Omnexo HUB 4 AP / REG

Installation instructions

Valid from date 1 May 2026
Please keep for future use.

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Der SonnenLichtManager

General information

Fig. 1: Omnexo HUB 4 AP / REG

With the use of Omnexo HUB 4 AP / REG, the bus line can be extended to a maximum length of 3600 m.

In addition, branch lines may be installed (e.g. to a weather station) to reach remote bus devices.

The Omnexo HUB 4 REG/AP has four outputs.

Intended use

This product is an electronic device intended for the following use:

- Extension of the bus line
- Formation of branch lines

The approval of the manufacturer must be obtained for uses outside of the purposes listed in these instructions.

Safety instructions

WARNING
In accordance with VDE 0100 and/or the legal requirements and standards of the country in which the device is being installed, the electrical installation (assembly)/dismantling must be carried out by a certified electrician. The electrician must observe the installation notes and instructions included with the electrical devices supplied.

WARNING
If hazard-free operation cannot be assumed, the device may not be started or must be deactivated. This assumption is justified if

- the housing or the connecting lines show signs of damage.
- the device is no longer working.

Notes on the bus system

- A maximum of 500 actuators and 16 weather stations may be used in the Omnexo system. A maximum of 100 devices are permissible in each section of the bus. The bus must be subdivided by a HUB if more than 100 devices are to be connected.
- A HUB is an additional bus device that must be included in the calculation to determine the maximum number of bus users.
- A maximum of two HUBs may be switched in series in the bus line.
- A HUB is required after every bus length of 1200 m. Communication from one HUB output to another is not possible.
- Terminating resistors at the beginning and end of each bus line must be provided, and also for each branch line (see wiring diagram).
- The default value of the terminating resistor is 120 Ω for a JY(St)Y 4×2×0.8 mm ∅ line.

The Omnexo HUB 4 does not compensate any signal runtimes.

Function

The data direction on the bus is always bi-directional from input to output and vice-versa.

- The approved bus line length without a HUB is limited to 1200 m for the RS485 as per the specification. A HUB 4 extends the bus line by another 1200 m maximum.
- One field of application for Omnexo HUB 4, for example, is branch lines that would otherwise not be permitted for the RS485 as per the specification.
- The data rate used on the RS485 bus in the Omnexo system is 38.4 kBaud. The HUB is configured for this data rate.

There are two LEDs on the device:

LED OK	LED status
Lights up green permanently when the operating voltage is applied	The LED flashes alternately between red and green (flickers) Flashes green: Data is being sent by bus devices connected to the input of the HUB. Flashes red: Data is being sent by bus devices connected to the outputs of the HUB.

Installation

The device is provided for surface installation or switch cabinet installation, depending on the housing. Installation must be indoors. The device is not suitable for use in damp locations.

Electrical connection

An on-site overload current protection device (fuse) and a disconnecting and isolating switch to switch off the entire unit must be provided.

The electrical connection is established according to the wiring diagrams on the back of this document.

The spring terminals for the outputs of Omnexo HUB 4 are included separately.

Bus termination

- Branch lines can only be implemented with a HUB (see wiring diagram)!
- Each branch line must be terminated with terminating resistors at the beginning and end.
- Terminating resistors are also required between two connected HUBs.
- Even if an output is not being used, it still needs to be closed off with a terminating resistor.
- The resistance value for the terminating resistors is 120 Ω. Suitable resistors are included in the scope of delivery.

Commissioning

After the device is fully installed and the operating voltage is switched on, the device is ready for operation.

Maintenance

There are no parts inside the device that require maintenance.

Cleaning

Clean the housing with a soft, dry cloth. Do not use detergents or cleaning agents, solvents, foaming substances or steam and high pressure washers!

Liability

Failure to comply with the product information in these instructions if the product is used for purposes other than those intended, or if the product is not used in accordance with its intended use may result in the manufacturer refusing to accept warranty claims for damage to the product. In this case, liability for secondary harm to persons or damage to property will also be excluded. Follow the instructions in the operating manual of your sun shading system.

Automatic or manual operation of the sun shading system when icing over as well as using the sun shading system during inclement weather can cause damages and must be prevented by the operator through suitable precautions.

Obligations for the disposal of electrical devices

A marking with this symbol indicates the following obligations under the scope of legal regulations:

- The owner of this electrical device must dispose of it and its packaging separately from unsorted municipal waste for further recycling.
- Used batteries and accumulators that are not enclosed in the old device, as well as lamps/bulbs that can be removed from the old device without breaking, must be disposed of separately.
- Distributors of electrical devices and disposal companies are obliged to take back the equipment free of charge.
- The owner is responsible for deleting any personal data contained on the electrical device prior to disposal.

Technical data

Omnexo HUB 4 AP / REG	min.	typ.	max.	Unit
Supply				
Operating voltage	21.6	24	26.4	V DC
Current consumption		15	50	mA
Omnexo interface				
Bus interface			RS485 (two-wire bus)	
Housing				
Dimensions of DIN rail-mounted housing 6 MW (W x H x D)			106 x 95 x 60 mm	
Dimensions of surface mounted housing (W x H x D)			106 x 180 x 60 mm	
Degree of protection, DIN rail-mounted housing			IP20	
Degree of protection, surface mounted housing			IP30	
Safety class			III	
Installation, DIN rail-mounted housing			EN rail - TH 35	
Installation, surface mounted housing			Surface-mounted	
Miscellaneous				
Conformity can be viewed at www.warema.de/ce			CE	
This device complies with the EMC directives for use in residential and commercial areas.				
Data rate			38.4 kBaud	
Ambient conditions				
Operating temperature	0		50	°C
Storage temperature	0		70	°C
Humidity (not condensing)	10		85	%RH
Degree of soiling			2	
Connection				
Omnexo interface			Spring terminal	
Permissible conductor diameter			0.6 - 0.8 ∅	
Stripping length			6.5 mm	
Article numbers				
Omnexo HUB 4 REG			2058693	
Omnexo HUB 4 AP			2058694	
WAREMA Renkhoff SE Hans-Wilhelm-Renkhoff Str. 2 97828 Marktheidenfeld, Germany / www.warema.com				

Wiring diagram

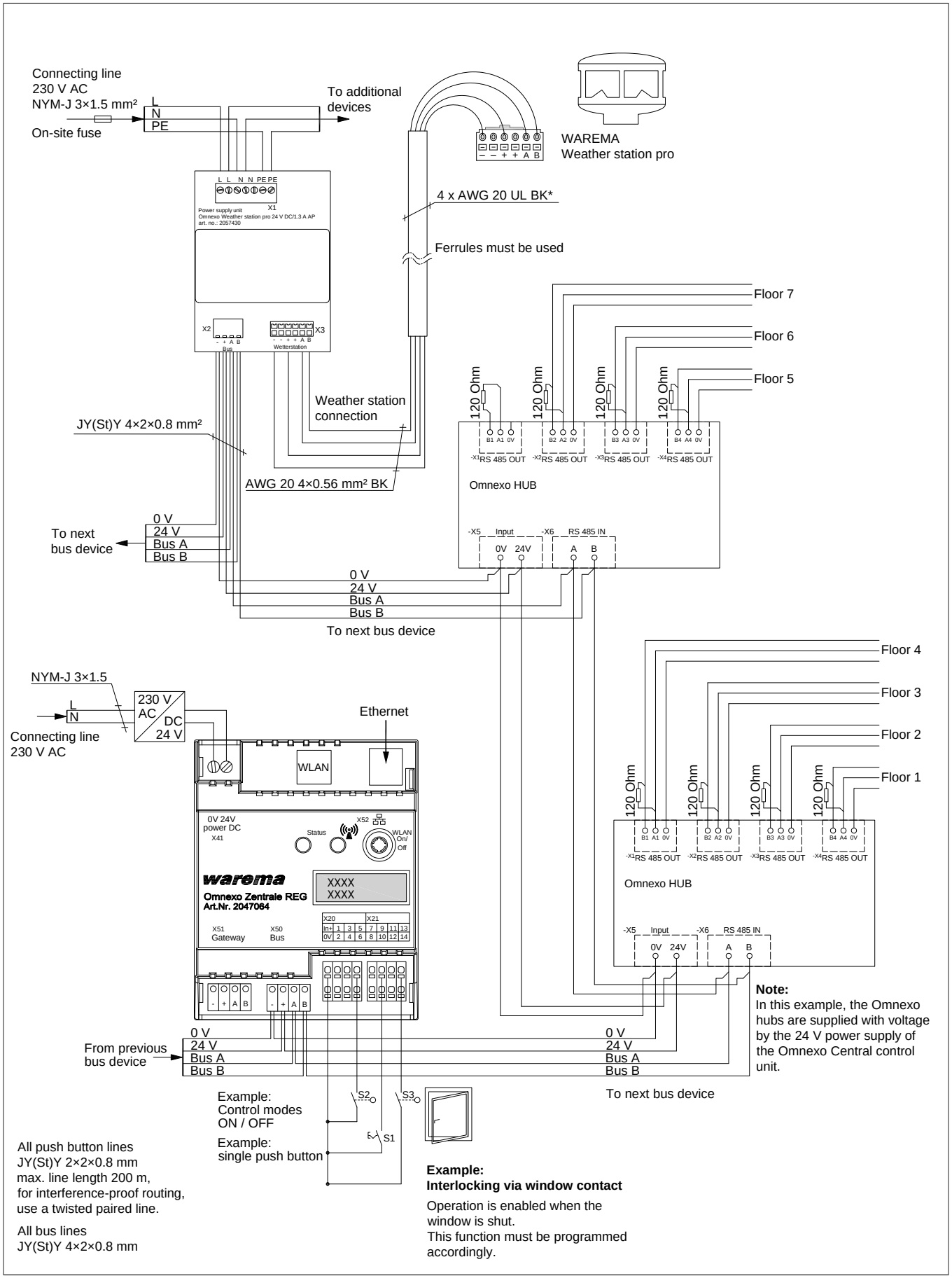

Fig. 2: Connection example Omnexo HUB 4 AP / REG for an Omnexo system with WAREMA Weather station pro and Omnexo Central control unit

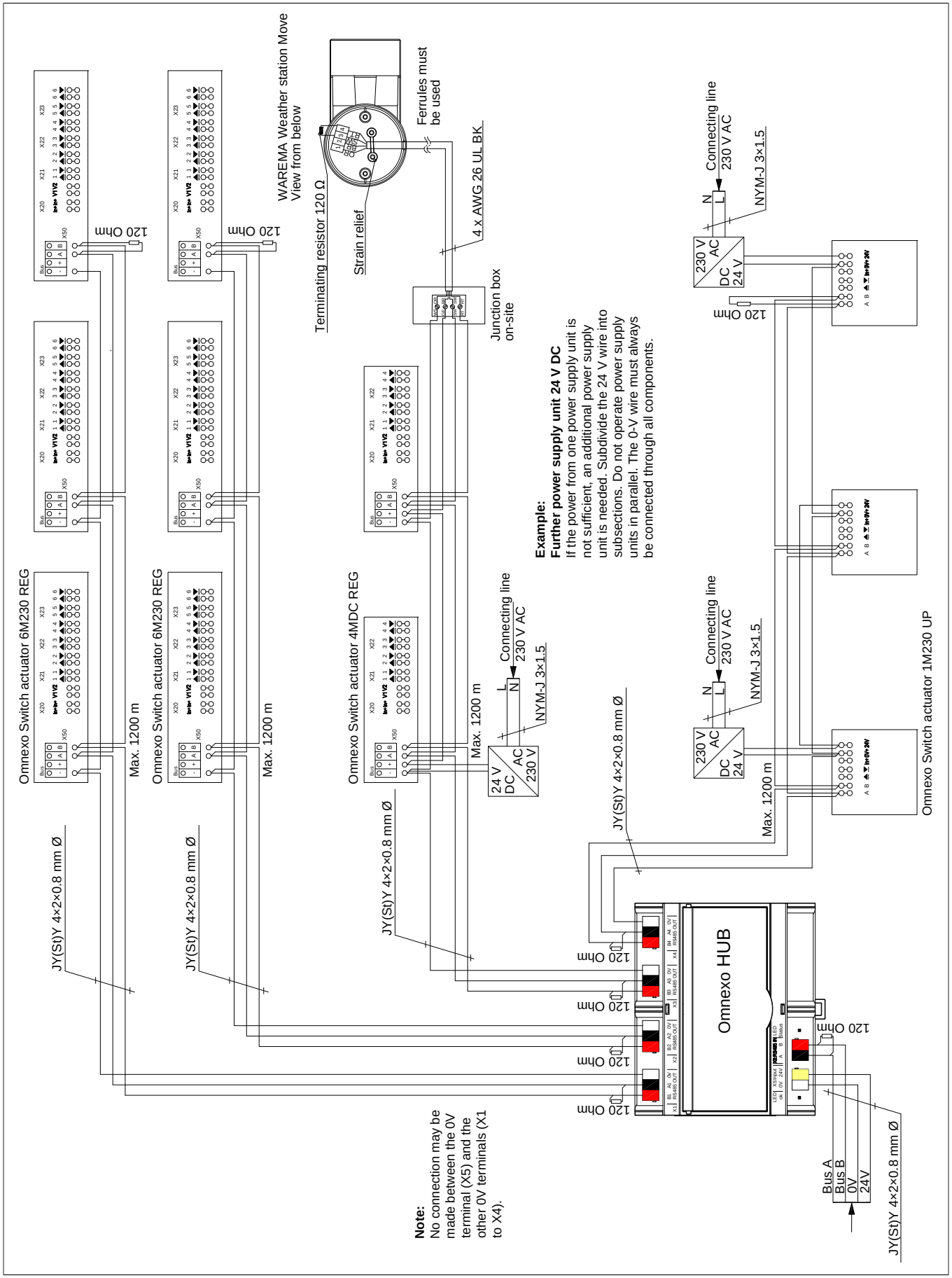

Fig. 3: Omnexo HUB 4 AP / REG wiring diagram