Product description

SBM – Solar protection control unit [Interior blinds]

Introduction SBM

SBM is an addressable control unit and relay box on Lindinvent's communication loop (CAN) for the control of two motors for interior solar protection blinds.

Your solar protection becomes intelligent with SBM. The control system is based on outdoor conditions in the form of solar exposure and temperature as well as indoor conditions such as presence and temperature deviation.

SBM – Styrenhet solavskärmning.

Function

- The two motors can be controlled individually.
- All conditions and calculations needed to determine whether a protection blind is up or down are made in the SunShade software module installed on the system server.
- Push buttons can be connected directly to SBM for manual control of the solar protection. SBM also supports wireless and non battery powered switches that communicate via Enocean technology.

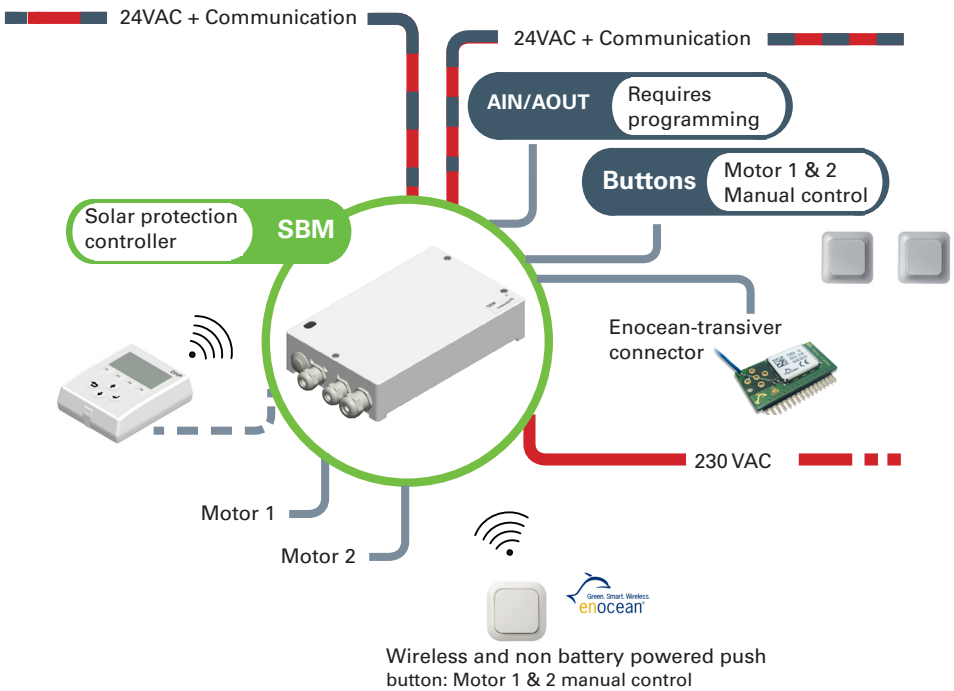
user interface

- Web tool LINDINSPECT for configuration and visualization.
- User panel DHP via IR or via cable.
- The motors can be activated via push buttons on the circuit board in SBM.

LIND**INTELL**/LIND**INSPECT**

LINDINTELL is a software package that is installed on a central server. LINDINTELL has among other things functions for optimization, override and free programming.

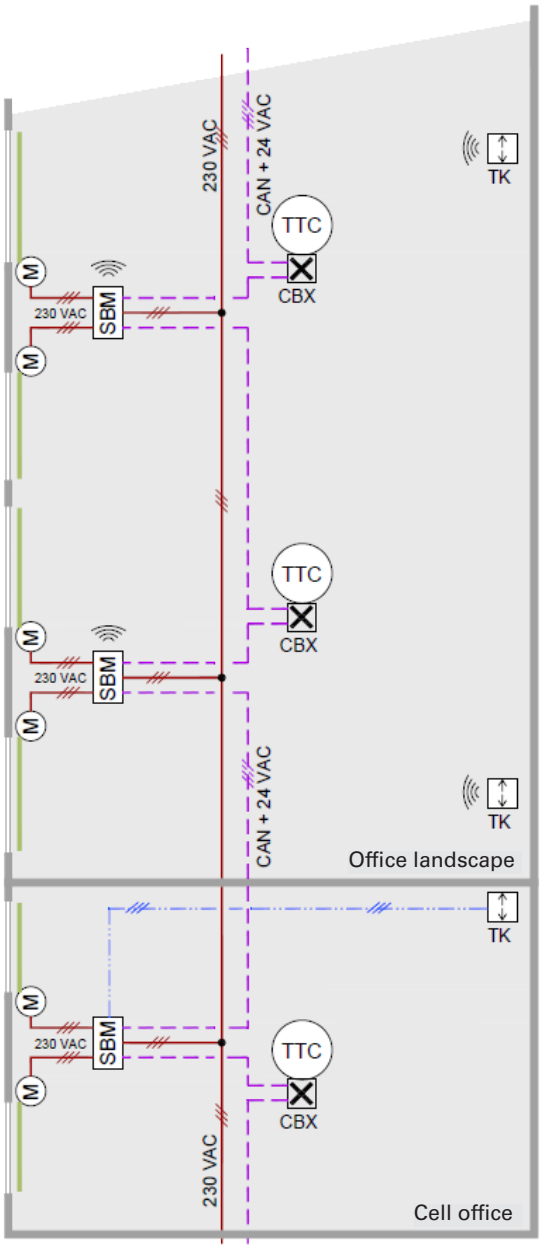
LINDINSPECT is a Web interface developed for use with LINDINTELL.



Connection diagram SBM.

SBM – Solar protection control unit [Interior blinds]

Functional chart



Office landscape

- SBM is powered via 24 VAC.
- SBM is connected to the CAN network via Lindinvent's shielded four-wire cable for 24 VAC and CAN communication.
- Supply air diffusers (TTC with its connectionbox CBX) with built-in presence and temperature sensors are connected to the same communication line.
- Motors (M) for window sections that are configured to be included in the same solar zone are controlled in parallel.
- The solar protection position is calculated by the SunShade module in LINDINTELL based on outdoor conditions in the form of solar exposure and temperature, and indoor conditions such as presence and temperature deviation.
- Manual control via wireless and battery-free push buttons (TK). Various setting options for controlling entire facades or groups of motors.
- The solar protection can be controlled manually via web interface LINDINSPECT.

Cell office

- SBM is powered via 24 VAC.
- SBM is connected to the CAN network via Lindinvent's shielded four-wire cable for 24 VAC and CAN communication.
- Supply air diffusers (TTC / CBX) with built-in presence and temperature sensors are connected to the same communication line.
- The solar protection position is calculated by the SunShade module in LINDINTELL based on outdoor conditions in the form of solar exposure and temperature, and indoor conditions such as presence and temperature deviation.
- With the power switch (TK) both sun shades can be controlled manually in parallel Up/Down.
- The solar protection can be controlled manually via web interface LINDINSPECT.

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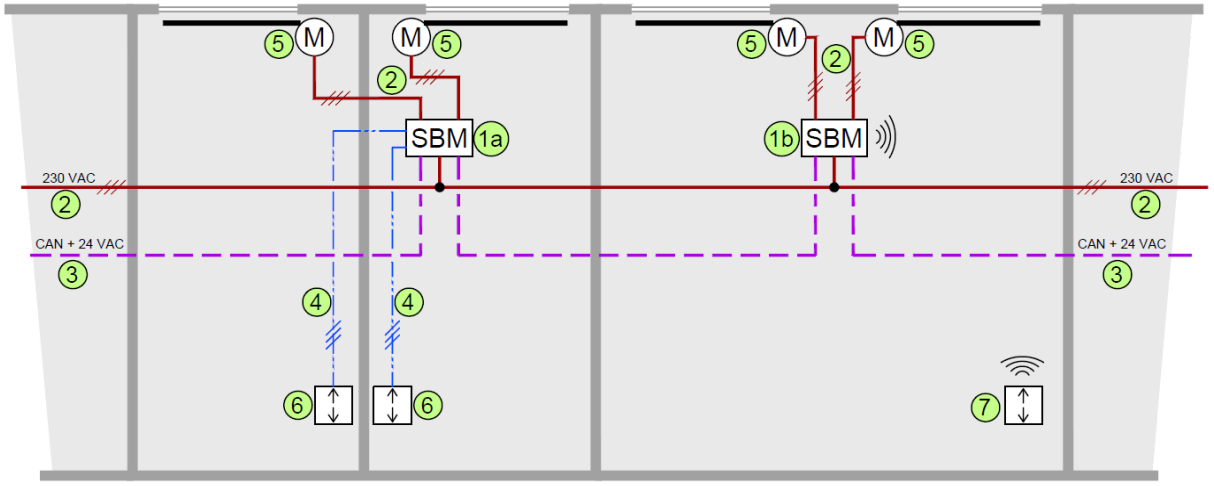
SBM contractor boundary

Below are examples of how the boundary between the electrical contractor (EE), solar protection contractor (SAE) and ventilation contractor (VE) is normally divided. Lindinvent's installations are usually included in the ventilation contract, but can also be carried out as a separate contract.



Object	Shipping	Mounting	Electrical installation
1a. Solar protection control unit, SBM	VE	VE	VE/EE
1b. Solar protection control unit , SBM with enocean transeiver	VE	VE	VE/EE
2. Cable for 230 VAC	EE	EE	EE
3. Cable for 24 VAC + Communication(CAN)	EE	EE	VE
4. Cable for Push buttons	EE	EE	EE
5. Motors	SAE	SAE	EE
6. Push buttons (Push-to-make)	EE	EE	EE
7. Push button Enocean	VE	EE	-

Typical contractory boundaries.

Contractor ativities

EE performs self-checking of installation when voltage is supplied for the first time by activating predefined self-control sequences in SBM. The sequences can be activated via digital user panel DHP but also via push buttons on the circuit board in SBM.

SAE performs self-checking and setting of limit switches on motors either via digital user panel DHP or via push buttons on the circuit board in SBM.

VE puts node ID on controllers and programs sequences and other system settings for Sun shade.

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Technical specification

General

Dimensions (mm)
200 x 125 x 45 (LxWxH)

Temperature limits
Operation: 10°C till 40°C; <85% RF
Storage: -20°C till 50°C; <90% RF

Material
Polystyrene encapsulation

Net weight
0,6 kg

Colour
RAL 9003

IP classification
IP53

Electrical system

Supply voltage
24 VAC

Electric power usage
Max 10W

CE marking
Complies with EMC and the Low Voltage Directive

Connectors

- 1 x 230 VAC
- 2 x [24 VAC + Communication loop (CAN)]
- 1 x Motor 1
- 1 x Motor 2
- 1 x [General 0-10 VDC (AIN2 and AIN3)] Not in use
- 1 x Enocean module socket
- RJ45 for wired communication with user panel DHP
- 1 x IR transciever "IRDA"

Technical limitations

Number of motors: 2 per SBM
Maximum current: 2 A (Each motor)

Manual control push buttons

There are 3 push buttons (K1 to K3) on the circuit board for setting the end limit switches in connection with commissioning of the solar shading.

Additional product documentation SBM

Table 1: Additional documentation for SBM can be obtained via the product's website under Products at www.lindinvent.se

Document	Available	Not available	Comments
Installation instruction		●	Mounting holes in the bottom encapsulation
Start-up instruction	●		The control unit setup menu is presented
Maintenance instruction		●	Considered as maintenance free
External connection diagram	●		
Environmental product declaration	●		Assessed by Byggvarubedömningen
User information		●	Not relevant
Modbus list	●		
AMA text	●		

Product documentation can be downloaded via www.lindinvent.se/produkter/

Contact
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Tel: 046–15 85 50

Lindinvent – Smarter indoor climate. Greener buildings.

The company offers products and systems for controlling ventilation, lighting, solar shading and local utilization. Equipment and climate solutions are being developed for offices, schools, hospitals, laboratories and similar working environments. Lindinvent's systems work together to provide high indoor comfort and the lowest possible energy use.