg) |
|----------|---|-------------|
| 75003000 | suspension bracket 60 kg (type A) | 0.045 |
| 75003004 | suspension bracket 60 kg (type B) | 0.045 |
| 75003001 | hook for lamp | 0.015 |
| 75003002 | ring | 0.015 |
| 75003005 | Pigtail for chain | 0.015 |
| 75003008 | 5 m steel cable with self locking clamp | 0.085 |
| 75003009 | bracket with 3 m steel cable | 0.05 |
| | | |

CABLE CHANNEL FOR ADDITIONAL DATA CABLE

| | | Weight (kg) |
|----------|--------------------------------------|-------------|
| 71000104 | PVC cable channel with cover (3 m) | 0.884 |
| 755001 | Cablofil steel wire cable tray (3 m) | 1.5 |
| 75003006 | bracket for cable channel | 0.135 |

Codes **75003001-2-5** must always be used with brackets **75003000** or **75003004**, depending on the type of busbar.

Item **75003006** must always be used with brackets **75003000** or **75003004** and cable channel **71000104**.

Bracket **75003000** can be used for the suspension of the line and the suspension of lighting bodies at the same time, while bracket **75003004** may only perform one of the two functions at customer's discretion, depending on its rotation.

Red codes: new items



QUICK SELECTION TABLE

| | R side L side | R side L side | | | | | | |
|--|---------------|---------------|---------------|---------------|-----------------------|-----------------------|--|--|--|--|--|--|
| | • * | n 🔸 | N • • N | N • N | * • • * | N • N | | | | | | |
| | • 0+ | 13 • • D= | D* | • = | 13 • • D+ | • 8- | | | | | | |
| | • • • | 12 • • p- | | L1 0 L1 | | L1 0 L1 | | | | | | |
| | | | | | | 622 L DATA | | | | | | |
| STRAIGHT LENGTHS TYPE A WITH BUS | 232 + DAIA | 234 - DAIA | 250 + DAIA | 402 T DAIA | 400 - DAIA | 032 + DAIA | | | | | | |
| 3m length - 4 outlets (4+4 and 4+2 outlets) | 75160102D | 75170102D | 75180102D | 75200102D | 75220102D | 75240102D | | | | | | |
| 3m length - 3 outlets (3+3 outlets) | 75160104D | 75170104D | 75180104D | 75200104D | 75220104D | | | | | | | |
| 1.5m length - 1 outlets | 75200111D | 75220111D | 75220111D | 75200111D | 75220111D | 75240111D | | | | | | |
| | | 1 | | | | | | | | | | |
| FEED UNITS FOR POWER AND DATA BUS | | | | | | | | | | | | |
| RH feed unit + RH end cover | 75161001D | 75221001D | 75221001D | 75201001D | 75221001D | 75241001D | | | | | | |
| LH feed unit + LH end cover | 75201002D | 75221002D | 75221002D | 75201002D | 75221002D | 75241002D | | | | | | |
| Centre feed unit | 75201151D | 75221151D | 75221151D | 75201151D | 75221151D | 75241151D | | | | | | |
| | | | | | | | | | | | | |
| FLEXIBLE ELEMENTS FOR PATH CHANGE | | - | | | | | | | | | | |
| Flexible joint | 75201261D | 75221261D | 75221261D | 75201261D | 75221261D | 75241261D | | | | | | |
| | | | | | | | | | | | | |
| POWER AND DATA TAP-OFF PLUGS | | | | | | | | | | | | |
| L1-N + DATA 16A plug with 1m cable 5G1.5 (H05VVF) | 75005005D | | | 75005 | 5005D | | | | | | | |
| L1-N + DATA 16A plug with 1m cable 5G1.5 (FG7OM1) | 75005006D | | | 75005 | 5006D | | | | | | | |
| Phase selection plug + DATA 16A plug with 1m cable | | 7500 | 5007D | | 75005007D | | | | | | | |
| 5G1.5 (H05VVF) | | | | | | | | | | | | |
| Phase selection plug + DATA 16A plug with 1m cable | | 7500 | 5008D | | 75005008D | | | | | | | |
| 5G1.5 (FG70M1) | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| IAP-OFF PLUGS ONLY DAIA | 1 | | | | | | | | | | | |
| "DATA only" plug with 1m cable D1-D2 (H05VVF) | | | 7500 | 5014D | | | | | | | | |
| "DATA only" plug with 1m cable D1-D2 (FG7OM1) | | | 7500 | 5064D | | | | | | | | |
| | | | | | | | | | | | | |
| BRACKETS | | | | | | | | | | | | |
| Suspension bracket 60 kg (LB PLUS - TYPE A) | | | 7500 | 03000 | | | | | | | | |
| Hook for lamp | | | 7500 | 03001 | | | | | | | | |

| Hook for lamp | 75003001 |
|--|----------|
| Ring | 75003002 |
| Pigtail for chain | 75003005 |
| Bracket for cable channel | 75003006 |
| 5m steel cable with self locking clamp | 75003008 |
| Bracket with 3m steel cable | 75003009 |

GENERAL FEATURES

| In compliance with the standards | IEC 61439-6, CEI EN 61439-6 |
|----------------------------------|--|
| Protection index | IP55 |
| Impact resistance | IK07 |
| Rated current | IN 25-40-63 A |
| STRAIGHT LENGTHS | |
| Material LB PLUS - TYPE A | Rigid casing (35 x 46 mm) thickness 0.5 mm |
| Mounting | Quick-coupling * |
| FEED UNITS | |
| Loads | In 25-40-63 A |
| TAP-OFF PLUGS | |
| Material | Self extinguishing plastic: (IEC 60695-2-12) glow wire test and V0 according to UL94 |
| Loads | In 10-16-25 A |

* with addition of screw torque

L¹ legrand[®]

TECHNICAL DATA

| LB PLUS DATA | | | | | | | | | |
|--|--|---------------------------------------|----------|-------------|-------------|-----------|-----------|-----------|--|
| | | | 252 DATA | 254 DATA | 256 DATA | 402 DATA | 406 DATA | 632 DATA | |
| Number of live conductors | | | 2+2 DATA | 4+2 DATA | 6+2 DATA | 2+2 DATA | 6+2 DATA | 2+2 DATA | |
| Overall dimension of the busbar | LxH | [mm] | 35x46,3 | 35x46,3 | 35x46,3 | 35,2x77,5 | 35,2x77,5 | 35,2x46,3 | |
| Rated current | ln | [A] | 25 | 25 | 25 | 40 | 40 | 63 | |
| Operational voltage | Ue | [V] | 400 | 400 | 400 | 400 | 400 | 400 | |
| Insulational voltage | Ui | [V] | 500 | 500 | 500 | 500 | 500 | 500 | |
| Frequency | f | [Hz] | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | |
| Rated short-time current (0.1 s) | I _{cw} | [kArms] | 2,2 | 2,2 | 2,2 | 2,7 | 2,7 | 2,7 | |
| Singlephase Peak current | lpk | [kA] | 4,4 | 4,4 | 4,4 | 5,4 | 5,4 | 5,4 | |
| Thermal limit | l²t | [A ² s x 10 ⁶] | 0,484 | 0,484 | 0,484 | 0,729 | 0,729 | 0,729 | |
| Phase resistance (20 °C) | R ₂₀ | $[m\Omega/m]$ | 4,761 | 4,761 4,761 | 4,761 | 3,190 | 3,190 | 1,595 | |
| Phase resistance at thermal conditions | R _t | [mΩ/m] | 5,656 | 5,656 | 5,656 | 3,802 | 3,802 | 1,901 | |
| Phase reactance (50 Hz) | Х | [mΩ/m] | 0,229 | 0,229 0,229 | 0,229 | 0,236 | 0,236 | 0,118 | |
| Phase impedance | Z | $[m\Omega/m]$ | 4,767 | 4,767 | 4,767 4,767 | | 3,199 | 1,599 | |
| Resistance of protective conductor (sheet) | R _{PE'} | $[m\Omega/m]$ | 1,695 | 1,695 | 1,695 | 1,695 | 1,695 | 1,695 | |
| Reactance of the protective bar (50 Hz) | X _{PE} | [mΩ/m] | 0,222 | 0,222 | 0,222 | 0,222 | 0,222 | 0,222 | |
| Resistance of the fault loop | R | [mΩ/m] | 6,456 | 6,456 | 6,456 | 4,885 | 4,885 | 3,290 | |
| Reactance of the fault loop (50 Hz) | X _° | $[m\Omega/m]$ | 0,451 | 0,451 | 0,451 | 0,458 | 0,458 | 0,340 | |
| Impedance of the fault loop | Z _o | [mΩ/m] | 6,472 | 6,472 | 6,472 | 4,906 | 4,906 | 3,308 | |
| Voltage drop with distribuited load | $\Delta V 10^{-6} \cos \varphi = 0.7$ | [V/m/A] | 3,03 | 3,03 | 3,03 | 2,08 | 2,08 | 1,04 | |
| | $\Delta V 10^{-6} \cos \varphi = 0.75$ | [V/m/A] | 3,22 | 3,22 | 3,22 | 2,21 | 2,21 | 1,10 | |
| | $\Delta V 10^{-6} \cos \varphi = 0.8$ | [V/m/A] | 3,42 | 3,42 | 3,42 | 2,33 | 2,33 | 1,17 | |
| | $\Delta V 10^{-6} \cos \varphi = 0.85$ | [V/m/A] | 3,61 | 3,61 | 3,61 | 2,46 | 2,46 | 1,23 | |
| | ΔV 10 ⁻⁶ cosφ = 0.9 | [V/m/A] | 3,80 | 3,80 | 3,80 | 2,58 | 2,58 | 1,29 | |
| | $\Delta V 10^{-6} \cos \varphi = 0.95$ | [V/m/A] | 3,98 | 3,98 | 3,98 | 2,69 | 2,69 | 1,34 | |
| | $\Delta V 10^{-6} \cos \varphi = 1$ | [V/m/A] | 4,12 | 4,12 | 4,12 | 2,76 | 2,76 | 1,38 | |
| Weight | р | [kg/m] | 1,04 | 1,25 | 1,28 | 1,19 | 1,56 | 1,56 | |
| Fire load | | [kWh/m] | 1,03 | 1,91 | 1,91 | 1,0 | 1,9 | 1,9 | |
| Degree of protection | IP | | 55 | 55 | 55 | 55 | 55 | 55 | |
| Degree of impact resistance | IK | | 07 | 07 | 07 | 07 | 07 | 07 | |
| Losses for the Joule effect at nominal current | Р | [W/m] | 10,6 | 10,6 | 10,6 | 18,2 | 18,2 | 22,6 | |
| Ambient temperature min./MAX. | t [°C] | -5/+50 | -5/+50 | -5/+50 | -5/+50 | -5/+50 | -5/+50 | -5/+50 | |

$$\Delta V1F = \frac{1}{2} (2 R_{20} \cos\varphi + 2 X \sin\varphi) \qquad \Delta V3F = \sqrt{\frac{3}{2}} (R_{20} \cos\varphi + X \sin\varphi)$$

Protection from short circuit (In \leq 100 A).

Zucchini busbar trunking systems with a rated current lower than or equal to 100 A (LB PLUS - MS 63 e 100) are properly protected through an MCB (Modular Circuit Breaker) with a rated current lower than or equal to that of the busbar. This protection is guaranteed up to the MCB breaking capacity.

Product fully in compliance with the standard: IEC 61439-6, CEI EN 61439-6

* metal casing

Temperature rating schedule according to the room temperature

| Room temperature [°C] | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
|-------------------------|------|------|------|------|-------|----|-------|------|------|------|
| K1 factor | 1.15 | 1.12 | 1.08 | 1.05 | 1.025 | 1 | 0.975 | 0.95 | 0.93 | 0.89 |

Multiplier coefficient of rated current for room temperature values different from 40° C

Mechanical loads permitted table

The table shows the maximum weights (kg) that can be supported, both for concentrated, and distributed loads.

| | Distance between suspension brackets | Concentrated load | Distributed load |
|--------------|---|-------------------|-------------------|
| LB PLUS DATA | 1.5 m | 40 kg | 50 kg/m (75 kg)** |
| | 2 m | 30 kg | 30 kg/m (60 kg)** |
| | 3 m | 20 kg | 13 kg/m (39 kg)** |

** Distributed load total weight



DIMENSIONAL DATA



LB PLUS DATA Lighting Management KNX





0 488 64

| ltem | MODULAR AND WIRE CABLE TRAY DIMMERS |
|-----------|---|
| 0 026 35 | KNX/DALI Gateway for the control of DALI ballasts, with a maximum load of 64 ballasts per output. Ballasts can be managed in different ways (individually, in groups, or all in the same way). The gateway also gives the possibility of receiving status information on ballast and DALI bus faults. Bus connection using a red-black KNX connector. Feed unit voltage 110 - 240 V 50-60 HZ, and additional feed unit from KNX bus. Fitting on DIN rail, size: 6 DIN modules |
| 0 026 63* | KNX/DALI interface with 8 independent channels, each capable of managing up to 8 ballasts. Each ballast connected to a certain channel is managed in the same way. Bus connection using a red-black KNX connector. Feed unit voltage 110 - 240 V 50-60 HZ. Fitting on DIN rail, size: 4 DIN modules |
| 0 488 64 | KNX/DALI Room Controller. With 4 independent outputs, each capable of controlling up to 32 ballasts, 1 SCS bus input with maximum delivery 200 mA for the connection of SCS commands and sensors, and one riser KNX input with clamp connection. Bus connection using a red-black KNX connector. Feed unit voltage 100/240 Vac 50/60 Hz. False ceiling installation. |
| 0 488 66 | KNX/DALI Room Controller. Bus connection using a red-black KNX connector. Feed unit voltage 100/240 Vac 50/60 Hz. False ceiling installation. |
| 0 488 62 | KNX 1-10V Room Controller. With 4 independent outputs, each with maximum load 4.3A at 230Vac, 1 SCS bus input with maximum delivery 200 mA, for the connection of SCS commands and sensors, and one riser KNX input with clamp connection. Bus connection using a red-black KNX connector. Feed unit voltage 100/240 Vac 50/60 Hz. False ceiling installation. |





0 489 21

0 489 19

| ltem | SENSORS |
|-----------|--|
| 0 489 19* | Ceiling mounted KNX PIR sensor, IP20 protection index. Ideal for installation in the centre of the corridor KNX bus connection using a red-black KNX connector. SELV 29 Vdc feed unit voltage from KNX bus.support and Livinglight cover plate. Flush mounted false ceiling or masonry ceiling installation using flush mounting boxes or springs; ceiling mounted installation using accessory ref.048875 |
| 0 489 21* | Wall mounted KNX PIR sensor, IP55 protection index. Ideal for installation in open transit areas (e.g. car parks). Bus connection using a red-black KNX connector. SELV 29 Vdc feed unit voltage from KNX bus.support and Livinglight cover plate. Wall mounted or ceiling installation. |





0 484 21

0 784 89

0 784 94

| tem | CONTROL DEVICES |
|------------------------|--|
| | Directly connected to the KNX Bus (supplied with KNX connector) Programming through ETS software For lighting control (ON/OFF, dim, scenario, etc.), shutters and slats control, automation control Equipped with 4 programmable Red Green Blue LEDs (12 colours available) to indicate the status of the loads and provide system and alarm status feedback |
| | KNX control units - Mosaictm Programme To be equipped with support frames and plates |
| 0 784 89* 0 784 95* | 1 pushbutton 1 actuation point 2 actuation points |
| 0 784 94* 0 784 96* | 2 pushbuttons 2 actuation points 4 actuation points |
| | KNX control units - Arteor To be equipped with cover plates, support frames and plates |
| 0 675 71* | 1 or 2 pushbuttons 4 actuation points |
| 0 484 20* | 2 channel KNX contact interface. It can be used for the interfacing of traditional electromechanical KNX bus controls. The 2 channels are fitted with LEDs and can be configured as inputs or outputs (status return). KNX bus connection using a red-black KNX connector. Feed unit voltage 100/240 Vac 50/60 Hz. Installation in flush-mounted box. |
| 0 484 21* | 4 channel KNX contact interface. It can be used for the interfacing of traditional electromechanical KNX bus controls. The 4 channels are fitted with LEDs and can be configured as inputs or outputs (status return). KNX bus connection using a red-black KNX connector. Feed unit voltage 100/240 Vac 50/60 Hz. Installation in flush-mounted box |
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LB PLUS DATA Lighting Management KNX





0 035 04

| ltem | INFRASTRUCTURE DEVICES |
|------------|--|
| 0 035 12 | KNX modular feed unit Bus connection using a red-black KNX connector. Input voltage: 230V +10%15%, 5060 Hz. Output voltage: 29V ±1V d.c. SELV. Output current: 320 mA . Fitting on DIN rail, size: 4 DIN modules |
| 0 035 04 * | KNX modular feed unit Bus connection using a red-black KNX connector. Input voltage: 230V +10%15%, 5060 Hz. Output voltage: 29V ±1V d.c. SELV. Output current: 640 mA . Fitting on DIN rail, size: 4 DIN modules |
| 0 035 16 | KNX coupler, to be used for data exchange between two KNX lines. It may be used as: - line coupler (to couple one line to a main line) - backbone coupler (to couple a main line to the backbone line) - repeater (to couple two segments of the same line) Connection to the bus using a red-black KNX connector. SELV 29 Vdc feed unit voltage from KNX bus.support and Livinglight cover plate. Fitting on DIN rail, size: 2 DIN modules |
| 003547 | KNX/USB opto-insulated interface for the connection of a PC for the addressing, parameter definition, logging display, and diagnostics of KNX systems. Fitted with type B USB connector. USB 1.1 transmission (max. 12 Mbit/s). Bus connection using a red-black KNX connector. Direct feed unit from the BUS line through USB connection. Fitting on DIN rail, size: 1 DIN modules |
| 0 492 91 | KNX cable with single pair of twisted conductors (red-black). It may be installed side by side with the 230 V feed unit cable and is for protruding and flush mounted installation, installation inside conduit in dry outdoor areas, provided that protection from sunlight is ensured. Test voltage: 4 kV rated diameter 6.1 mm. Length (in m): 500. |
| 0 492 92 * | KNX cable with double pair of twisted conductors (red-black and white-yellow). It may be installed side by side with the 230 V feed unit cable and is indicated for protruding and flush mounted installation, for installation inside conduits, in dry outdoor areas, provided that protection from sunlight is ensured. Test voltage: 4 kV rated diameter 6.1 mm. Length (in m): 500. |



KNX is the world standard, compliant with the main European and international regulations, for automatic and decentralised management of technological systems in a wide range of situations: commercial buildings, industry, offices, private homes, public establishments and many more. KNX is an "open and easy to expand" system that can be used for several applications, both in the residential and service sector (e.g. lighting management, shutter and rolling shutter control, safety and heating systems etc).

KNX strongly contributes to energy savings (up to 50% in the control of lighting and heating) and to minimising the impact on the environment. KNX holds the following approvals:

- European Standards (CENELEC EN 50090 and CEN EN 13321-1)
- International Standards (ISO/IEC 14543-3)
- Chinese Standards (GB/Z 20965)
- US Standards (ANSI/ASHRAE 135)

For further information on the KNX offer see the specific offer guide. For further information on the KNX standard visit the following website: www.knx.org

* for information on these items and their availability contact a Legrand representative

NOTES

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