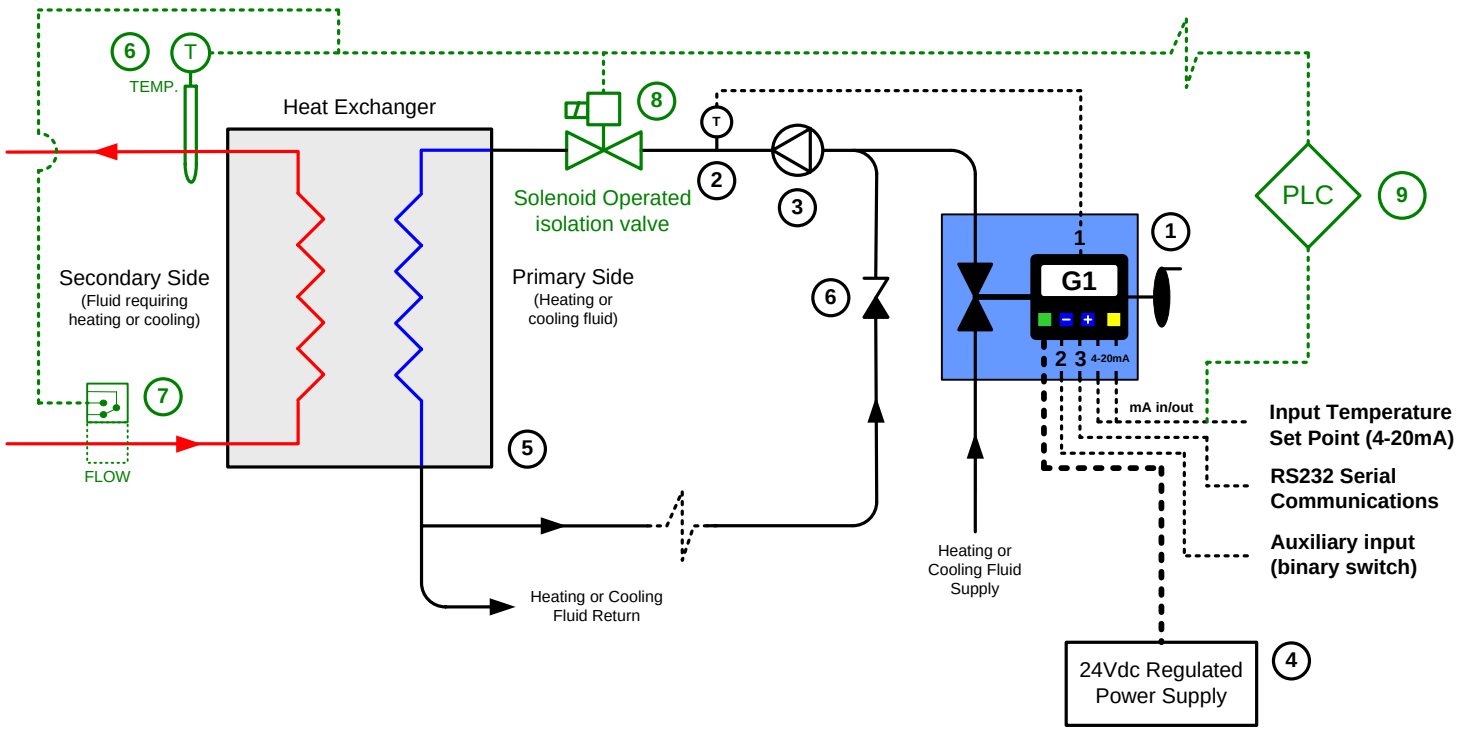
Pasteurizer Controller Circuit

APPLICATION PROVEN IN INDUSTRY

Application Note: SDAN0009 Rev D



Advantages of the Emech Valve and Actuator

OUT OF THE BOX solution

Very high resolution capability (0.03° rotational)

High speed electronic actuator

Local closed loop control of temperature

IP65/Nema 4 electronics enclosure

Constructed of CF8M (316) stainless steel

High speed temperature sensor

Top entry allows inline access to internal valve parts

Durable corrosion resistant ceramic discs

Figure 1: The Emech temperature control solution consisting of the F2 control valve and G1 actuator.

Application

To provide accurate temperature control to the primary side of a heat exchanger.

Operation

In this circuit type the F2 controls the heat exchanger INLET temperature. The set point to the G1 controller is usually a mA signal from a Cascade style control loop in the plant pasteurizer.

Advantages

If the primary side flow or temperature is reduced, the Emech controller automatically ALTERS the flow through the heat exchanger to achieve the desired outlet temperature. i.e. set point is achieved regardless of variation in the heat transfer availability.

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.

Key

1	**Emech F2 + G1 Temperature Controller**
2	**Emech Fast Acting Temperature Sensor**
2	**Circulating Pump (maybe required)**
3	**24Vdc Regulated Power Supply**
4	**Heat Exchanger**
5	**Check Valve (non return)**
6	**Temperature Sensor (optional)**
7	**Flow Switch (optional)**
8	**Solenoid Operated Isolation Valve (optional)**
9	**Programmable Logic Controller (PLC) (optional)**

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

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