



**Modular control system for
Buderus EMS boilers with room,
zone, low loss header, and solar
control capability**

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1 System Description

Room controller for Buderus EMS boilers

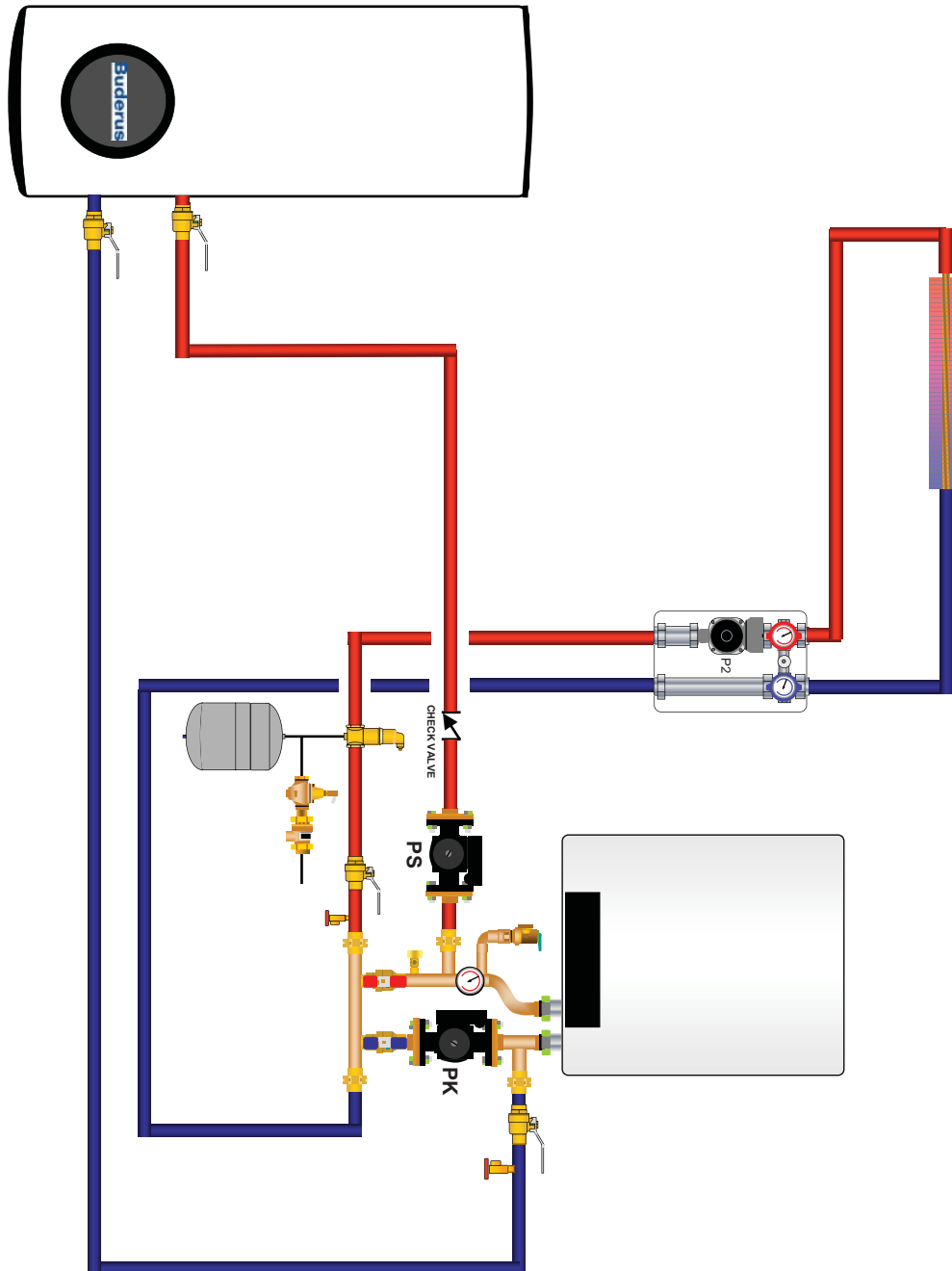
Features:

- Room reset
- Outdoor reset
- Room, zone, low loss header and solar control capability
- Graphic display and user interface
- System diagnosis
- Error code display
- Programmable thermostat.
- User level
- Service level
- Mounted in boiler
- Room sensor
- DHW priority.
- 4 independent heating zones

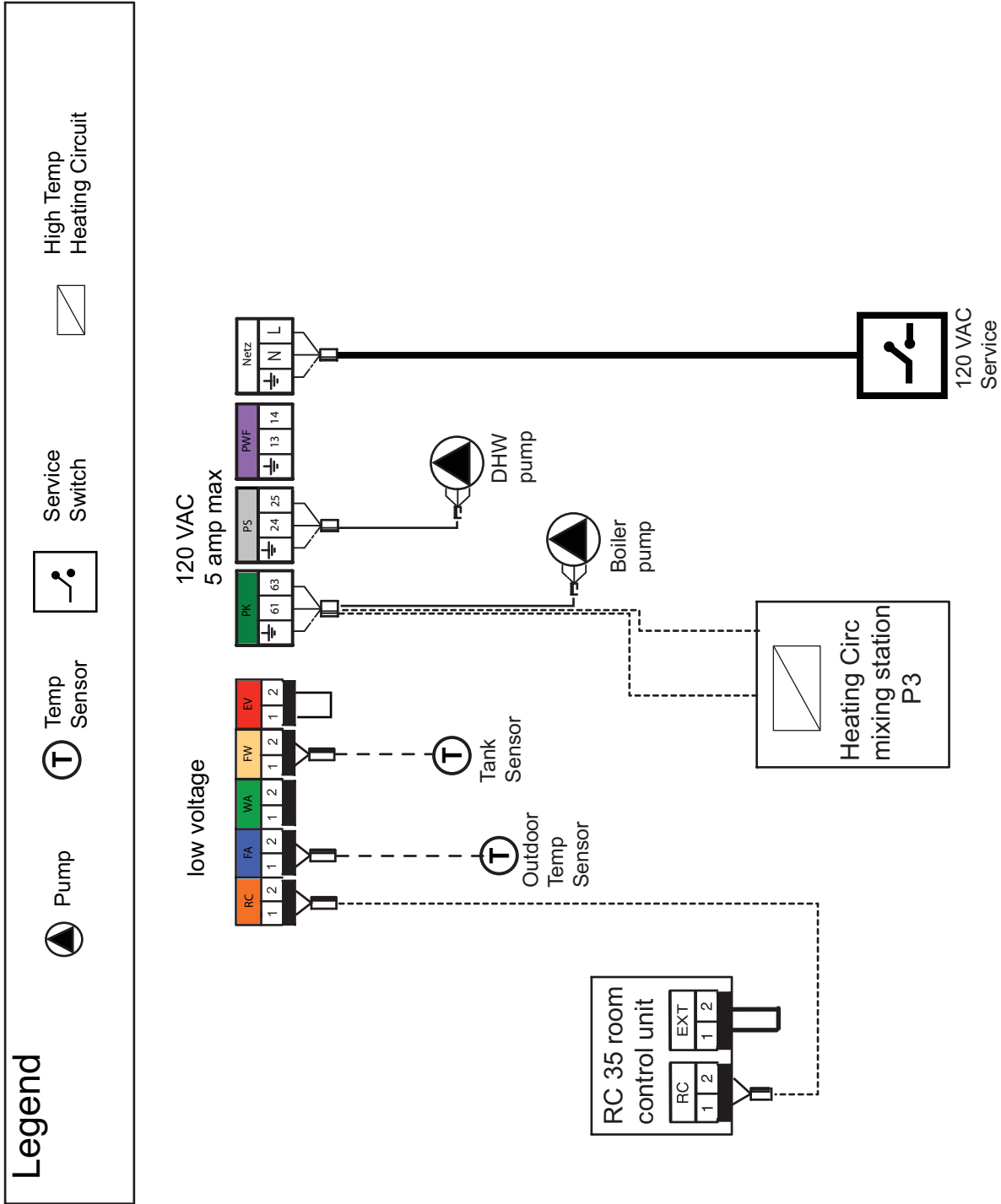
3 available modules for added functionality:

	MM10	WM10	SM10
Description	Mixing module	Low loss header module	Solar DHW module
Input 1	temperature sensor FV	low loss header sensor FK	collector sensor FSK
Input 2	N/A	N/A	bottom tank sensor FSS
Output 1	pump PH	pump PH	solar pump PSS
Output 2	120V mixing valve SH	N/A	N/A
Notes	Max. 3 MM10 per system: Future expandability with programmable room sensor RC20	Max. 1 WM10 per system	Max. 1 SM10 per system; Pump modulates 30 - 100% for best delta T.

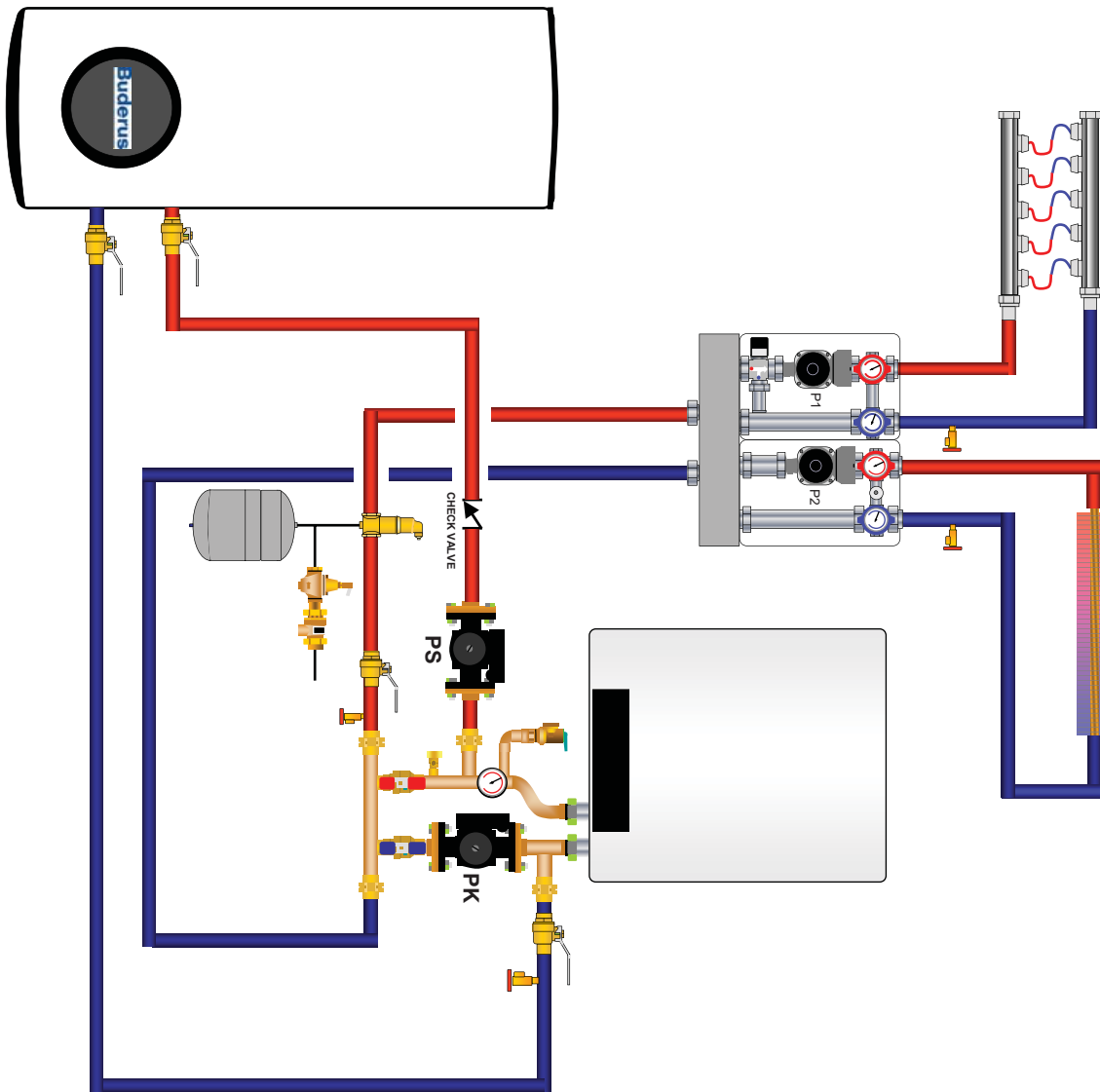
2 GB142 with unmixed heating zone - piping diagram



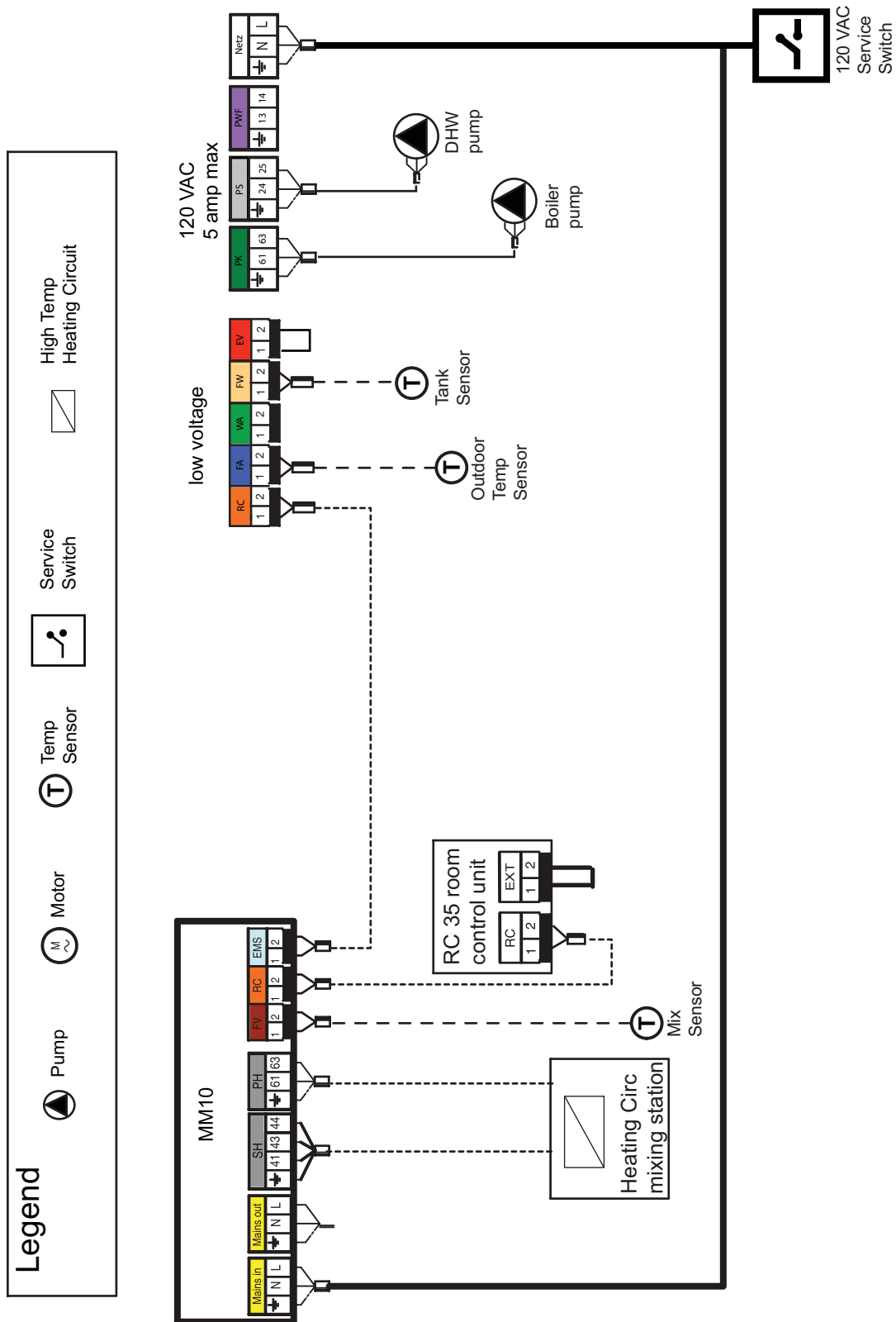
3 GB142 with unmixed heating zone - wiring diagram



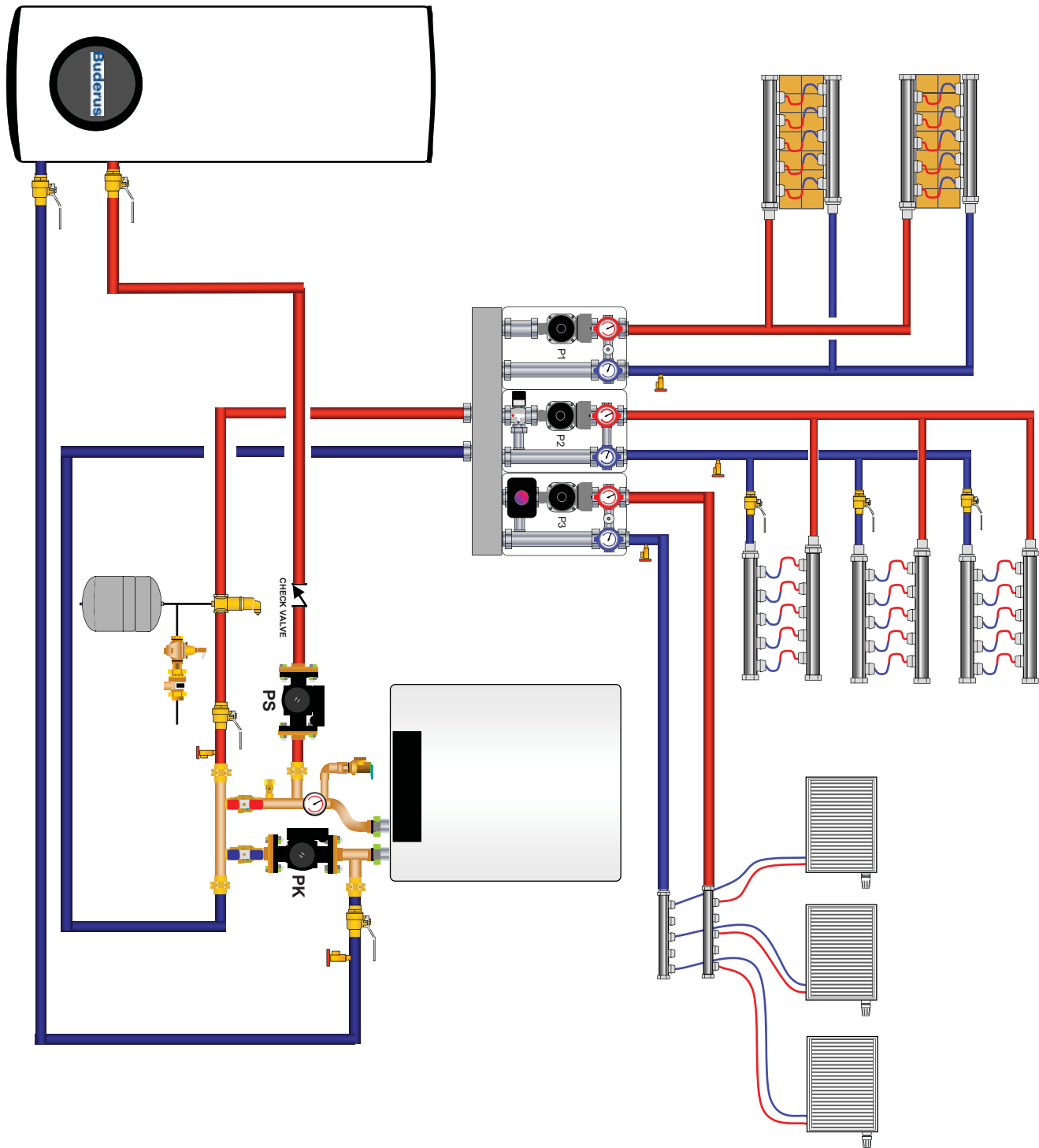
4 GB142 with 1 unmixed zone, 1 mixed zone and DHW - piping diagram



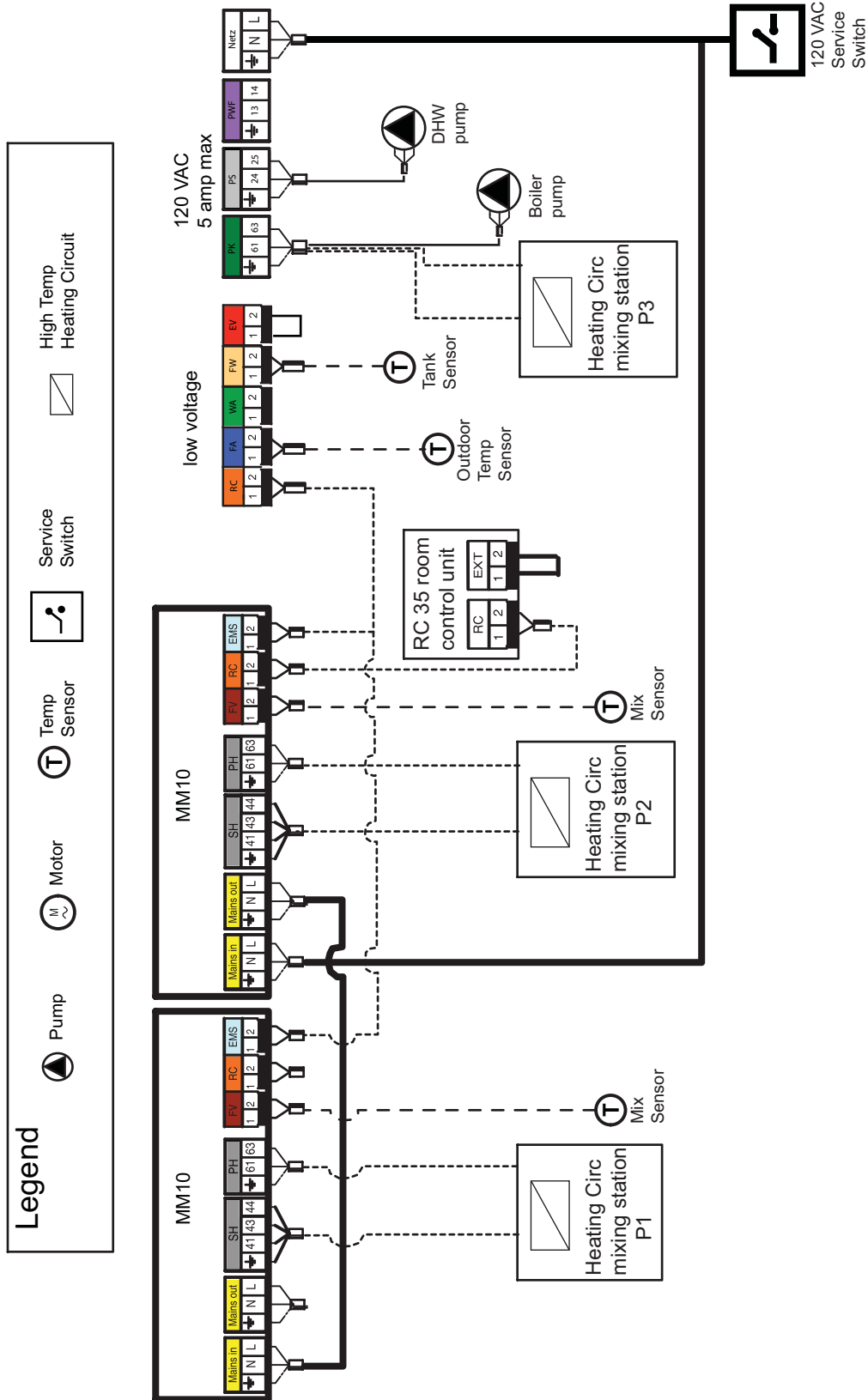
5 GB142 with 1 unmixed zone, 1 mixed zone and DHW - wiring diagram



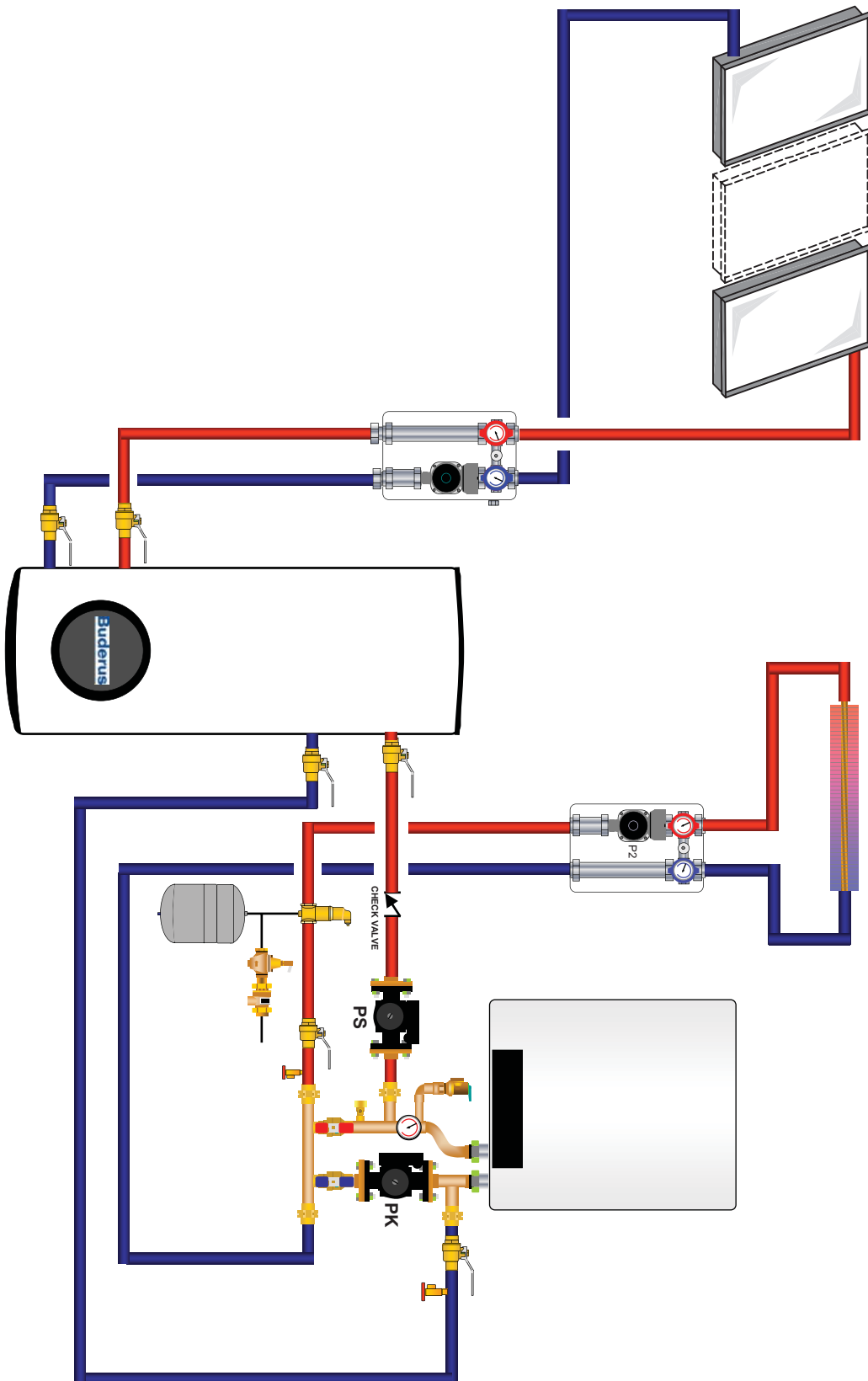
6 GB142 with 2 mixed zones, 1 unmixed zone and DHW - piping diagram



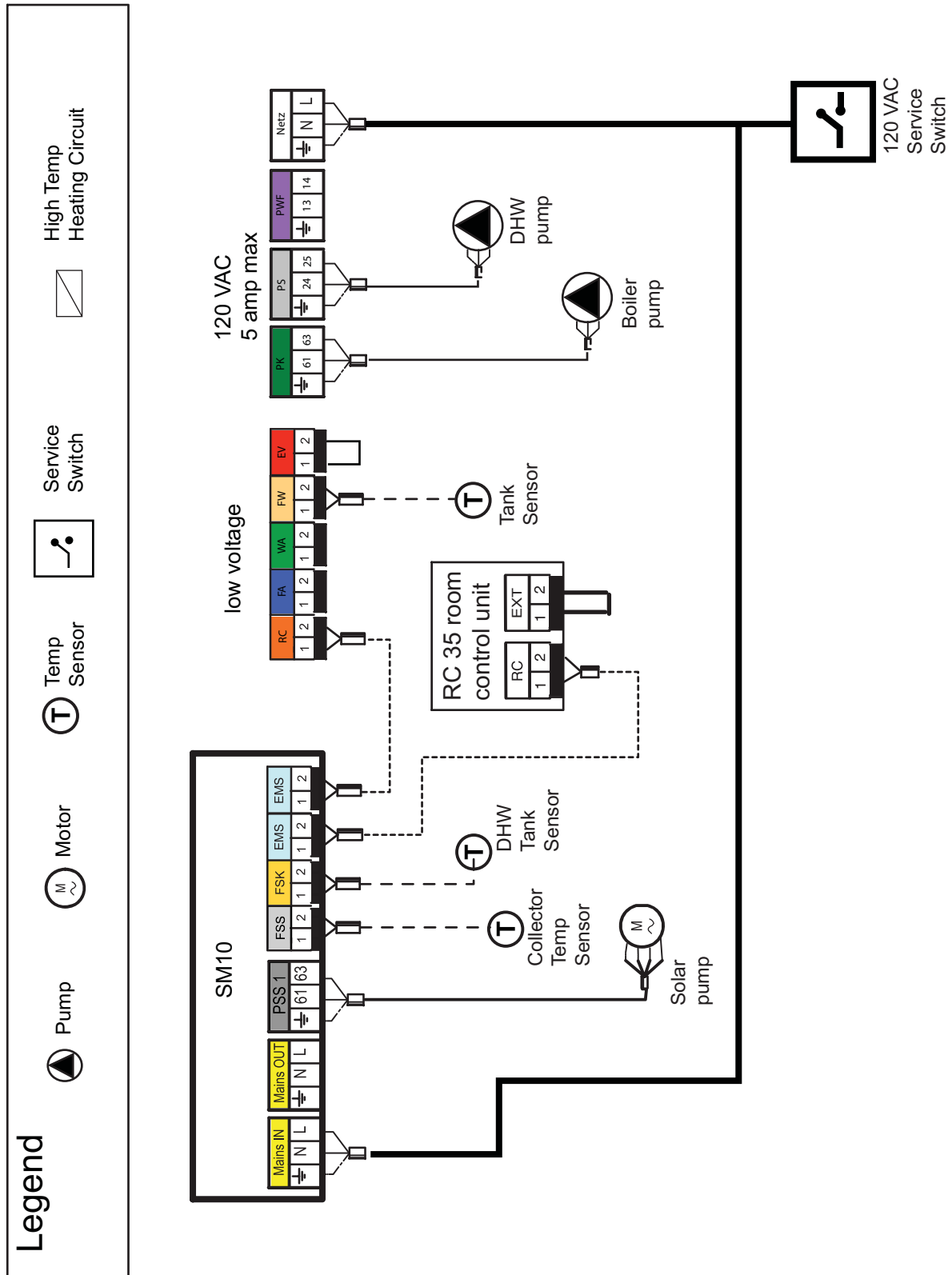
7 GB142 with 2 mixed zones, 1 unmixed zone and DHW - wiring diagram



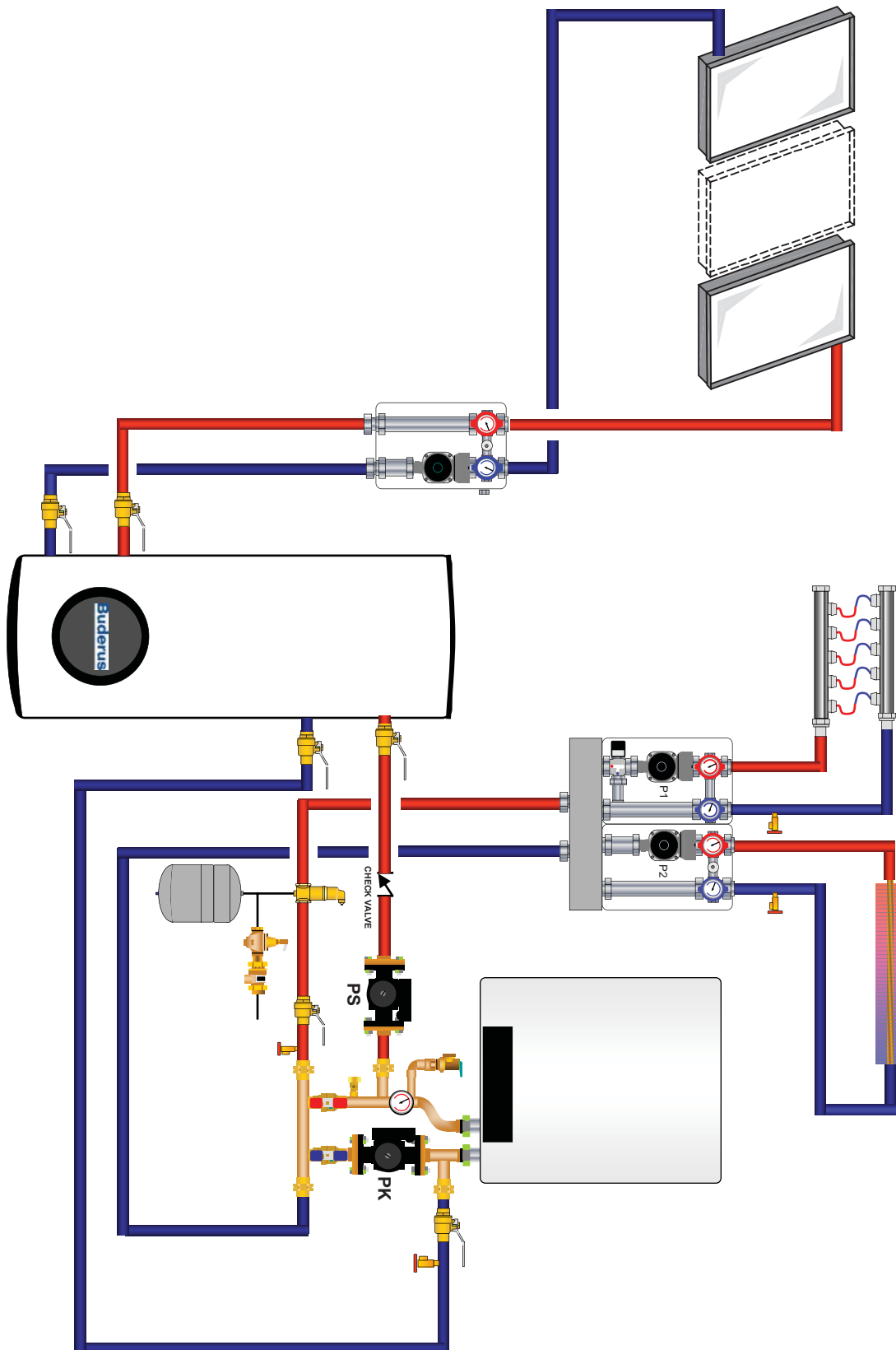
8 GB142 with 1 unmixed zone and solar DHW - piping diagram



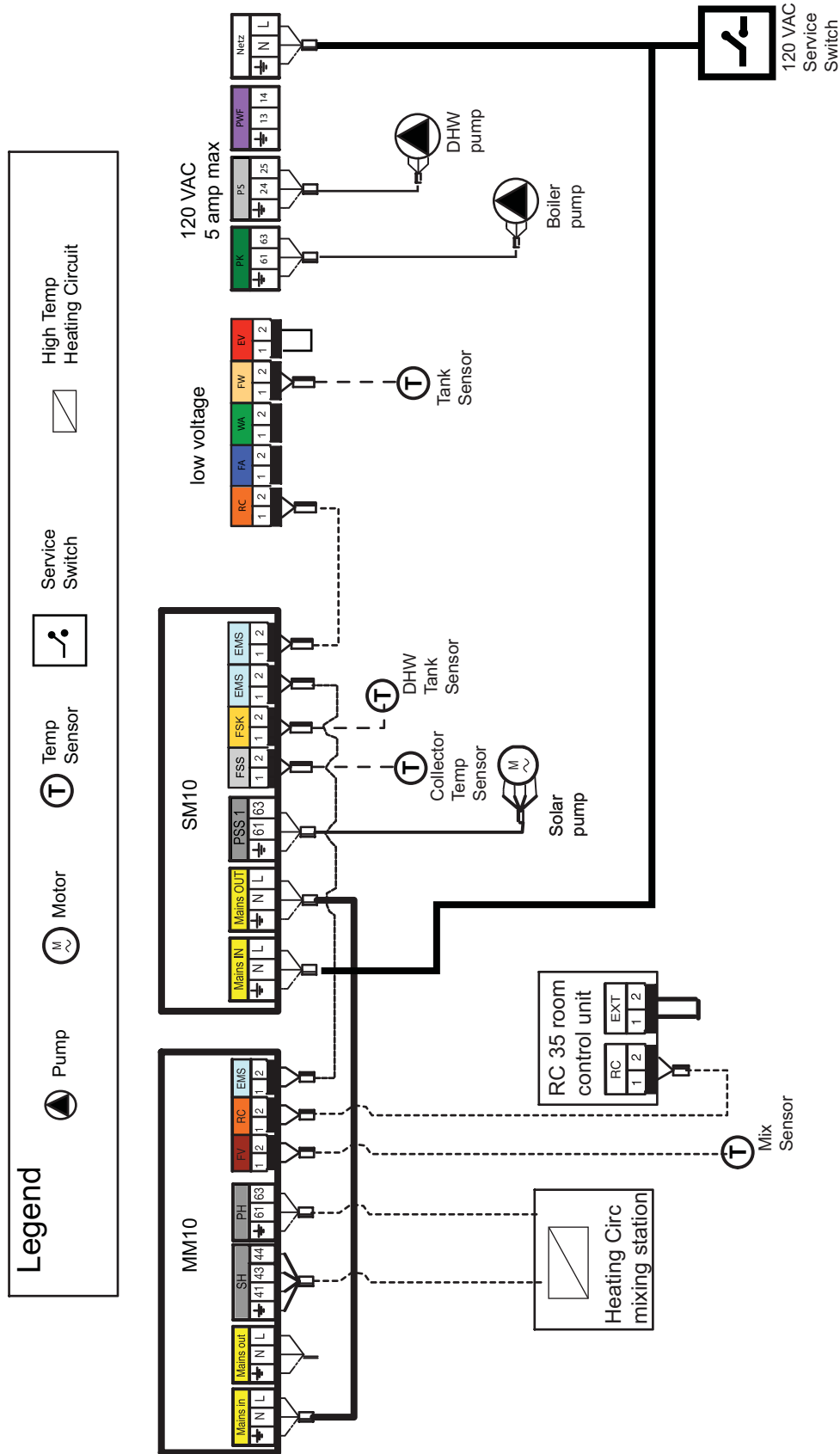
9 GB142 with 1 unmixed zone and solar DHW - wiring diagram



10 GB142 with 1 unmixed zone, 1 mixed zone and solar DHW - piping diagram



11 GB142 with 1 unmixed zone, 1 mixed zone and solar DHW - wiring diagram



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