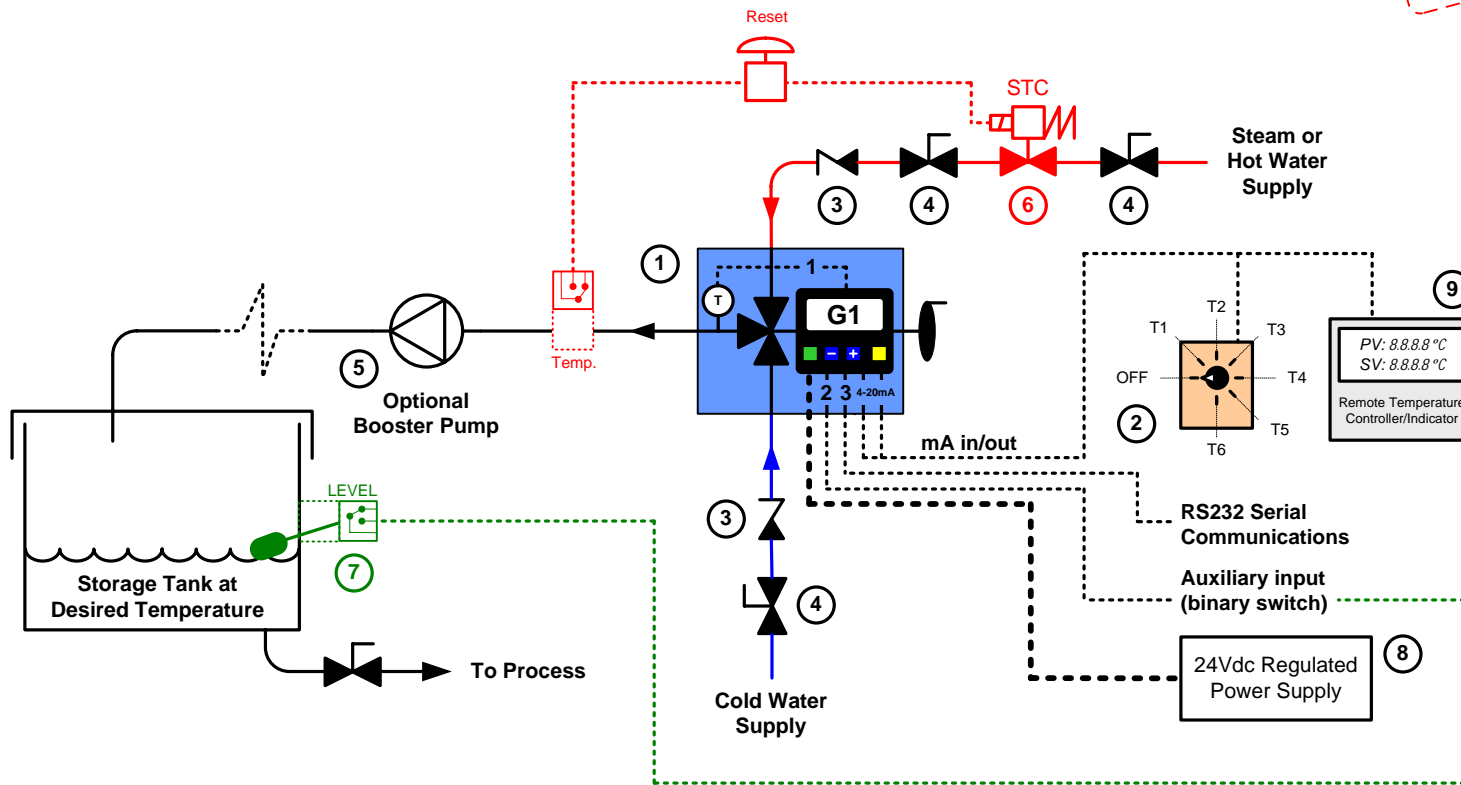


**APPLICATION
PROVEN IN
INDUSTRY**

Application Note: SDAN0020 Rev A



Advantages of the Emech Valve and Actuator

OUT OF THE BOX solution

①

Local closed loop control of temperature

Constructed of CF8M (316) stainless steel

F5 – Hard seal stainless steel discs

F3 – Durable corrosion resistant ceramic discs

Figure 1: The Emech temperature control solution consisting of the F3 (or F5) mixing valve and G1 actuator with integrated temperature sensor.



Very high resolution capability (0.03° rotational)

High speed electronic actuator

IP65/Nema 4 electronics enclosure

High speed temperature sensor

Top entry allows inline access to internal valve parts

Application

To provide accurate and energy saving temperature control to fill a vessel.

Operation

The Emech valve and actuator accurately controls the temperature of the filling fluid. Even with sudden changes of inlet pressure and temperature to the valve, the G1 controller aggressively minimizes outlet temperature variations.

Advantages

- High performance stand alone closed loop temperature control out of the box solution.
- Accurate to +/- 0.5°C (0.9°F) over a 0 – 100°C (32 - 212°F) control range.
- Minimized seal replacement requirements and plant down time.

Disclaimer: This diagram is for general discussion purposes only. The information is solely intended to provide a general understanding of the subject matter and to assist Emech's customers and potential customers to assess whether they require further information.

Contact Emech for customized application sketches

Note: Proposal sketch for discussion purposes.

- Water pipe
- - - Steam pipe
- 24Vdc power cable
- Signal cable

Key

- 1 Emech F3 (or F5) + G1 Temperature Controller
- 2 Emech Temperature Selector Switch (optional)
- 3 Check Valve (non return)
- 4 Manual Isolation Valve
- 5 Booster Pump (maybe required)
- 6 Thermal Switch Over-Temperature Cut Out System (Recommended); includes - manual reset, fast acting spring to close isolation valve, thermal switch
- 7 Auxiliary Input e.g. Flow or Level Switch (optional)
- 8 24Vdc Regulated Power Supply
- 9 Remote Digital Controllers (PV and SP display) (optional)

Emech Control

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