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ABB I-BUS® KNX

# ABB i-bus® KNX DALI Gateways

## New premium versions

### **Buildings just got smarter with ABB's DALI Gateway Premium**

The KNX DALI Gateway Premium opens up new perspectives in safe and healthy building environments thanks to the new Tunable White, Dim2Warm, Human Centric Lighting functions. With the KNX DALI Gateway Premium, the integration of DALI devices into the KNX installation is simplified and thus streamlines the installation, commissioning and use of intelligent automation solutions.

### **ABB i-bus® KNX and DALI**

ABB i-bus® KNX can transform an office or other commercial building into a smart building by enabling control of blinds, lights, heating, air-conditioning, door communication or home appliances. Via a wall switch, voice-control or smartphone, tablet or personal computer, ABB i-bus® KNX gives the user full command of comfort, safety and efficiency. All functions can be managed automatically – according to a schedule, sunset or sunrise, temperature or the presence of people – or be called up at the touch of a button.

DALI (digital addressable lighting interface) is a network-based protocol – set out in technical standard IEC 62386 – for control of lighting in building automation. Controllable lighting systems are the key to energy saving – with the additional benefit of increased comfort and safety. DALI was developed as an international industry standard for intelligent and easy management of lighting equipment

For some time, DALI intelligent light management systems have been employed extensively in commercial premises, such as offices, due to DALI's flexibility and ease of installation. DALI was little used in residential units for reasons of cost and lack of appropriate luminaires. Recently, however, technological advances have changed this situation and suitable luminaires can now be sourced at a reasonable price, which has led to DALI gaining some traction in home automation systems, despite another drawback of DALI in residential settings – namely, the cost and complexity of installation.

ABB's KNX DALI Gateway Premium changes the value proposition of using DALI in smart buildings by providing a bridge between DALI lighting systems and ABB-i-bus KNX. The new range of devices are also certified according to the DALI-2 standard.

More specifically, the KNX DALI Gateway Premium now allows the easy commissioning and integration capabilities using the ABB i-bus® KNX tool to be exploited to reduce the complexity of DALI installation. The integration of DALI devices with the ABB i-bus® KNX system also creates synergies that benefit markets where DALI is a vital feature.



Fig. 1 The KNX DALI Gateway Premium.

### The KNX DALI Gateway Premium

ABB's KNX DALI Gateway Premium range includes two devices in a 4 TE (70 mm) width, DIN-rail devices that can drive 64 individually controlled DALI devices (device type 0, 1 and 8 to EN 62386) per output channel (fig. 1). The product has an integrated DALI power supply and can be supplied by 100 to 240 V AC/DC, 50/60Hz, which makes it suitable for use worldwide.

In providing a gateway between ABB i-bus® KNX and DALI lighting systems, the KNX DALI Gateway Premium behaves in a fashion similar to a conventional dimmer in the ABB i-bus® KNX system. Crucially, the gateway brings the straightforward ABB i-bus® KNX-like integration and commissioning to the DALI world, thus removing one of the

obstacles faced by traditional DALI installers, panel builders and system integrators. This innovation makes the integration of DALI digital lighting solutions in residential buildings much more practical.

A further benefit delivered by the KNX DALI Gateway Premium is that the ABB i-bus® KNX portfolio is now available to a wider range of applications.

The gateway is simple to install, and no tools are required for assembly. Safety was a core value in the design of the gateway and special measures have been taken to make installation and operation completely safe. Two LEDs provide clear status indication and manual operation is accomplished via a single push button. Operating hours can be managed via the ABB i-bus® tool. Power-on level (ie, brightness value after a supply voltage recovery of the DALI device) and system-failure level (ie, the reaction of the DALI device in case of a DALI voltage failure) can be set per gateway.

Each channel of the KNX DALI Gateway Premium has parameters available to it such as minimum brightness, maximum switch-on brightness day/night, autonomous switch-off time and switch-on mode (fig. 2), and many more.

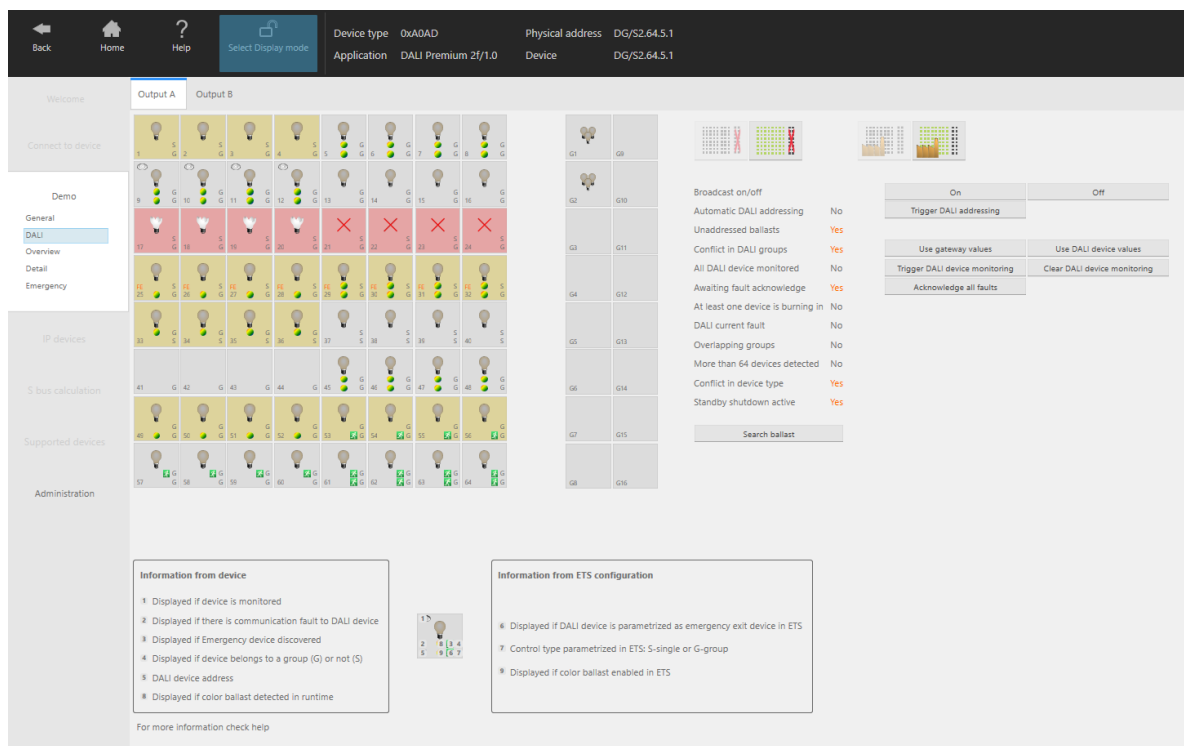


Fig 2 Settable parameters of the KNX DALI Gateway Premium.

## **ABB i-bus® KNX**

As the name suggests, the KNX DALI Gateway Premium is founded on ABB i-bus® KNX. This means of communication and control is based on the KNX standard, which is accepted as the world's first open standard for the control of all types of intelligent buildings – industrial, commercial or residential. With ABB i-bus® KNX, all devices communicate with each another via a single bus cable that is installed alongside the normal power lines. KNX is ideal for DALI-type installations as sensors, touchscreens, etc. can share the bus with instructions sent to a gateway to control, for example, a group of downlighters in a living space. Further, if a residential layout changes, the lighting can be reconfigured in software without having to rewire the circuitry.

Because it is an open standard (see EN 50090, ISO/IEC 14543), ABB's KNX implementation is compatible with other players in the sector, which means that all relevant devices can work together – lighting, blinds and shutters, HVAC, security systems, energy management, audio-video, , displays, remote control, etc.

## **DALI-2**

ABB's KNX DALI Gateway Premium is fully compatible with DALI-2 as well as DALI. DALI-2, which is fully backward-compatible, saw various DALI issues resolved as well as an extension to include control devices, and higher quality standards and better testing procedures, which ensures higher compatibility – a potential problem with some DALI devices. The DALI-2 specification is more precise – to reduce the chance of misinterpretation – and has new commands and features such as extended fade-time (0.1 s to 16 min) and NV-RAM storage of persistent variables.

## **A step-change in residential building automation**

With its ease of installation and use, the KNX DALI Gateway Premium provides the ideal way to integrate professional digital DALI lighting solutions with ABB i-bus® KNX to deliver energy efficiency, safety and comfort to intelligent residential building systems. The gateway is DALI-2 certified and is backward-compatible with existing DALI devices. A similar device is currently not available from any ABB i-bus® KNX competitor in this segment. With the KNX DALI Gateway Premium, installers, panel builders and system integrators are guaranteed a reliable hardware platform that extends the benefits of ABB i-bus® KNX to the DALI world and that significantly streamlines the installation, commissioning and use of intelligent residential automation solutions.