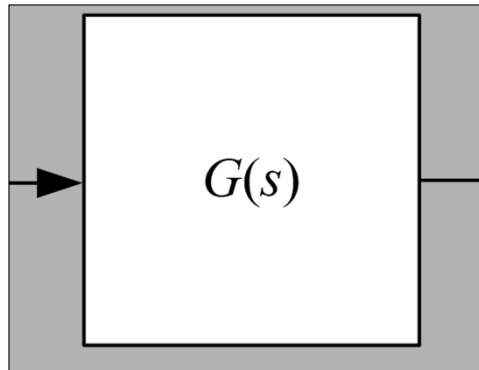# Terminology

- Process under control (_____)
- Raw power
- Power interface
- Process Variable (_____)
- Sensor
- Set Point (_____)
- Error (_____)
- Controller (_____)
- Controller output (_____)

Purpose – make the process "behave"

- PV is not affected by changes in input energy/disturbances   -   _____

- PV follows SP   -   _____

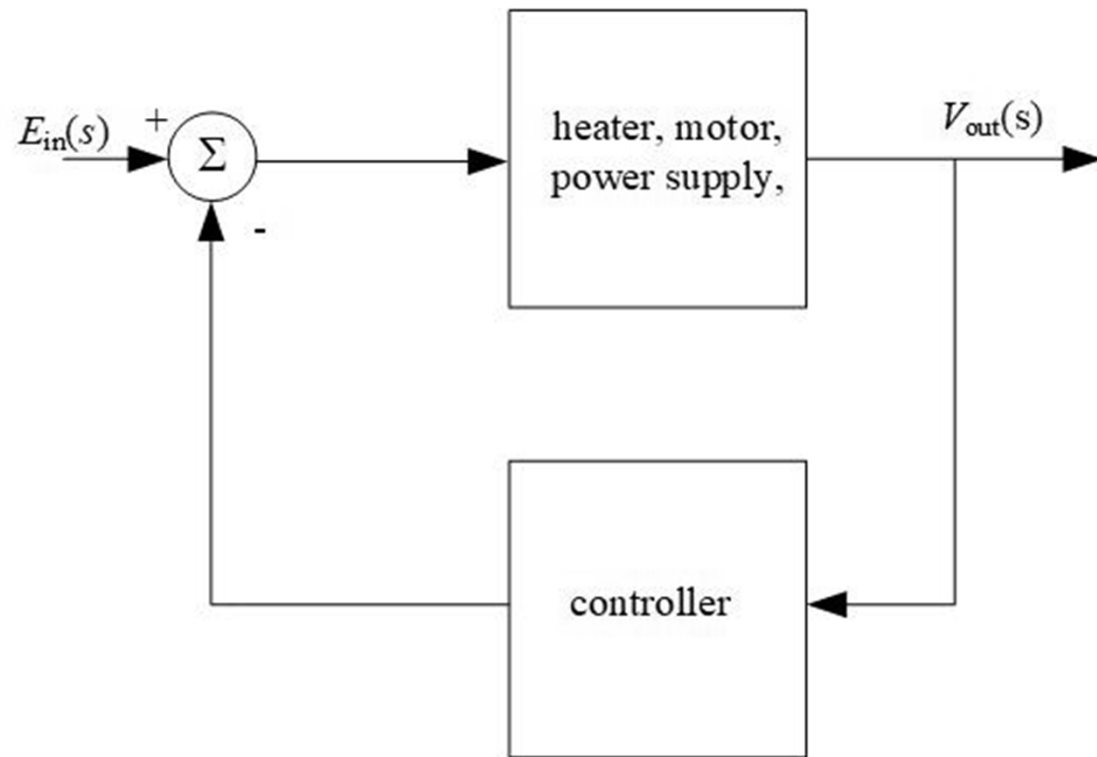- Error = SP-PV = _____

Negative feedback

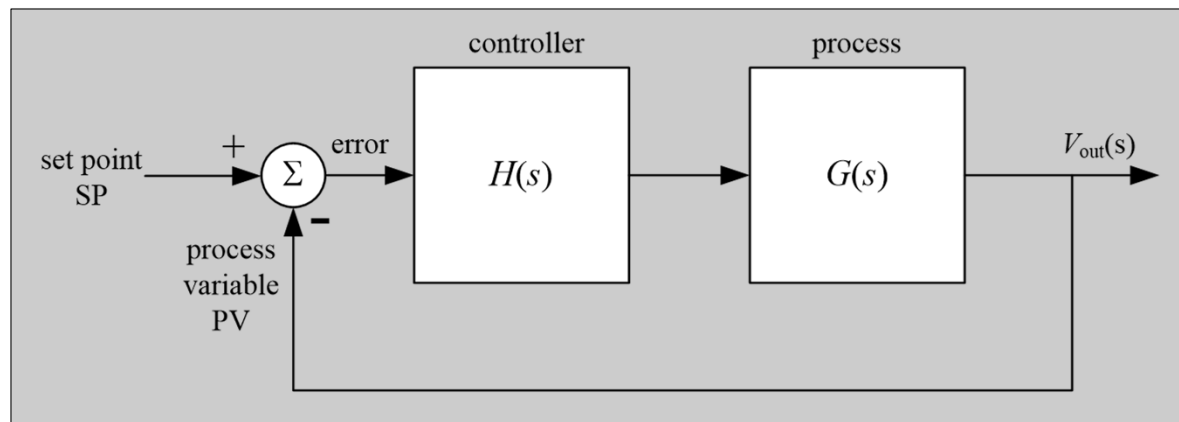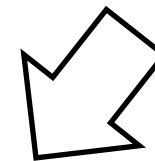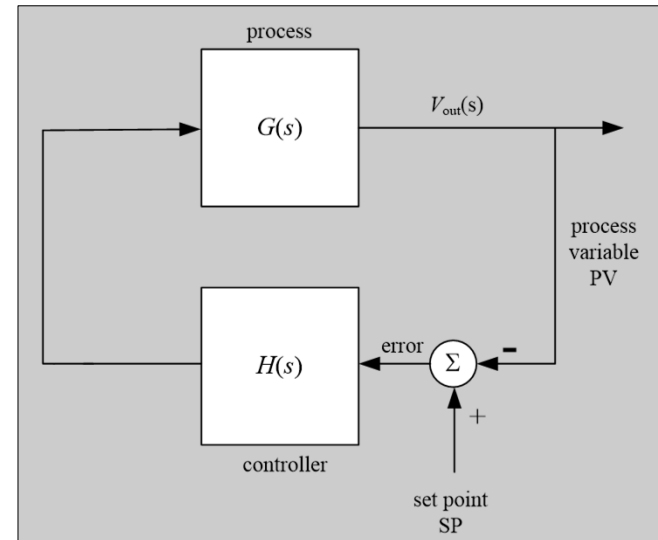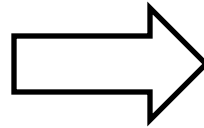Raw Power   Power interface   G   Process Variable   Set Point   Error   H
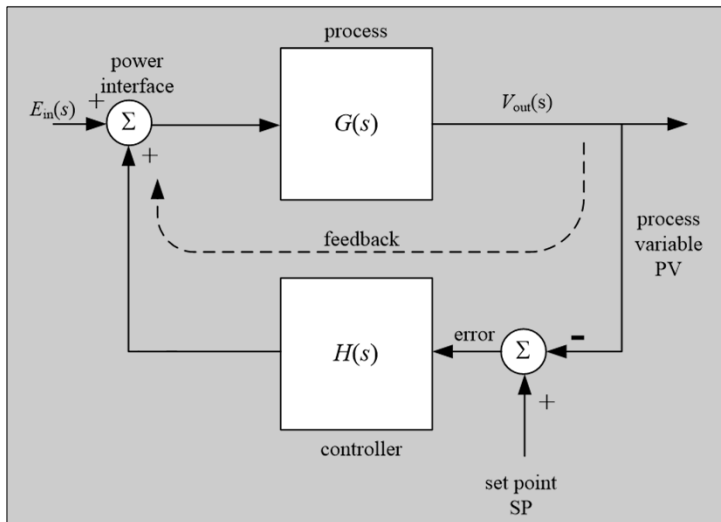What's the objective?

Process Control
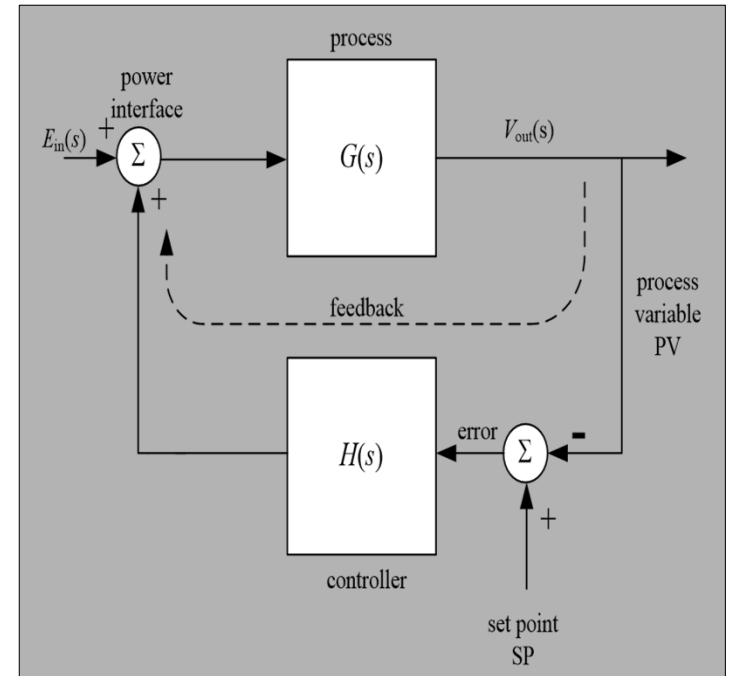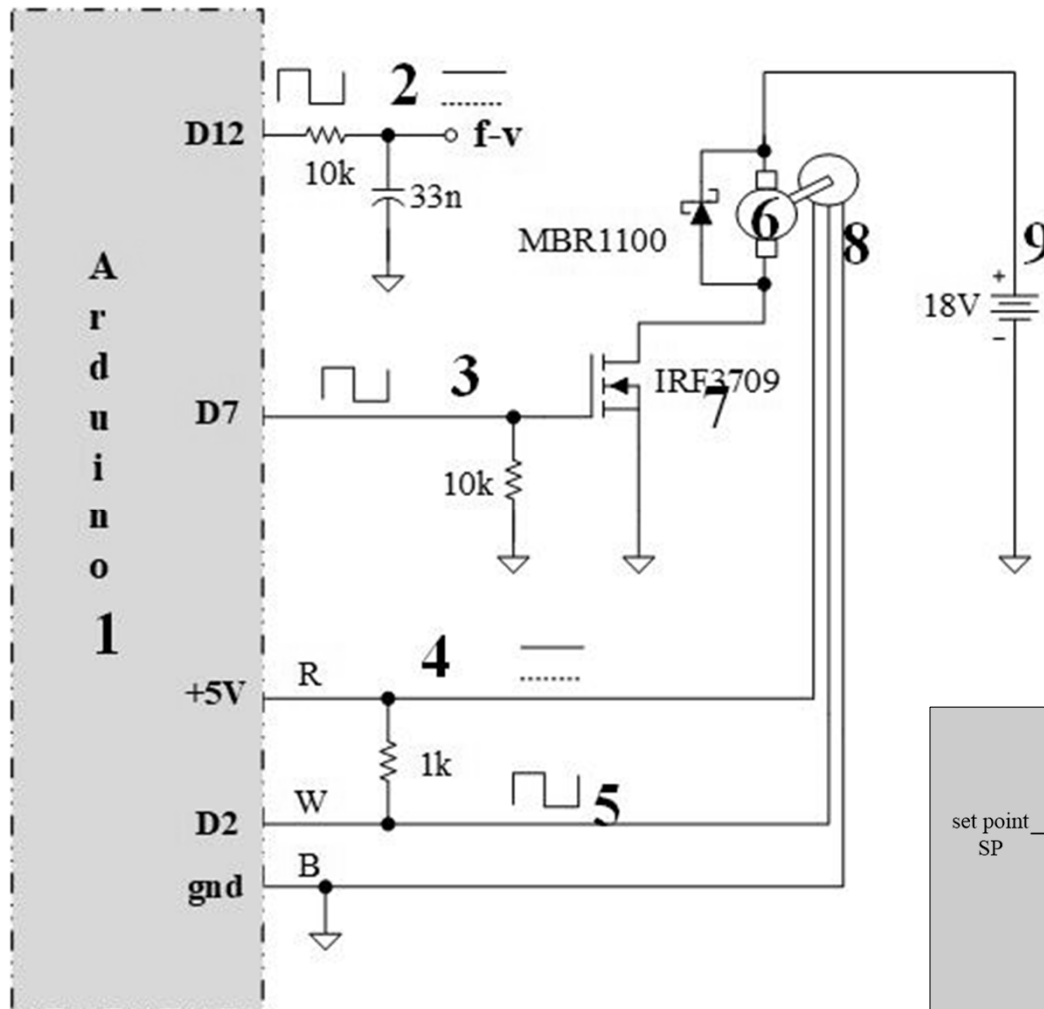
Hold the PV constant for changes in input energy - Regulation

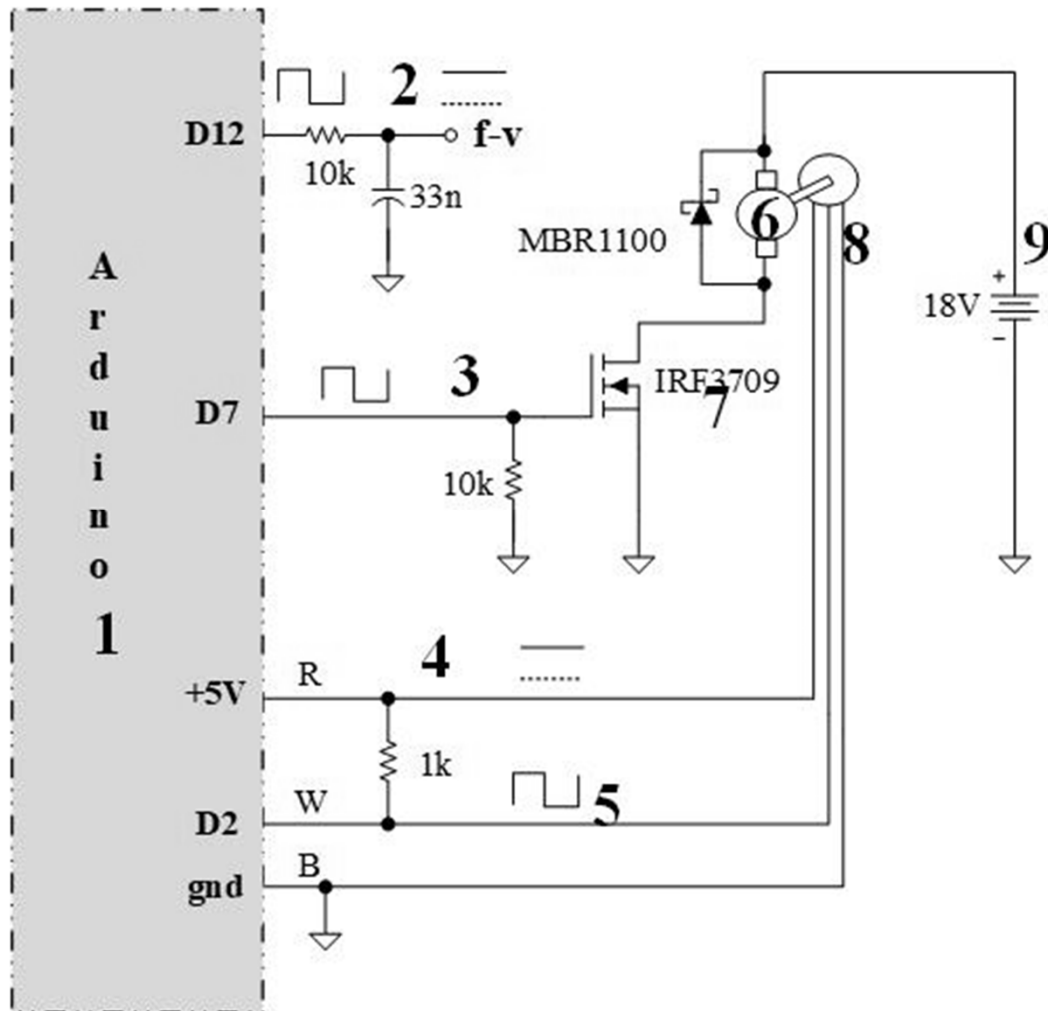# Servo Tracking: ΔSP => ΔPV

Motor controller - Blocks
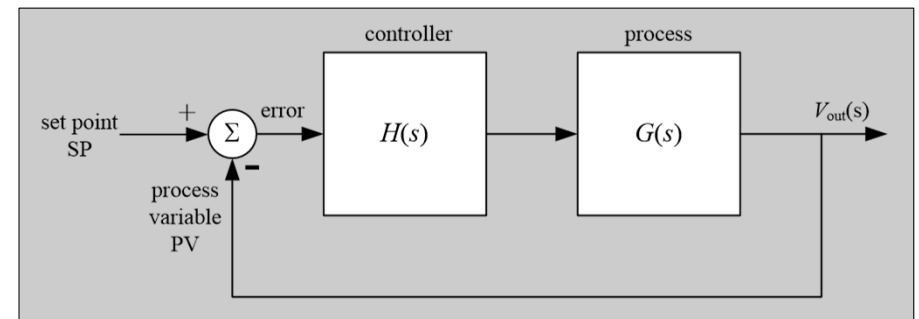
Raw Power   Power interface   G   Process Variable   Set Point   Error   H
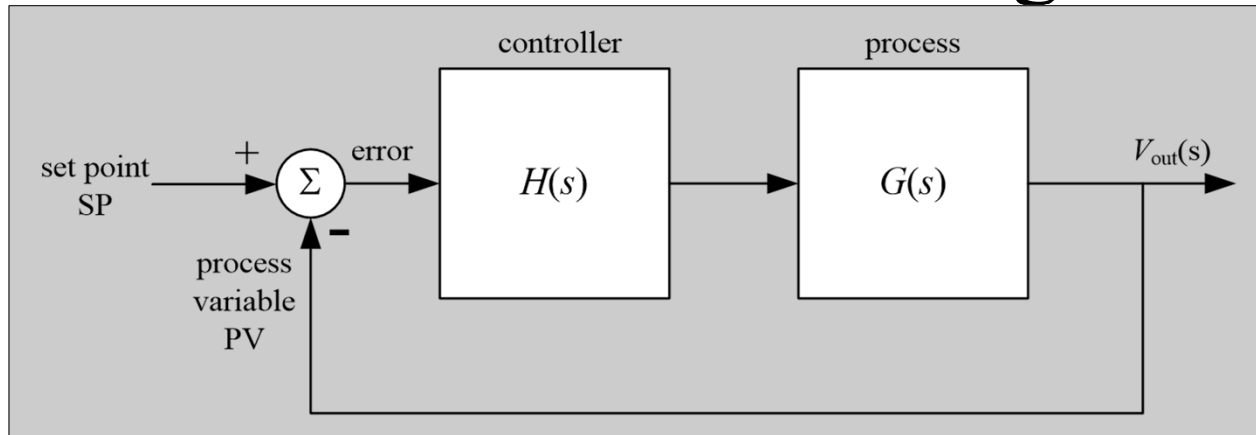
What's the objective?

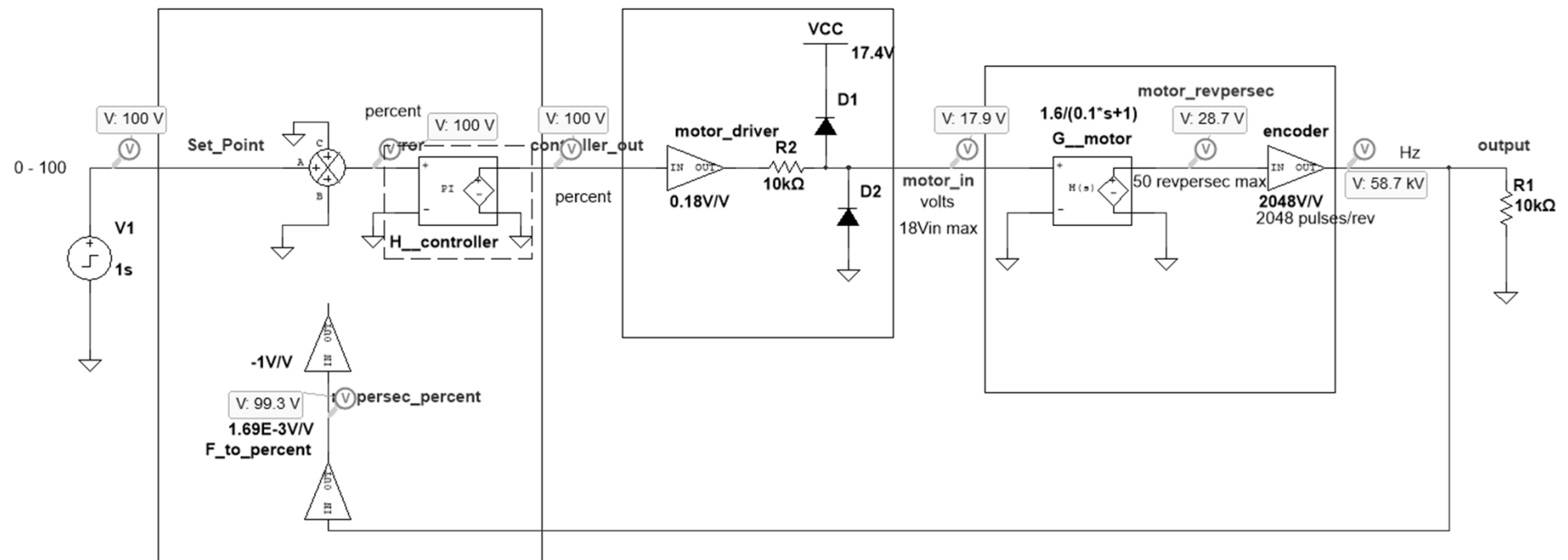# Motor controller - Electronics

MOSFET   PWM   MBR1100   Sensor   Set Point   Controller   f-v

Multisim Block Diagram – elements

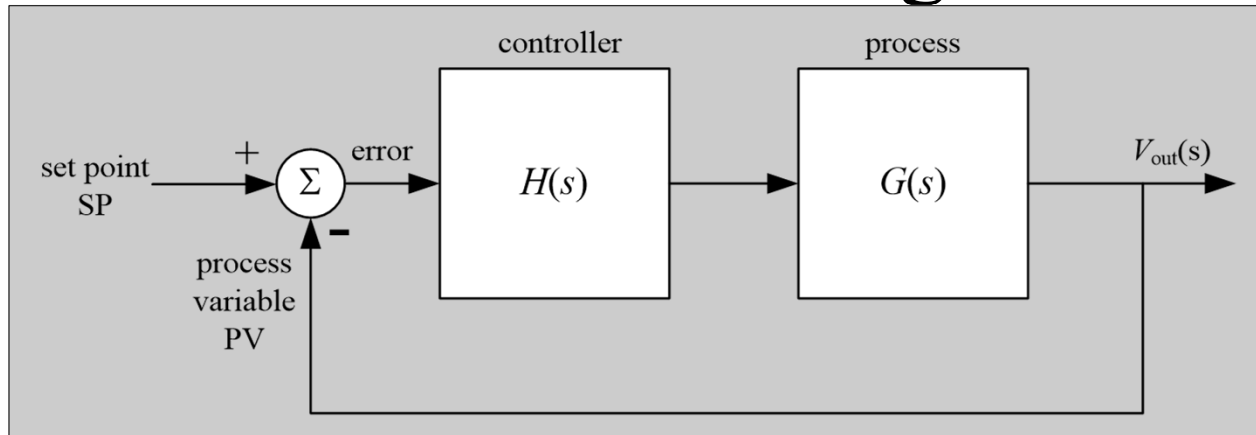$$G = \frac{1.6}{0.1s + 1}$$
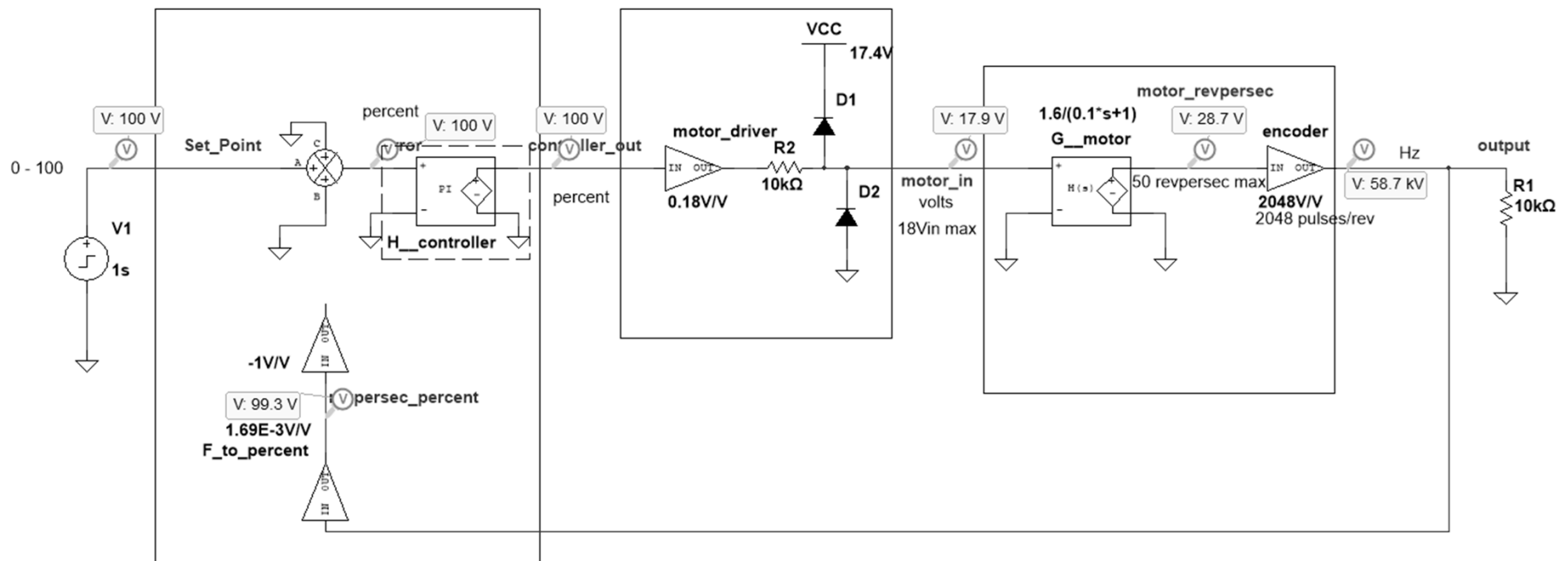
$$H = 1$$

New motor, Spring 2025

Raw Power   Power interface   G   Process Variable   Set Point   Error   H

Multisim Block Diagram – numbers => %

$$G = \frac{1.6}{0.1s + 1}$$

$$H = 1$$

Raw Power   Power interface   G   Process Variable   Set Point   Error   H