Field Motor Controller - LL21 SMI LT

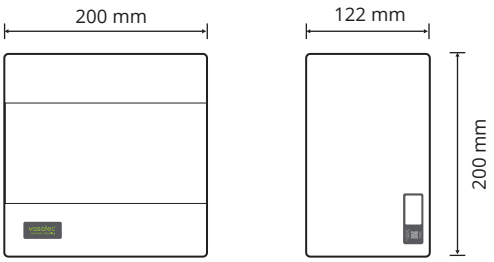
DATA SHEET

U-MOD SERIES

PRODUCT INFO

Product Name	Item No.
Vasatec Complete Supply	
FCU-LL21 SMI-LT4	10011064
FCU-LL21 SMI-LT8	10011065

Measurements



SHORT DESCRIPTION

The FCU-LL21 SMI-LT is a is a control module for LL21 I-06 Mod1 Switch, which allows the control of LL21 SMI motors to be controlled in Switch-Mode, without the need of SMI Gateways.
The built-in power supply allows the operation of up to x8 LL21 Motors. The communication interface enables the unit to be directly connected to an existing KNX BUS.
Central Group Commands (which operate all connected LL21 motors) can be sent from the KNX installation.

TECHNICAL DATA

Device Type	Field Motor Controller - LL21 SMI
Operating Voltage	230VAC
Power Consumption	96W
Protection Type	IP 20
Dimensions	L: 200 mm, W: 122 mm, H: 200 mm
Mounting Type	Wall Mount
Area Of Application	Interior
Operating Temperature	0°C ... +50°C
Housing Colour	Light-grey
Housing	UV-resistant flame-retardant polycarbonate
	KNX Component
Interface	KNX TP
Connection	Quick Connect Modbus RTU Terminal | Main via quick connect terminals
KNX Bus Max. Current	640mA

CONNECTION

The device is prewired and allows for a pluggable Pancon (MUSS100-4-D-E) motor connection inside the enclosure.
A main power cable needs to be connected to the respective screw terminals of the internal devices.

Figure 1: Connection designation
(backside, lower half of the housing)

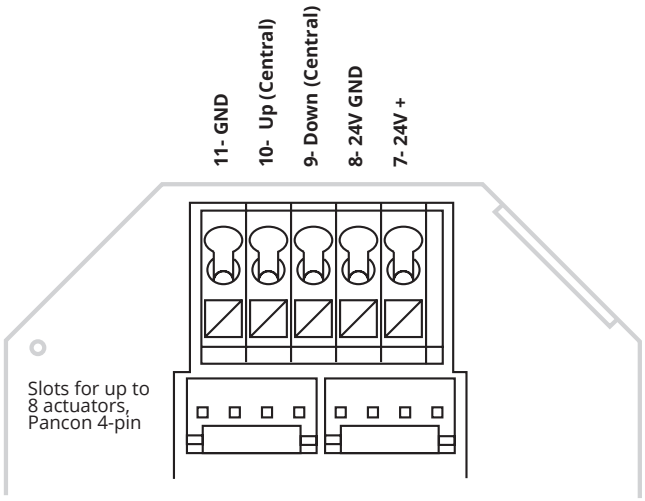
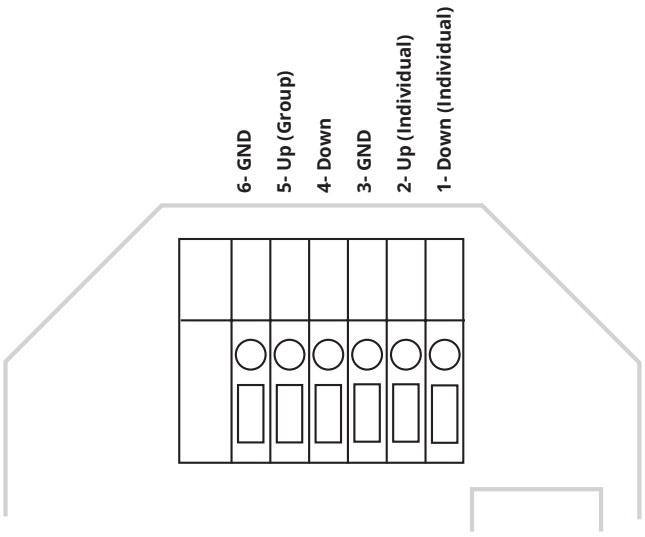


Figure 2: Connection designation
(front, upper half of the housing)



FUNCTION DESCRIPTION

General

In general, the LL21 Controller 24VDC includes the following functions:
• Processing of DIP switch and potentiometer settings
• Self-holding after 3 seconds for group and individual push buttons (via DIP switch)
• No self-holding for central control
-> Run time is defined by the higher-level control system
• Fixed “priority control”
-> Hierarchical order of control commands

Overview of command priorities:

Priorities *	Command Type
1	Central command (Up / Down)
2	Group command (Up / Down)
3	Individual command (Up / Down)

*1 has the highest priority

Rotation-Tilting

When the “Rotation-Tilting” function is activated (DIP2 = Off), the motors can only be driven up for the tilting time set via DIP4. Even multiple upward commands cannot exceed this time in total. If the motors are driven down for a period of time, they can then be driven up again for the same amount of time. The downward movement is not time-limited. In the event of a power failure, the upward movement time is stored.

LED Feedback

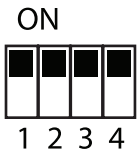
The multicolor LED is off during normal operation. A short button press or the application of power will display the current status for 5 seconds.

LED Colour	Status
Red blinking	Error in bus system / malfunction
Yellow blinking	During command output
Green	Ready for operation
Green blinking	Test run

Rotation-Tilting

The test run is triggered by a long button press and includes the following sequence:
1. All curtains move to the lower end position.
2. Ten seconds after the last curtain reaches the lower end position, all curtains automatically move back to the upper end position.
3. When all curtains have reached the upper end position, the test is complete. The status LED blinks green throughout the entire test run.

ADJUSTMENT OPTIONS



DIP Switch

The DIP switches are used to set additional functions.

DIP Switch 1
Toggle self-holding operation after 3 seconds - Default: ON
DIP Switch 2
Switch between full function (ON) and rotation-tilting (OFF) - Default: ON
DIP Switch 3
Toggle tilting command in the lower end position - Default: ON
DIP Switch 4
Switch the tilting time from “standard” (ON) to “extend” (OFF) - Default: ON

Note: The “extend” tilting time is intended only for 25mm slats.

Rotary Potentiometer

The potentiometer is used to set the slat angle in the lower end position.
The following marks indicate the position of the rotary potentiometer and the resulting slat position. Other positions can also be used; the resulting angle will be between the specified marks.

MIN	**Closed (Slat position approximately vertical - Default)**
CUT	**Group command (Up / Down) | Cut-Off (Slats in shading position)***
MAX	**Individual command (Up / Down) | Open (Transparency, slat position approximately horizontal)**

* Adjustment of the slats to prevent direct sunlight while still allowing visibility.

OPERATION

Button

Short Button Press < 3 Seconds	**Status LED shows the current status for 5 seconds**
Long Button Press < 3 Seconds	**Starts the test run**
Short Button Press During test run	**Interrupts the test run**

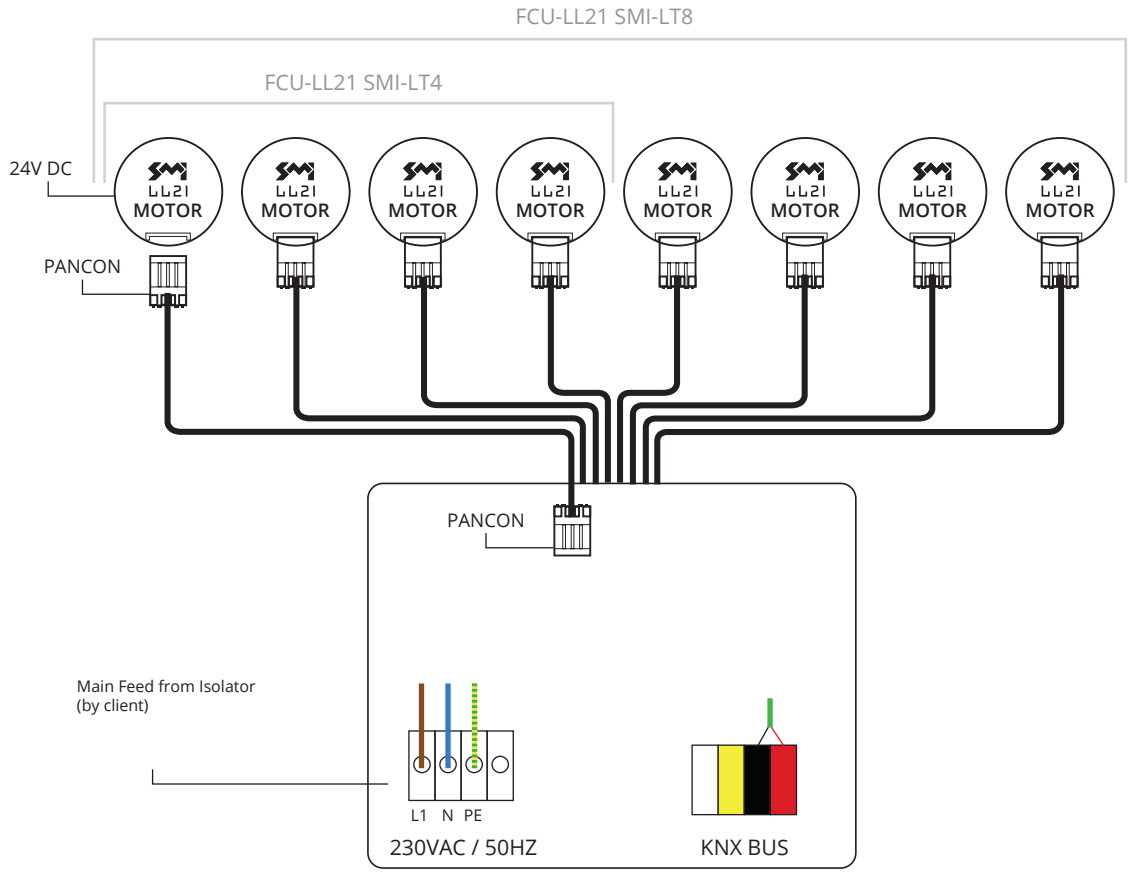
SCOPE OF DELIVERY AND TOPOLOGY

Scope of Delivery

The FCU-LL21 SMI-LT will be delivered in a preassembled condition, ready for a licensed Electrician to connect main power and KNX Data. The system is preset to the required operation modes.

Topology

The example topology shown here represents the maximum possible connection configuration.



IMPORTANT SAFETY INSTRUCTIONS

- Engage a certified electrician for the installation.
- The controller must be inspected for any damages.
- If it is damaged, it must not be put into operation under any circumstances. In the case of damage during transport, the supplier must be informed.
- The controller is intended only for proper use (as described in the operating manual). Any changes or modifications are not allowed, otherwise, any warranty claims will be void.
- If safe operation of the controller is no longer guaranteed, the controller must be taken out of service immediately.
- If any work is being carried out on the shading system or its components, they must be secured against unintentional operation.
- Technical data can be found on the controller's nameplate.
- Do not allow children to play with electrical components and keep them out of reach of children.
- The entire electrical system must be regularly inspected by qualified personnel for any defects or damage.

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