

Optocoupler Calculations

$$I_F := 15 \text{ mA}$$

$$CTR := 135\%$$

$$V_F := 1.2 \text{ V}$$

$$V_{in} := 3 \text{ V}$$

$$R_1 := \frac{(V_{in} - V_F)}{I_F} = 120 \text{ } \Omega$$

$$I_c := CTR \cdot I_F = 0.02 \text{ A}$$

$$V_{CE} := 2 \text{ V}$$

$$V_{CC} := 12 \text{ V}$$

$$R_2 := \frac{(V_{CC} - V_{CE})}{I_c} = 493.827 \text{ } \Omega$$