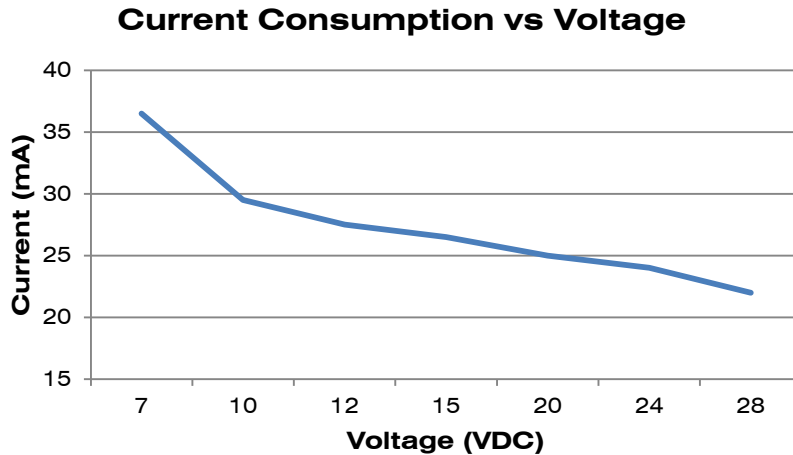


The E-Series flow computers are rated at 0.3 watts of average power consumption. The image below shows the current consumption of an E-Chart against the voltage supplied to the unit.



Note: Verify voltage and current rates before powering unit. Always disconnect power from the unit prior to replacing a fuse. Use only the recommended amp rating to avoid over-voltage and over-current of the unit.

Based on the power consumption (shown above), the size of the back-up battery can be calculated to support the flow computer for a known period of time. For one hour of operation at 12 Volts, the flow computer will need 0.025 Amp hours, based on this formula:

$$i = \frac{\text{Power}}{\text{Voltage}} = \frac{0.3 \text{ Watts}}{12 \text{ Volts}} = 0.025 \text{ Ah}$$

Thus for a two weeks (336 hours) target run time, the back-up battery needs to be 8.4 Amp hours, based on this formula:

$$\text{Ah} * \text{hours} = 0.025 \text{ Ah} * 336 \text{ hours} = 8.4 \text{ Ah}$$

So the flow computer will need a 12V back-up battery with a minimum of 8.4 Amp hours.

Power consumption varies drastically, depending on what else is connected to the flow computer. Here are some considerations:

- Switch outputs, relays, pulse outputs and analog outputs add to the power consumption. Serial devices polling the flow computer will also considerably increase the total power consumption. In these cases, the 0.3 Watts will not be used and the average current draw must be calculated.
- New battery technologies have protection circuits, which will cut off power before the back-up battery is fully drained. This leaves only 80-90% of the stated capacity for use.