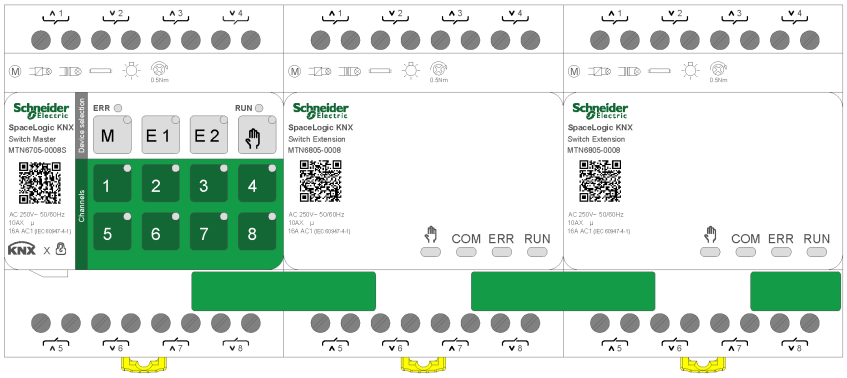
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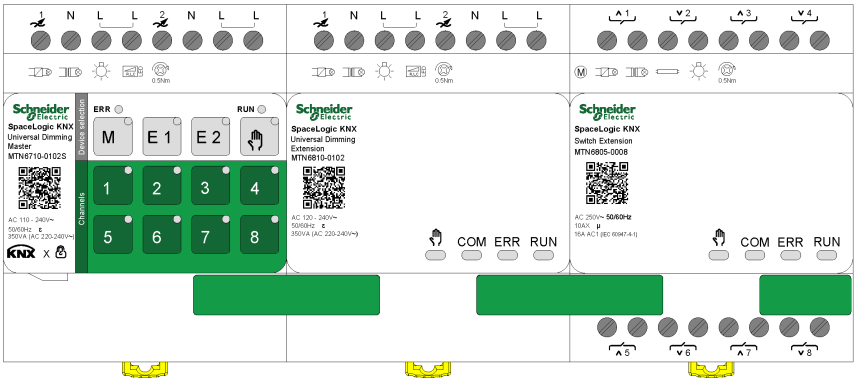
Master-Extension Platform

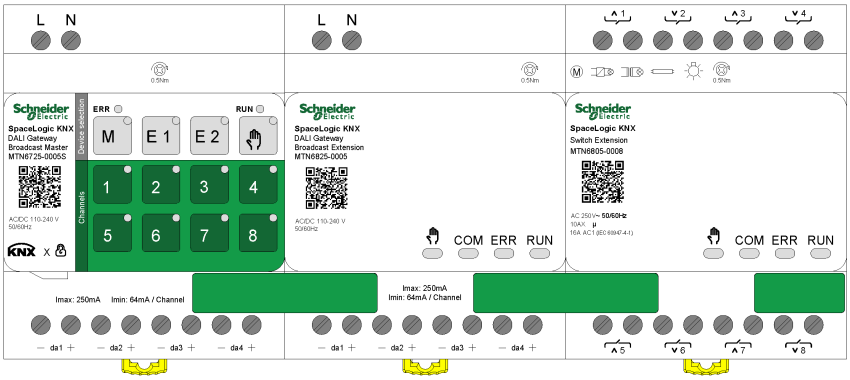
Product Information

This document provides an overview of the SpaceLogic KNX Master-Extension platform and describes how Masters and Extensions operate together as a modular system for switching, blind control, dimming, and DALI broadcast applications.

MTN6705-0008S | MTN6805-0008 | MTN6710-0102S | MTN6810-0102 | MTN6725-0005S | MTN6825-0005
Release date 03/06/2026







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Safety Information

Important Information

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

⚠ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result** in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.



The addition of this symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

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DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

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WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

⚠ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result** in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

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A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

About the Book

Document Scope

This document provides an overview of the SpaceLogic KNX Master-Extension platform and describes how Masters and Extensions operate together as a modular system for switching, blind control, dimming, and DALI broadcast applications. It outlines the principles of the Master-Extension architecture, explains centralized ETS configuration, and summarizes the functional responsibilities shared across all Master devices. The scope includes installation-related behavior, commissioning interactions, and platform-wide advantages such as simplified wiring, unified device handling, and scalable expansion through up to two Extensions per Master.

It also covers special use cases, supported device combinations, and the firmware update procedure for maintaining device compatibility and performance.

The content is intended for system integrators, installers, and developers working with KNX-based automation systems.

Validity Note

The technical characteristics and product details described in this document are based on the latest available information at the time of publication. Schneider Electric reserves the right to make changes to product specifications and documentation without prior notice. For the most up-to-date information, always refer to the official product pages at www.se.com.

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In recent years, the growing number of networked machines and production plants has seen a corresponding increase in the potential for cyber threats, such as unauthorized access, data breaches, and operational disruptions. You must, therefore, consider all possible cybersecurity measures to help protect assets and systems against such threats.

To help keep your Schneider Electric products secure and protected, it is in your best interest to implement the cybersecurity best practices as described in the Cybersecurity Best Practices document.

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  - Access the cybersecurity posture.
  - Learn more about cybersecurity in the cybersecurity academy.
  - Explore the cybersecurity services from Schneider Electric.

Available Languages of the Document

The document is available in these languages:

- English

Related Documents

Title of documentation	Reference number
SpaceLogic KNX Secure DALI Gateway Broadcast Master – ETS Software Application Description	MTN6725-0005S_7314_SW
SpaceLogic KNX Secure DALI Gateway Broadcast Master, Instruction sheet	MTN6725-0005S_HW
SpaceLogic KNX Secure, Universal Dimmer Master, ETS Software Application Description	MTN6710-0102S_SW
SpaceLogic KNX Secure, Universal Dimming Master, Installation and Connection	MTN6710-0102S_HW
SpaceLogic KNX Secure, Switch/Blind Master, ETS Software Application Description	MTN6705-0008S_SW
SpaceLogic KNX Secure, Switch/Blind Master, Installation and Connection	MTN6705-0008S_HW

To find documents online, visit the Schneider Electric download center (www.se.com/ww/en/download/).

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SpaceLogic KNX Master-Extension Platform

The SpaceLogic KNX Master-Extension platform provides a unified and scalable approach for controlling switching loads, blinds, dimming applications, and DALI broadcast lighting. Its modular design allows installers and system integrators to build flexible KNX installations that can be easily expanded or adapted without increasing system complexity. The platform is designed to reduce installation effort, simplify ETS configuration, and ensure consistent functional behavior across all supported device types.

Platform Concept

Modular platform designed for:

- switching,
- blind control,
- dimming,
- DALI broadcast operation.

Simplifies:

- device selection,
- installation and wiring,
- commissioning and parameterization,
- long-term system scalability.

Ensures unified functionality across all Master device types.

Master-Extension Architecture

Each Master supports up to **two Extensions**.

Extensions:

- connect **tool-free**,
- require **no KNX bus coupler**,
- are **powered and controlled** directly by the Master.

The Master manages:

- power distribution,
- bus communication,
- addressing and position assignment,
- overall device coordination.

Automated ETS Integration

All configuration is performed within the Master´s ETS application.

When an Extension is connected, the Master performs Extension linking:

- it checks hardware compatibility,
- assigns the correct Extension position (E1/E2),
- imports all Extension channels,
- and loads the appropriate application version.

This internal linking process is not KNX commissioning but a simplified synchronization step performed automatically by the Master.

The entire assembly appears as **one logical device** in ETS.

Extensions do not require KNX commissioning. They have no KNX address and do not appear as separate ETS entries. All configuration is completed through the Master, and Extensions are handled exclusively through the Extension linking process.

Operational Advantages

Faster installation thanks to:

- tool-free linking,
- automatic application transfer,
- central ETS configuration.

Reduced cabinet space:

- unified mechanical size,
- 1 Master + 2 Extensions = 12 TE total width.

Lower energy consumption compared to stand-alone actuators.

Repeatable and predictable installation workflow.

Manual Operation

Master allows manual operation of:

- its own channels,
- all connected Extension channels.

Ideal for:

- wiring tests,
- troubleshooting,
- initial commissioning preparation.

Manual mode can be restricted via ETS.

Security and Diagnostics

Supports KNX Secure for:

- encrypted telegrams,
- authenticated communication.

Provides diagnostic data through KNX:

- status and error reporting,
- communication and initialization feedback.

Ensures consistent maintenance behavior across device types.

Core Responsibilities of the Master

- Supplies operating voltage to Extensions.
- Handles communication with the KNX line.

- Provides a unified ETS entry for the whole assembly.
- Synchronizes Extensions during KNX commissioning of the Master and during Extension linking.
- Manages logic, scenes, priorities, and functional behavior.

Key Benefits

- Consistent platform behavior across all Master and Extension types.
- Reduced time needed for wiring, configuration, and commissioning.
- Easy system expansion through modular add-on architecture.
- Simplified planning due to uniform mechanical footprints.

For compatibility details, refer to Supported Master-Extension Combinations, page 30. For information on adding, replacing, or removing Extensions, see Commissioning of the Master and Extension Linking, page 59.

Overview of the Devices

Depending on the loads to control, you can use different devices:

SpaceLogic KNX	Commercial Reference	Hardware Specifications
Switch/Blind Secure Master	MTN6705-0008S	Switch: 8 x 10 A/16 A relay channels
Switch/Blind Extension	MTN6805-0008	Switch: 8 x 10 A/16 A relay channels
Secure Dimmer Master	MTN6710-0102S	Dimmer: 2 x AC phasecut dimming channels (300 W)
Universal Dimming Extension	MTN6810-0102	Dimmer: 2 x AC phasecut dimming channels (300 W)
Secure DALI Gateway Broadcast Master	MTN6725-0005S	DALI: 4 x DALI Broadcast channels, 32 x DALI 2 ECGs per channel
DALI Gateway Broadcast Extension	MTN6825-0005	DALI: 4 x DALI Broadcast channels, 32 x DALI 2 ECGs per channel

All devices in the platform share standardized module widths. A configuration with one Master and two Extensions occupies 12 TE and may provide up to 24 channels within a single assembly. This consistent mechanical sizing helps simplify cabinet design and ensures easier planning for installers. A QR code on the device’s front label provides quick access to technical information.

Getting to Know the Secure Switch/Blind Master

The **Secure Switch/Blind Master (8-channel)** is a KNX actuator designed to control up to **8 electrical loads** (such as lights) or **4 blind motors** with end switches. You can assign each channel as either a switch or a blind control, depending on your project needs.

If your setup requires more channels, you can connect up to **two Switch/Blind Extensions**. This allows you to control a total of **24 loads** or **12 blind motors**.

You can operate all connected loads manually using the buttons on the Master device. If needed, this manual control feature can be disabled through the ETS software.

For more on manual control, see: Manual Operation: Direct Channel Control, page 80.

The device uses several LEDs to indicate its current status, including channel activity, readiness, and whether manual mode is active.

For LED behavior, see: Switch/Blind Devices, page 66.

To ensure secure communication, the actuator supports **KNX Secure**, which protects the device from unauthorized access on the KNX bus.

For more on secure setup, see: Information on Secure Commissioning, page 59.

Extended Functions of the Master (Secure Switch/Blind)

Extended functions shared by all KNX Masters are described in SpaceLogic KNX Master-Extension Platform, page 9.

The following differences apply to the **Secure Switch/Blind Master**:

Channel Assignment

Each of the 8 channels can be configured in ETS as either a switch load or a blind/roller shutter output with end switches.

Extension Linking

When an Extension is connected, the Master manages its power and communication. Extensions do not require KNX commissioning or addressing; they are linked to the Master and configured through the Master's ETS application. This simplifies setup and ensures that full commissioning takes place from a single point – the Master's ETS.

Manual Operation

All connected loads (Master + Extensions) can be operated using the buttons on the Master device.

- Low-priority manual operation: wiring test, controlling 2 channels at a time.
- High-priority manual operation: full channel control, KNX telegrams buffered (1).

Manual mode can be disabled via ETS.

(1) Incoming KNX commands are temporarily stored and executed only after manual operation is deactivated.

Blind-Specific Functions

- Movement duration settings
- Adjustable motion range limits
- 8-bit positioning (height & slats)
- Weather alert integration (wind/frost/rain)
- Safety interlocking

Extensions

Up to two Switch/Blind Extensions can be added. When connected, the full switching and blind feature set becomes available on the Extension channels.

For details on adding, replacing, or removing Extensions, see Connecting Master and Extension, page 27.

Scenes, Timing, Central and Priority Functions

Scenes

- Scene recall and storage
- Individual channel scene participation
- Adjustable behavior during scene execution

Timing Functions

Includes all time-based functions, such as:

- Staircase timer function
- Switch-on delay / switch-off delay
- Pre-warning before switch-off (e.g., blinking before staircase timer ends)
- Idle time between blind movements
- Step interval for short blind commands

Central Functions

- Central ON / OFF
- Central UP / DOWN for blinds
- Combined commands with priority logic

Priority & Locking Functions

- Priority levels for external commands
- Locking (e.g., disable manual or KNX operation)
- Weather-based locking for blinds (wind, frost, rain)
- Heating/cooling interlocks used for shading logic

ETS Functions of the Master (Secure Switch/Blind)

The ETS allows you to configure a wide range of functions for the Master device. A full description of available communication objects, parameters, and settings can be found in the ETS Application Description.

ETS Functions Overview

Category	Functions
General settings	• Central function • Extension type selection • Channel configuration
Extended settings	• Energy saving options • Device safety features • Device health monitoring • Switching cycle counter • Sending delay • Manual operation settings • PIN code for firmware updates via USB • Firmware version display in ETS • Master device uptime
Switch actuator functions	• Normally closed / normally open contact operation • Programmable behavior after download • Individual delay settings per channel • Staircase timer function (with or without manual OFF) • Pre-warning before switch-off (optional) • Scene control • Central switching function • Lock function • Logic operations and priority control • Status feedback for each channel • Operating hours counter (from firmware 4.0)
Blind actuator functions	• Movement duration • Idle time between operations • Step interval configuration • Lock function • Motion range limits • Weather alert integration • 8-bit positioning for height and slats • Scene control • Status and feedback functions

Getting to Know the Secure Dimmer Master

The **Secure Dimmer Master (2-channel)** is a KNX actuator designed to switch and dim up to **two lighting loads**. It supports a wide range of dimmable lighting types, including:

- Incandescent and halogen lamps (resistive loads)
- Low-voltage halogen lamps with dimmable wound transformers (inductive loads)
- Low-voltage halogen lamps with dimmable electronic transformers (capacitive loads)
- Combinations of resistive and inductive or capacitive loads
- Dimmable ESL/CFL lamps
- Dimmable LED lamps

IMPORTANT: Never connect inductive and capacitive loads to the same output.

Security and Load Detection

The actuator supports KNX Secure, which protects the device from unauthorized access to the KNX bus.

For more on secure commissioning, see: Information on Secure Commissioning, page 59.

When powered on, the actuator automatically detects the type of connected load and selects the appropriate dimming mode:

Mode	Phase Type	Activation
RC	Trailing edge	Automatic (default via ETS or device)
RL	Leading edge	Automatic (default via ETS or device)
RL-LED	Leading edge	Manual (via ETS or device)

NOTE: For LEDs and CFLs, RC mode is selected by default. However, some models may require RL-LED mode. Always refer to the lamp manufacturer's instructions.

Even during operation, the actuator monitors the load for inductive behavior and switches to RL mode if needed.

IMPORTANT: Always disconnect mains voltage before replacing a load.

Extensions and Manual Control

To expand the number of dimming channels, you can connect up to **two Extensions** to the Master. Depending on your needs, you can use:

- SpaceLogic KNX Universal Dimming Extension
- SpaceLogic KNX Switch/Blind Extension

All connected loads can be manually controlled using the Master’s buttons. This feature can be disabled via ETS.

For manual operation, see: Manual Operation: Direct Channel Control, page 80.

The device status – including channel activity, readiness, and manual mode – is indicated by several LEDs.

For LED behavior, refer to: Operating and Display Elements, page 66.

Extended Functions of the Master (Secure Dimmer)

Extended functions shared by all KNX Masters are described in SpaceLogic KNX Master-Extension Platform, page 9.

The following differences apply to the Secure Dimmer Master:

- **Dimming channels:**
  Two dimming channels supporting resistive, inductive, capacitive, and selected LED/ESL lamp types.

- **Automatic load detection:**
  The device detects RL (leading edge) or RC (trailing edge) mode automatically; RL-LED mode can be set manually if required by specific LED drivers. During operation, inductive behavior triggers automatic switch to RL.

- **Extension linking:**
  Extensions do not require KNX commissioning or addressing. They are linked to the Master and configured through the Master's ETS application, making setup easier and ensuring full commissioning occurs from the Master's ETS.

- **Dimming control:**
  Supports switching (1 bit), relative dimming (4 bit), absolute/value dimming (1 byte), selectable switch-on behavior, min/max brightness, dimming curves, channel timing (switching, dimming, values, priority, scenes), and scene control.

- **Status and safety:**
  Provides status feedback for switching and value, priority/locking functions, safety/alarm handling, failure and download behavior, operating hour and switching cycle counters, and device health monitoring.

- **Manual operation:**
  Prior to ETS download, both channels can be toggled (dimming disabled) for wiring tests. In operation, channel buttons support ON/OFF and dim up/down. Function buttons enable automatic load detection and RL-LED mode selection; dual-button long press resets counters per channel.

- **Extensions:**
  Up to two Extensions are supported. A Universal Dimming Extension adds two dimming channels; a Switch/Blind Extension adds switching/blind channels.

For details on adding, replacing, or removing Extensions, see Connecting Master and Extension, page 27.

ETS Functions of the Master (Secure Dimmer)

The ETS allows you to configure a wide range of functions for the Master device. A full description of available communication objects, parameters, and settings is provided in the ETS Application Description.

ETS Functions Overview

Category	Functions
General settings	• Central function • Extension type selection • Channel configuration
Extended settings	• Energy saving options • Device safety features • Device health monitoring • Operating hours counter • Switching cycle counter • Sending delay • Manual operation settings • PIN code for firmware updates via USB • Firmware version display in ETS • Master device uptime
Dimming functions	• Switching (1 bit) • Relative dimming (4 bit) • Absolute/value dimming (1 byte) • Switch-on behavior (via switch object) • Execution of selected switch-on behavior • Switch object behavior • Dimming curve • Min/max brightness • Start at 50% brightness (ESL/CFL) • Dimming operation mode • Dimming object/value object switches channel • Scene control • Status feedback (switching/value) • Dimming times (switching, dimming, values, priority, scenes) • Time settings (staircase time, on/off delay) • Priority and locking functions • Safety and alarm settings (safety function, alarm, failure and download behavior)
Switch/Blind actuator functions	All functions available in the Secure Switch/Blind Master are also supported when using a Switch/Blind Extension.

Getting to Know the Secure DALI Gateway Broadcast Master

The **SpaceLogic KNX Secure DALI Gateway Broadcast Master 4 Channel/32** is a KNX actuator designed to interface with DALI lighting systems. It supports up to **4 broadcast channels**, each capable of controlling **32 DALI control gears**, enabling efficient and scalable lighting control in commercial and residential environments.

You can connect a maximum of two Extension devices:

- DALI Gateway Broadcast Extension: MTN6825-0005
- Switch/Blind Extension: MTN6805-0008

This device uses **DALI broadcast communication**, which simplifies the installation by avoiding the need for DALI commissioning. This makes it ideal for installations where fast setup and easy maintenance are priorities.

Each DALI channel can be operated manually using the Master´s buttons. This allows manual on/off and dimming control of each DALI broadcast channel. Manual control can be deactivated via ETS.

For more on manual control, see Manual Operation: Direct Channel Control, page 80.

The device uses several LEDs to indicate its current status, including channel activity, readiness, and whether manual mode is active.

For LED behavior, see: LED Behavior of the Masters, page 78.

To ensure secure communication, the actuator supports **KNX Secure**, which protects the device from unauthorized access on the KNX bus.

For more on secure setup, see: Information on Secure Commissioning, page 59.

Extended Functions of the Master (Secure DALI Gateway Broadcast)

General platform behavior is described in SpaceLogic KNX Master-Extension Platform, page 9

The following differences apply to the Secure DALI Gateway Broadcast Master:

DALI Topology and Power

The Master provides DALI power to its four DALI channels via two internal DALI power supplies, each supplying two channels. Each connected DALI Gateway Broadcast Extension powers its own four DALI lines. The control parts of both the DALI Master and DALI Extensions are fully powered via the KNX fieldbus; therefore, commissioning can be performed with KNX bus power only, without AC on the DALI lines. For manual control of DALI channels, both KNX bus power and mains AC must be available.

Extension Linking

Extensions do not require KNX commissioning or addressing. They are linked to the Master and configured through the Master’s ETS application, ensuring that full commissioning occurs from a single point – the Master’s ETS.

Broadcast Operation

Each DALI channel controls up to 32 devices (ECGs) in broadcast mode. Individual addressing is not required for control; device replacement typically does not require reprogramming.

Scenes and Color

Supports up to 16 scenes per channel and DT8 color control (tunable white, RGB/RGBW).

Diagnostics and Energy

Provides channel-level status feedback and optional energy monitoring via Type 51 devices. If individual feedback or energy data is needed, the gateway can address ECGs to acquire information (automatically on restart or manually via the front panel).

DALI Commissioning Processes

The Secure DALI Gateway Broadcast Master supports two commissioning scenarios:

1. **Classic broadcast installation** (no DALI commissioning required)
   In typical broadcast operation, ECGs respond uniformly to broadcast commands. No short addresses are assigned, and no DALI commissioning is performed.
2. **Advanced broadcast installation** (commissioning scenario enabling extended features)
   For installations requiring extended functionality (ECG failure feedback, lamp error detection, energy metering via type 51), the gateway performs temporary addressing of ECGs to gather individual device information.
   This process includes:
   - New installation:
     Scans each DALI channel and assigns short addresses 0...31 to all detected ECGs.
   - Post-installation:
     Checks for changes, adds newly detected ECGs, and may optionally remove non-responding ECGs during system check.
   - Manual triggers:
     Both new installation and post-installation (with system check) can be started manually via the channel buttons on the device.

   These commissioning scenarios enable diagnostic and reporting features not available in classic broadcast mode.

Manual Operation and LED Indications

Manual channel control switches/dims all ECGs on the selected channel. Front LEDs indicate installation progress and error states (ECG error, lamp error, DALI overload >32, DALI short circuit).

Extension and Function Visibility in ETS

Up to two Extensions are supported. A DALI Gateway Broadcast Extension provides four additional broadcast channels. A Switch/Blind Extension exposes on/off switching only (no blind control, no dimming/color) when connected behind the Secure DALI Gateway Broadcast Master.

For details on adding, replacing, or removing Extensions, see Connecting Master and Extension, page 27.

ETS Functions of the Master (Secure DALI Gateway Broadcast)

The ETS allows you to configure a wide range of functions for the Master device. A full description of available parameters and settings is provided in the **ETS Application Description** (see **Related Documents** section of the About the Book, page 7 chapter).

The ETS functions are the same for both the Secure DALI Gateway Master and its Extensions. When Extensions are connected, additional channels become visible in ETS. This also applies to Switch/Blind Extensions, which support all lighting control functions except dimming and color control (on/off only).

A special mode of the Switch/Blind Extension is **internal usage**, where – for example – switching channel 1 can cut AC power to DALI channel 2´s ECGs. In this configuration, a logical “lights off” command also triggers a physical power-down of the ECGs, helping reduce energy consumption. When an “on” telegram is received, the ECGs power up, and the lights turn on shortly afterward.

ETS Functions Overview

Category	Functions
General settings	• Central function • Channel assignment • Scene configuration • Dimming/Color dimming*
Extended settings	• Dimming time settings • Staircase timer • Lock and priority functions • Alarm and failure notifications • Manual operation • Firmware version visibility • PIN code for firmware updates
Lighting control functions	• Absolute and relative dimming • Color temperature control • RGB/RGBW control • Scene recall and programming • Status feedback per channel

* The Secure DALI Gateway Master sends broadcast commands for dimming and color dimming.

For example, if a color command is sent, only DT8 ECGs (devices supporting color control) will respond, while other ECGs remain at their current dimming level.

A subsequent dimming command, however, will affect all connected devices.

Functional Combinations of Secure DALI Gateway Master and Extensions

The **SpaceLogic KNX Secure DALI Gateway Broadcast Master** supports connection with up to two Extensions. This flexibility allows for scalable lighting control and integration of switching logic, but it is important to understand that **the visible functions of each Extension in ETS may differ depending on the Master device it is connected to**.

- Always verify the **visible functions** of Extensions in ETS after connecting them to the Secure DALI Gateway Master.
- Do not assume that all Extension features are available across all Master types.
- Refer to the **ETS Application Description** (see **Related Documents** section of the About the Book, page 7 chapter) for detailed parameter listings.

Supported Extension Types

Extension Type	Supported by Secure DALI Gateway Master	Notes
Switch/Blind Extension	✓	No shutter control available
DALI Gateway Extension	✓	Full DALI broadcast functionality
Universal Dimming Extension	✖	Not supported

For full compatibility details, see: Supported Master-Extension Combinations, page 30.

Functional Differences in ETS

When Extensions are connected to the Secure DALI Gateway Broadcast Master, the availability of ETS functions may differ compared to when the same Extensions are connected to Secure Switch/Blind or Secure Dimmer Masters. These differences are primarily related to the type of output control, not to the availability of control logic.

Example: Switch/Blind Extension Behind Secure DALI Gateway Broadcast Master

When a Switch/Blind Extension is connected to a Secure DALI Gateway Broadcast Master:

- **Switching outputs** are available.
- **Shutter/blind** control is not supported.
- **Lighting control** logic such as scenes, priority functions, timing functions, central switching, and locking remains available in ETS.
- **Lighting control** is performed via relay outputs and therefore operates as on/off switching only.
- **Dimming and color** control are not available because relay outputs do not support analog or DALI dimming.

This behavior differs from configurations where Secure Switch/Blind or Dimmer Masters are used, in which the output type may allow dimming or shutter-specific control, depending on the device.

The functional limitations are therefore not related to ETS control logic but are a direct consequence of the physical switching nature of relay outputs.

Priority Modes and Control Logic

Priority and locking logic apply consistently to the Secure DALI Gateway Broadcast Master and all connected Extensions. Standard KNX priority concepts (normal, lock, priority, alarm, and safety modes) are supported and function the same on Master and Extension channels.

- Priority and locking behavior is independent of the output technology (relay switching or DALI broadcast control). **Functional differences** in application behavior between Master–Extension combinations result from supported application functions, not from reduced priority handling.
- When Extensions are connected to the Secure DALI Gateway Broadcast Master, **priority and locking modes** apply equally to DALI channels on the Master and to switching channels on connected Switch/Blind Extensions.
- Unlike Secure Switch/Blind and Secure Dimmer Masters, the Secure DALI Gateway Broadcast Master does not support a dedicated high-priority **manual operation** mode. Manual operation on both Master and Extension channels operates at the same priority level as ETS-configured priority modes. Commands with the same priority do not override manual operation, while higher-priority KNX telegrams may do so.
- **Long-press button** actions on the Secure DALI Gateway Broadcast Master are reserved for DALI commissioning functions (such as new installation and post-installation checks). Therefore, long-press high-priority manual override is not available on the Master or on connected Extensions.
- Priority and locking logic must be distinguished from timing functions. **Timing functions** (for example, staircase timer operation) define activation behavior but do not influence command priority or locking.

Internal Switching Logic

A **Switch/Blind Extension** connected to a Secure DALI Gateway Broadcast Master can be configured in **internal usage mode**, where:

- A switching channel (e.g., channel 1) can **cut AC power** to a DALI channel's ECGs (e.g., channel 2).
- This setup allows a logical "lights off" command to trigger a **physical power-down**, reducing energy consumption.
- When an "on" telegram is received, the ECGs power up, and the lights turn on shortly afterward.

Extension Behavior Matrix

The following table describes the functional contribution of supported Extension types when used with the Secure DALI Gateway Broadcast Master. Priority modes and locking behavior always follow the capabilities of the Master device and are therefore not differentiated per Extension.

Extension Type	ETS Functionality (Visible)	Limitations / Notes
Switch/Blind Extension	All light and load switching functions, including internal ECG switch-off	No shutter or blind control
DALI Gateway Broadcast Extension	Full DALI broadcast control; adds 4 additional DALI channels	Same DALI broadcast capabilities as the Master
Universal Dimming Extension	Not supported	—

Getting to Know the Switch/Blind Extension

The **SpaceLogic KNX Switch/Blind Extension** is an actuator designed to expand the channel capacity of the **Secure Switch/Blind Master**, the **Secure Dimmer Master**, and **Secure DALI Gateway Broadcast Master**.

The **SpaceLogic KNX Switch/Blind Extension** can control:

- Up to **8 switching loads** (e.g., lamps)
- Up to **4 blind motors** with end switches

You can freely assign each channel as either a switch or blind control, depending on your project requirements.

All connected loads can be manually operated using the Master's buttons. This feature can be disabled via ETS if needed.

For manual control details, see: Manual Operation: Direct Channel Control, page 80.

The Extension's status – such as channel activity, readiness, and manual mode – is indicated by LEDs located on the Master device.

For LED behavior, refer to: Switch/Blind Devices, page 66.

Master-Controlled Operation

The Master device fully manages the Extension, including:

- Power supply
- Communication with the KNX bus
- Programming via the Master's ETS application

Because the Extension does not have its own bus coupler or individual KNX address, it does not require separate KNX commissioning. Extension linking is performed directly by the Master device when you use the device buttons. Extensions do not require KNX commissioning. This simplifies setup and makes it easy to update your system – whether you are adding, removing, or replacing an Extension.

For commissioning steps, see: Commissioning of the Master and Extension Linking, page 59.

Getting to Know the Universal Dimming Extension

The **SpaceLogic KNX Universal Dimming Extension** is an actuator designed to expand the dimming capabilities of the **Secure Dimmer Master**. It supports up to **2 dimmable channels** and is compatible with a wide range of lighting types, including:

- Incandescent and halogen lamps (resistive loads)
- Low-voltage halogen lamps with dimmable wound transformers (inductive loads)
- Low-voltage halogen lamps with dimmable electronic transformers (capacitive loads)
- Combinations of resistive and inductive or capacitive loads
- Dimmable ESL/CFL lamps
- Dimmable LED lamps

IMPORTANT: Do not connect inductive and capacitive loads to the same output.

Automatic Load Detection and Dimming Modes

When powered on, the actuator automatically detects the connected load and selects the appropriate dimming mode:

Mode	Phase Type	Activation Method
RC	Trailing edge	Automatic (default via ETS or device)
RL	Leading edge	Automatic (default via ETS or device)
RL-LED	Leading edge	Manual (via ETS or device)

NOTE: For LEDs and CFLs, RC mode is selected by default. However, some models may require RL-LED mode. Always refer to the lamp manufacturer's instructions.

Even during operation, the actuator monitors the load for inductive behavior and switches to RL mode if needed.

IMPORTANT: Always disconnect mains voltage before replacing a load.

Manual Control and Status Indication

All connected loads can be manually operated using the Master’s buttons. This feature can be disabled via ETS.

For manual operation details, see: Manual Operation: Direct Channel Control, page 80.

The Extension’s status – including channel activity, readiness, and manual mode – is indicated by LEDs located on the Master device.

For LED behavior, refer to: Operating and Display Elements, page 66.

Master-Controlled Operation

The Master device fully manages the Extension, including:

- Power supply
- Communication with the KNX bus
- Programming via the Master’s ETS application

Because the Extension does not have its own bus coupler or individual KNX address, it does not require separate KNX commissioning. The Master automatically performs Extension linking when the device is connected. This simplifies setup and makes it easy to update your system – whether you're adding, removing, or replacing an Extension.

For commissioning steps, see: Commissioning of the Master and Extension Linking, page 59.

Getting to Know the DALI Gateway Broadcast Extension

The **SpaceLogic KNX DALI Gateway Broadcast Extension** is a KNX-DALI interface designed to expand lighting control capabilities in conjunction with the **Secure DALI Gateway Broadcast Master**. It supports up to **4 independent DALI channels**, each capable of managing up to **32 DALI devices**, such as luminaires, LED drivers, and ballasts.

Supported DALI device types include:

- **DT6** – Standard dimmable devices
- **DT8** – Color control (RGB, RGBW, Tunable White)
- **Type 51** – Devices with energy monitoring

Each channel operates in **broadcast mode**, eliminating the need for individual addressing or grouping of DALI devices. This simplifies commissioning and allows for easy replacement of faulty devices without reprogramming.

All connected DALI loads can be manually operated using the device's front panel buttons. This feature can be disabled via ETS if needed.

For manual control details, see: Manual Operation: Direct Channel Control, page 80.

Status indicators such as channel activity, readiness, and manual mode are displayed via LEDs on the device front panel.

For LED behavior, refer to: Operating and Display Elements, page 66.

Master-Controlled Operation

The Extension is designed to operate under the control of the **Secure DALI Gateway Broadcast Master**, which manages:

- Power supply
- Communication with the KNX bus
- Programming via the Master's ETS application

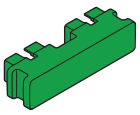
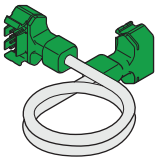
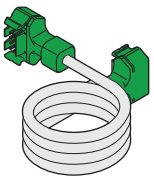
Because the Extension does not have its own bus coupler or individual KNX address, it does not require separate KNX commissioning. When connected, the Master automatically performs Extension linking. This simplifies setup and makes it easy to update your system – whether you're adding, removing, or replacing an Extension.

For commissioning steps, see: Commissioning of the Master and Extension Linking, page 59.

Connecting Master and Extension

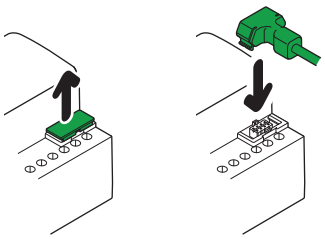
Connection Options

Depending on the distance between the devices in the cabinet, you can choose from the following connection types:

Product	Commercial reference	Maximum distance
SpaceLogic KNX Module Link 	MTN6940-0000 (supplied with the Extension)	Direct connection
SpaceLogic KNX Cable Link S 	MTN6941-0001	30 cm
SpaceLogic KNX Cable Link L 	MTN6941-0002	150 cm

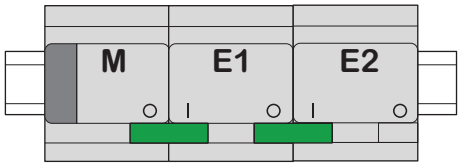
Connection Steps

1. **Remove** the link interface cap from the devices.
2. **Insert** the appropriate connection cable (Module Link or Cable Link) between the Master and Extension.

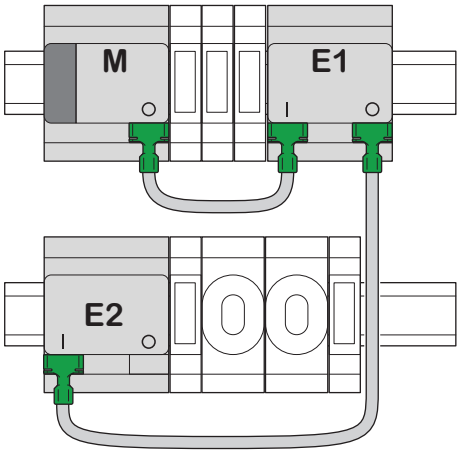


Choosing the Right Link

- Use the **Module Link** if the devices are mounted directly next to each other.

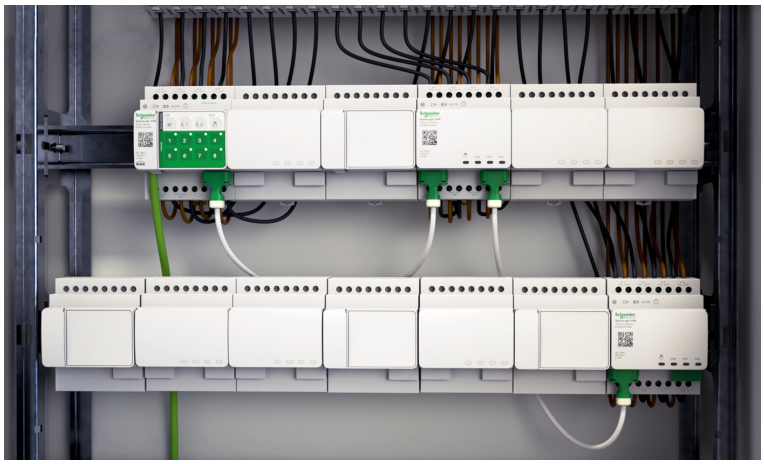


- Use a **Cable Link** if the devices are spaced apart.

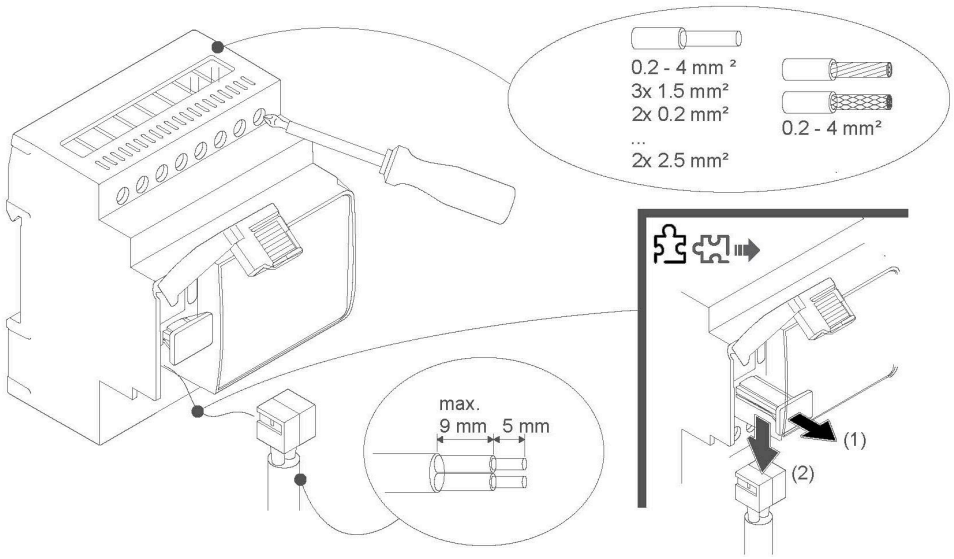


- **M** = Master
- **E1 / E2** = Extension 1 / Extension 2
- **O** = Output
- **I** = Input

IMPORTANT: Always connect from **Output to Input**. If the Cable Link is plugged incorrectly, the devices will not operate. In this case, the corresponding Extension LED (**E1** or **E2**) on the Master will flash to indicate a connection error.



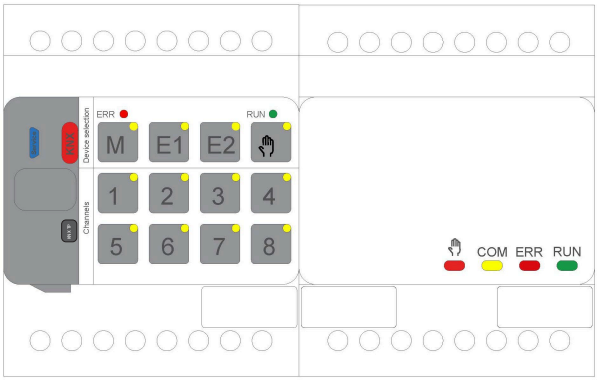
Electrical, KNX and Link Wiring of the Master and Extension



NOTE: The service USB connection is available on Secure Switch/Blind and Secure Dimmer Masters only. The Secure DALI Gateway Broadcast Master does not provide a USB interface; commissioning, firmware updates, and diagnostics are performed via the KNX-TP bus.

Push-buttons and LEDs of the Master and Extension

The installer can control the Extension channels from the Master keypad



Supported Master-Extension Combinations

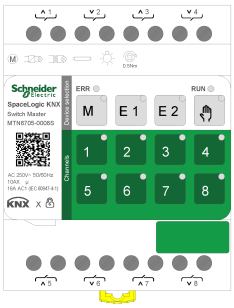
Each Master can be connected to a maximum of two Extensions. The combinations shown in the table below follow the general rules of the SpaceLogic KNX Master-Extension platform. They define which Extension types can be connected to each Master type and clarify that all configuration is performed exclusively within the Master's ETS application.

Master Type	Switch/Blind Extension	Universal Dimming Extension	DALI Gateway Broadcast Extension
Secure Switch/Blind Master	✓	✖	✖
Secure Dimmer Master	✓	✓	✖
Secure DALI Gateway Broadcast Master	✓	✖	✓

For more details on device combinations, refer to: .

SpaceLogic KNX Switch/Blinds

1 x SpaceLogic KNX Switch / Blind Master



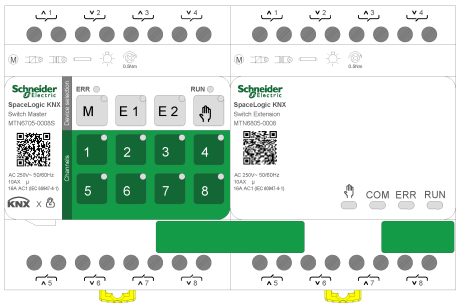
Master 8 switch or 4 blind channels

Total 8 switch or 4 blind channels

KNX bus: 6.5 mA

1 x SpaceLogic KNX Switch / Blind Master

1 x SpaceLogic KNX Switch / Blind Extension



Master 8 switch or 4 blind channels

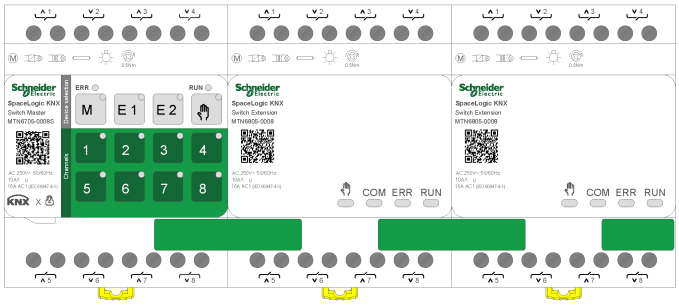
Extension 8 switch or 4 blind channels

Total 16 switch or 8 blind channels

KNX bus: 9 mA

1 x SpaceLogic KNX Switch / Blind Master

2 x SpaceLogic KNX Switch / Blind Extension



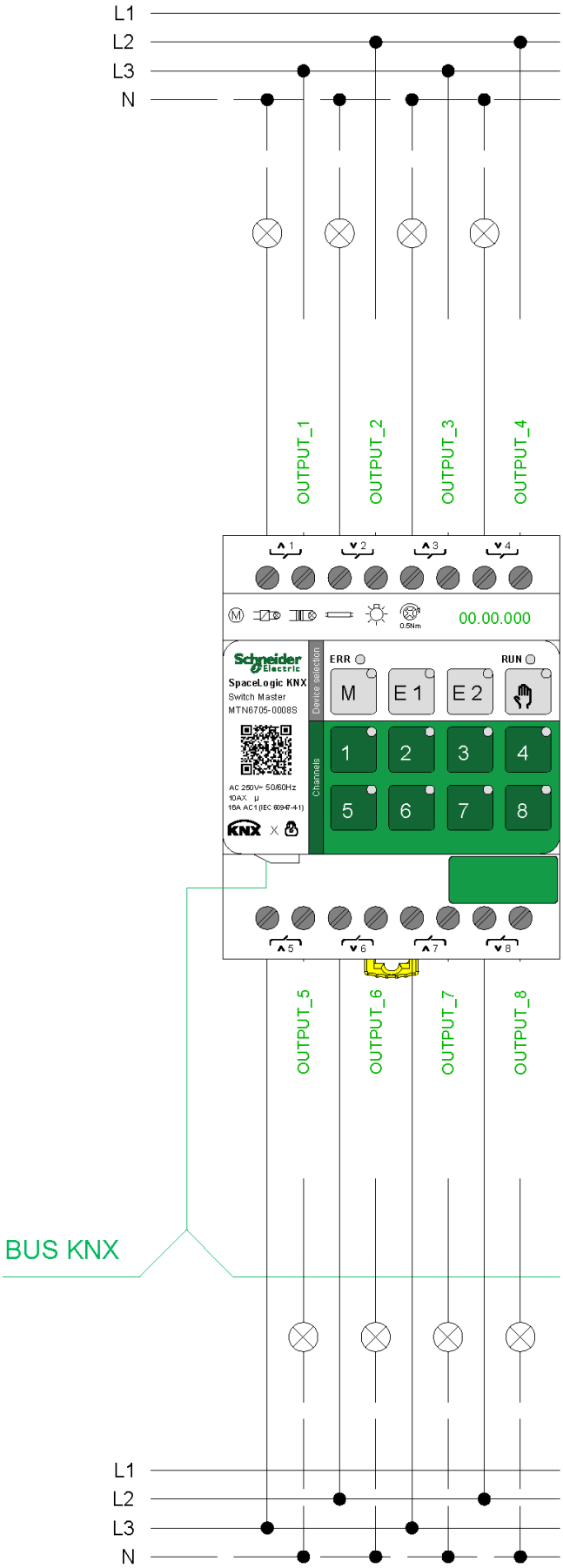
Master 8 switch or 4 blind channels

Extension 8 switch or 4 blind channels

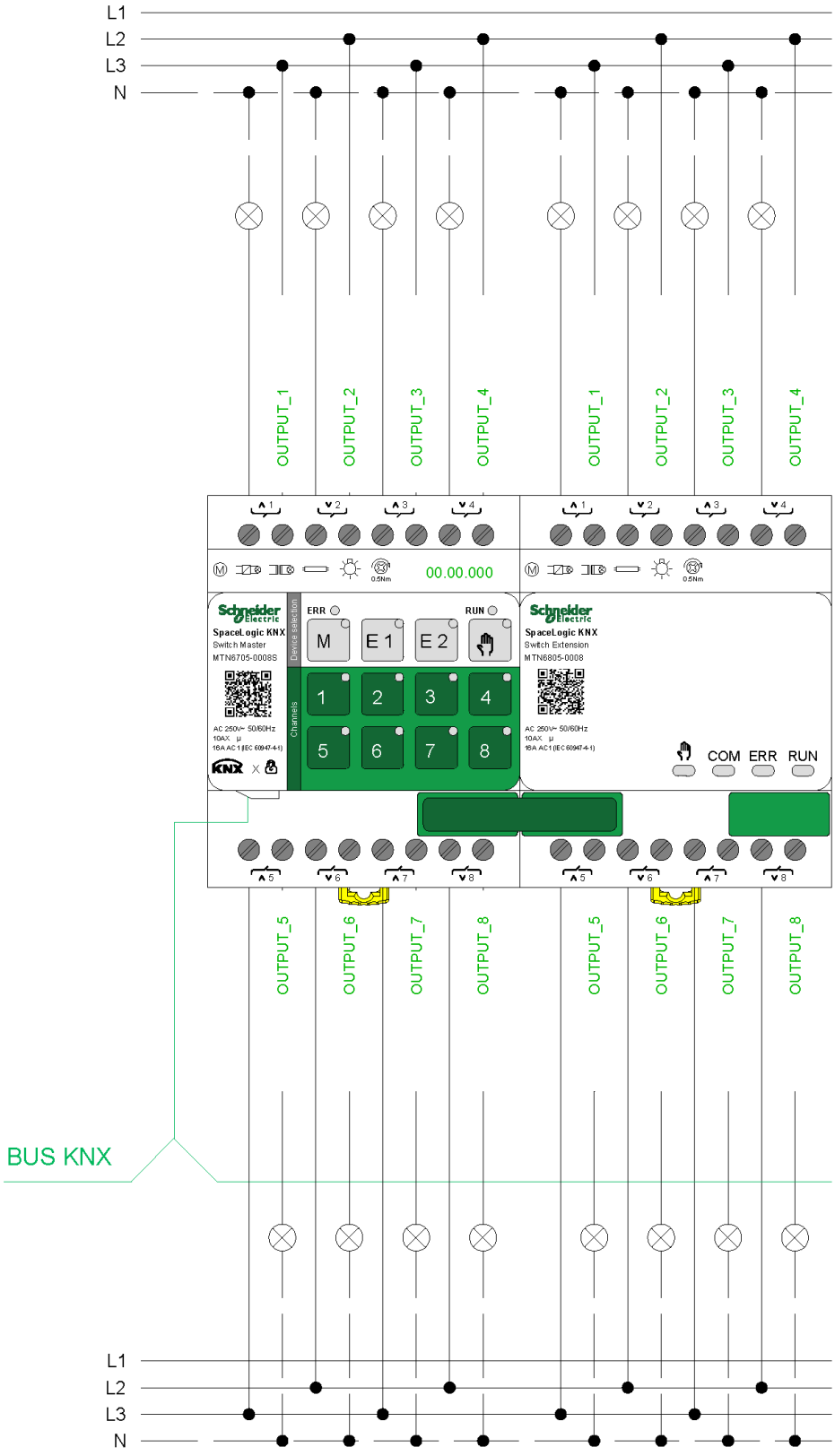
Total 24 switch or 12 blind channels

KNX bus: 12.5 mA

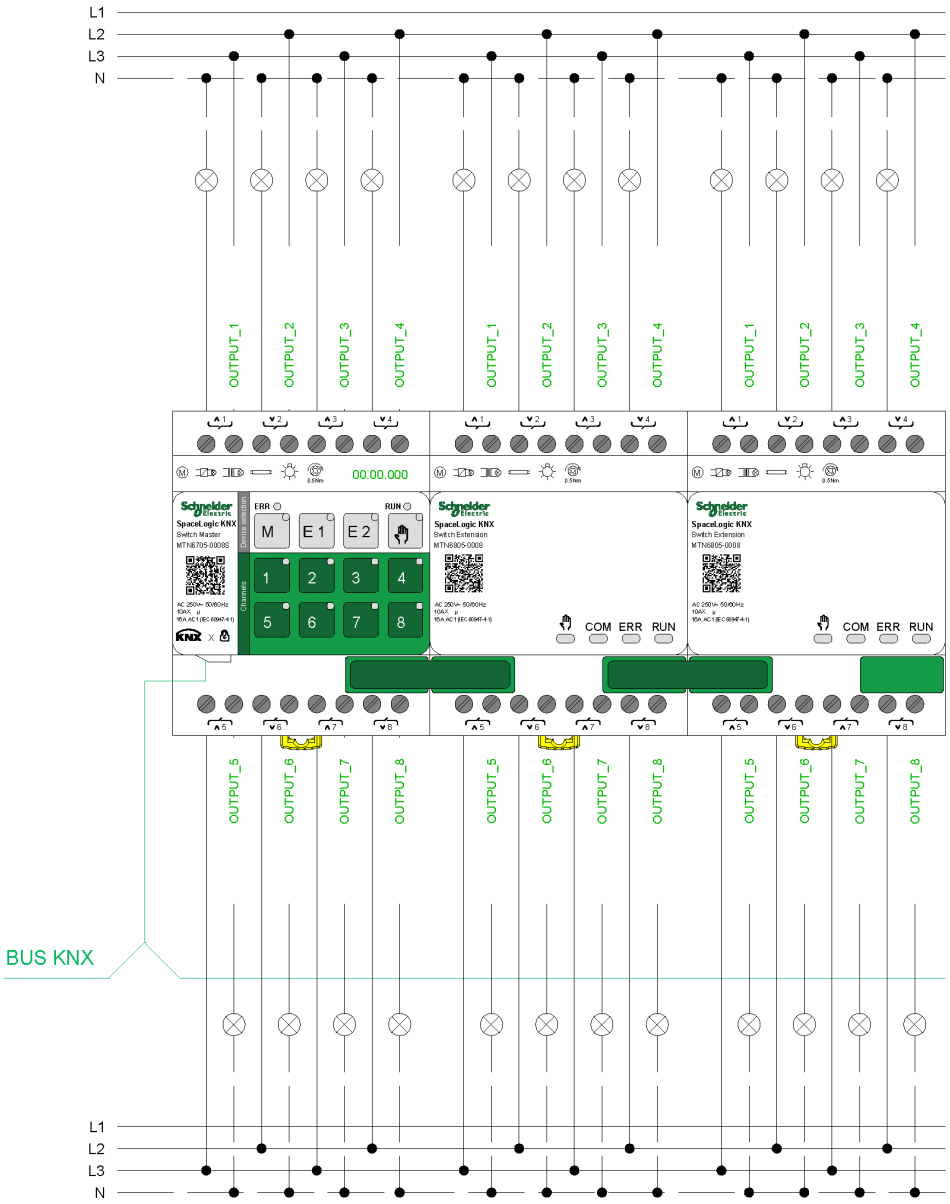
Switch Master Wiring



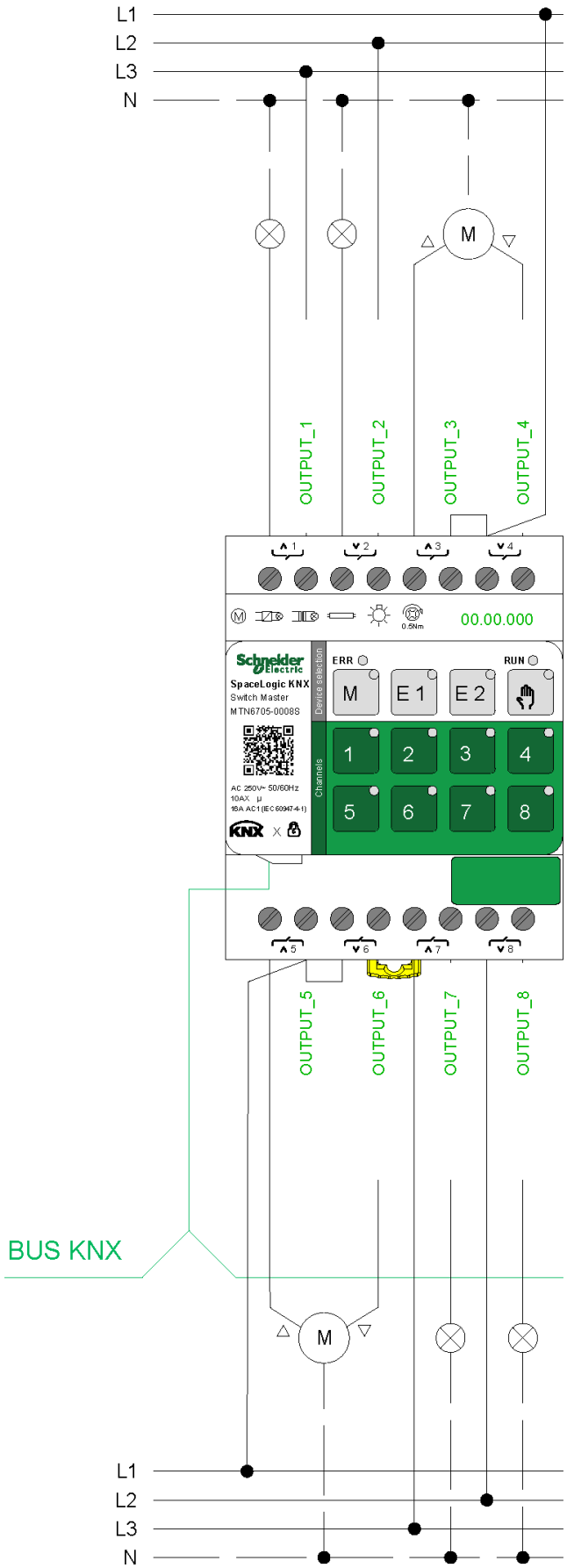
Switch Master + Switch Extension Wiring

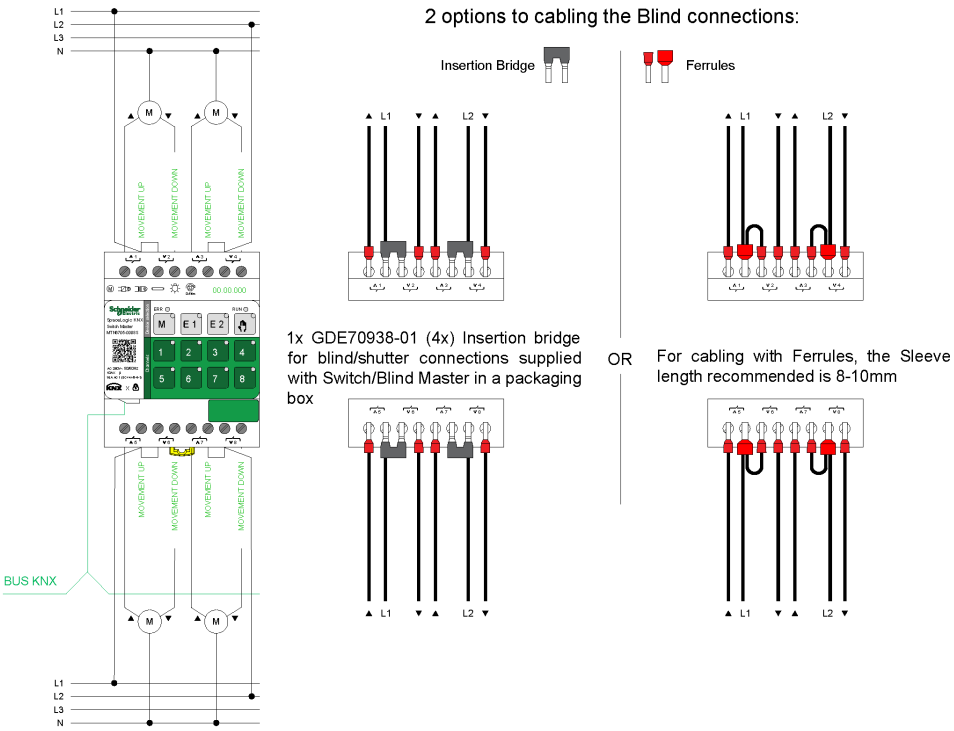


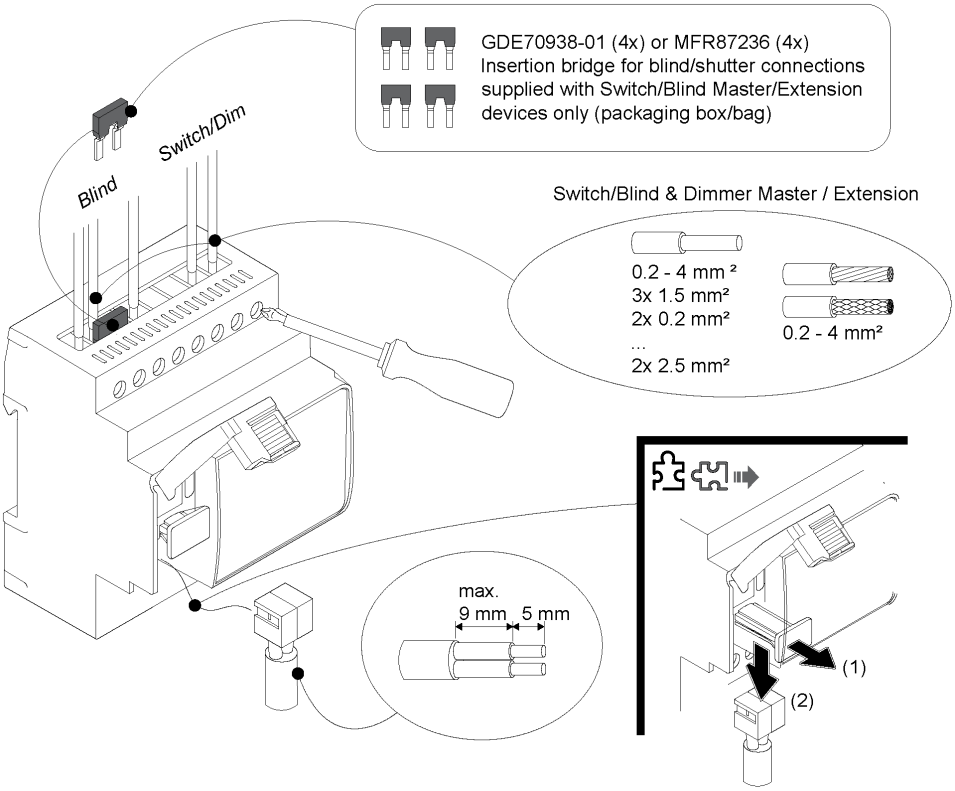
Switch Master + Two Switch Extensions Wiring



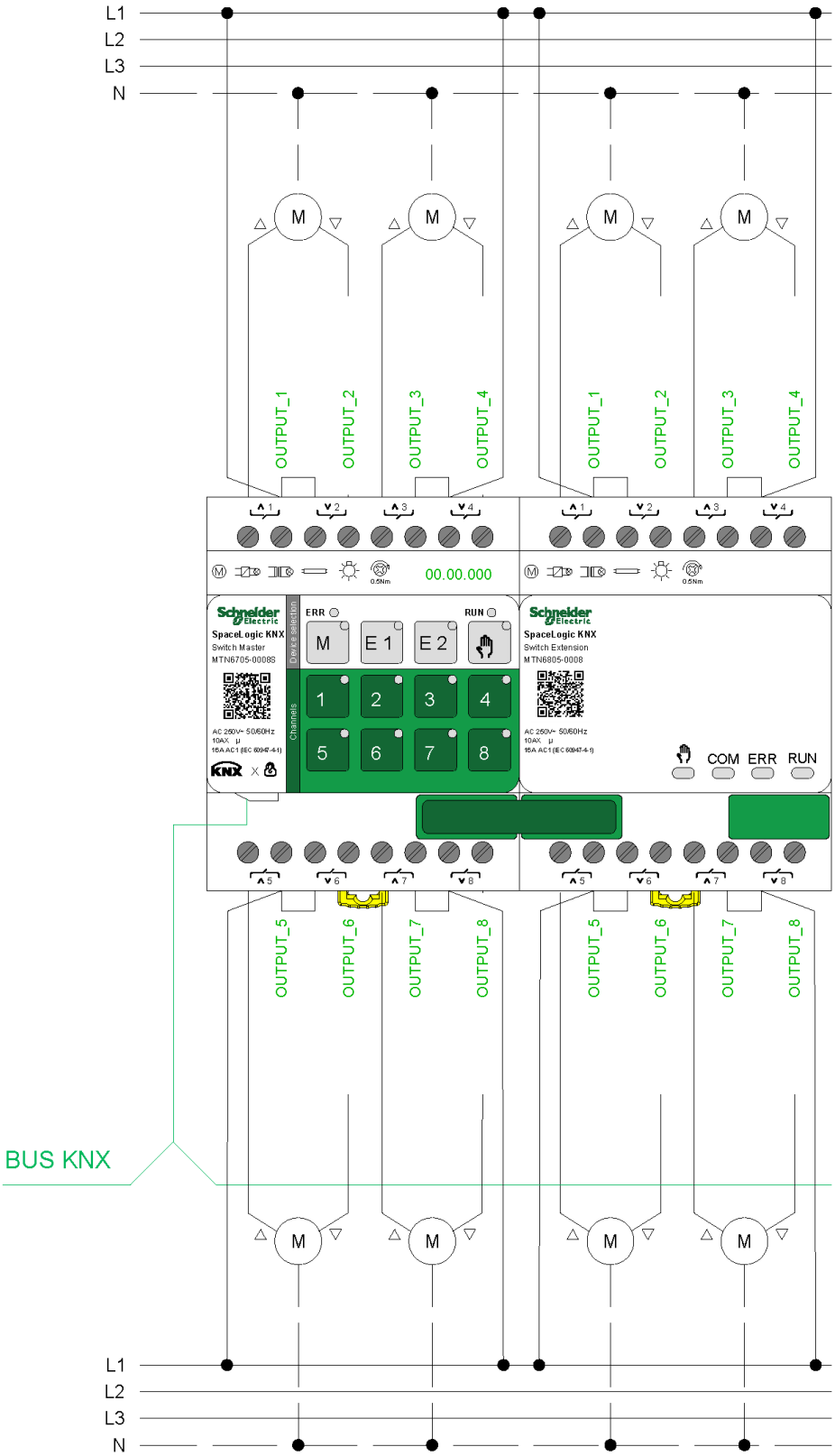
Secure Switch/Blind Master Wiring

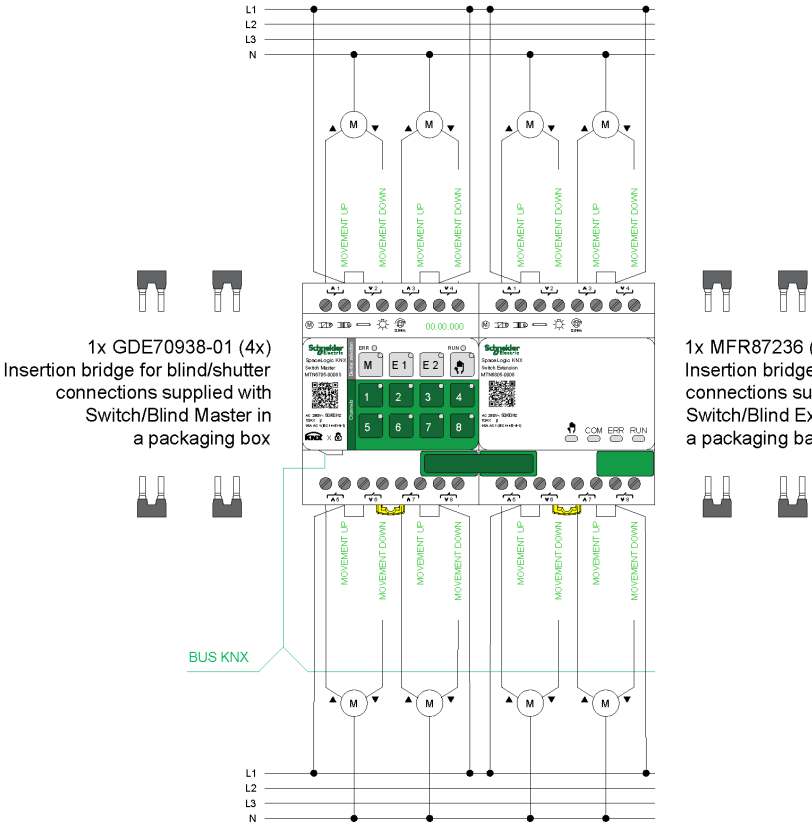



L1
L2
L3
N
BUS KNX
2 options to cabling the Blind connections:
Insertion Bridge
Ferrules
1x GDE70938-01 (4x) Insertion bridge for blind/shutter connections supplied with Switch/Blind Master in a packaging box
OR
For cabling with Ferrules, the Sleeve length recommended is 8-10mm


GDE70938-01 (4x) or MFR87236 (4x)
Insertion bridge for blind/shutter connections supplied with Switch/Blind Master/Extension devices only (packaging box/bag)
Switch/Dim
Blind
Switch/Blind & Dimmer Master / Extension
0.2 - 4 mm ²
3x 1.5 mm²
2x 0.2 mm²
...
2x 2.5 mm²
0.2 - 4 mm²
max.
9 mm
5 mm
(1)
(2)

Switch Master + Blind Extension Wiring

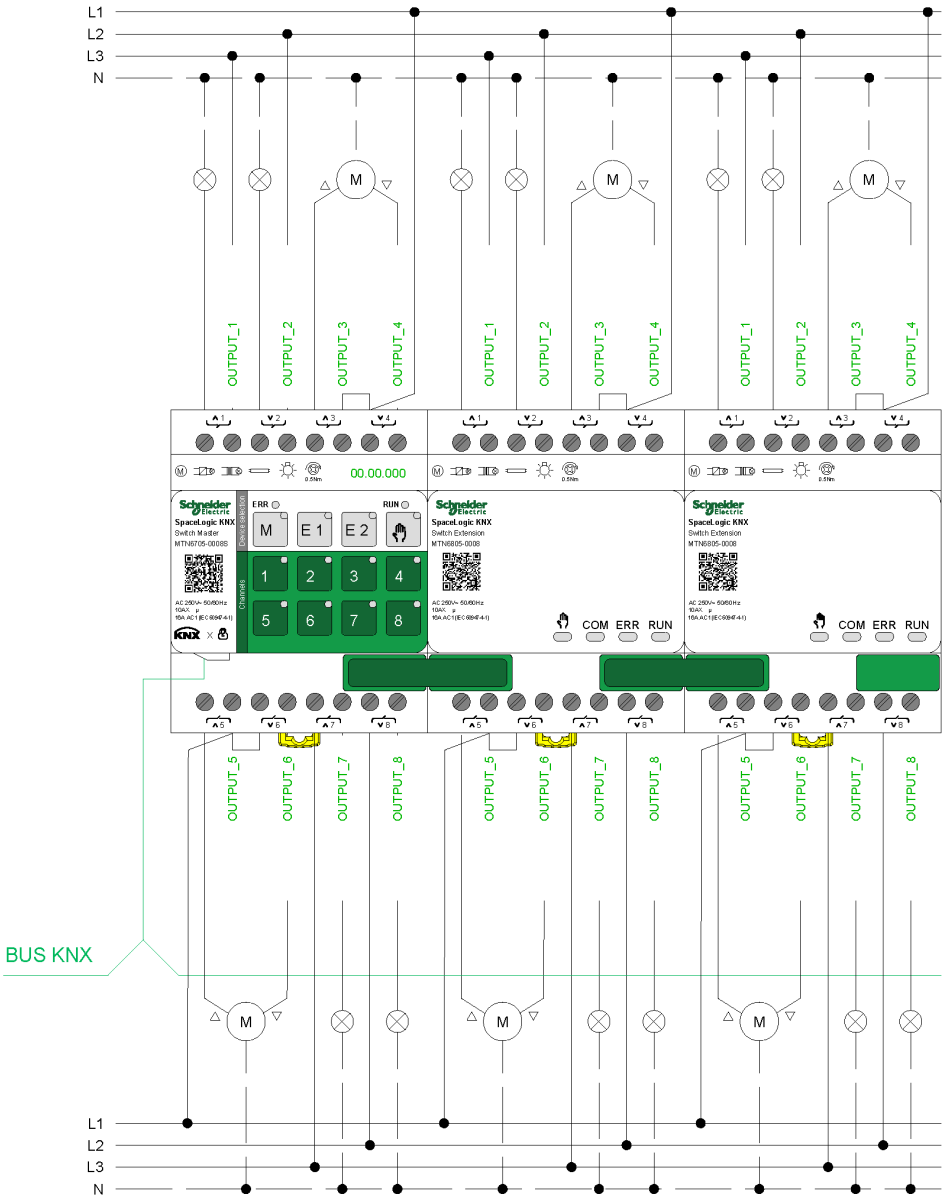


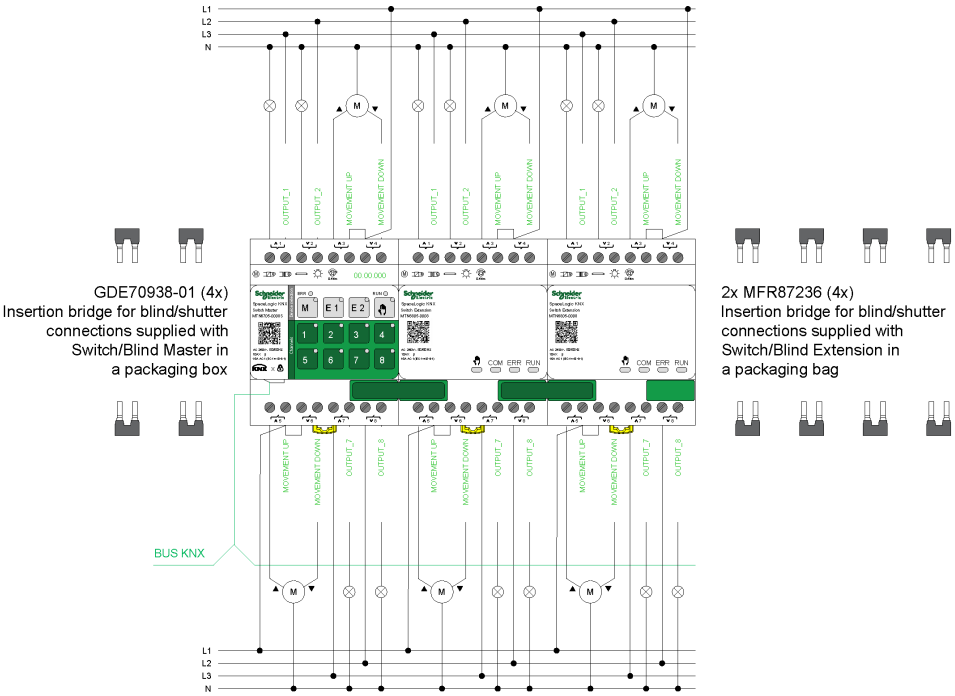


1x GDE70938-01 (4x)
Insertion bridge for blind/shutter connections supplied with Switch/Blind Master in a packaging box

1x MFR87236 (4x)
Insertion bridge for blind/shutter connections supplied with Switch/Blind Extension in a packaging bag

Secure Switch Master + Two Switch/Blind Extensions Wiring



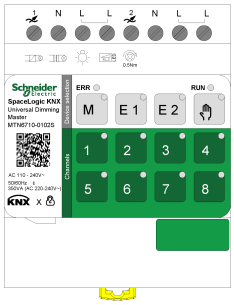


GDE70938-01 (4x)
Insertion bridge for blind/shutter connections supplied with Switch/Blind Master in a packaging box

2x MFR87236 (4x)
Insertion bridge for blind/shutter connections supplied with Switch/Blind Extension in a packaging bag

SpaceLogic KNX Dimmer

1 x SpaceLogic KNX Secure Dimmer Master



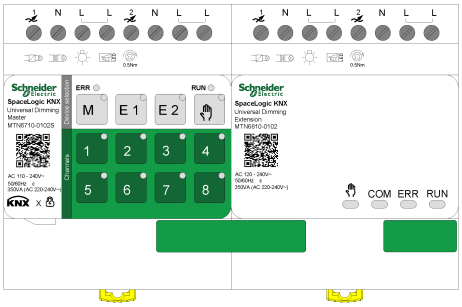
Master 2 dimmer channels

Total 2 dimmer channels

KNX bus: 7.5 mA

1 x SpaceLogic KNX Secure Dimmer Master

1 x SpaceLogic KNX Dimmer Extension



Master 2 dimmer channels

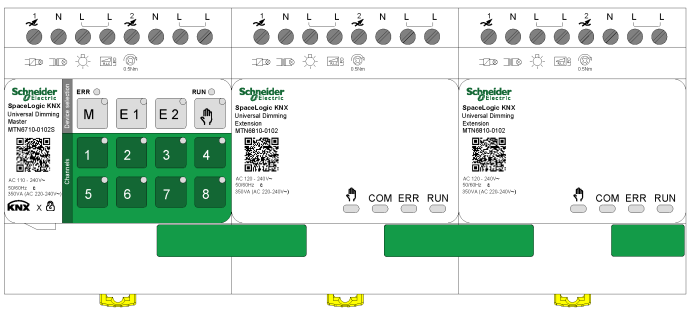
Extension 2 dimmer channels

Total 4 dimmer channels

KNX bus: 10 mA

1 x SpaceLogic KNX Secure Dimmer Master

2 x SpaceLogic KNX Dimmer Extension



Master 2 dimmer channels

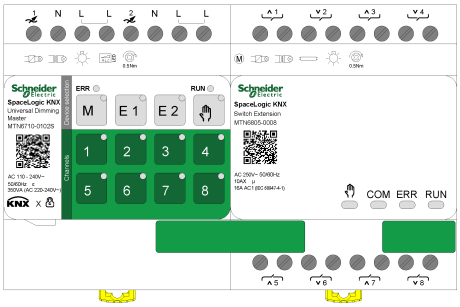
Extension 2 dimmer channels

Total 6 dimmer channels

KNX bus: 12.5 mA

1 x SpaceLogic KNX Secure Dimmer Master

1 x SpaceLogic KNX Switch / Blind Extension



Master 2 dimmer channels

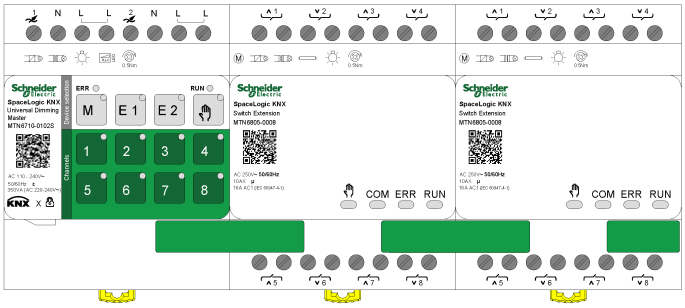
Extension 8 switch or 4 blind channels

Total 2 dimmer and 8 switch or 4 blind channels

KNX bus: 10 mA

1 x SpaceLogic KNX Secure Dimmer Master

2 x SpaceLogic KNX Switch / Blind Extension



Master 2 dimmer channels

Extension 8 switch or 4 blind channels

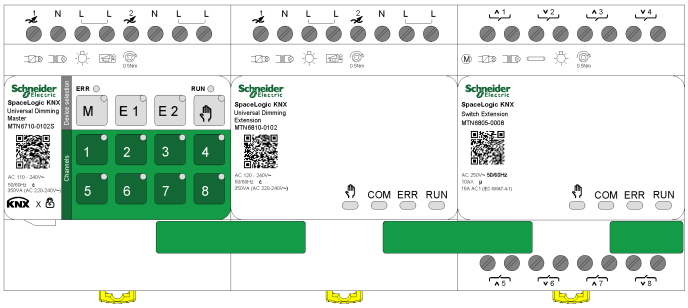
Total 2 dimmer plus 16 switch or 8 blind channels

KNX bus: 12.5 mA

1 x SpaceLogic KNX Secure Dimmer Master

1 x SpaceLogic KNX Dimmer Extension

1 x SpaceLogic KNX Switch / Blind Extension



Master 2 dimmer channels

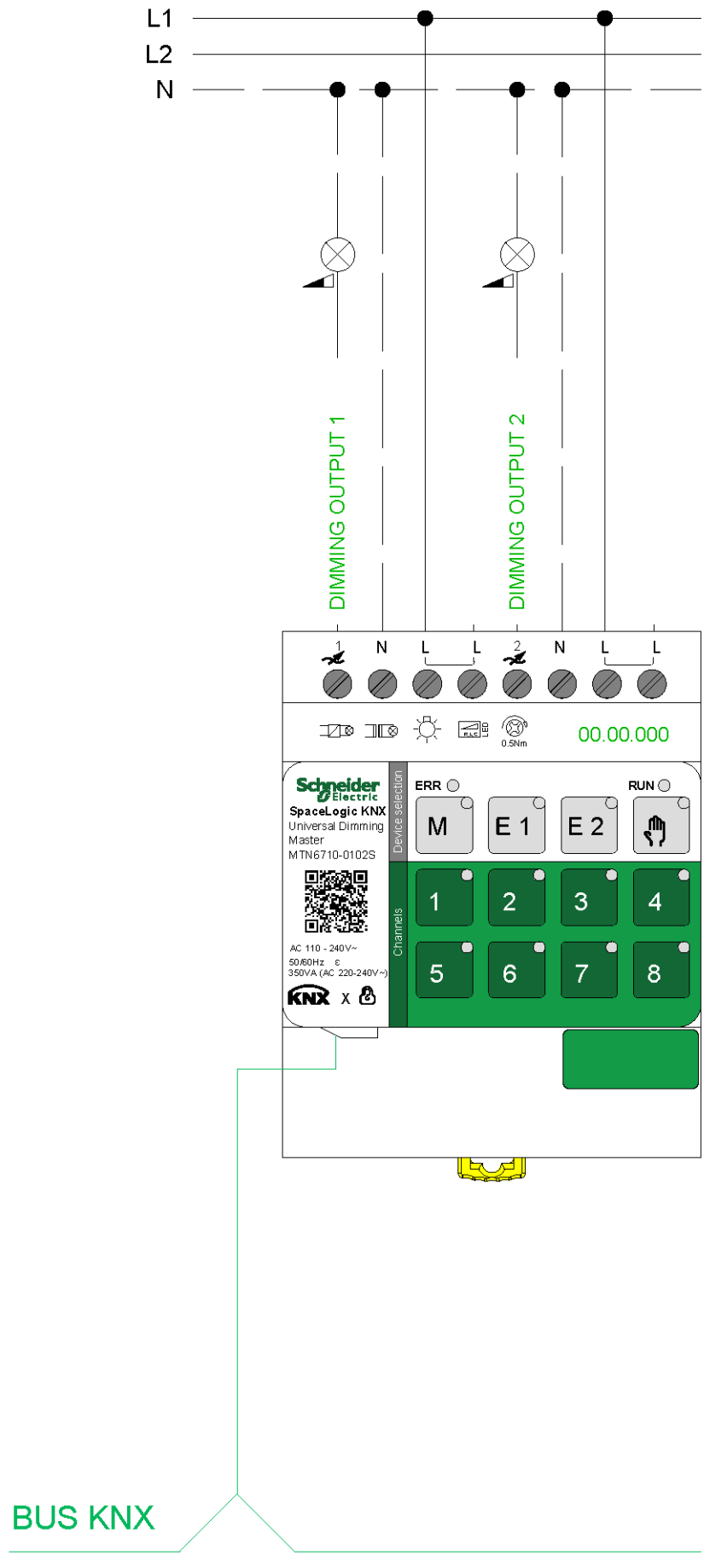
Extension 2 dimmer channels

Extension 8 switch or 4 blind channels

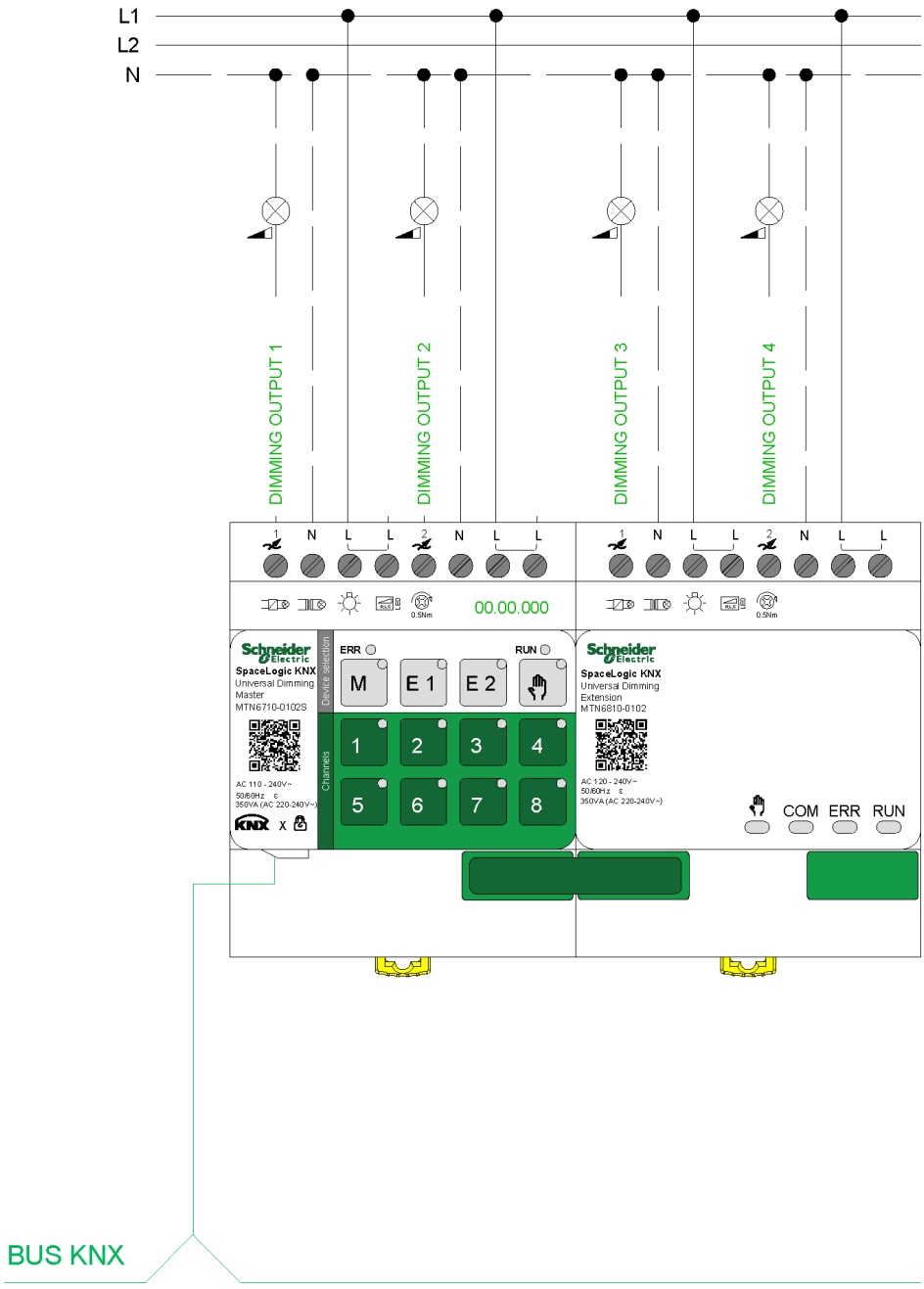
Total 4 dimmer + 8 switch or 4 blind channels

KNX bus: 12.5 mA

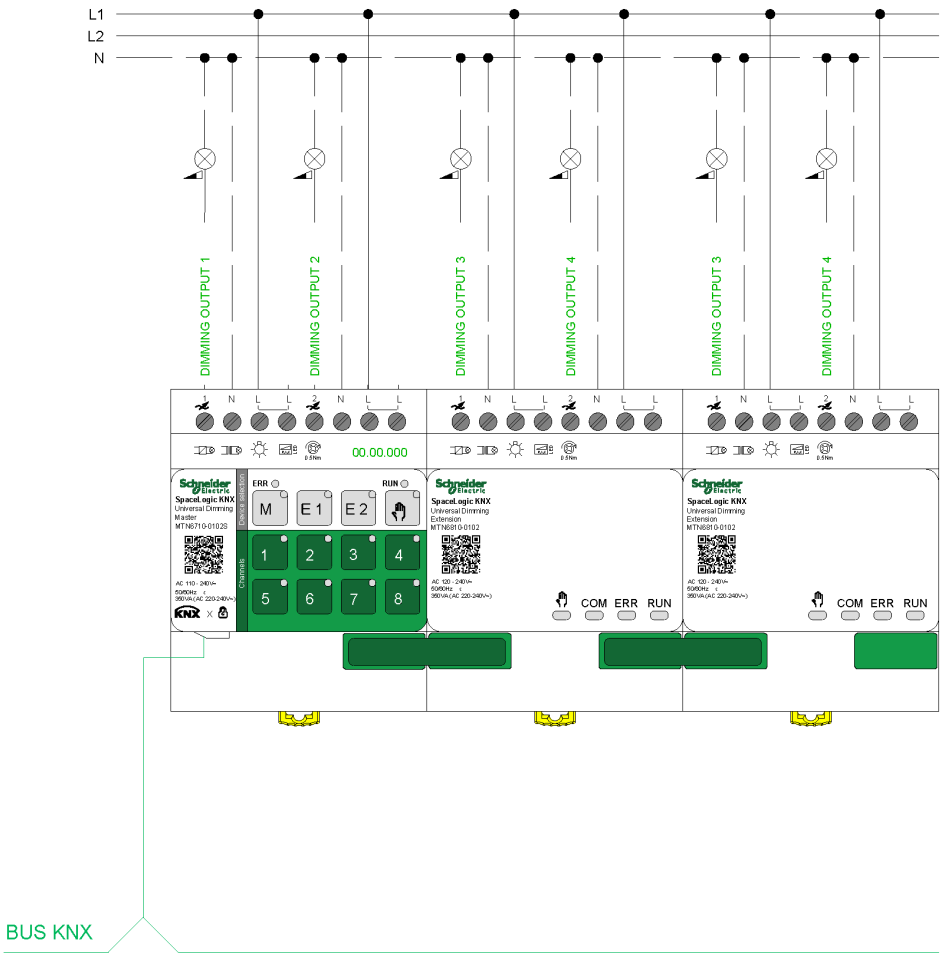
Secure Dimmer Master Wiring



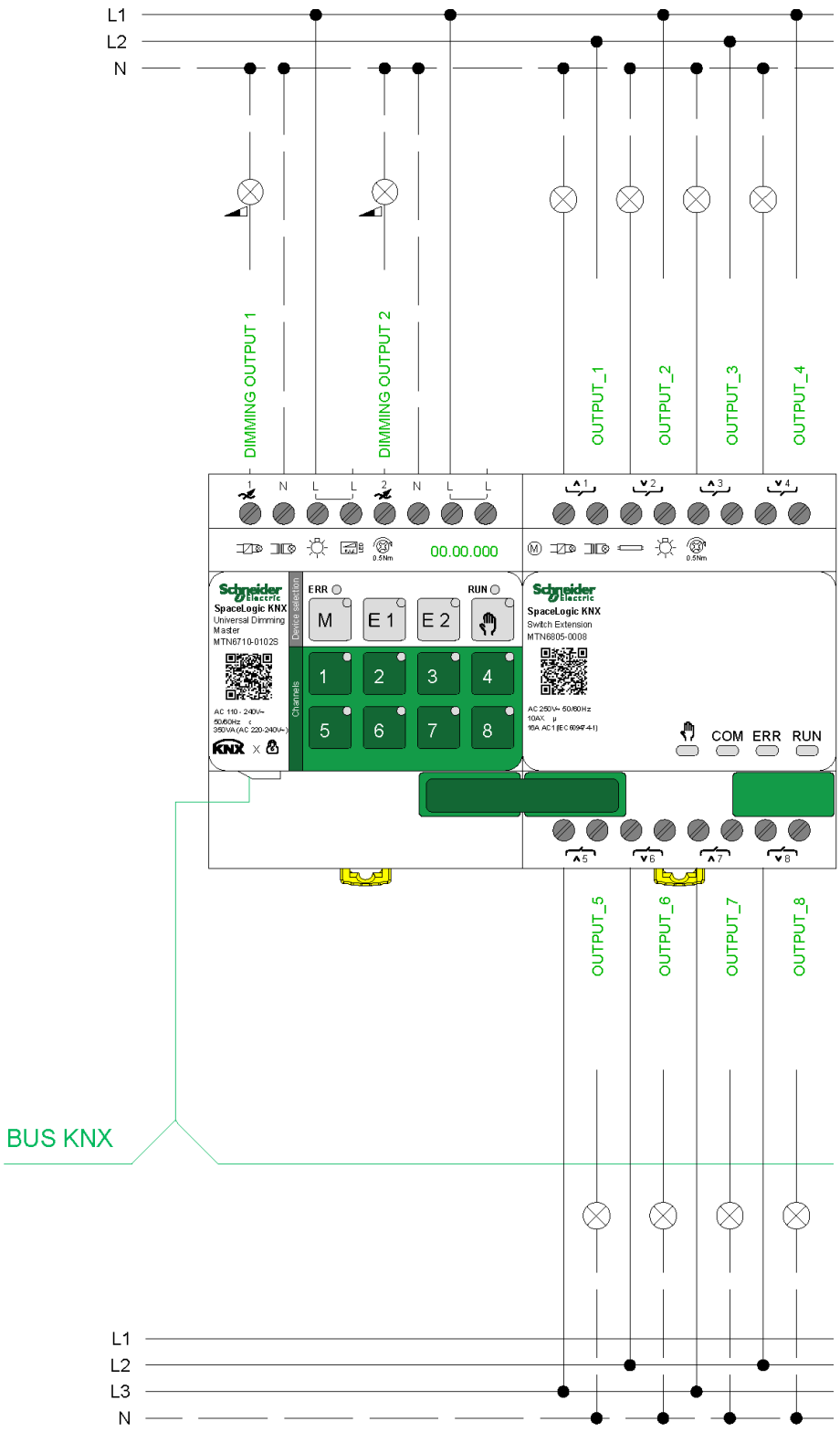
Secure Dimmer Master + Universal Dimming Extension Wiring



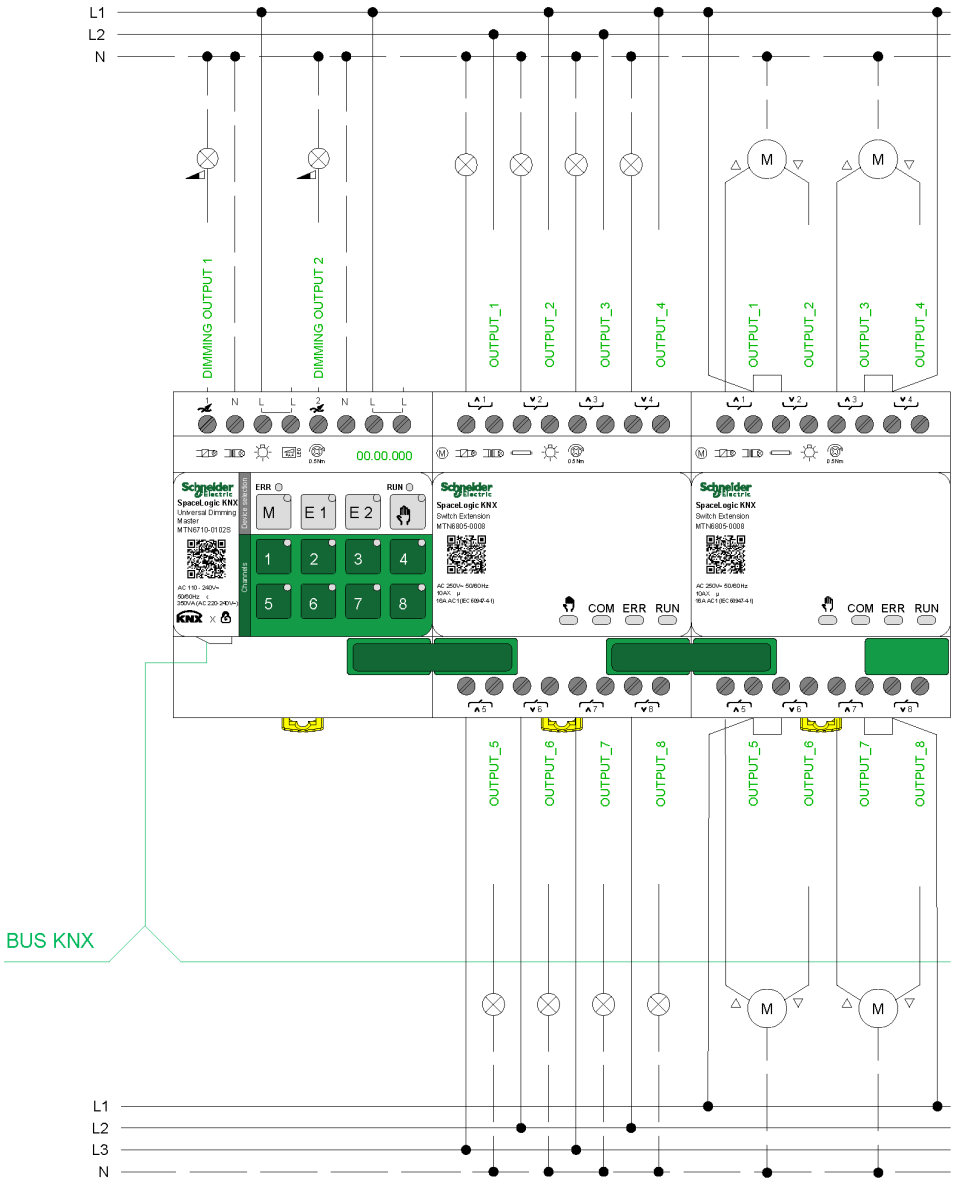
Secure Dimmer Master + Two Universal Dimming Extensions Wiring



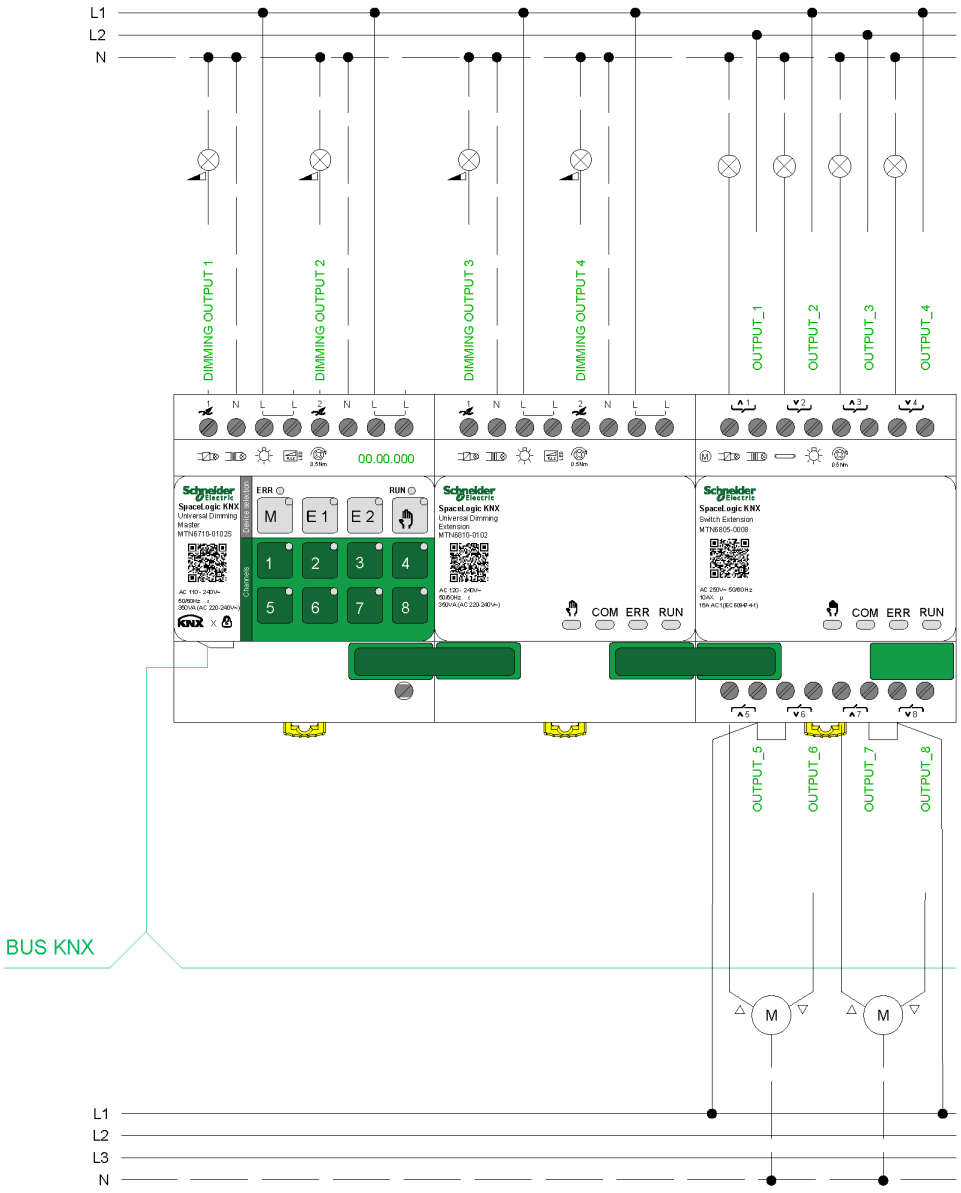
Secure Dimmer Master + Switch Extension Wiring



Secure Dimmer Master + Two Switch Extensions Wiring

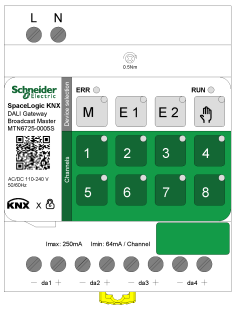


Secure Dimmer Master + Dimmer Extension + Switch Extension Wiring



SpaceLogic KNX DALI Gateway Broadcast

1 x SpaceLogic KNX Secure DALI Gateway Broadcast Master



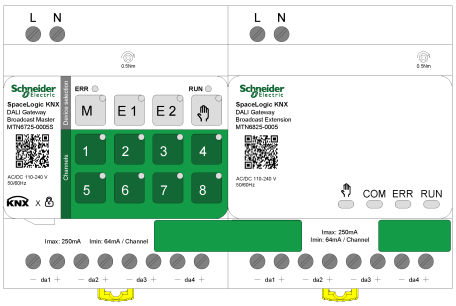
Master 4 DALI broadcast channels

Total 4 DALI broadcast channels

KNX bus: 6.5 mA

1 x SpaceLogic KNX Secure DALI Gateway Broadcast Master

1 x SpaceLogic KNX DALI Gateway Broadcast Extension



Master 4 DALI broadcast channels

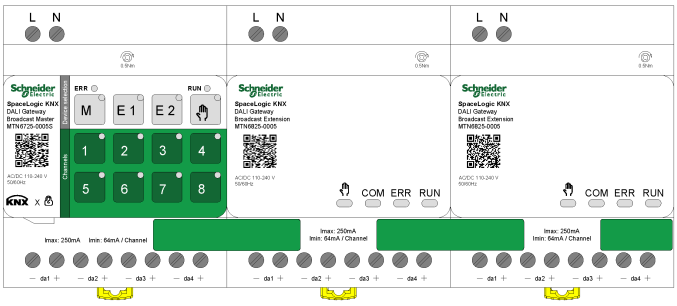
Extension 4 DALI broadcast channels

Total 8 DALI broadcast channels

KNX bus: 12.5 mA

1 x SpaceLogic KNX Secure DALI Gateway Broadcast Master

2 x SpaceLogic KNX DALI Gateway Broadcast Extension



Master 4 DALI broadcast channels

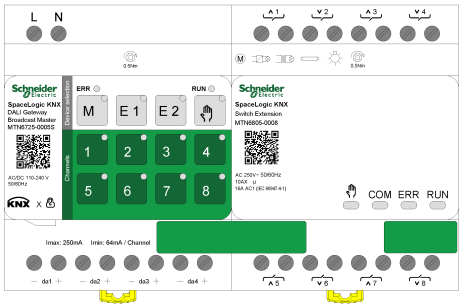
Extension 4 DALI broadcast channels

Total 12 DALI broadcast channels

KNX bus: 18.5 mA

1 x SpaceLogic KNX Secure DALI Gateway Broadcast Master

1 x SpaceLogic KNX Switch / Blind Extension*



Master 4 DALI broadcast channels

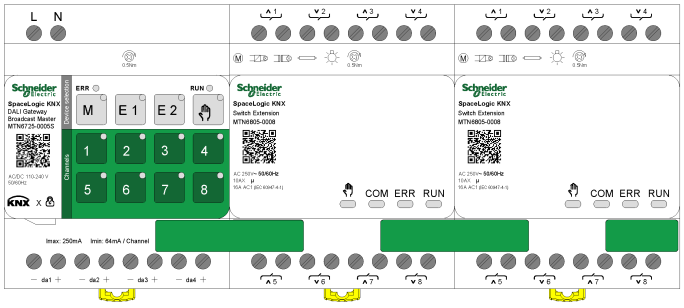
Extension 8 switch channels

Total 4 DALI broadcast channels plus 8 switch channels "zero power"

KNX bus: 10 mA

1 x SpaceLogic KNX Secure DALI Gateway Broadcast Master

2 x SpaceLogic KNX Switch / Blind Extension*



Master 4 DALI broadcast channels

Extension 8 switch channels

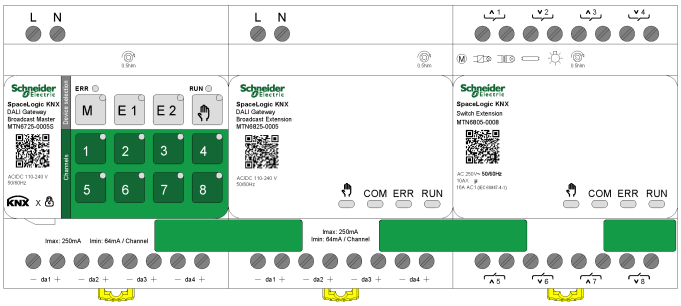
Total 4 DALI broadcast channels plus 16 switched channels "lighting control"

KNX bus: 13.5 mA

1 x SpaceLogic KNX Secure DALI Gateway Broadcast Master

1 x SpaceLogic KNX DALI Gateway Broadcast Extension

1 x SpaceLogic KNX Switch / Blind Extension*



Master 4 DALI broadcast channels

Extension 4 DALI broadcast channels

Extension 8 switch channels

Total 8 DALI broadcast channels plus 8 switch channels "zero power"

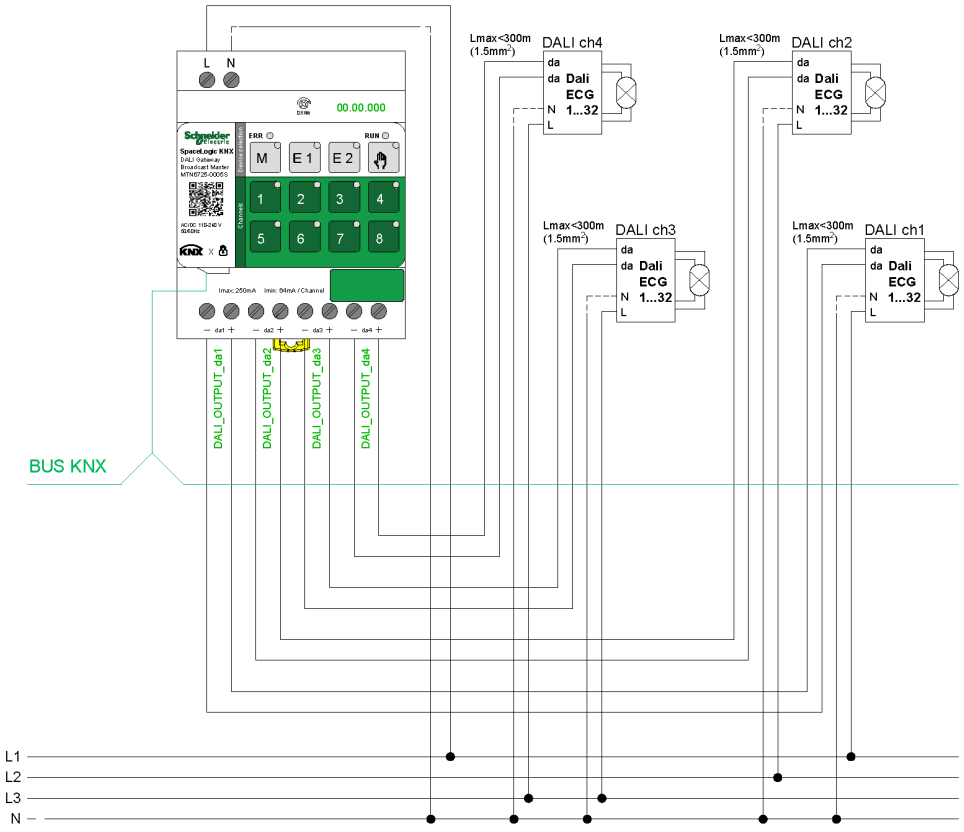
KNX bus: 16 mA

(*) Features supported by the SpaceLogic KNX Switch / Blind:

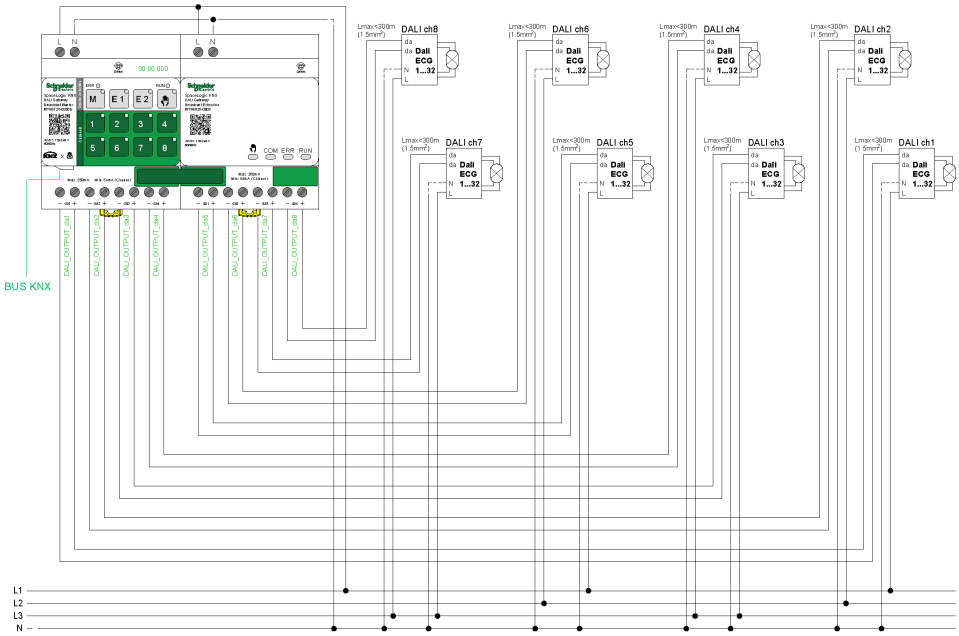
- Lighting control
- Load control
- DALI “zero power”

Not supported: Shutter control

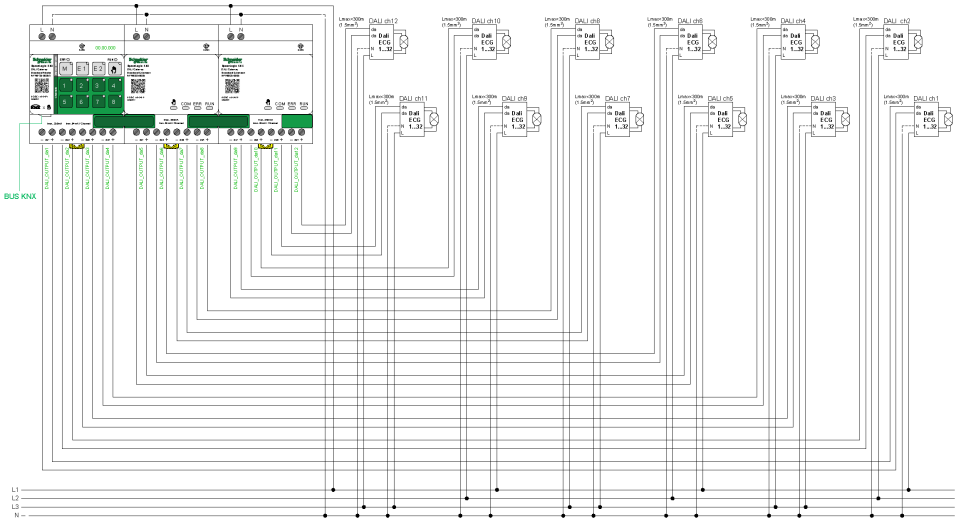
Secure DALI Gateway Broadcast Master Wiring



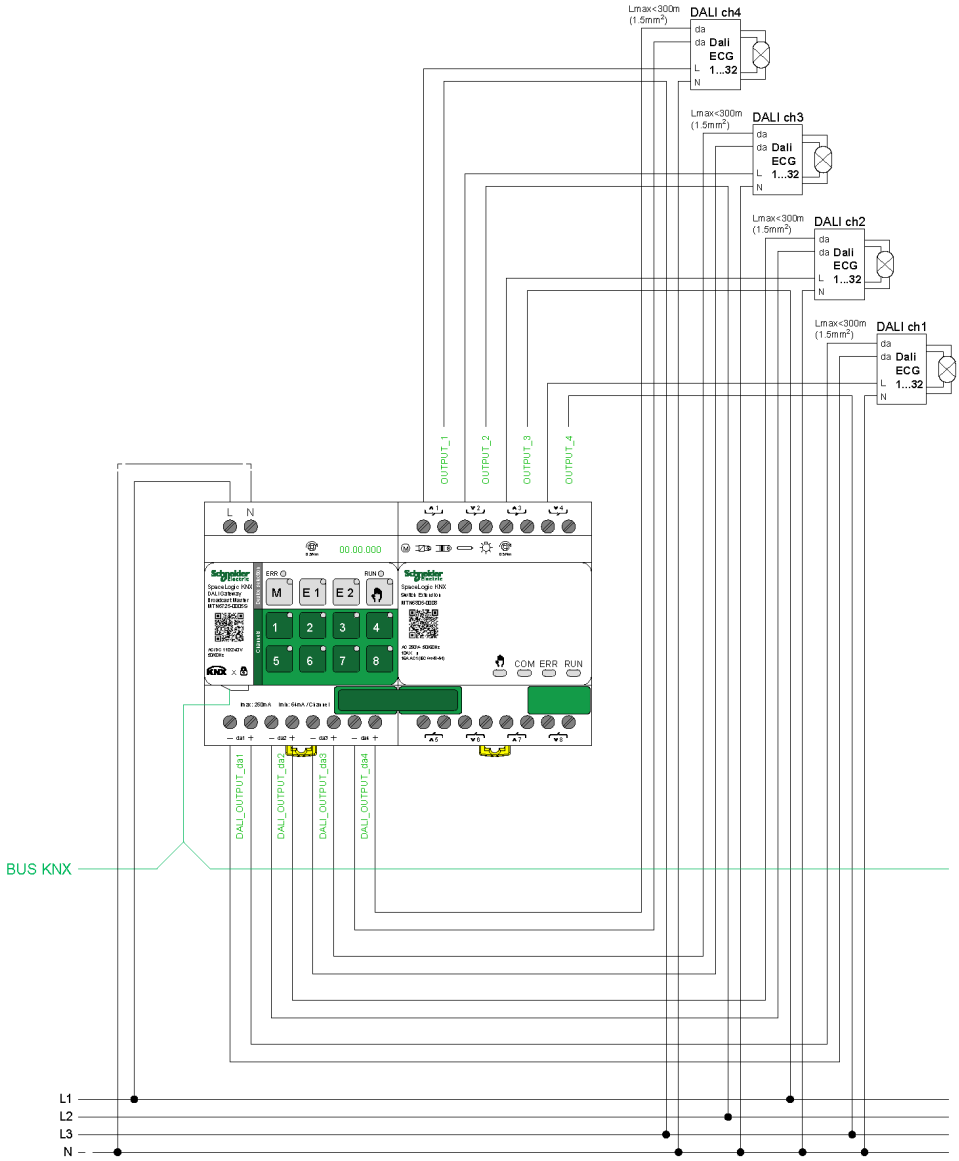
Secure DALI Gateway Broadcast Master + DALI Gateway Broadcast Extension Wiring



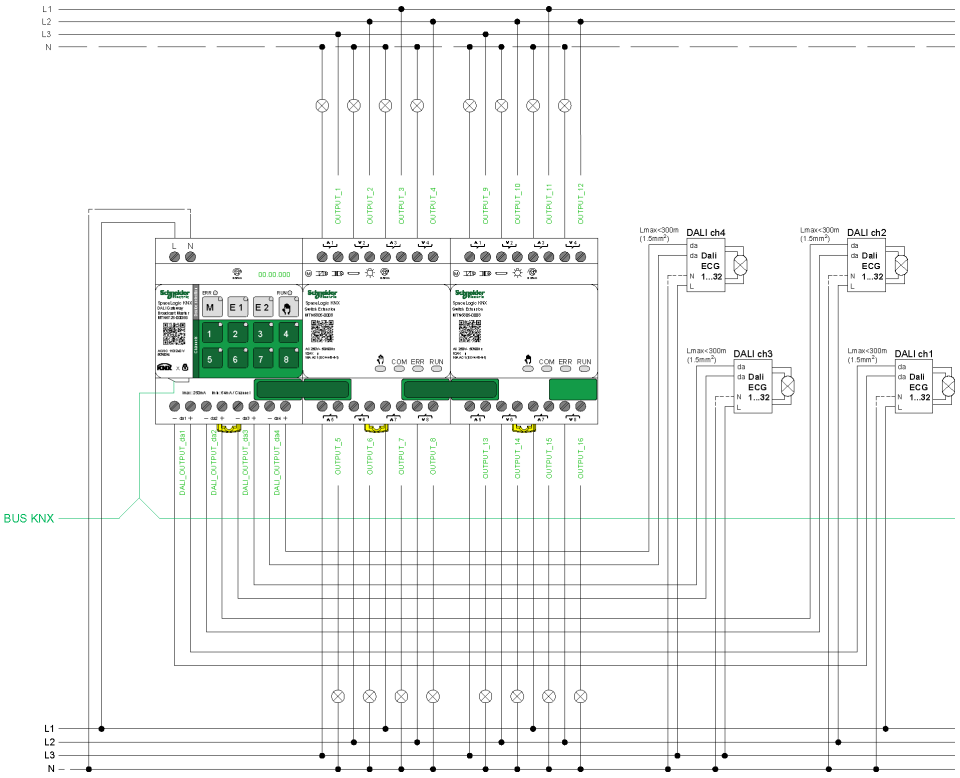
Secure DALI Gateway Broadcast Master + Two DALI Gateway Broadcast Extensions Wiring



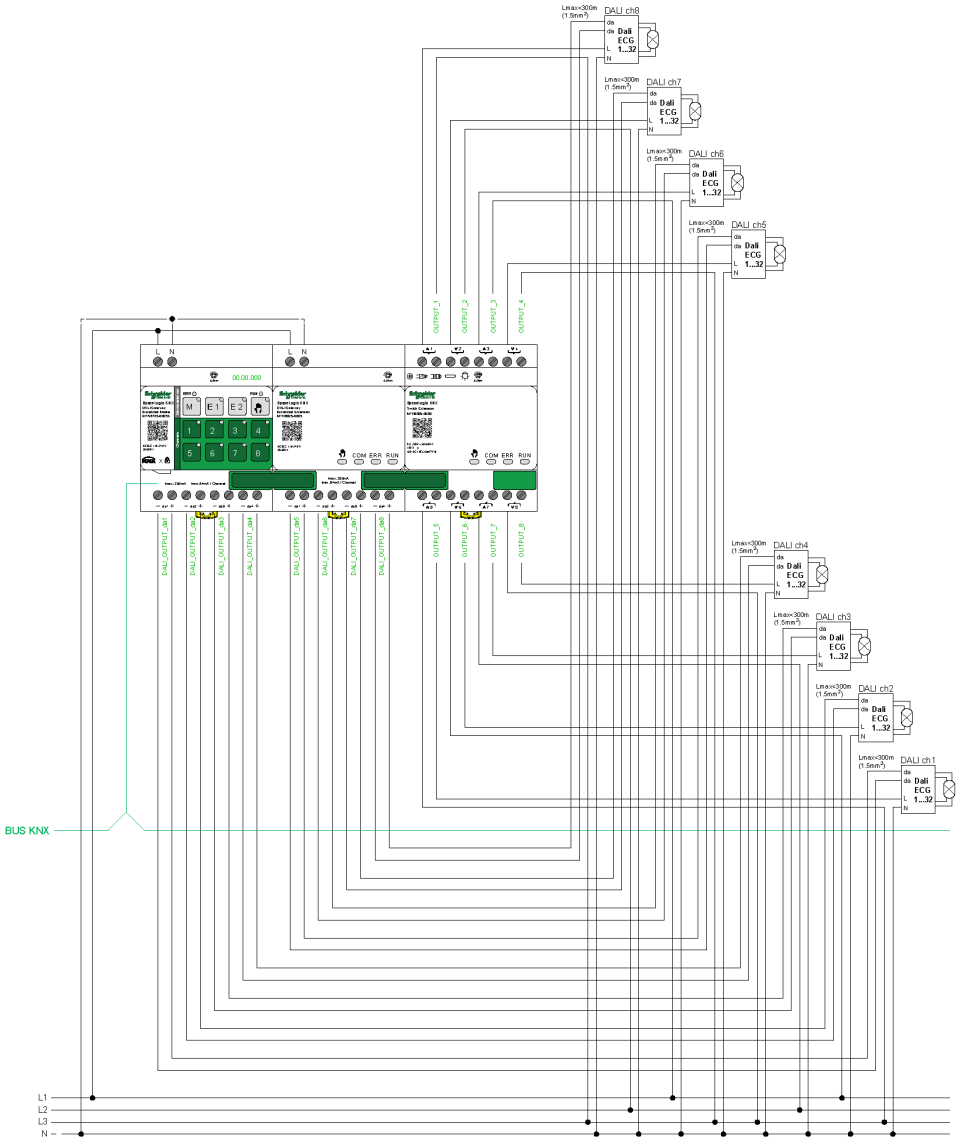
Secure DALI Gateway Broadcast Master + Switch Extension Wiring



Secure DALI Gateway Broadcast Master + Two Switch Extensions Wiring



Secure DALI Gateway Broadcast Master + DALI Gateway Broadcast Extension + Switch Extension Wiring



Commissioning of the Master and Extension Linking

Information on Secure Commissioning

Protecting your data and system configuration is essential. The ETS software and KNX Data Secure offer tools to safeguard your KNX installation from unauthorized access.

Securing Your Project in ETS

To protect your project configuration:

1. In ETS, set a **project password** that restricts access to devices and configuration data.



2. Your password should be strong and include:
   - At least **8 characters**
   - At least **one number**
   - At least **one uppercase letter**
   - At least **one lowercase letter**
   - At least **one special character**

   IMPORTANT: Avoid weak passwords like 1234 or 0000.

About KNX Data Secure

KNX Data Secure is an Extension of the KNX standard that encrypts communication between devices, preventing unauthorized monitoring or manipulation.

- It encrypts telegrams at the object level, ensuring secure data exchange.
- Encrypted telegrams are longer than standard ones, so your interface (e.g., USB) and line couplers must support **KNX long frames**.
- Special setup steps are required in ETS when using secure devices.
- For more details, visit https://www.knx.org/.

Activating KNX Data Secure for a Device

1. In ETS, go to the device **Properties** and click **Add Device Certificate**.

2. You can either scan the QR code on the device or enter the certificate manually.



The certificate includes:

- The **serial number**
- The **FDSK (Factory Default Setup Key)**

The FDSK is used only during initial commissioning and is replaced by ETS after the first download. This prevents unauthorized access even if someone knows the FDSK. The FDSK is printed on the device label both as a QR code and in text form.

Encryption Process Overview

1. Enter the **FDSK** into ETS.
2. ETS generates a **device-specific tool key**.
3. During configuration, ETS sends the tool key to the device, encrypted and authenticated using the FDSK.
4. After setup, the device only accepts the tool key. The FDSK can then only be used to reset the device to factory settings.
   - All secure data is deleted during a reset.
   - Keep the FDSK stored safely in your project documentation.
5. ETS also generates **runtime keys** for secure group communication, encrypted and authenticated using the tool key.

Commissioning

Commissioning a KNX Master device follows the same process as commissioning any other KNX device. KNX commissioning includes linking the device to the KNX bus (individual address) and configuring all functions in ETS.

Extensions do not require KNX commissioning. Once the Master is commissioned in ETS, all physically connected Extensions are automatically detected and linked by the Master.

If Extensions are physically connected but not configured in ETS, the corresponding Extension LED (E1 or E2) on the Master will flash.

There are two types of commissioning procedures, depending on the situation:

Full Commissioning

Use full commissioning when you:

- Load the ETS application or assign an individual address to the Master
- Replace the Master device
- Permanently add or remove an Extension
- Replace an Extension with a different type (e.g., dimmer or switch)
- Change the order of the Extensions

For full commissioning, refer to Full Commissioning, page 62.

Linking or Replacing Extensions (Partial Procedure)

Use this procedure when you:

- Replace an Extension with the same type

For information on adding, replacing or removing Extensions, refer to Working with Extensions, page 64.

Full Commissioning

Full commissioning is required in the following situations:

- When loading the ETS application and assigning the physical address to the Master for the first time
- When replacing the Master device
- When permanently adding or removing an Extension
- When replacing an Extension with a different type (e.g., dimmer or switch)
- When changing the order of the Extensions

During full commissioning:

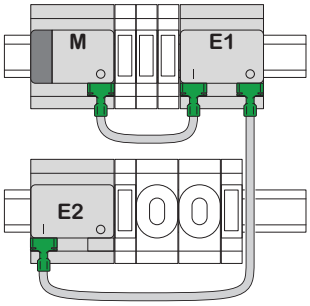
- The Master receives the ETS application and, if applicable, its individual address.
- Configuration data is automatically loaded into the connected Extensions.
- The order of the Extensions is defined: the Extension directly connected to the Master is assigned address “1”, the next one “2”.

NOTICE

CHECK BEFORE COMMISSIONING:

Make sure the physical setup matches your ETS configuration: The device order (Master → Extension 1 → Extension 2) must match the ETS setup.

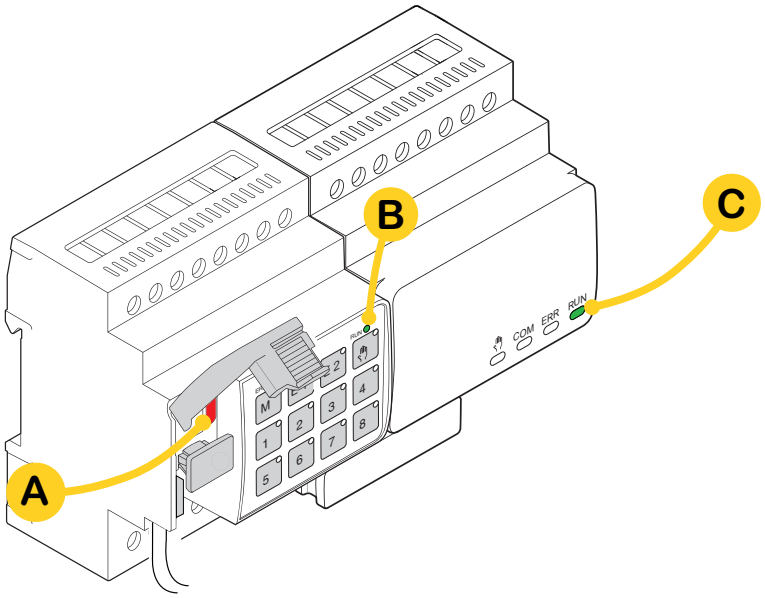
- Connect blind motors to the blind channels as defined in ETS.
- Connect loads to the switching channels specified in the ETS.
- If an Extension is defined as Extension 1 (E1), connect it directly to the Master.
- If defined as Extension 2 (E2), connect it to Extension 1.



An Extension cannot be linked if the physical order does not match the ETS configuration.

Commissioning Steps

1. Connect your PC or notebook to the KNX bus.



2. Press programming button A
   - The programming LED (A) on the Master will light up
3. Load the ETS application and individual address into the device
   - The programming LED (A) on the Master will turn off
   - The RUN LED (B on Master, C on Extension) will light up

During the initialization phase (up to 12 seconds), the device will be temporarily non-functional.

Working with Extensions

Extension linking is used when:

- You replace an Extension with the **same type** (e.g., replacing one dimmer with another)

During Extension linking:

- Only the **newly installed Extension** receives updated configuration data.
- Existing Extensions are updated only if their configuration data **is consistent**.
- The system also checks:
  - The **firmware version** of the new Extension.
  - The **order** of the Extensions.

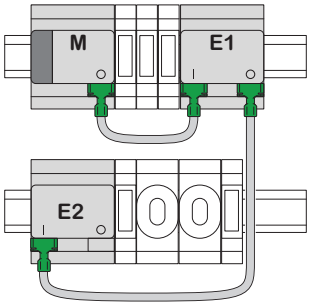
Extension linking is performed during normal operation and does not include KNX commissioning.

NOTICE

CHECK BEFORE LINKING:

Before linking, ensure that the physical setup matches the ETS configuration: The device order (Master → Extension 1 → Extension 2) must match the ETS setup.

- Connect blind motors to the blind channels as defined in ETS.
- Connect loads to the switching channels specified in the ETS.
- If an Extension is defined as Extension 1 (E1), connect it directly to the Master.
- If an Extension is defined as Extension 2 (E2), connect it to Extension 1.



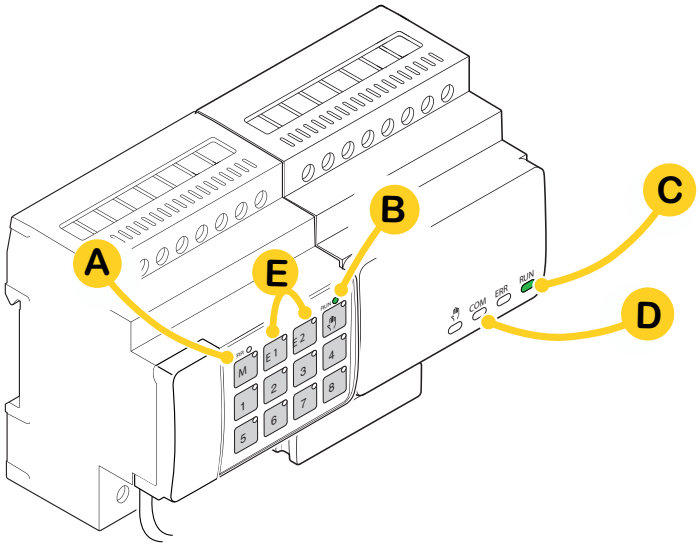
An Extension cannot be linked if the physical order does not match the ETS configuration.

The platform allows Extensions to be replaced without modifying the KNX topology. When an Extension is replaced, the Master updates only the newly installed Extension and checks firmware compatibility as well as the correct sequence of connected devices.

Linking Steps

After replacing the Extension:

1. Press and hold the Master push button (A) for 7 seconds
   - On the **Master**: LED A turns off after 7 seconds, RUN LED (B) starts flashing.
   - On the **Extension**: COM LED (D) turns off.



2. Configuration data is loaded
   - On the **Extension**: COM LED (D) flashes

   During the initialization phase (up to 12 seconds), the device will be temporarily non-functional.
3. The process is complete when all RUN LEDs are lit again.

Firmware Compatibility

If the newly installed Extension has an **incompatible firmware version**:

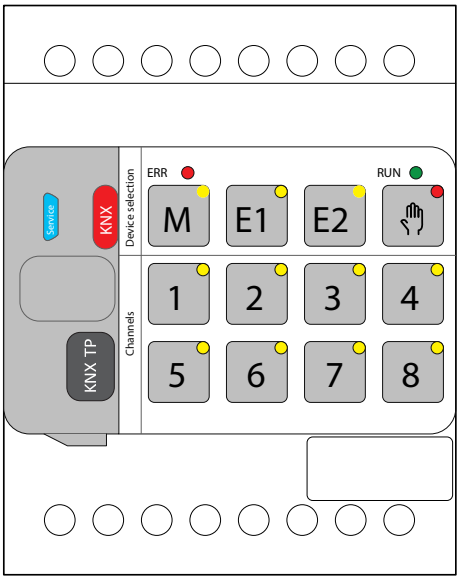
- The Extension LED (E) will flash
- A **firmware update** is required

For firmware update instructions, refer to Firmware Update of Master Devices and Extensions, page 87.

Operating and Display Elements

Switch/Blind Devices

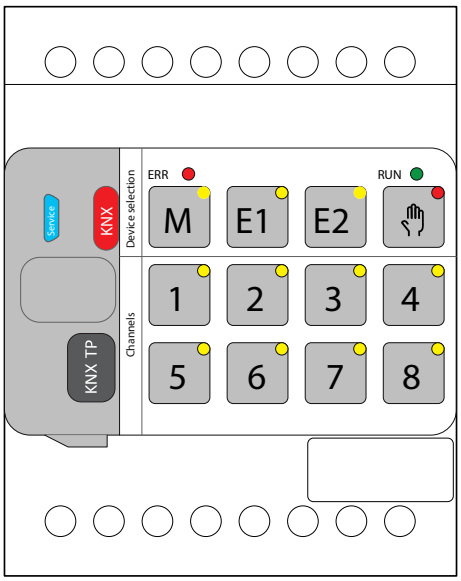
Push Buttons of the Master



M	**Master push button**	
	Short press:	Selection of the Master. The status LEDs indicate the current status of the Master.
	Long press:	Working with Extensions, page 64
E1	**Extension 1 push button**	
	Short press:	Selection of the Extension 1. The status LEDs indicate the current state of Extension 1.
	Long press:	Firmware Update after Replacing an Extension (Firmware Update of Master Devices and Extensions, page 87)
E2	**Extension 2 push button**	
	Short press:	Selection of the Extension 2. The status LEDs indicate the current state of Extension 2.
	Long press:	Firmware Update after Replacing an Extension (Firmware Update of Master Devices and Extensions, page 87)
	Manual push button	
	Switching to manual operation	
	Short press:	Manual operation with low priority (Manual Operation with Low Priority, page 82)
	Long press:	Manual operation with high priority (Manual Operation with High priority, page 84)
1 ... 8	**Channel push button**	
	As soon as the manual operation is activated, you can control the channels activated in the ETS.	
	ETS application loaded:	Switch and control channels.
	ETS application not loaded:	Manual operation with low priority: 2 channels can be controlled at a time: push button 1/2 or 3/4 or 5/6 or 7/8
		For wiring test, page 97 purposes.
		Manual operation with high priority (long press): all channels can be controlled.

KNX	**KNX programming button with integrated LED**	
	Short press	KNX commissioning (Commissioning of the Master and Extension Linking, page 59)
	Press and hold	Triggers the Master reset (Reset to Factory Settings (Master Reset), page 86)
Service	**Service Port**	
	Firmware update and diagnostics:	
KNX TP	**KNX-TP connector**	Standard KNX twisted-pair interface used for KNX communication. Also used for commissioning, firmware update, and diagnostic functions.

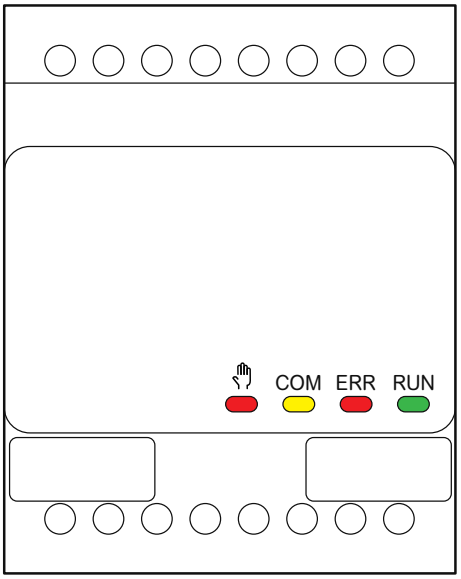
LEDs of the Master



RUN	**RUN LED**	
	Shows the current operating status of the device.	
	On	ETS application loaded, device in operation
	Flashes slowly	Firmware update of the Master
	Flashes fast	Extension linking or update in progress (initial synchronization of an added or replaced Extension)
	Off	ETS application not active. Only wiring test, page 97 possible
ERR	**Error LED**	
	Displays an internal error, e.g. relay powered not sufficient due to missing power supply. For error details, please refer to the diagnostic tool.	
	On	Internal error Master (power supply, device error, ...) or error Master during the firmware update
	Flashes	External error Master
M	**Master / Extension 1 / Extension 2 LED**	
	Indicates that either Master, Extension 1, or Extension 2 has been selected.	
	M, E1 or E2	The device was selected. You can identify the channel states of the device by means of the status LEDs.
E1	On	
	E1 flashes	Error Extension 1
	E2 flashes	Error Extension 2
E2	M, E1 or E2	The Extensions receive the firmware update from the Master
	On	

	Manual LED	
	Indicates that the unit has been switched to manual operation.	
	On	Manual operation with low priority active
	Flashes	Manual operation with high priority active
	Status LED	
1 ... 8	Shows the physically current status of the channels (independent of the ETS configuration)	
	On	Relay contact closed
	Off	Relay contact opened
	KNX programming button with integrated LED	
KNX	Shows the status during KNX commissioning. Device is in programming mode.	
	Flashes	KNX commissioning

LEDs of the Extension

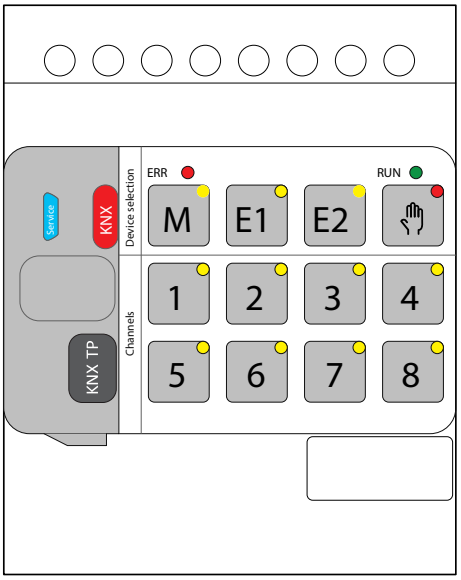


	RUN LED	
RUN	Shows the current operating status of the device. The RUN LED flashes during commissioning.	
	On	ETS application in the Master loaded, device in operation
	Flashes slowly	Firmware update of the Master
	Flashes fast	Extension linking/update in progress (synchronization from the Master)
	Off	Wiring test, page 97 or device does not work (firmware version or Extension type not compatible). In this case, the corresponding Extension LED E1/E2 flashes on the Master.
	Error LED	
ERR	On	Internal error Extension (e.g. self test). For error details, please refer to the diagnostic tool.
	Flashes	External error Extension
	COM LED	
COM	Flashes	Indicates that the Master and the Extension are communicating.
	On	Firmware update
	Manual LED	
	Indicates that the unit has been switched to manual operation.	

On	On Indicates that manual operation has been activated for the device. The channels of the Extension can now be controlled using the channel push buttons of the Master. This function can also be used to identify the Extension, page 96 in the cabinet.

Dimmer Devices

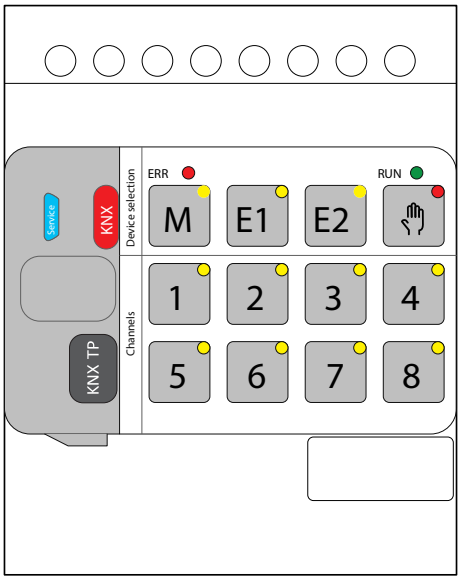
Push Buttons of the Master



M	**Master push button**	
	Short press:	Selection of the Master. The status LEDs indicate the current status of the Master.
	Long press:	Working with Extensions, page 64
E1	**Extension 1 push button**	
	Short press:	Selection of the Extension 1. The status LEDs indicate the current state of Extension 1.
	Long press:	Firmware Update after Replacing an Extension (Firmware Update of Master Devices and Extensions, page 87)
E2	**Extension 2 push button**	
	Short press:	Selection of the Extension 2. The status LEDs indicate the current state of Extension 2.
	Long press:	Firmware Update after Replacing an Extension (Firmware Update of Master Devices and Extensions, page 87)
	Manual push button	
	Switching to manual operation	
	Short press:	Manual operation with low priority (Manual Operation with Low Priority, page 82)
	Long press:	Manual operation with high priority (Manual Operation with High priority, page 84)
C1 C2 I/ O/ 1 2 3 4	**Channel push button**	
	As soon as the manual operation is activated, you can control the channels activated in the ETS.	
	ETS application loaded:	Switching and dimming channels.
	ETS application not loaded:	Both channels can be controlled at the same time. The dimming function is deactivated, only On/Off switching is possible. For wiring test, page 97 purposes. Manual operation with high priority (long press): all channels can be controlled.
1 3	Short/long press:	Lamp is switched on/dimmed brighter

2 4	Short/long press:	Lamp is switched off/dimmed darker
C1 C2 5 6 7 8 RL<> RC RL-LED RL<> RC RL-LED	**Function buttons**	
	As soon as the manual operation is activated, you can set the dimming operation modes for example.	
5 7	Short press	Channel 1/2: Automatic load detection is activated (LED lights up)
6 8	Short press:	Channel 1/2: RL-LED Operating mode is activated
5 + 6	Long press on both buttons:	Channel 1: Counter reset The dimmer can collect the following information: number of switching operations and number of light hours.
7 + 8	Long press on both buttons:	Channel 2: Counter reset The dimmer can collect the following information: number of switching operations and number of light hours
KNX	**KNX programming button with integrated LED**	
	Short press	KNX commissioning (Commissioning of the Master and Extension Linking, page 59)
	Press and hold	Triggers the Master reset (Reset to Factory Settings (Master Reset), page 86)
Service	**Service Port** Firmware update and diagnostics:	
KNX TP	**KNX-TP connector**	Standard KNX twisted-pair interface used for KNX communication. Also used for commissioning, firmware update, and diagnostic functions.

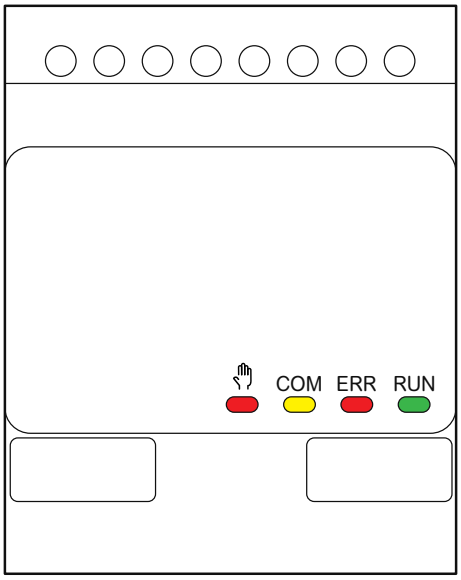
LEDs of the Master



RUN	**RUN LED**	
	Shows the current operating status of the device.	
	On	ETS application loaded, device in operation
	Flashes slowly	Firmware update of the Master

	Flashes fast	Extension linking or update in progress (initial synchronization of an added or replaced Extension)
	Off	ETS application not active. Only wiring test, page 97 possible
ERR	**Error LED**	
	Shows an internal/external error.	
	On	Internal Error (e.g. device is only powered during firmware update by USB)
	Flashes	External error (e.g. shortcut, frequency out of range, overload, loose wire, load is not detected)
M	**Master / Extension 1 / Extension 2 LED**	
	Indicates that either Master, Extension 1, or Extension 2 has been selected.	
	M, E1 or E2 On	The device was selected. You can identify the channel states of the device by means of the status LEDs.
E1	E1 flashes	Error Extension 1 (e.g.: the ETS configuration does not correspond to the installation or a different Extension type is used.)
	E2 flashes	Error Extension 2 (e.g.: the ETS configuration does not correspond to the installation or a different Extension type is used.)
E2	M, E1 or E2 On	The Extensions receive the firmware update from the Master
	Manual LED	
	Indicates that the unit has been switched to manual operation.	
	On	Manual operation with low priority active
	Flashes	Manual operation with high priority active
	Status LED of channels	
	Shows the physically current status of channel 1 and 2 (C1/C2).	
1 3	On	Channel is On (1 % - 100 %)
	Off	Channel is Off
2 4	Off	Channel 1/2 is powered
	Flashes fast	External error of channel 1/2 (e.g. shortcut, frequency out of range) Mains voltage reset is needed
	Flashes slow	External error of channel 1/2 (e.g. overload, loose wire, no load) The application or the user has to stop it.
	On	Channel 1/2 is offline
	Status LED of functions	
	Shows the status of the dimming operation modes of channel 1 and 2 (C1/C2)	
5 7	On	Automatic load detection is active (RL or RC mode is active)
	Off	Automatic load detection is not active
6 8	On	Channel 1/2 is powered
	Off	RL-LED mode is active
5 + 6	Flashes	RL-LED mode is not active
7 + 8	Flashes	Channel 1: Counter reset is ongoing
KNX	**KNX programming button with integrated LED**	
	Shows the status during KNX commissioning. Device is in programming mode.	
	Flashes	KNX commissioning

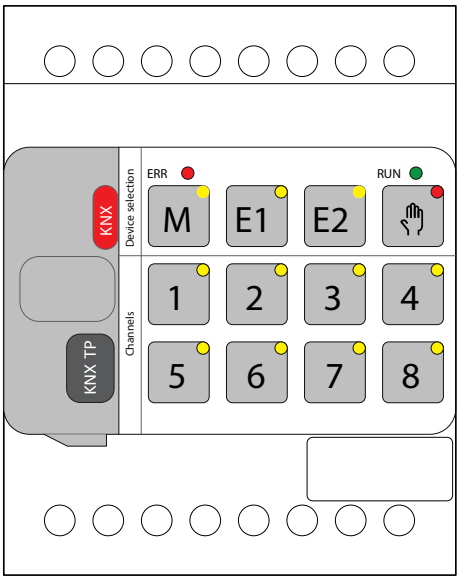
LEDs of the Extension



RUN	**RUN LED**	
	Shows the current operating status of the device. The RUN LED flashes during commissioning.	
	On	ETS application of the Master loaded, device in operation
	Flashes slowly	Firmware update of the Master
	Flashes fast	Extension linking or update in progress (initial synchronization of an added or replaced Extension)
	Off	Wiring test, page 97 or device does not work (firmware version or Extension type not compatible). In this case, the corresponding Extension LED E1/E2 flashes on the Master.
ERR	**Error LED**	
	On	Internal error Extension (e.g. self test). For error details, please refer to the diagnostic tool.
	Flashes	External error Extension (overload, no load, ...)
COM	**COM LED**	
	Flashes	Indicates that the Master and the Extension are communicating.
	On	Firmware update
	Manual LED	
	Indicates that the unit has been switched to manual operation.	
	On	Indicates that manual operation has been activated for the device. The channels of the Extension can now be controlled using the channel push buttons of the Master. This function can also be used to identify the Extension, page 96 in the cabinet.

DALI Gateway Broadcast Devices

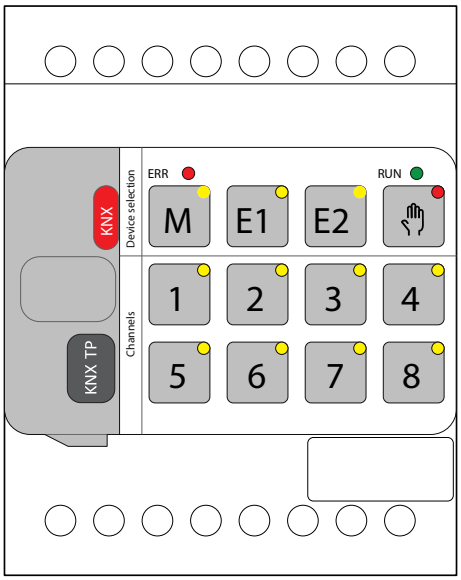
Push Buttons of the Master



M	**Master push button**	
	Short press:	Selection of the Master. The status LEDs indicate the current status of the Master.
	Long press:	Working with Extensions, page 64
E1	**Extension 1 push button**	
	Short press:	Selection of the Extension 1. The status LEDs indicate the current state of Extension 1.
	Long press:	Firmware update after replacing an Extension (Firmware Update of Master Devices and Extensions, page 87)
E2	**Extension 2 push button**	
	Short press:	Selection of the Extension 2. The status LEDs indicate the current state of Extension 2.
	Long press:	Firmware Update after Replacing an Extension (Firmware Update of Master Devices and Extensions, page 87)
	Manual push button	
	Switching to manual operation	
	Short press:	Manual operation with low priority (Manual Operation with Low Priority, page 82)
	Long press:	Starts DALI installation functions (new installation) or post-installation with system check. High-priority manual operation is not supported on the Secure DALI Gateway Broadcast Master (Differences Between Secure DALI Gateway Broadcast Master and Other Masters, page 80). Switches the device to error analysis mode.
1...4	**Channel push button**	
	As soon as the manual operation is activated, you can control the channels activated in the ETS.	
	Short press:	On
	Long press:	Dimming up
1...4	Long press:	The new installation, page 97 is activated by a long press of buttons 1..4. Button 1 starts the reinstallation for channel 1, button 2 starts the reinstallation for channel 2 and so on.
5...8	Short press:	Off
	Long press:	Dimming down

5...8	Long press:	Post-installation, page 97 can be forced with a long press of buttons 5..8. Button 5 starts the post-installation for channel 1, button 6 starts the post-installation for channel 2, etc.
KNX	**KNX programming button with integrated LED**	
	Short press	KNX commissioning (Commissioning of the Master and Extension Linking, page 59)
	Press and hold	Triggers the Master reset (Reset to Factory Settings (Master Reset), page 86)
KNX TP	**KNX-TP connector**	Standard KNX twisted-pair interface used for KNX communication. Also used for commissioning, firmware update, and diagnostic functions.

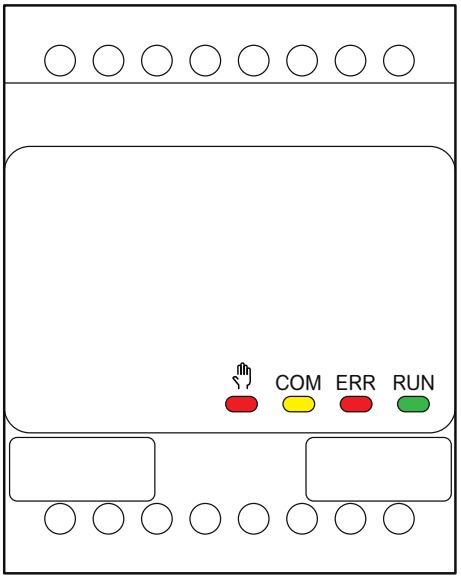
LEDs of the Master



RUN	**RUN LED**	
	Shows the current operating status of the device.	
	On	ETS application loaded, device in operation
	Flashes slowly	Firmware update of the Master
	Flashes fast	Extension linking or update in progress (initial synchronization of an added or replaced Extension)
	Off	ETS application not active. Only wiring test, page 97 possible
ERR	**Error LED**	
	Displays an internal error, e.g. relay powered not sufficient due to missing power supply. For error details, switch to error analysis mode (long press of the Manual push button).	
	On	Internal error Master (power supply, device error, ...) or error Master during the firmware update
	Flashes	External error Master
	Master / Extension 1 / Extension 2 LED	
M	Indicates that either Master, Extension 1, or Extension 2 has been selected.	
	M, E1 or E2	The device was selected. You can identify the channel states of the device by means of the status LEDs.
E1	On	
	E1 flashes	Error Extension 1
	E2 flashes	Error Extension 2
E2	M, E1 or E2	The Extensions receive the firmware update from the Master
	On	

1...4	Status DALI channel 1...4	
1...4	Flashing	New installation, page 97 process is running
5...8	Off	No error detected in the channel
5...8	Flashing	Post-installation, page 97 process in progress
5...8	Light up	If the error analysis is triggered, the LEDs (5...8) indicate the error status of the DALI channel currently selected via LEDs 1...4.
LED 5 lights up	ECG error in the selected channel	
LED 6 lights up	Lamp error in the selected channel	
LED 7 lights up	DALI overload (more than 32 ECGs) in the selected channel	
LED 8 lights up	DALI short circuit in the selected channel	
	Manual LED	
	Indicates that the unit has been switched to manual operation.	
	On	Manual operation with low priority active
	Flashes red	Error analysis mode. Any active manual operation is terminated.
	Status LED	
	Shows the physically current status of the channels (independent of the ETS configuration)	
	On	Relay contact closed
	Off	Relay contact opened
	KNX programming button with integrated LED	
	Shows the status during KNX commissioning. Device is in programming mode.	
	Flashes	KNX commissioning

LEDs of the Extension



	RUN LED	
	Shows the current operating status of the device. The RUN LED flashes during commissioning.	
	On	ETS application loaded, device in operation
	Flashes slowly	Firmware update of the Master
	Flashes fast	Extension linking or update in progress (initial synchronization of an added or replaced Extension)

	Off	Wiring test, page 97 or device does not work (firmware version or Extension type not compatible). In this case, the corresponding Extension LED E1/E2 flashes on the Master.
ERR	**Error LED**	
	On	Internal error Extension (e.g. self test). For error details, please refer to the diagnostic tool.
	Flashes	External error Extension
COM	**COM LED**	
	Flashes	Indicates that the Master and the Extension are communicating.
	On	Firmware update
	Manual LED	
	Indicates that the unit has been switched to manual operation.	
	On	On Indicates that manual operation has been activated for the device. The channels of the Extension can now be controlled using the channel push buttons of the Master. This function can also be used to identify the Extension, page 96 in the cabinet.

LED Behavior of the Masters

Commissioning

	KNX	RUN		M	E1	E2	ERR	Push-button function
Wiring test	—	—	On	—	—	—	—	released
Commissioning, switching on the voltage	—	On for 1 s	On for 1 s	On for 1 s	On for 1 s	On for 1 s	On for 1 s	locked
KNX commissioning	Flashes	—	—	—	—	—	—	locked

Normal Operation

	RUN		M	E1	E2	ERR	Push-button function
Device ready for operation	On	—	—	—	—	—	released
ETS application not active	—	—	—	—	—	—	released
Manual operation with low priority active	On	On	On	—	—	—	released
Manual operation with high priority active	On	Flashes	On	—	—	—	released
Master selected	On	—	On	—	—	—	released
Extension 1 selected	On	—	—	On	—	—	released
Extension 2 selected	On	—	—	—	On	—	released
Internal error	—	—	—	—	—	On	released
External error Master	On	—	—	(On)	(On)	Flashes	released
Error Extension	On	—	—	Flashes	Flashes	—	released
Error of Master/ Extension/ Extension configuration**	On	—	—	(On)	(On)	—	released

IMPORTANT: The high-priority manual operation LED indication does not apply to the Secure DALI Gateway Broadcast Master.

Device Firmware Update

	RUN		M	E1	E2	ERR	Push-button function
Firmware update of the Master	Flashes	—	—	—	—	—	locked
Firmware update of the Master*	Flashes	—	—	—	—	On	locked
Firmware update of the Extensions	—	—	On	On	On	—	locked
Firmware update of the Extensions*	—	—	On	On	On	On	locked

Error Indication

	RUN		M	E1	E2	ERR	Push-button function
Internal error	—	—	—	—	—	On	released
External error Master (concern Extensions)**	On	—	—	(On)	(On)	Flashes	released
Error Extension 1 (e.g. O/I swapped by CableLink)	On	—	—	Flashes	—	—	released
Error Extension 2 (e.g. O/I swapped by CableLink)	On	—	—	—	Flashes	—	released

* The firmware update is stopped and the device is put into error mode. The Extension linking or the firmware update can be initiated via the keypad. If the KNX bus is not connected and the device is only powered via micro USB, all Error LEDs will light up (Master and Extensions). If power is supplied via the KNX bus, all Error LEDs are off.

** LEDs E1/E2 indicate incompatible firmware or a connected Extension that does not match the ETS programming.

Manual Operation: Direct Channel Control

Manual operation allows you to control channels directly from the Master device. This feature is useful for tasks such as maintenance, cleaning, or testing specific channel configurations.

There are two types of manual operation:

- **Manual operation with low priority:**
  Use this mode when you want to **test a channel** or **check its current status**. The KNX bus remains active and high-priority functions from the bus can still override manual control. See Manual Operation with Low Priority, page 82 for details.

- **Manual operation with high priority:**
  Use this mode when performing **maintenance or cleaning work** on the connected loads. KNX telegrams are buffered during this mode and are executed only after manual operation is deactivated. See Manual Operation with High priority, page 84 for details.

Differences Between Secure DALI Gateway Broadcast Master and Other Masters

Manual operation behaves differently on the Secure DALI Gateway Broadcast Master compared to Secure Switch/Blind and Secure Dimmer Masters. These differences are intentional and are primarily related to the commissioning requirements and functional design of DALI systems.

Secure Switch/Blind Master and Secure Dimmer Master:

For these devices, long-press manual operation can be used to enter high-priority manual mode, in which incoming KNX telegrams are buffered and only executed after manual operation is deactivated. This allows uninterrupted local testing, maintenance, or service work, even when the KNX line is active.

In addition, these Masters support four ETS priority modes. The high-priority manual mode functions effectively as a fifth priority mode that cannot be overridden by any KNX telegram; only releasing the manual mode on the device can exit it.

Secure DALI Gateway Broadcast Master:

On the Secure DALI Gateway Broadcast Master, the behavior is different. Long-press functions are reserved for DALI commissioning actions (new installation, post-installation with system check). Therefore high-priority manual mode is not available for DALI channels.

Manual operation on the DALI Gateway Broadcast Master does not use a special fifth priority level. Instead it operates at the same priority level used by the ETS priority system.

As a result:

- KNX telegrams at the same priority level do not override manual operation.
- However, higher-priority KNX telegrams can override manual operation on DALI channels.

This design avoids the need for an additional fifth priority mode while still supporting meaningful priority handling for professional applications.

Manual operation on the DALI Master runs at the same priority level as ETS priority modes. Because the device internally supports several DALI-specific priority modes that are not exposed in ETS, higher-priority telegrams may override manual control when required. High-priority manual mode is intentionally not

supported to keep long-press actions exclusively available for DALI commissioning functions.

Behavior of Switch/Blind Extensions behind a Secure DALI Gateway Broadcast Master:

When a Switch/Blind Extension is connected behind the Secure DALI Gateway Broadcast Master, it inherits the DALI Master's manual operation logic.

Short-press manual operation remains available for switching loads. However, long-press high priority manual override is not supported, because long-press functions on the Secure DALI Gateway Broadcast Master are dedicated to DALI commissioning tasks. This ensures that DALI installation and scanning procedures are not accidentally interrupted by Extension operation.

Reason for this difference:

The reserved long-press actions and the absence of high priority manual override on DALI channels prevent accidental interference with DALI commissioning processes. This ensures correct operation of new installation scans, post-installation checks, addressing of ECGs, and diagnostic procedures.

Maintaining reliable DALI commissioning behavior is the primary reason for the different manual operation logic on the Secure DALI Gateway Broadcast Master and its connected Extensions.

Manual Operation with Low Priority

Manual operation with low priority allows you to control channels directly from the Master device while the KNX bus remains active. This mode is intended for testing individual channels or checking the current load status without interrupting normal KNX communication. In this mode, bus-based high-priority functions such as alarms or central commands may still override the manual settings.

Key Characteristics

- The **RUN LED** stays on, indicating that the KNX bus is still active.
- Channel push buttons operate with **low priority**, meaning high-priority functions (e.g., weather alarms) can override manual settings.
- Manual operation can be activated:
  - Directly on the Master device
  - Via a KNX object
- It can be deactivated:
  - Manually on the device
  - Automatically after a configurable timeout set in ETS

⚠ CAUTION

RISK OF INJURY DUE TO SUDDEN CHANGE OF STATUS OR POSITION OF THE ELECTRICAL LOADS.

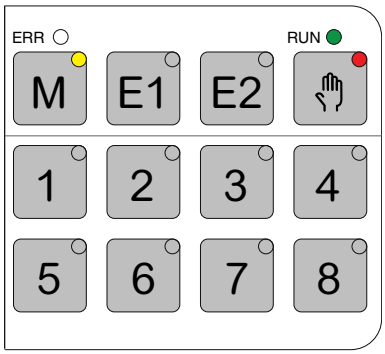
High-priority functions can change the status of the relay contacts at any time. Blinds may move unexpectedly, for example due to a wind alarm or automatic control.

- During manual operation, make sure that no persons are near the loads.
- For maintenance or cleaning work, always use high-priority manual operation.

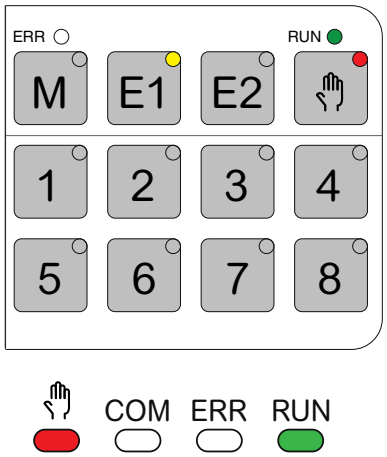
Failure to follow these instructions could result in minor injury.

Activating Manual Operation (Low Priority)

1. Short press the manual push button on the Master.
   - Manual LED lights up.
   - RUN LED remains on (bus function active).
   - Master LED lights up (as the Master is always preselected).
   - Status LEDs show the current state of Master channels configured in ETS.
   - You can now control loads using the channel push buttons.



2. To operate an Extension manually, press the Extension push button (E1 or E2).
   - LED E1 or E2 lights up.
   - Master LED turns off.
   - Manual LED on the Extension lights up.
   - Status LEDs show the current state of Extension channels configured in ETS.
   - You can now control loads using the Master's channel push buttons.



NOTE: When the ETS application is not loaded, low-priority manual operation is limited to predefined wiring-test behavior. Depending on the device type, only basic on/off functions are available.

Deactivating Manual Operation (Low Priority)

Short press the manual push button.

- Manual LED turns off.
- Manual operation is deactivated.

NOTE: If an automatic timeout is configured in ETS, manual operation will deactivate automatically after the defined time. The timer is extended each time a channel push button is pressed.

Manual Operation with High priority

Manual operation with high priority allows direct channel control while incoming KNX telegrams are temporarily blocked. During this period, the device continues to receive KNX messages, but they are buffered and executed only after high priority manual operation is deactivated. This mode is intended for situations where uninterrupted manual control is necessary, for example during maintenance work, cleaning, or safety-relevant tasks.

Key Characteristics

- The RUN LED remains on, indicating the KNX bus is still active.
- KNX telegrams are blocked during manual operation but are stored and processed afterward.
- Channels can only be controlled via the physical channel push-buttons.
- Manual operation can only be activated and deactivated directly on the Master device (not via KNX objects).

⚠CAUTION

RISK OF INJURY DUE TO SUDDEN CHANGE OF STATUS OR POSITION OF THE ELECTRICAL LOADS.

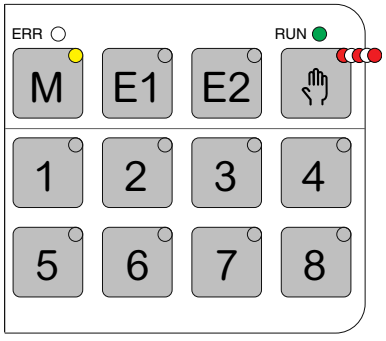
KNX telegrams are buffered during manual operation. After deactivating manual operation, the device will execute the commands of the buffered telegrams. The relay contacts could change their state unexpectedly.

- Only deactivate manual operation when all maintenance work has been finished.

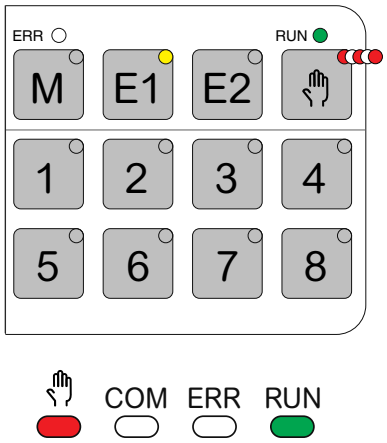
Failure to follow these instructions could result in minor injury.

Activating Manual Operation (High Priority)

1. Press and hold the manual push button for more than 2 seconds.
   - Manual LED flashes.
   - RUN LED stays on (bus remains active).
   - KNX telegrams are buffered, not executed.
   - Master LED lights up (as the Master is always preselected).
   - Status LEDs show the current state of Master channels configured in ETS.
   - You can now control loads using the physical channel push buttons.



2. To operate an Extension manually, press the Extension push button (E1 or E2).
   - LED E1 or E2 lights up.
   - Master LED turns off.
   - Manual LED on the Extension lights up.
   - Status LEDs show the current state of Extension channels configured in ETS.
   - You can now control loads using the Master's channel push buttons.



NOTE: If the ETS application has not been downloaded yet, high priority manual operation still enables local switching, but only predefined wiring-test behavior is available. Dimming functions on dimmer devices remain disabled.

Deactivating Manual Operation (High Priority)

Short press the manual push button on the Master.

- Manual LED turns off.
- RUN LED remains on.
- Buffered KNX telegrams are executed immediately.
  For each channel, only the last received command is executed. If commands were received for multiple channels, the last command for each affected channel is executed.
- Manual operation ends, and full KNX communication resumes.

Reset to Factory Settings (Master Reset)

Performing a Master reset restores the Master device and its Extensions to their original factory state.

State of the Master after the Reset

- Without ETS application.
- The default physical address is set to 15.15.255.
- All group addresses and association tables are deleted.
- All device parameters are reset to their factory default values.
- The BCU (Bus Coupler Unit) key is reset to its default state.
- For KNX data secure devices, the Tool Key of a secure device is set back to its FDSK. This allows the device to be used in another ETS project.
- The relay contacts are open.
- Manual operation is possible, only one relay per device can be switched at a time.

For wiring test instructions, refer to the installation instruction or Wiring Test, page 97 section.

How to Perform a Master Reset

1. **Disconnect** the device from the KNX bus.
2. **Press and hold** the KNX programming button.
3. **Reconnect** the device to the KNX bus.
4. The **KNX programming LED** will start **blinking slowly (red)**.
5. **Release** the KNX programming button.
6. **Press and hold** the KNX programming button again for **at least 5 seconds**.
7. The KNX programming LED will start **blinking rapidly (red)**.
8. **Release** the KNX programming button.
9. The KNX programming LED will remain **ON (red)**.

The Master reset is now triggered and in progress. The device will automatically restart.

All RUN LEDs will be off, indicating that the ETS application has been removed.

Firmware Update of Master Devices and Extensions

Firmware updates ensure that devices in the SpaceLogic KNX Master – Extension platform remain secure, reliable, and up-to-date. All Master types and Extensions can be updated using the **Device Firmware Update Tool Secure (DFU Tool)**. The DFU Tool supports **all current and legacy** update methods, including:

- USB updates
- KNX-TP (twisted pair) updates
- LAN updates (for Pro-class DALI gateways, not part of this family)

The type of interface used for a firmware update depends on the device type.

Firmware Update Interfaces by Device Type

Legacy Masters refer to earlier non-secure Switch/Blind and Dimmer Masters without KNX Data Secure support and without KNX-TP firmware update capability.

Secure Masters refer to the current generation with KNX Secure support.

Legacy Masters (Switch/Blind Master & Dimmer Master Non-secure)

These earlier Master devices do **not** support KNX-TP firmware updates. They can **only** be updated using:

- **USB (Micro-USB B)** connection → via the DFU Tool, using the USB tab.

Secure Masters (Secure Switch/Blind Master & Secure Dimmer Master)

These devices support **both** update paths:

- USB (Micro-USB B)
- **KNX-TP** via the KNX bus → Device detected in the KNX tab of DFU Tool.

This means they can be updated even when cabinet access to the USB port is not possible.

Secure DALI Gateway Broadcast Master (MTN6725-0005S)

This device does **not include a USB interface**. Its firmware can be updated **only** via:

- **KNX-TP** → Selected in the KNX tab of the DFU Tool.

Extensions (all types)

Extensions do not have their own USB or KNX interface. They are **always** updated:

- through the connected Master device,
- **automatically**, in the same update process.

This applies to:

- Switch/Blind Extension

- Universal Dimming Extension
- DALI Broadcast Extension

Summary Table

Device type	Update via USB	Update via KNX-TP	Update via LAN	Note
Legacy Switch/Blind Master	✓	✖	✖	USB-only legacy devices
Legacy Dimmer Master	✓	✖	✖	USB-only legacy devices
Secure Switch/Blind Master	✓	✓	✖	Supports both USB + KNX-TP
Secure Dimmer Master	✓	✓	✖	Supports both USB + KNX-TP
Secure DALI Gateway Broadcast Master	✖	✓	✖	No USB port; KNX-TP only
Switch/Blind Extension	Updated via Master	Updated via Master	✖	Always updated through the Master device
Universal Dimming Extension	Updated via Master	Updated via Master	✖	Always updated through the Master device
DALI Gateway Broadcast Extension	Updated via Master	Updated via Master	✖	No USB port. Always updated through the Master device

Firmware Update Workflow

Updating starts **always at the Master**.

Once the Master firmware is transferred and activated, the Master automatically updates all connected Extensions.

This avoids additional update steps and ensures that all components run compatible firmware versions.

Using the DFU Tool

Firmware Archive

Before updating any device, load or download the firmware archive in the DFU Tool. The archive contains:

- Current firmware images
- Supported device list
- Signatures for authenticity checking (signature warning appears if invalid).

Updating via KNX-TP

Applicable to:

- Secure Switch/Blind Master
- Secure Dimmer Master
- Secure DALI Broadcast Master

Steps (DFU Tool → KNX tab):

- Select KNX interface (USB-KNX or KNX-IP).
- Connect.
- List/Scan devices.
- Select device.
- Start firmware transfer.
- Enter PIN (configured in ETS).
- Activate firmware.

Updating via USB

Applicable to:

- Legacy (non-secure) Switch/Blind Master
- Legacy (non-secure) Dimmer Master
- Secure Switch/Blind Master
- Secure Dimmer Master

Steps (DFU Tool → USB tab):

- Select COM port.
- List USB device.
- Start update.
- Enter PIN if required (secure devices).

LAN Updates

Only used for **DALI Gateway Pro** (different product line).

This does **not** apply to the Secure DALI Gateway Broadcast Master.

DFU Tool includes the LAN tab for completeness.

LED Behavior During Firmware Update

Because LED signaling differs between Master families, always refer to the following:

- The section Operating and Display Elements, page 66
- Chapter **LED Behavior During Update** in the SpaceLogic KNX-Device Firmware Update Tool (DFU Secure) user guide, available in the DFU Tool software package online at www.se.com

Transition from Old DFU to New DFU Tool Secure

Old DFU Tool Limitations

- Only supported **USB updates**
- Could not update devices via KNX-TP
- Did not support secure communication
- Required manual firmware handling

New DFU Tool Secure Improvements

- Supports **USB**, **KNX-TP**, and **LAN**
- Unified tool for **legacy + secure** devices
- Handles Extension updates automatically
- Verifies firmware signatures
- Supports secure PIN-protected devices
- Provides diagnostics and update reporting

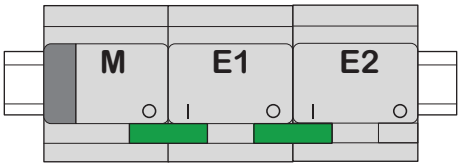
This now fits all device types in the current Master – Extension platform.

Accessories

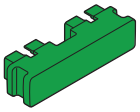
SpaceLogic KNX Module Link



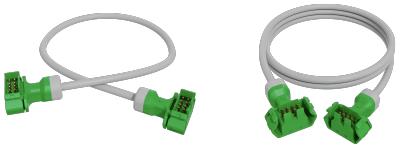
The **Module Link** is used to connect KNX devices with link interfaces that are installed **directly next to each other**.



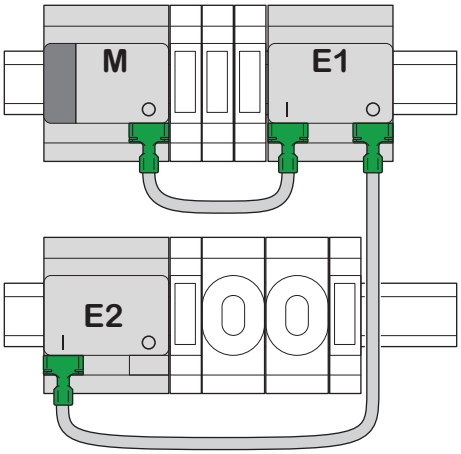
- **M** = Master
- **E1 / E2** = Extension 1 / Extension 2

Product		Commercial Reference	Maximum Distance
SpaceLogic KNX Module Link		MTN6940-0000 (supplied with the Extension)	–

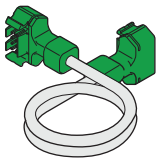
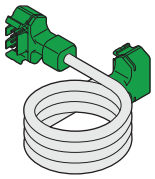
SpaceLogic KNX Cable Link



The **Cable Link** is used to connect KNX devices with link interfaces that are installed **at a distance from each other**.



- **M** = Master
- **E1 / E2** = Extension 1 / Extension 2

Product		Commercial Reference	Maximum Distance
SpaceLogic KNX Cable Link S		MTN6941-0001	30 cm
SpaceLogic KNX Cable Link L		MTN6941-0002	150 cm

FAQ

Cabinet Planning

What should I consider when planning the cabinet layout?

- Plan the required functions and number of channels in your ETS project.
- Allocate 72 mm (4 TE) of space for each Master or Extension.
- Master and Extensions do not need to be placed side by side.
  - Use Module Links for adjacent devices.
  - Use Cable Links (30 cm or 150 cm) for spaced devices.

SpaceLogic KNX	Commercial Reference	Hardware Specifications
Secure Switch/Blind Master	MTN6705-0008S	Switch: 8 x 10 A/16 A relay channels
Switch/Blind Extension	MTN6805-0008	Switch: 8 x 10 A/16 A relay channels
Secure Dimmer Master	MTN6710-0102S	Dimmer: 2 x AC phasecut dimming channels (300 W)
Universal Dimming Extension	MTN6810-0102	Dimmer: 2 x AC phasecut dimming channels (300 W)
Secure DALI Gateway Broadcast Master	MTN6725-0005S	DALI: 4 x DALI Broadcast channels, 32 x DALI 2 ECGs per channel
DALI Gateway Broadcast Extension	MTN6825-0005	DALI: 4 x DALI Broadcast channels, 32 x DALI 2 ECGs per channel

The modular Master-Extension architecture reduces cabinet space usage because all devices share the same mechanical width. A single Master with two Extensions occupies 12 TE and provides up to 24 channels, allowing efficient use of space in distribution boards.

Operational benefits also include reduced energy consumption and simplified handling of commercial references. These aspects are especially valuable in projects that may expand gradually over time.

Expanding the Project

Can I add more channels?

Yes. You can connect up to 2 Extensions to one Master. See Supported Master-Extension Combinations, page 30 for more information.

For example, with a Secure Switch/Blind Master, you can have up to 24 switching channels. If more channels are needed, start with a new Master and connect Extensions to it.

Power Supply

Do I need a special KNX power supply?

No. Standard KNX power supply rules apply. Refer to the device’s installation instructions for electrical connection details.

Changes in ETS

What should I do after making changes in ETS?

Perform a full commissioning to download the updated application to the Master and Extensions. See Full Commissioning, page 62.

Replacing Extensions

What if I replace an Extension with the same type?

Use a new or previously used Extension. After installation, perform Extension linking. See Working with Extensions, page 64.

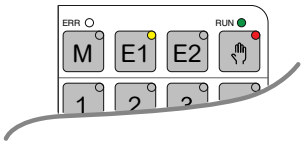
What if I replace an Extension with a different type?

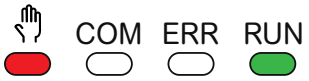
Update the ETS configuration and perform a full commissioning. See Full Commissioning, page 62.

Identifying Extensions in the Cabinet

How can I identify Extensions without removing the cover?

1. Activate manual operation on the Master (short press the manual button).
2. Press the Extension button (E1 or E2).
   - The manual LED on the selected Extension lights up red.





3. Do not forget to deactivate manual operation afterward (short press again).

Adding or Removing Extensions

What if I permanently add or remove an Extension?

Update the ETS configuration and perform a full commissioning. See Full Commissioning, page 62.

Replacing the Master

What should I do if I replace the Master?

Perform a full commissioning after installation. See Full Commissioning, page 62.

Changing Extensions Order

What if I change the order of the Extensions?

After reconnecting all devices, perform a full commissioning. See Full Commissioning, page 62.

Wiring Test

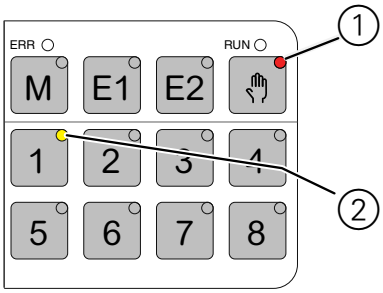
How and when can I test the wiring of the connections?

You can test wiring before loading the ETS application.

- Universal Dimming Extension:
  - Both channels can be controlled simultaneously.
  - Only On/Off switching is possible (dimming is disabled).
- Switch/Blind Extension:
  - In low priority manual mode, control two channels at a time (e.g., 1/2, 3/4, etc.).
  - In high priority manual mode, control all channels simultaneously.

Steps:

1. Activate manual operation:
   - Short press = low priority
   - Long press = high priority
2. Select the channel with a connected load.
   - The channel LED lights up
   - The connected load switches on



Dimmer Error Handling

What if the ERR LED and channel LEDs (2/4) flash and the load does not respond?

This indicates a short circuit or frequency issue in the mains voltage.

- Likely caused by an incorrect load.
- Replace the load and briefly interrupt the power supply to the affected channel (not the KNX bus).

Secure DALI Gateway Broadcast Master Installation

What happens during the first-time installation of the Secure DALI Gateway Broadcast Master?

When the gateway is powered on for the first time in its delivery/default state, it automatically performs a new installation. It scans each DALI channel for connected ECGs (Electronic Control Gear) using their unique 3-byte long addresses. If ECGs are found, the gateway assigns them ascending short addresses from 0 to 31.

What is a post-installation and when does it occur?

A **post-installation** occurs when the gateway restarts and ECGs have already been taught in. It checks whether previously known ECGs are still present and scans for any newly added ECGs. New ECGs are added and assigned short addresses. The total number of ECGs per channel must not exceed 32.

What happens if ECGs are removed or replaced?

If ECGs are removed or replaced, a post-installation with system check or a new installation must be performed. Otherwise, the gateway will retain outdated ECGs in memory, causing error messages and preventing new ECGs from being added due to memory limits.

What is the difference between post-installation with and without system check?

- Without system check: Non-responding ECGs are retained. Use this when only adding new ECGs.
- With system check: Non-responding ECGs are deleted. Use this when ECGs have been removed or replaced.

How can I manually start a post-installation with system check?

Press the button on the device to manually trigger a post-installation. This always includes a system check and deletes non-responding ECGs.

What happens if no ECGs are connected during a system check?

All previously taught-in ECGs are deleted from memory. The next time the device starts, it will perform a new installation on the empty channel.

What should I do after changing the DALI installation?

Always perform a post-installation with system check or a new installation to ensure the gateway correctly reflects the current state of the DALI line.

Manual Operation of the Master Devices

What is manual operation of the Master devices?

Manual operation allows you to control the outputs of a Master device and any connected Extensions directly on the device hardware. It is intended for use during wiring tests, commissioning preparation, troubleshooting, or maintenance tasks when temporary local control is required.

What is the difference between low priority and high priority manual operation?

Low priority manual operation keeps the KNX bus fully active. Incoming telegrams can still override manual switching positions. High priority manual operation temporarily blocks incoming KNX telegrams. The blocked telegrams are stored and executed only after high priority mode is deactivated. This mode is intended for maintenance work where safe, uninterrupted manual control is required.

How do I activate manual operation on a Master?

A short press of the manual button activates low priority manual operation. A long press (approximately two seconds) activates high priority manual operation, unless this function is not supported by the specific Master type.

Does manual operation work if the ETS application has not been downloaded yet?

Yes. In this case, the device supports a predefined wiring-test behavior. On Secure Switch/Blind Masters, two channels at a time can be controlled. On Secure Dimmer Masters, both dimming channels can be switched on and off, but dimming is disabled. On Secure DALI Gateway Broadcast Masters, short-press control is available for switching and dimming the broadcast channels.

Can all Master devices perform high priority manual operation?

No. High priority manual operation is only available on the Secure Switch/Blind Master and the Secure Dimmer Master. The Secure DALI Gateway Broadcast Master does not support high priority manual operation for its lighting channels.

Why is high priority manual operation not available on the Secure DALI Gateway Broadcast Master?

The Secure DALI Gateway Broadcast Master uses all long-press button functions for DALI commissioning tasks such as new installation, post-installation, system check, and diagnostic operations. These functions must remain available at all times. Therefore, the long-press layer cannot be used to activate high priority manual override for DALI channels.

How does manual operation work on the Secure DALI Gateway Broadcast Master?

Manual operation on the Secure DALI Gateway Broadcast Master is limited to short-press control for switching and dimming the broadcast channels. KNX telegrams are not blocked, and the bus remains fully active during manual operation.

Do Extensions behave differently when connected to a Secure DALI Gateway Broadcast Master?

Yes. When a Switch/Blind Extension is connected behind a Secure DALI Gateway Broadcast Master, it inherits the DALI Master’s manual-operation logic.
Short-press operation remains available, but high priority manual override (long press) is not available because long-press functions are reserved for DALI commissioning tasks on the Master.

Can manual operation be disabled?

Yes. Manual operation can be disabled in ETS for installations where local access is restricted or not desired.

Does manual operation affect KNX Secure communication?

No. Manual operation affects only the relay or output behavior of the device. KNX Secure communication and configuration security remain unchanged.

What happens to buffered telegrams after high priority manual mode is deactivated?

All KNX telegrams that were received during high priority manual operation are executed immediately after high priority mode is switched off.

Can I identify Extensions using manual operation?

Yes. When manual operation is active, selecting an Extension (E1 or E2) lights the corresponding manual LED on the Extension, making it easy to identify the physical module in the cabinet.

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