# **LIGHTING SOLUTIONS**

# **Operating Manual** iProgrammer

**3C**
convenient
clever
Communication

| USB | **iProgrammer** | DALI | LED Driver |
|-----|-----------------|------|------------|
| 230 V | | 230 V | |
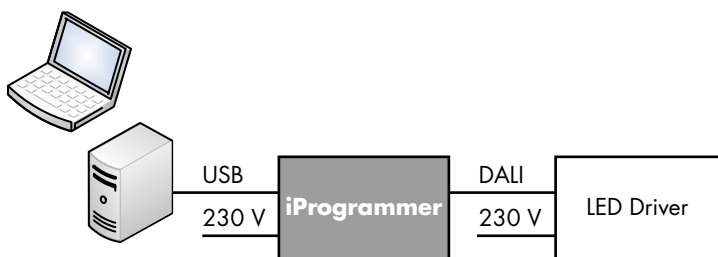
# iProgrammer

## ■ GENERAL INFORMATION

As a versatile configuration tool for DALI control gear, the iProgrammer serves to make such control gear individually programmable and updateable for luminaire manufacturers. General DALI parameters can be both read-out and programmed. For programmable LED drivers made by Vossloh-Schwabe, the secondary current can be adjusted with a degree of precision down to 1 mA. Vossloh-Schwabe's "Streetlight" drivers can be configured using functions already known from the iMCU. Should subsequent changes need to be made, the "Remote Control" function enables remote programming via the existing power supply line without having to open any luminaires.

Designed to be a flexible tool, the iProgrammer is suitable for use both in production settings for quick individual configuration as well as with an existing DALI network. No complicated commissioning procedure is necessary. Operation and configuration are made easy with the help of a graphic user interface.

## ■ 1. SOFTWARE AND HARDWARE INSTALLATION

### 1.1. Software Installation
Please always download the latest version of the iProgrammer configuration software and the model xml file from the following website: https://www.vossloh-schwabe.com/en/home/products/led-control-gears/constant-current.html

Since the software does not need to be installed to run, opening/loading the *.exe file is all you need to do to start working. Please unpack the *.zip file in a directory of your choice and, if required, create a desktop shortcut.

NOTE    New DALI control gear requires an up-to-date "Model.xml" version to be properly recognised and to render all functions usable. This xml file must be saved in the subfolder "Config" of the software. It is therefore advisable to regularly update the software to its latest version if the latest generation of DALI control gear is to be programmed.

### 1.2. Hardware Installation
Connect the supplied cable to a free USB port and the iProgrammer.

Up to 64 DALI devices can be connected or addressed. However, parameters can only be read-out with one connected or addressed DALI device. The "3C" function can also be used only when connecting a single DALI driver. The operating mode and addressing options can be selected at a later point in time in the software. The iProgrammer exclusively supports DALI control gear made by Vossloh-Schwabe.

NOTE    The iProgrammer can optionally supply the bus voltage for DALI operation. While both voltage supply and the DALI output can already be connected, this is not necessary for hardware installation purposes.

IMPORTANT    If an external DALI voltage supply unit is used, care must be taken to ensure correct polarity.

The installation of the requisite USB driver will differ depending on the specific version of your Microsoft® operating system. The USB driver is also part of the *.zip file. Upwards of Windows 7, this driver can be loaded via the device manager (see screenshot). All warnings concerning the driver that is not licensed by Microsoft can be ignored.
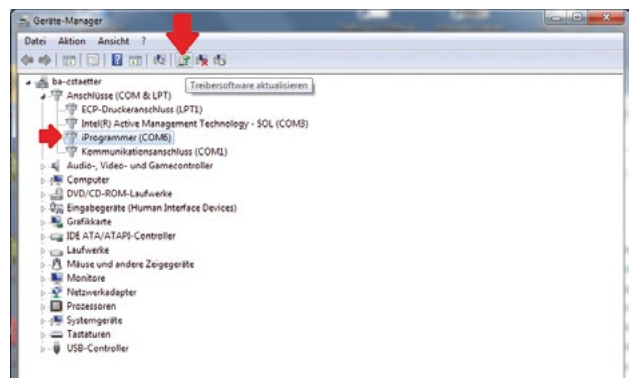


Please make a note of the driver's COM port following successful installation.

NOTE    Should it not have been possible to complete the installation process in the manner described above, please contact your IT department since USB ports may well have been disabled for security reasons.
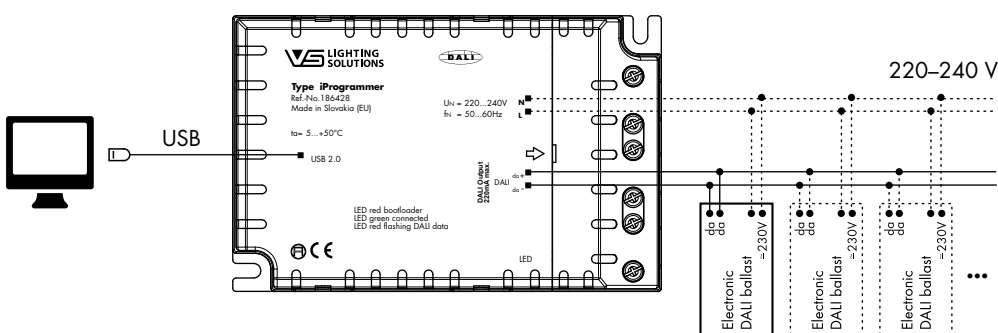
## ■ 2. RUN THE SOFTWARE

Run the iProgrammer configuration software with a double click on file step1_*.exe. If correct communication is established between the software and the iProgrammer, the green status LED on the iProgrammer will light up. If the iProgrammer was not properly recognised or installed, a message that the software is in DEMO Mode will be displayed in the upper left-hand corner of the screen.

Should "DEMO Version" continue to be displayed, the following problems could be responsible:
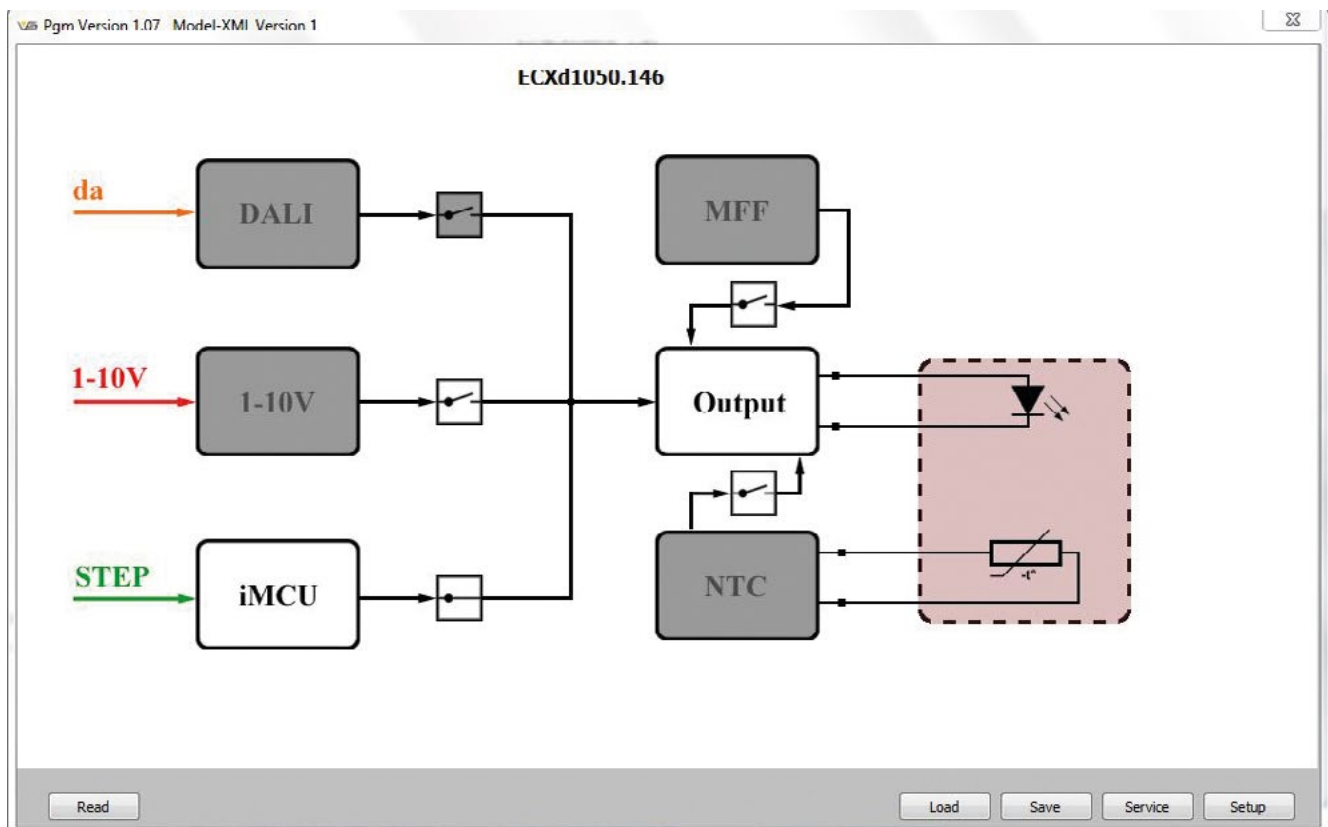• the iProgrammer is not properly connected,
• the USB port is disabled (contact your IT department),
• the wrong default COM port was selected; this setting is described in the following.

The command buttons for settings are shown in the task bar at the bottom of the screen. DALI control gear is configured using the window with the block diagram.

NOTE   For use in production settings, an optimised user interface, which enables the profile created here to be transferred into the device with just one click of the mouse, can be made available on request (see section 4.2).

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3

# iProgrammer

## 2.1. Selection of Communication Settings and Device Type

Starting the software generates a pop-up window in which basic settings regarding DALI operating mode, connection via USB and the type of the respective DALI control gear can be made. This pop-up can be reopened at any time by clicking on "Setup".

### DALI Power Supply and Broadcast

Broadcast DALI communication is preselected as a default setting. However, certain applications demand that only control gear with a concrete DALI address is addressed.
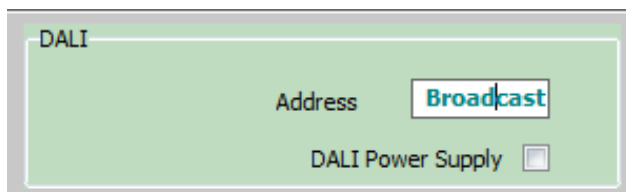


IMPORTANT  The "DALI Power Supply" function, which is disabled by default, must be enabled to permit communication with DALI control gear without an external DALI power supply. Putting a tick in the box will enable internal DALI bus power supply. An external DALI power supply may only be connected if no check mark is set.

### Communication Port

The COM port is responsible for establishing communication between the iProgrammer and the software. The previously noted COM port of the USB driver for the iProgrammer must therefore be entered here.
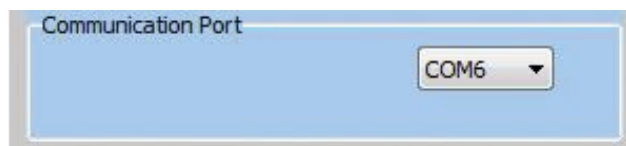


NOTE  If the software runs in DEMO Mode, the wrong COM port of the computer may have been selected or the USB driver may not have been properly installed.

### Type of DALI Control Gear

If one of the supported VS DALI drivers is used, a choice can be made from a list of available device types. Different configuration options are available for each device profile.
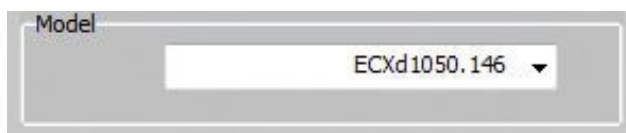


NOTE  If the wrong DALI device model is selected, this selection will be ignored from the software.

Please refer to the respective datasheet to check the device type of your Vossloh-Schwabe DALI control gear.

## ■ 3. COMMAND BUTTONS AND CONTROL ELEMENTS

### 3.1. Functions of the Command Button Bar (File Operations)

#### 3.1.1. Read
All device information and parameters are read-out, for which purpose only one DALI device may be connected at any one time.

#### 3.1.2. Save
The current configuration is then saved as a parameter file. A dialogue to specify the storage location and name of the parameter file (*.vsq) will then open. This file can subsequently be used for the simplified production user interface.

#### 3.1.3. Load
An already created parameter file can now be loaded into the program. All parameters in the program will then be overwritten. A dialogue to choose the parameter file (*.vsq) will open.

#### 3.1.4. Service
Various information on the DALI device is shown. This function must be preceded by a "Read" command.

#### 3.1.5. Setup
Settings on the connection and device types are then undertaken (see section 2.1).

### 3.2. General Configuration Elements

Activating a Function Block

  If the switch is open, the function block will be disabled and will be displayed in grey. If the switch is closed, the function block will be enabled and settings can be made in it.

Scroll bar



All values are set by adjusting a scroll bar. It is not possible to enter values using a keyboard.

## ■ 4. PROGRAM OR FUNCTION BLOCKS

Various configuration elements are available depending on the connected DALI control gear. In addition, device parameters can be read-out.

IMPORTANT  After successful hard- and software installation, the VS DALI driver can be connected to mains and the DALI terminal. Now the system is ready for programming.

NOTE  The respective device model is read automatically from the driver by clicking "Read", see section 2.1.

**VS** LIGHTING SOLUTIONS

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4

## 4.1. Vossloh-Schwabe DALI Control Gear (Profile type: Unknown Model)

The parameters of "DALI setup" are available for all Vossloh-Schwabe DALI control gears.
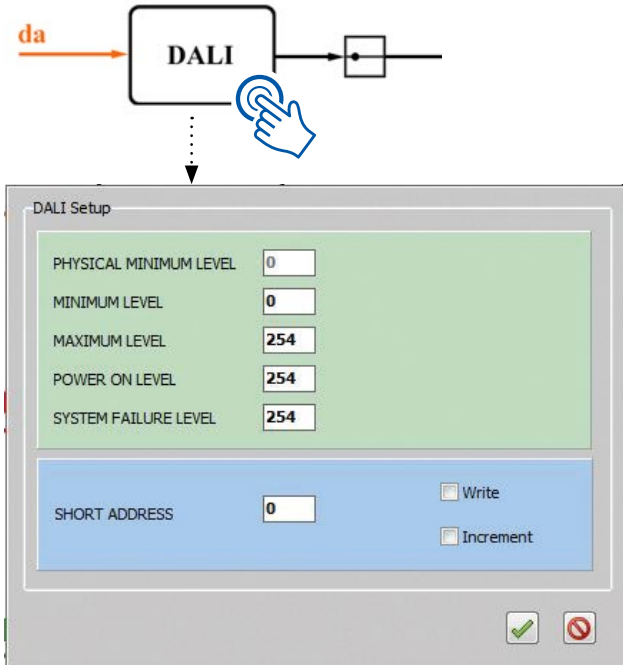


If available, the DALI parameters read-out with the "Read" command will be displayed here. The dimming range, start behaviour and error response can be adjusted. For every parameter, the DALI values 0 to 255 are available. The DALI device can also be given a DALI short address. By entering the short address and setting the check mark "Write" it becomes active. A click on ✔ transfers the new parameters.

Furthermore, the following operating parameters can be read-out, after which they will be displayed under "Service":
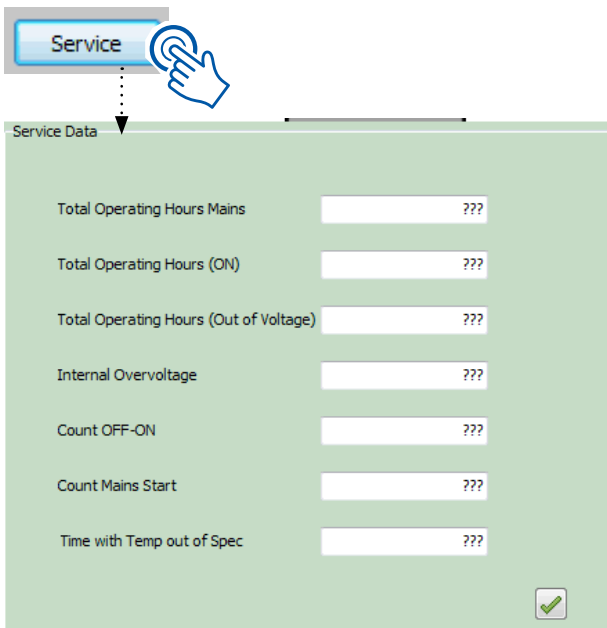


Detailed DALI information can be found in the datasheet of your Vossloh-Schwabe LED driver.

## 4.2. Vossloh-Schwabe MultiCurrent LED Driver (Profile type will be selected automatically)

Besides the DALI parametrization (see section 4.1.), Vossloh-Schwabe DALI drivers with the 3C function offer a configurable current output (mA).

**IMPORTANT** The current output of the DALI driver may not be adjusted while supplying a LED module. During the change there can occur undefined states.
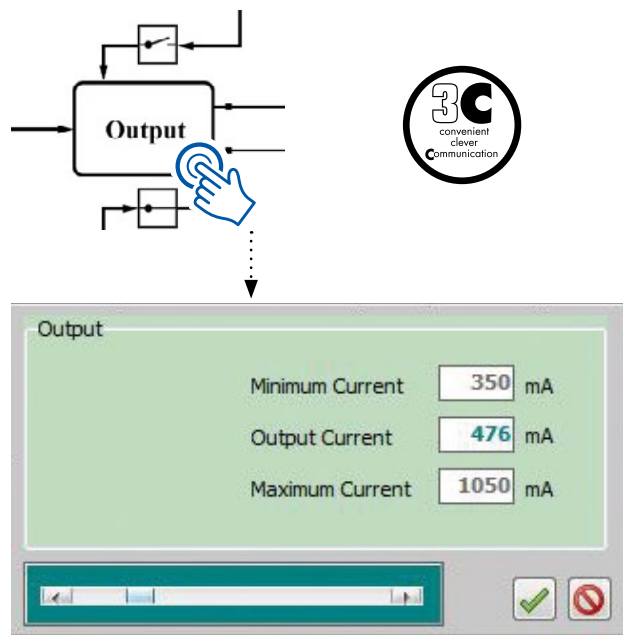


The physically possible minimum and maximum currents that were read-out with the "Read" command are displayed here. The desired operating current can be set within these limits. A click on ✔ will directly read-out the value to the DALI LED driver and close the pop-up window.

**NOTE** A correct transmission can be visually verified by the shortly flashing red indicator LED of the iProgrammer.

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5

### 4.2.1. Production Tool

For the identic parametrization of numerous devices there is an optimized user interface available.

### Step 1

The output current can be set as described in section 4.2 and saved as a *.vsq file by clicking "Save". The filename may not consist of special characters or spaces.

🖐 **IMPORTANT** Please make a note of the filename and place the file into the same program folder (see screenshot).
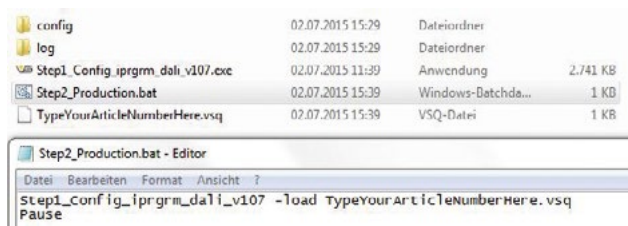




Open Step2_Production.bat file by right-click -> "Edit". The part "TypeYourArticleNumberHere" must be replaced by the previously given filename of the *.vsq file.

**NOTE** It is also possible to create and use several production tools in parallel. Just duplicate the *.bat file and edit the respective *.vsq file name.

### Step 2

The now configured production tool can be started with the file Step2_Production.bat. Every connected DALI driver can now be parametrized by only one click.
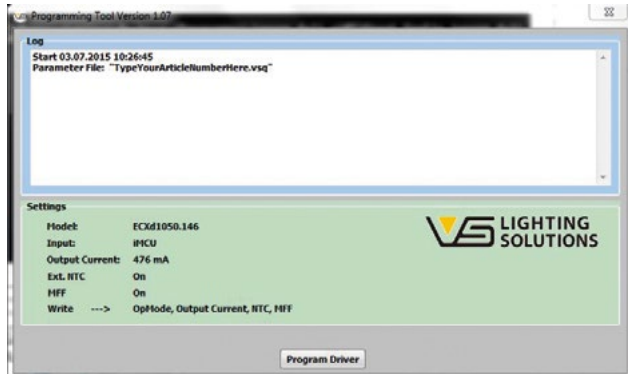


🖐 **IMPORTANT** After a correct transmission there appears a green tick and an entry in the log. It is solely necessary to ensure that during transmission the driver may not be disconnected from power supply or the DALI terminal.

Application in an automated production environment:
The parameter "step1_config* -load *.vsq" can also be integrated into a console application (see screenshot).



By adding the parameter "-autorun" the required mouse-click is no longer necessary. The console application then prompts a return value (1=error, 0= OK) that can be interpreted by the automation program of the user.

### 4.3. Vossloh-Schwabe Streetlight iMCU Control Gear (Profile type will be selected automatically)

### 4.3.1. Operating mode: 1–10 V or iMCU

The "Streetlight" driver can be operated with a 1-10V interface and selectable output current. The configuration is done as described in section 4.2. Alternatively the device can be used in iMCU mode incl. Lst control signal. MFF and NTC function blocks are also available for all operating types.
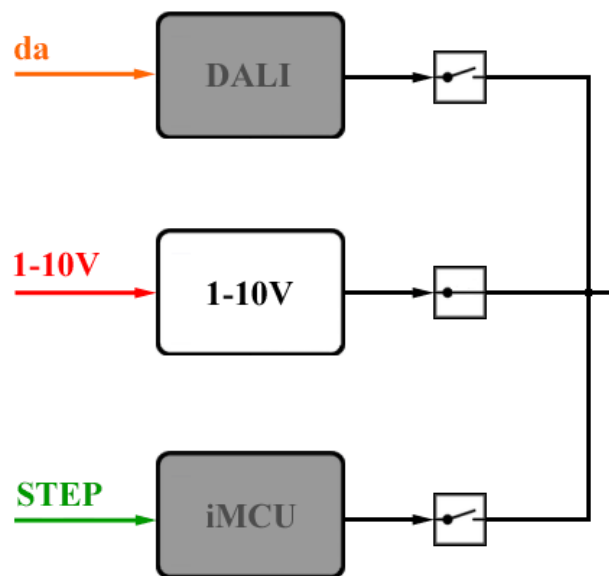


### 4.3.2. MFF

The maintenance factor to compensate for the lamp's decrease in luminous flux is set with MFF.
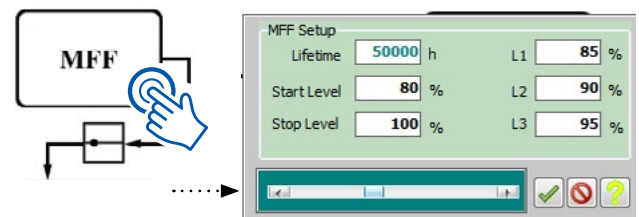


Example: according to manufacturer specifications, the decrease in luminous flux of a connected LED module amounts to 20% over 50,000 hours. In consequence, the maintenance factor is set to increase the output of the connected driver by 20% over 50,000 hours. The decrease in luminous flux can be individually adjusted in three steps via L1, L2 and L3.

A click on ✅ closes the pop-up and immediately transfers the new parameters.

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6

### 4.3.3. NTC

The function of the externally connected NTC resistor can be configured here. Please see the datasheet of your Vossloh-Schwabe LED driver for details.
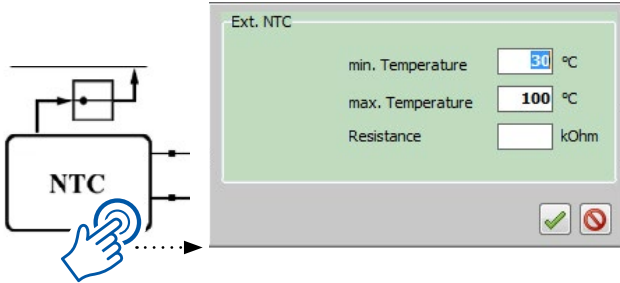


A click on ✔ closes the pop-up. The new parameters can then be immediately transferred with a click on "Write" or a new function block can be configured.

### 4.3.4. iMCU Configuration

If iMCU has been selected as the operating mode, a click on the "iMCU" element opens up an extended user interface in addition to the above-named MFF and NTC functions. If the "Read" command is carried out beforehand, the program will be displayed with all current settings.
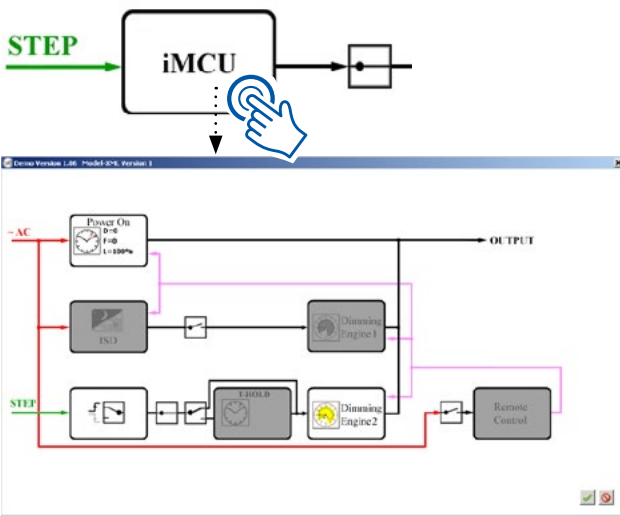


A detailed explanation of the iMCU functions can be found in the separate manual "Additional Functions Streetlight".

Whenever an electric light goes on around the world, Vossloh-Schwabe is likely to have made a key contribution to ensuring that everything works at the fl ick of a switch.

Headquartered in Germany, Vossloh-Schwabe counts as a technology leader within the lighting sector. Top-quality, high-performance products form the basis of the company's success.

Whether cost-effective standard components or tailor-made product developments are needed, Vossloh-Schwabe can satisfy even the most diverse market and customer requirements. Vossloh-Schwabe's extensive product portfolio covers all lighting components: LED systems with matching control gear units and state-of-the-art control systems (LiCS) as well as electronic and magnetic ballasts and lampholders.

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