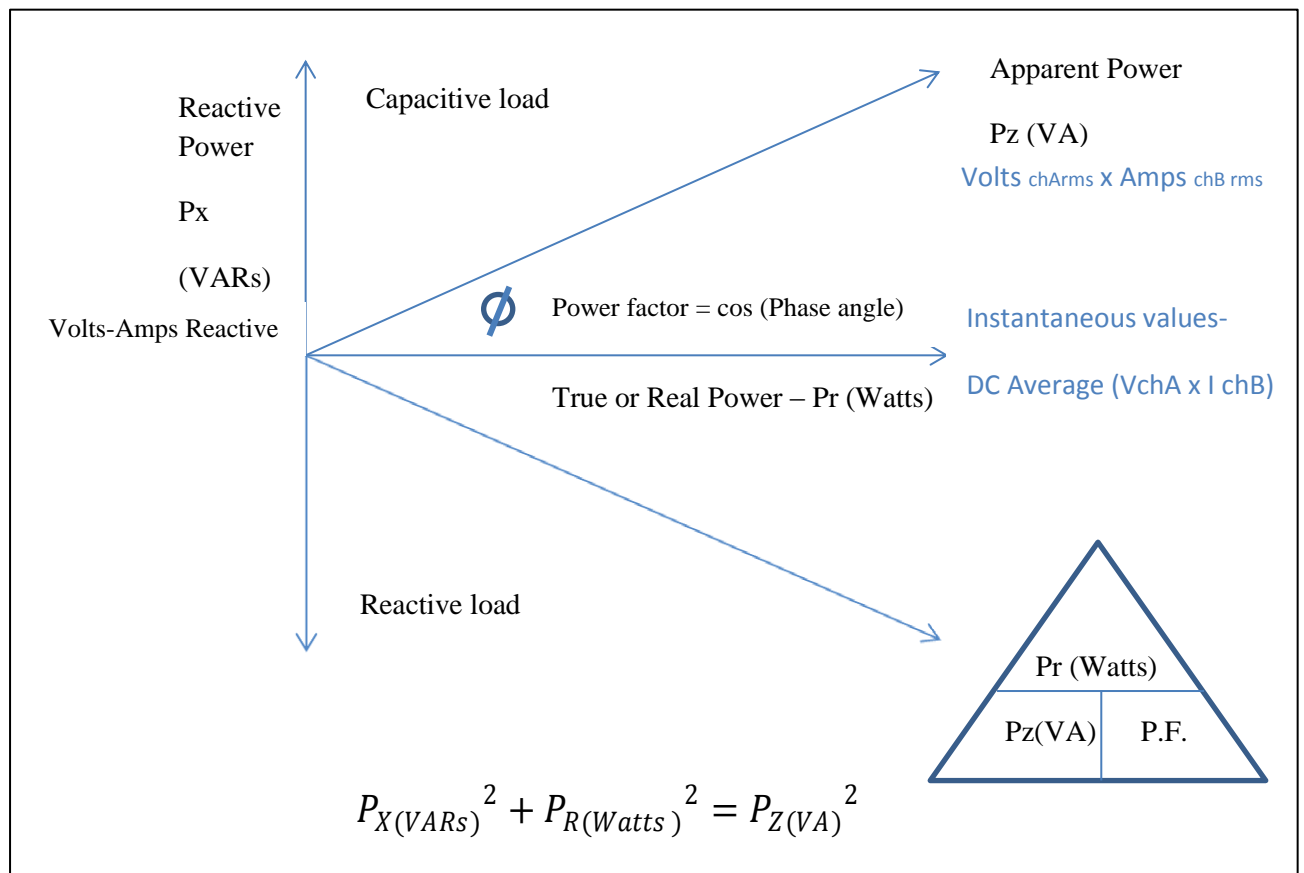


# AC Vectors and Power Factor



1. **Power Factor** =  $P_R(Watts) / P_Z(VA)$

2.  $\phi = \cos^{-1} \text{Power Factor}$

3.  $P_{X(VARs)} = \sqrt{P_{Z(VA)}^2 - P_{R(Watts)}^2}$

4.  $R(ohms) = V_{RMS} / I_{RMS}$

5.  $Z = \frac{R(ohms)}{\text{PowerFactor}}$

6.  $X = \sqrt{Z^2 - R(ohms)^2}$

7.  $I_Z = P_Z / V_{RMS}$

8.  $I_R = P_R / V_{RMS}$

9.  $I_X = P_X / V_{RMS}$