

RS485 bus weather data gateway

FWG14MS

**Only skilled electricians may install this electrical equipment otherwise there is the risk of fire or electric shock!**

Temperature at mounting location:  
-20°C up to +50°C.  
Storage temperature: -25°C up to +70°C.  
Relative humidity:  
annual average value <75%.

**valid for devices from production week 36/16** (see bottom side of housing)

Weather data gateway for multi sensor MS. Bidirectional. Only 0.3 watt standby loss.

Modular device for DIN-EN 60715 TH35 rail mounting. 1 modul = 18mm wide, 58mm deep.

A multisensor MS at the gateway is connected to terminals RSA and RSB. The information is received once per second and converted into bus telegrams.

However, several FWG14MS can be connected to a multisensor MS e.g. to control several Eltako RS485 buses with only one MS multisensor. Only at one FWG14MS must the end resistor connected. At additional FWG14MS, this resistor must be removed.

**Connection to the Eltako-RS485 bus. Bus cross wiring and power supply with jumper. Operation in conjunction with FAM14 or FTS14KS.**

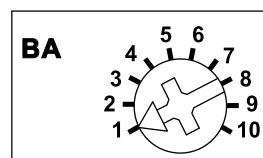
The Hold terminal is connected to the FAM14 or the FTS14KS. A maximum of two FWG14MS devices can be operated in one bus. The telegram duplicator FTD14 can also send telegrams over the Wireless Building System after the IDs of the FGW14MS are taught in the FTD14 or entered using the PTC14. Receiving devices can then be FSB14, FSB61NP, FSB71 and FWA65.

If the multisensor MS signal is not received,

an alarm telegram is sent.

Using the PC Tool PCT14, 96 inputs can be AND or OR linked and up to 12 outputs can be output.

### Mode switch



**Pos. 1:** ID range on the bus from 0x00001800 to 0x0000180C.

**Pos. 2:** ID range on the bus from 0x00001810 to 0x0000181C.

### Pos. 9: PCT14 communication

When the connection is made between PCT14 and FAM14, switchover from operating modes positions 1 and 2 is automatic. The green LED on the FAM14 lights up constantly and the green LED on the FWG14MS briefly lights up. After the link is disconnected, the green LEDs go out. In case of faults, manual switchover to pos. 9 is recommended.

### Pos. 10: Address reception

After turning to Pos. 10, the FGW14MS is ready for a period of 60 seconds to receive a device address from FAM14 or PCT14.

### Send MS weather data teach-in telegram of the first FWG14MS:

Turn the rotary switch from **Pos. 5** to **Pos. 4**. A teach-in telegram (0x4C080D80) is sent with the 0x0001800.

### Send MS weather data teach-in telegram of the second FWG14MS:

Turn the rotary switch from **Pos. 5** to **Pos. 6**. A teach-in telegram (0x4C080D80) is sent with the ID 0x0001810.

The MS weather data teach-in telegram can be taught in FSB14, FSB61NP, FSB71 and in the wireless weather data display FWA65.

### MS weather data:

The data telegram consists of two telegrams:

Telegram 1: 0xRRSSTTUU  
RR = twilight: 0 to 999Lux  
(example: 0x7A = 122; 122\*999/255 = 478Lux)

SS = temperature: -40°C to +80°C  
(example: 0x2C = 44; 44\*120/255 = 20,7  
-> less than 40 then -40+20,7 = -19,3°C)  
(example: 0x6F = 111; 111\*120/255 = 52,2  
-> greater than 40 then 52,2-40 = 12,2°C)

TT = wind speed: 0m/s to 70m/s  
(example: 0x25 = 37; 37\*70/255 = 10m/s)

Telegram 2: 0xVWVWXXYY  
VV = sun west: 0 to 150kLux  
(example: 0x44 = 68; 68\*150/255 = 40kLux);

WW = sun south: 0 bis 150kLux;

XX = sun east: 0 bis 150kLux;

YY = is always 28;

### Send:

The two data telegrams are sent 60 seconds after the power supply is switched on. At least every 10 minutes, but also:

**Brightness values** west, south and east each from 0 to 99kLux if a change of minimum 10% occurs.

**Twilight values** from 0 to 999Lux if a change of minimum 10% occurs.

**Wind speeds** from 0 to 70m/s. From 4m/s to 16m/s, the momentary values are sent immediately 3 times at intervals of 1 second. After that, further value increases are sent within 20 seconds. Dropping wind speeds are sent progressively delayed by 20 seconds.

**Rain values** at the start are sent immediately 3 times. After the rain stops, a telegram is sent within 20 seconds.

**Temperature values** from -40.0°C to +80.0°C are sent every 10 minutes together with all the other values in a status telegram.

### Sensor function monitoring:

The Multisensor MS sends up-to-date information to the FWG14MS every second. If the signal is missing for 5 seconds, the FWG14MS sends an alarm telegram immediately and then

every 30 seconds. The alarm telegram consists of the two data telegrams 0x00000028 and 0x0000FF1A with the values brightness 0Lux, twilight 0Lux, temperature -40°C (frost), wind 70 m/s and rain.

When the Multisensor MS detects a message again, the alarm is automatically interrupted.

### Logic functions:

Using the PC Tool PCT14, up to 96 inputs can be AND or OR linked and up to 12 outputs can be output.

Then conformation telegrams, for example, can be interlinked by bus actuators if their IDs are entered in the 'Inputs' configuration section of the FWG14MS.

Setting and resetting conditions are entered in the Switching circuits configuration section.

The IDs of the outputs are taught in the actuator to be switched or in the ID assignment section. 5 examples are already saved in the device.

### Issue device address for the FWG14MS:

Turn the rotary switch on the FAM14 to pos. 1 and its lower LED lights up red. Turn the rotary switch on the FWG14MS to pos. 10, the green LED of the FWG14MS flashes at a low rate. After the address of the FAM14 is issued, its lower LED lights up green for 5 seconds and the LED of the FWG14MS goes out.

### Clear device address for the FWG14MS:

Within 10 seconds, turn the rotary switch eight times to the right stop (turn clockwise) and away again. The green LED lights up for 10 seconds and goes out. The device address is cleared.

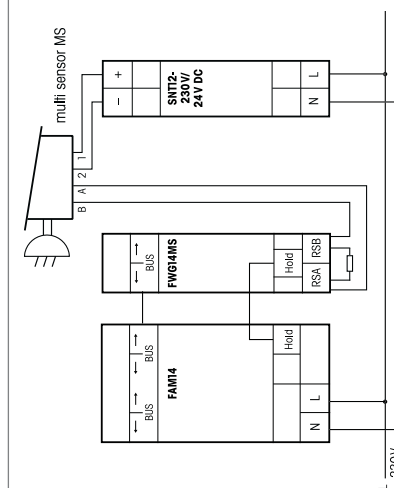
### Configure FWG14MS:

The following points can be configured using the PC PCT14 tool:

- Deactivate 'Send MS weather data'
- MS settings
- Inputs, outputs
- Switching circuits, links
- Send IDs (teach-in telegrams) of outputs
- Issue or clear device address

**Caution: Do not forget the 'Disconnect link to FAM' in the PC Tool. No wireless commands are executed while there is a link between the PC Tool and the FAM14.**

### Typical connection



### Must be kept for later use!

We recommend the housing for operating instructions GBA14.

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