15.1 dc Power Supply Options for PIC Projects

(1) a 6 V, 9 V, or 12 V wall transformer with a 5 V regulator

(2) a potted power supply with ac input and 5 V regulated output

(3) four AA batteries (6 V) in series with a 5 V regulator

(4) a 9 V battery with a 5 V regulator

(5) a rechargeable battery (or batteries in series) with a 5V regulator

(6) a full featured instrumentation power supply

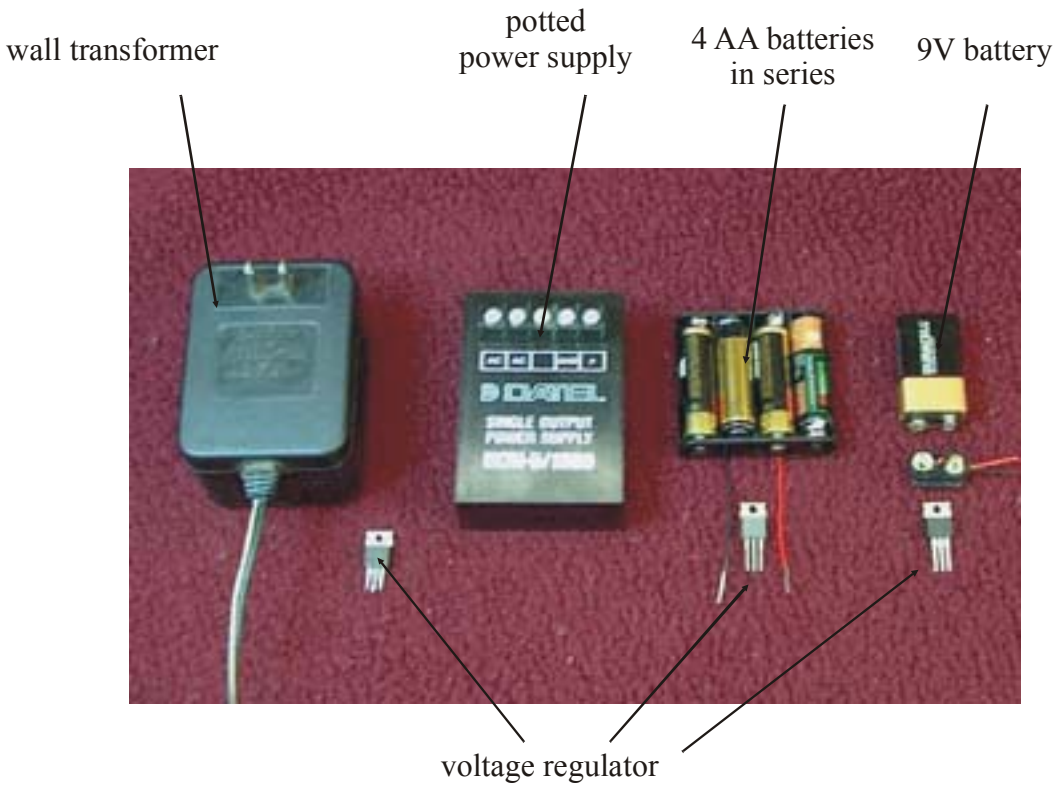

Figure 15.1 Low Cost Power Supply Options

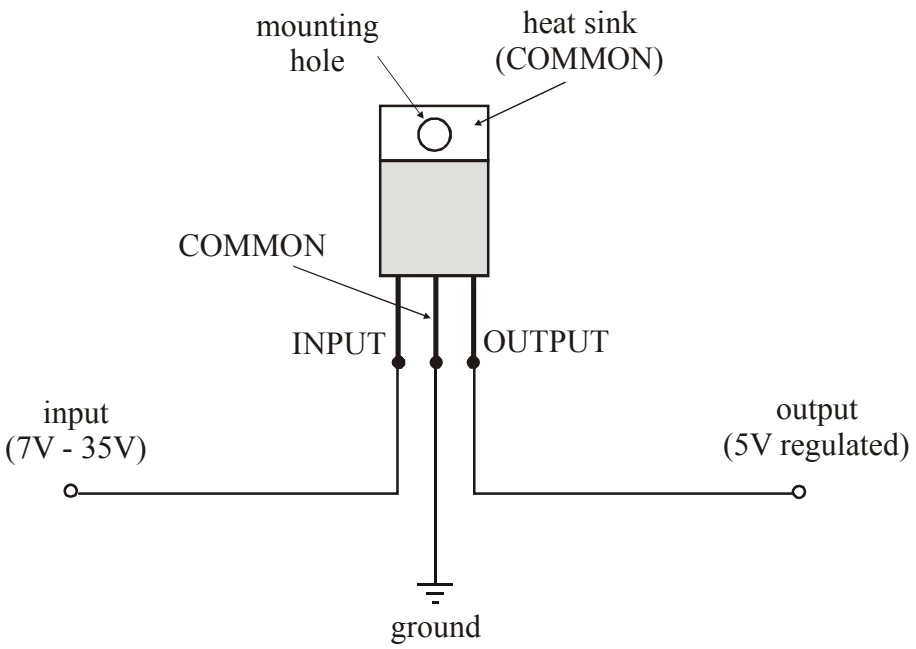

Figure 15.3 7805 Voltage Regulator Connections

Table 15.1 **5V Power Supply Options Summary**

Device	**Typical current**	**Relative size**	**Relative cost**
instrumentation power supply	1 A – 5 A	large	very expensive (~$1000)
small potted, open frame, or enclosed power supply	1 A – 10 A	medium	moderately expensive (~$20-$100)
wall transformer	1 A	small	cheap
9V battery	100 mA	small	cheap
4 AA batteries	100 mA	small	cheap
rechargeable battery	See Section 15.11	small	moderate