

2 Node(Pro) Gateway (slave)

DIP SWITCH

Not functional in Node(Pro) mode	DIP 1	Operating mode (standard mode)	DIP 2	DIP SWITCH W-MODBUS ON DIP 1 2 3 DIP 1/3 not used!
–	ON	Gateway (default) (base station)	ON	
–	OFF	Node(Pro) (wireless adapter)	OFF	

The **operating mode** is set via pos.2 of the "W-Modbus" DIP switch – see table!
For use as a **Node(Pro)** gateway (wireless adapter for wired Modbus units), **DIP 2** must be set to **OFF**.
If the unit is switched over, it is unpaired and must be paired again in the network.
Pos. 1 and 3 of the "W-Modbus" DIP switch are not used in Node mode.

STATUS LEDS

The two LEDs L1 and L2 (on the left of the "Pair" push-button) indicate the wireless state of the sensor.
They activate after the system is switched on and **deactivate automatically** after approx. 30 minutes.
If required, the LEDs can be reactivated manually using the "Pair" push-button.

TELEGRAM LED

The LED (on the right of the push-in terminals) flashes to indicate that Modbus communication is active.
If there is a fault in the Modbus cables, the LED lights up red steadily.

"PAIR" PUSH-BUTTON

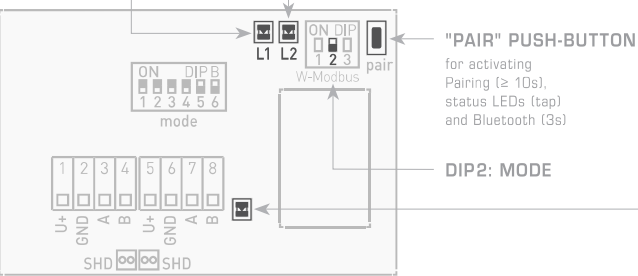
Different functions are assigned to the "Pair" push-button.
Briefly pressing the button (tap) **activates the status LEDs**for approx. 30 minutes.

A **long press of the button** (≥ 10 seconds) **activates Pairing**.
Deactivation takes place automatically when you exit the Pairing mode on the master gateway.

A **long press of the button** (approx. 3 seconds) **activates Bluetooth**. The status LED L2 flashes green.
The unit remains visible for approx. 60 seconds and can be detected by the Lumenradio **W-Modbus app**.
The connection remains active until you press "Disconnect" in the app or activate Pairing mode on the unit.

STATUS LEDS

L1 Network status	L2 Wireless connection
FLASHING RED Open connection, pairing active	OFF → No connection!
FLASHING GREEN Open connection, units paired	RED → Poor
GREEN secure connection	ORANGE → Acceptable
	GREEN → Good
	FLASHING GREEN Bluetooth active (60s) (W-Modbus app)



TELEGRAM LED

LED Address synchronisation is performed once after the unit boots up
FLASHING GREEN Address synchronisation active
SINGLE RED FLASH (1x) Address synchronisation completed
LED Telegram status
FLASHING GREEN Active communication via W-Modbus (wireless)
FLASHING RED active communication via Modbus (RTU cable)
RED Modbus fault – Check cabling!

2 Node(Pro) Gateway (slave)

MODBUS UNIT CONNECTION

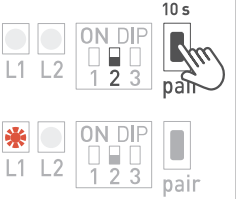
The number of nodes depends on the unit type (1 node with **GW-Modbus** – max. 16 nodes with **GW-ModbusPro**).
The wired Modbus node is connected to **Terminals A and B** of the Node(Pro) gateway (DIP2 → OFF).
DIP switches [B] are used for setting the **bus parameters**. These may differ from the settings on the DDC/PLC.
Each of the connected **Modbus units** must be set to a unique **bus address**. After pairing the unit with the master gateway, you can change the bus address or connect additional nodes to the NodePro.

PAIRING "Node(Pro)"

To pair a **Node(Pro)** gateway (slave) to a master **gateway** (DDC/PLC), **both units** must be set to Pairing mode. This also applies if the unit needs to be integrated into an existing network. Nodes that have already been paired are also automatically set to Pairing mode and paired again. Only one master gateway may be in Pairing mode at any one time in the immediate vicinity (wireless range)!
The Node(Pro) gateway can be optionally paired as standalone.
The Node(Pro) gateway (slave) – hereinafter referred to as the **node**-unit – is paired in three simple steps:

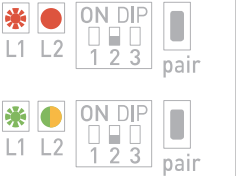
1. Activate pairing (open the connections)

To activate "Pair mode" on the **node** unit, press the **"Pair" push-button**
(long push of button for ≥ 10 seconds – DIP2 must remain on OFF).
The status LEDs indicate that Pairing mode is active: **L1 flashes red**, L2 is turned off.
The process for activating or deactivating Pairing mode on the master **gateway** (DDC/PLC) can be found in the unit-specific operating instructions.



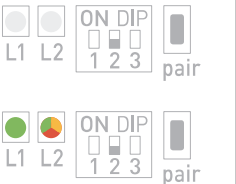
2. Pair the units (set up a connection)

When Pairing mode is active, the **Node** unit automatically searches for a master **gateway** that is set to Pairing. This process can take approx. 1-2 minutes.
The status LEDs indicate the running processes: **L1 flashes red** – **L2 is lit red**
The status LEDs then indicate successful pairing: **L1 flashes green** – **L2 is lit green or orange** (depending on the quality of the wireless connection).
Note! If the unit is paired with a master **gateway from a third-party provider**, the status LEDs indicate using different colours: L1 continues flashing red – L2 is lit green.
Now there is a **temporary connection** that can be secured as described in step 3.
After approx. 2-3 minutes, you can already test the Modbus communication and exchange data in this phase.



3. Deactivate pairing (secure the connections)

After all units have paired successfully, the user must manually **terminate pairing** on the master **gateway**. This also terminates pairing on all paired units.
The **node** unit then performs an **auto-restart** and establishes a **secure connection**. Modbus communication is re-established within 2-3 minutes.
The status LEDs indicate the ongoing restart: first, **L1 and L2 turn off**.
The status LEDs then indicate that the connection is secure: **L1 is lit green** – **L2 is lit green, orange or red** (depending on the quality of the wireless connection).
A **permanent connection** is now established and remains even after the unit is restarted. Data exchange can begin in **standard mode**.



NOTES see "Master gateway"

3 W-Modbus sensor (slave)

STATUS LEDS

The two LEDs L1 and L2 (on the right of the "Pair" push-button) indicate the wireless state of the sensor. They activate after the system is switched on and **deactivate automatically** after approx. 30 minutes. If required, the LEDs can be reactivated manually using the "Pair" push-button.

TELEGRAM LED

The LED (on the left of DIP switch A) flashes to indicate that Modbus communication is active. If there is a fault in the Modbus cables, the LED lights up red steadily.

"PAIR" PUSH-BUTTON

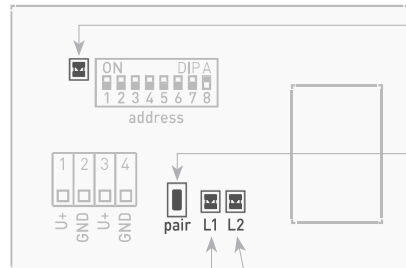
Different functions are assigned to the "Pair" push-button. **Briefly pressing the button** (tap) **activates the status LEDs** for approx. 30 minutes.

A **long press of the button** (≥ 10 seconds) **activates Pairing**. Deactivation takes place automatically when you exit the Pairing mode on the master gateway.

A **long press of the button** (approx. 3 seconds) **activates Bluetooth**. The status LED L2 flashes green. The unit remains visible for approx. 60 seconds and can be detected by the Lumenradio **W-Modbus app**. The connection remains active until you press "Disconnect" in the app or activate Pairing mode on the unit.

For more information, see "Configuration" (W-Modbus app).

W-MODBUS SENSOR



"PAIR" PUSH-BUTTON

for activating Pairing (≥ 10s), status LEDs (tap) and Bluetooth (3s)

STATUS LEDS

L1 Network status	L2 Wireless connection
FLASHING RED Open connection, pairing active FLASHING GREEN Open connection, units paired GREEN secure connection	OFF → No connection! RED → Poor ORANGE → Acceptable GREEN → Good FLASHING GREEN Bluetooth active (60s) (W-Modbus app)

TELEGRAM LED

LED Address synchronisation is performed once after the unit boots up FLASHING GREEN Address synchronisation active SINGLE RED FLASH (1x) Address synchronisation completed	LED Telegram status FLASHING GREEN Active communication via W-Modbus (wireless) FLASHING RED active communication via Modbus (RTU cable) RED Modbus fault – Check cabling!
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3 W-Modbus sensor (slave)

PAIRING "Slave"

The **bus address** is set to "1" at the factory and can be changed using DIP switches (see "Modbus configuration" section). The bus address can be changed at any time, even after pairing to a gateway.

To pair a W-Modbus **sensor** (slave) to a master **gateway** (DDC/PLC), **both units** must be set to Pairing mode. This also applies if the unit needs to be integrated into an existing network. Nodes that have already been paired are also automatically set to Pairing mode and paired again. Only one master gateway may be in Pairing mode at any one time in the immediate vicinity (wireless range)!

The W-Modbus **sensors** (slave) – hereinafter referred to as the **sensor** – are paired in three simple steps:

1. Activate pairing (open the connections)

The **sensor** is automatically set to Pairing mode at the factory. Manual activation is performed by pressing the **"Pair" push-button** (long push of button for ≥ 10 seconds).

The status LEDs indicate that Pairing mode is active: **L1 flashes red**, L2 is turned off. On display units, **[PAIRING]** is shown alternately with the configured bus address.

Please refer to the unit-specific operating instructions for the procedure for activating or deactivating Pairing mode on the master **gateway** (DDC/PLC).



2. Pair the units (set up a connection)

When Pairing mode is active, the **sensor** automatically searches for a **gateway** that is set to Pairing. This process can take approx. 1 - 2 minutes.

The status LEDs indicate the running processes: **L1 flashes red** – **L2 is lit red** (**[PAIRING]** is shown first on display units).

The status LEDs then indicate successful pairing: **L1 flashes green** – **L2 is lit green** or **orange** (depending on the quality of the wireless connection). On display units, **[CONNECTED]** is shown after successful connection.

Note! If the unit is paired with a master **gateway from a third-party provider**, the status LEDs indicate using different colours: L1 continues flashing red – L2 is lit green. **[PAIRING]** remains showing on the display.

Now there is a **temporary connection** that can be secured as described in step 3. After approx. 2 - 3 minutes, you can already test the Modbus communication and exchange data in this phase.



3. Deactivate pairing (secure the connections)

After all units have paired successfully, the user must manually **terminate pairing** on the master **gateway**. This also terminates pairing on all paired units.

The **sensor** then performs an **auto-restart** and a **secure connection** is established. Modbus communication is re-established within 2-3 minutes.

The status LEDs indicate the ongoing restart: first, **L1 and L2 turn off**. On display units, **[NO NETWORK]** is shown briefly.

The status LEDs then indicate that the connection is secure: **L1 is lit green** – **L2 is lit green, orange** or **red** (depending on the quality of the wireless connection). On display units, **[SECURED]** is shown after the connection is secured.

A **permanent connection** is now established and remains even after the unit is restarted. Data exchange can begin in **standard mode**.

NOTES

- **Status LEDs turn off (LED L1 and L2 turn off)**
LEDs deactivate automatically after a 30-minute time-out. The LEDs can be reactivated using the pair button (short push of button).

- **Error message (LEDs L1 and L2 flashing red** – Display units show **(W-M ERR!)**.)
Perform a reset: disconnect the unit from the power supply for approx. 1 minute, then switch it on again. If the error persists, please contact S+S Technical Support.

