

Charging Current:

$$I_{\text{charging}} = \frac{V_s}{X_c} = V_s \cdot 2\pi f C \approx$$

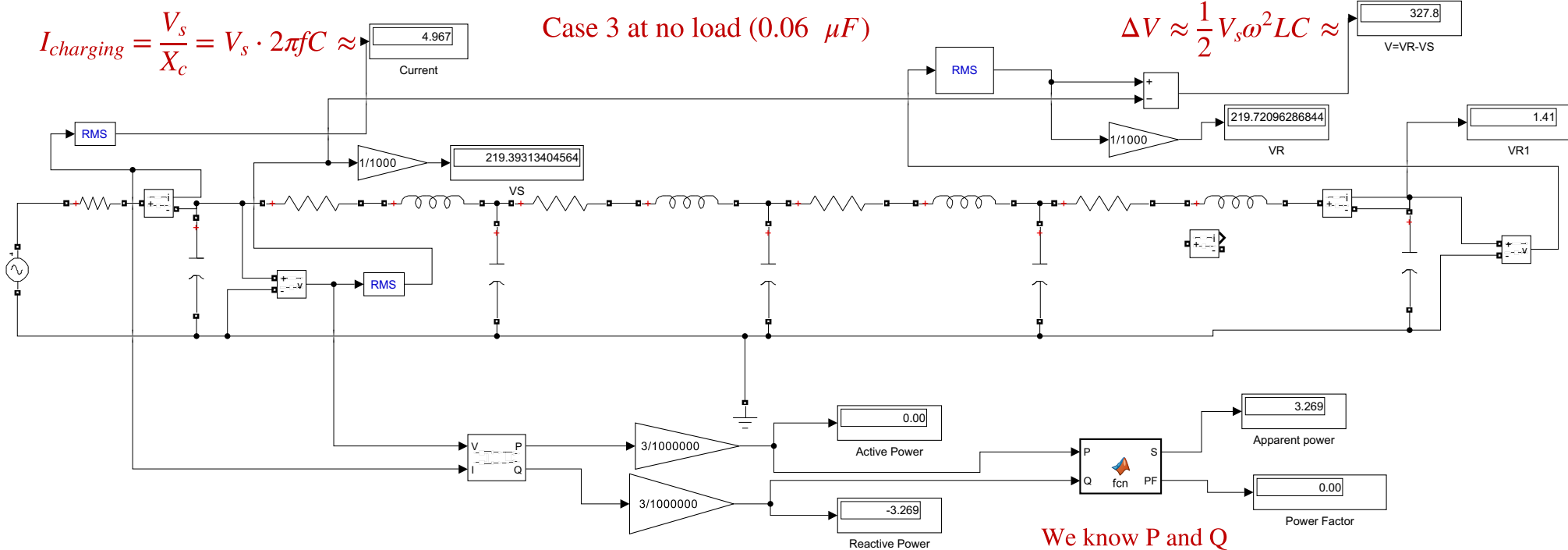
4.967  
Current

Case 3 at no load (0.06  $\mu\text{F}$ )

Ferranti Effect Voltage Rise:

$$\Delta V \approx \frac{1}{2} V_s \omega^2 L C \approx$$

327.8  
V=VR-VS



We know P and Q

so

$$S = \sqrt{P^2 + Q^2}$$

Power Factor:

$$PF = \cos(\phi) = \frac{P}{S}$$

