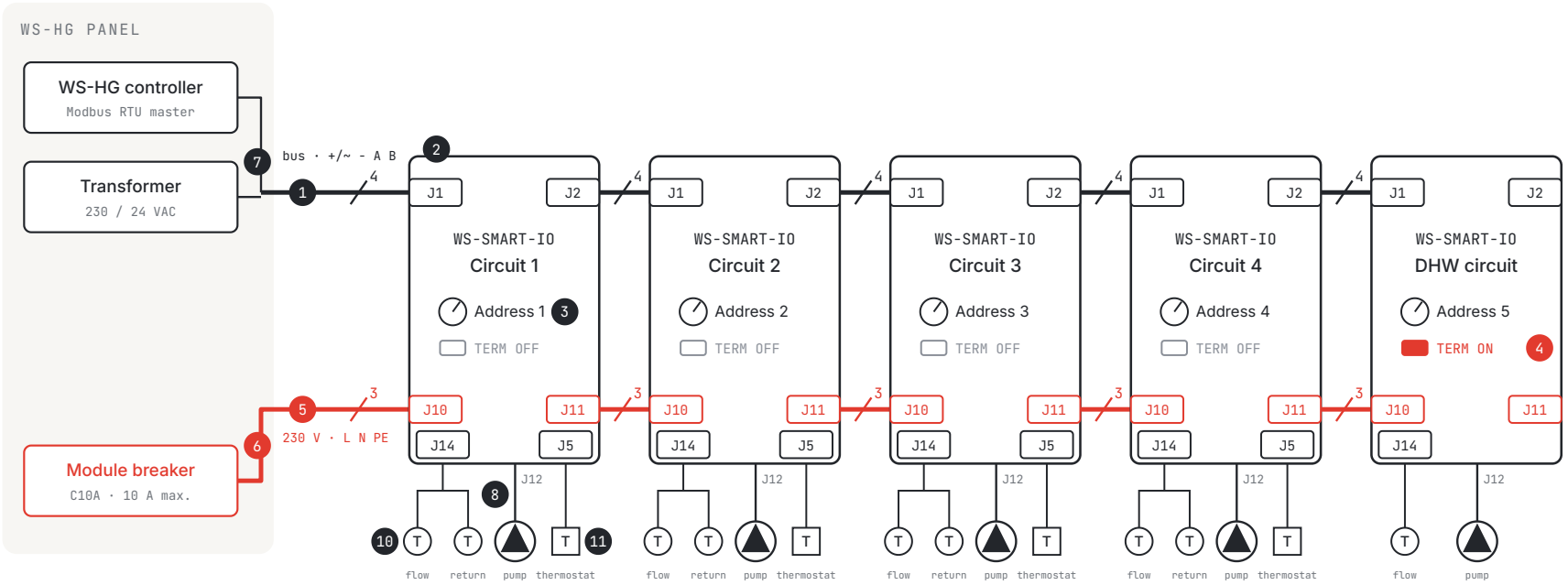
WS-SMART-HG · Bus topology

WS-SMART-IO modules daisy-chained from the WS-HG panel: bus, 230 V, sensors and thermostats. Reference example 1ECH-4GR-1ECS: four heating circuits and one DHW circuit, one WS-SMART-IO module per circuit. Terminals and cables as in wiring diagram v2.3, sheets 21 to 25.



1. Bus daisy-chained from module to module, 4 wires: +/~ and – carry 24 VAC/VDC, A and B Modbus RTU. A to A, B to B, never crossed.
2. J1: bus in, from the panel or the previous module. J2: out to the next module.
3. Set the address with the power off, one per module, no duplicates: 1 to 4 for the heating circuits, 5 for the DHW circuit. Position 0: the module does not respond.
4. TERM jumper (120 ohms) ON at the last module of the line only, OFF everywhere else.
5. 230 V daisy-chained, 3 wires L, N, PE: J10 in, J11 out, terminals in parallel.
6. Module 230 V line protected in the panel by a circuit breaker of 10 A max. Module fuses F1 and F3: 6 A.
7. 24 VAC from the panel transformer; each module draws 70 mA and accepts 19.2 to 28.8 V.
8. J12: circulator supply, current measured. J13: pump enable relay.
9. Up to 15 modules per bus. Modbus RTU: 19 200 Bd, even parity, 1 stop bit.
10. J14: PT1000 sensors, flow on RTD 1 (terminals 1-2), return on RTD 2 (terminals 3-4). DHW circuit: flow sensor only. Cable G51 1 × 2 × 0.8 mm per sensor.
11. J5: circuit safety thermostat, volt-free CO-NC contact on DI 1 (terminals 1-2), reported as a fault. Cable G51 1 × 2 × 0.8 mm. No thermostat on the DHW circuit.

Danger · Isolate and lock off at the panel before opening a module: the 230 V comes through the chain.

Installation by a qualified professional, in line with the applicable rules (SN 411000). The wiring diagram governs the detailed wiring.