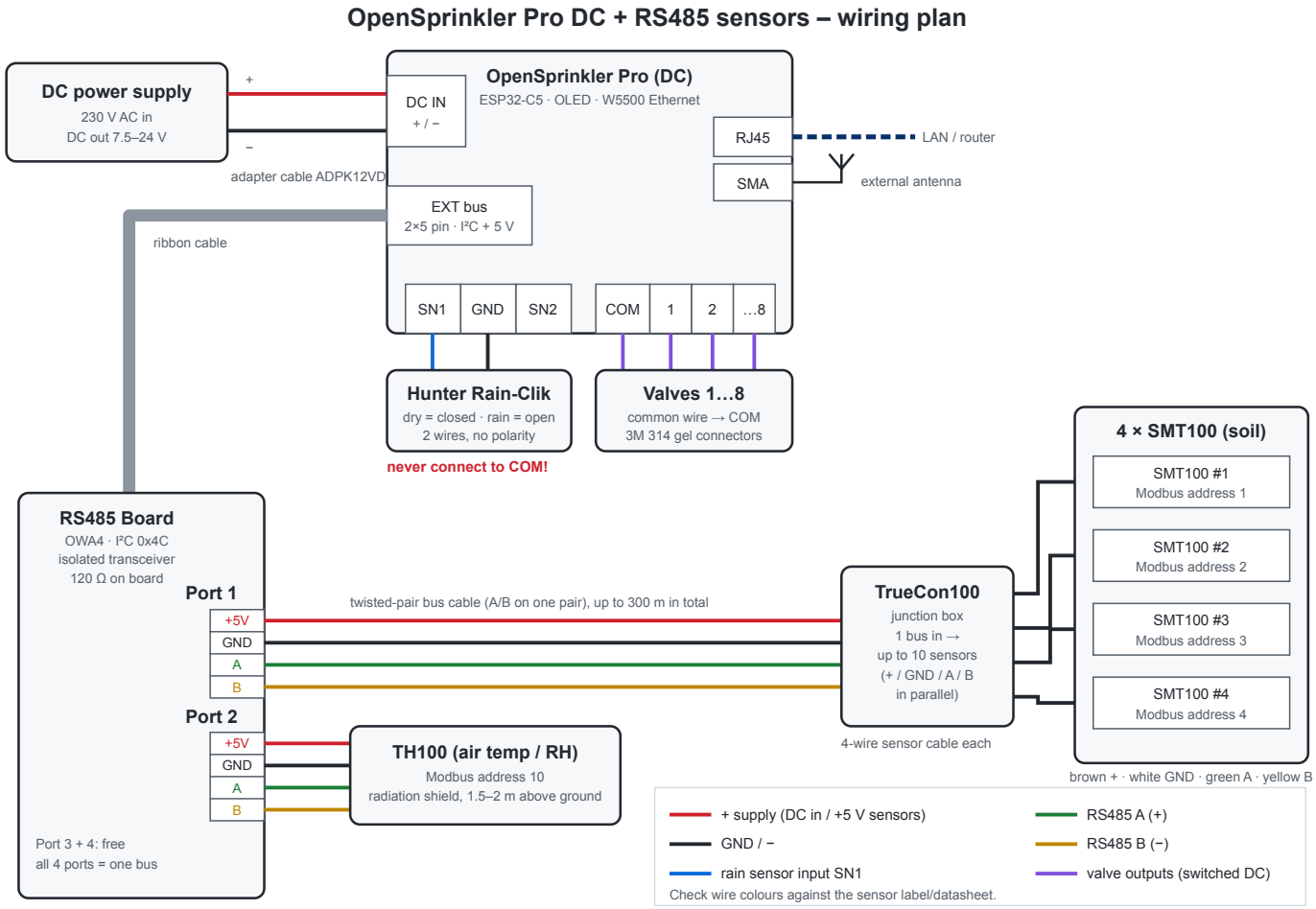
OpenSprinkler Pro + RS485 sensors – Quick reference

OpenSprinkler Pro DC (Ethernet) · RS485 Board · 4× SMT100 · TH100 · TrueCon100 · Hunter Rain-Clik

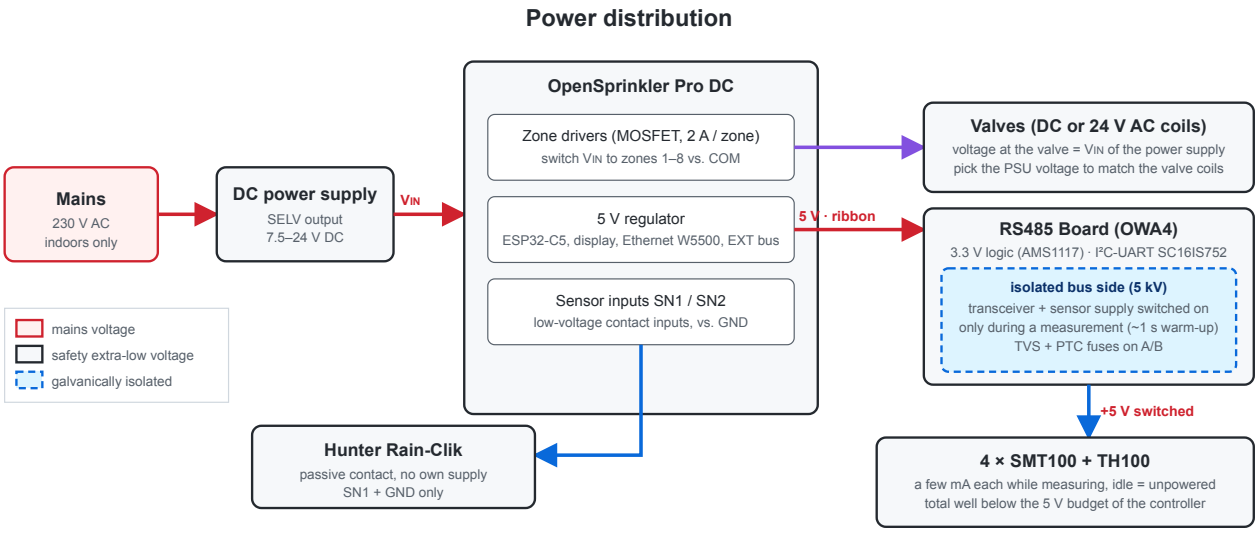
Wiring plan



Key rules

- **One RS485 board per controller** (fixed I²C address 0x4C). All 4 terminal blocks are one bus, up to 64 sensors. A second board = spare / second controller.
- Work **only with power off**. Ribbon cable to **EXT**, check pin 1 orientation.
- Rain-Clik to **SN1 + GND**, **never to COM**.
- Valve supply = DC voltage of the power supply; choose it to match the valve coils.
- Bus cable: A/B on **one twisted pair**, + and GND on the second pair, ≤ 300 m in total, not next to mains cables.
- Wire colours SMT100/TH100: **brown +**, **white GND**, **green A**, **yellow B** (check the label). No answer → swap A/B first.
- 120 Ω termination is on the board. Long cable (> 50 m): add 120 Ω A–B at the far end.

Power plan



Assembly in 9 steps

1. DIN rail holders V4 on Pro and RS485 board, snap onto rail.
2. Ribbon cable RS485 board ↔ EXT (power off).
3. Ethernet cable, external antenna on SMA.
4. Valves: common wire → COM, each valve → zone 1…8, 3M 314 gel connectors in the valve box.
5. Rain-Clik → SN1 + GND.
6. Bus cable port 1 → TrueCon100 input.
7. 4× SMT100 → TrueCon100 outputs (parallel).
8. TH100 → port 2 (shaded, 1.5–2 m high, radiation shield).
9. SMT100 into undisturbed soil, root zone 10–20 cm, no air gaps.

Commissioning

1. Power on → OLED shows IP. Open web UI / OpenSprinklerASB app, run *Online Update*.
2. *Edit Options* → *Sensors*: Sensor 1 type = **Rain**, **Normally Open = off**. Test button ≥ 30 s.
3. Set Modbus addresses **one sensor at a time** (others disconnected): *Analog Sensor Config* → add sensor → enter **Modbus ID** → **Set SMT100 Modbus ID** → label the cable.
4. Create sensors (table), enable **Log**. Diagnostics must not show *RS485_NO_ADAPTER*.
5. *Program Adjustments*: moisture sensor → program, e.g. min 15 % / max 30 % VWC. *Monitors*: stop zone at > 35 %, frost warning < 2 °C.

Sensors / Sensoren

Sensor	Type (Analog Sensor Config)	Modbus ID	Interval
SMT100 #1…#4 moisture	Truebner SMT100 RS485 Modbus, moisture mode	1, 2, 3, 4	300 s
SMT100 soil temperature	… temperature mode	1…4	900 s
TH100 humidity	Truebner TH100 RS485 Modbus, humidity mode	10	300 s
TH100 air temperature	Truebner TH100 RS485 Modbus, temperature mode	10	300 s

Troubleshooting

RS485_NO_ADAPTER	Ribbon cable, only one RS485 board, restart
One sensor missing	A/B swapped, duplicate/wrong address, +5 V/GND at TrueCon100
All sensors fail	Short circuit or water in the TrueCon100 / bus cable
Implausible moisture	Air gaps, gravel, sensor right at a dripper
Rain-Clik inactive	Sensor 1 = Rain, Normally Open = off, SN1 + GND