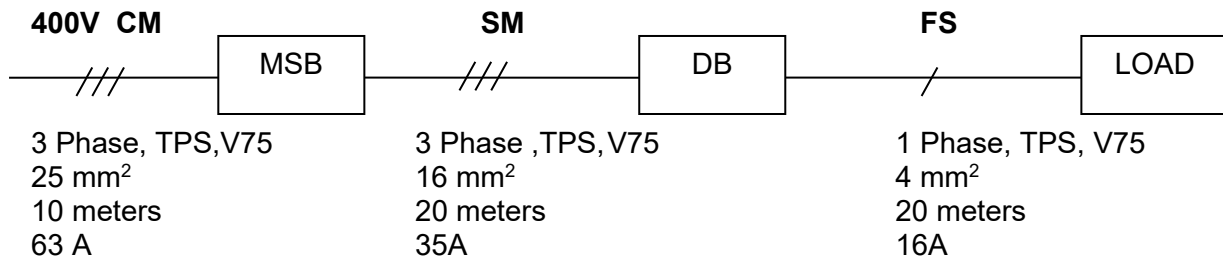


REVISION 3

Question 1 (Find max voltage at load)



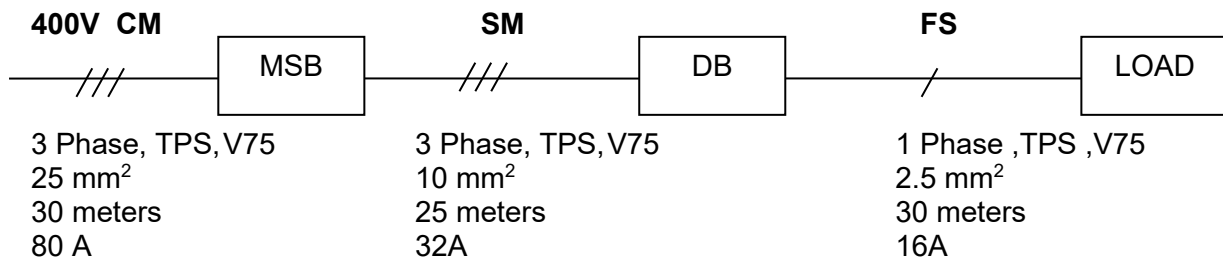
$$\text{CM Vd} = \frac{10 \times 63 \times 1.54 \text{ mV/Am}}{1000} = 400 - 0.97 = 399.03\text{V}$$

$$\text{SM Vd} = \frac{20 \times 35 \times 2.43 \text{ mV/Am}}{1000} = 399.03 - 1.71 = 397.32 \text{ V}/\sqrt{3} = 229.39 \text{ V}$$

$$\text{FS Vd} = \frac{20 \times 16 \times 9.71 \text{ mV/Am} \times 1.155}{1000} = 3.588 \text{ V}$$

$$\text{Vd} = 229.39 - 3.588 \text{ V} = 225.81\text{V}$$

Question 2 (Find max voltage at load)



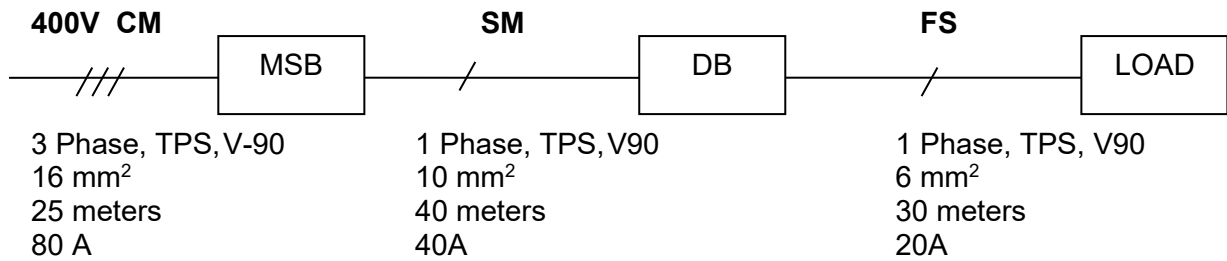
$$\text{CM Vd} = \frac{30 \times 80 \times 1.54 \text{ mV/Am}}{1000} = 400 - 3.7 \text{ V} = 396.3\text{V}$$

$$\text{SM Vd} = \frac{25 \times 32 \times 3.86 \text{ mV/Am}}{1000} = 396.3\text{V} - 3.1 \text{ V} = 393.2/\sqrt{3} = 227.02\text{V}$$

$$\text{FS Vd} = \frac{30 \times 16 \times 15.6 \text{ mV/Am} \times 1.155}{1000} = 8.65 \text{ V}$$

$$\text{Vd} = 227.02 - 8.65\text{V} = 218.37\text{V}$$

Question 3 (Find max voltage at load)



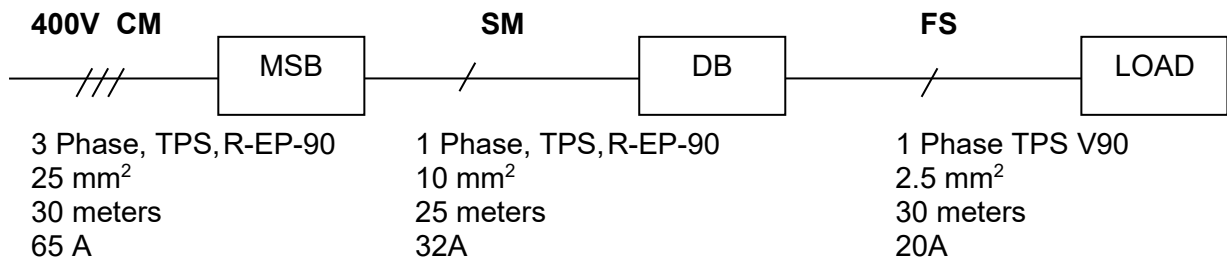
$$\text{CM Vd} = \frac{25 \times 80 \times 2.43 \text{ mV/Am}}{1000} = 400 - 4.86 \text{ V} = 395.14\text{V}/\sqrt{3} = 228.14\text{V}$$

$$\text{SM Vd} = \frac{40 \times 40 \times 3.86 \text{ mV/Am} \times 1.155}{1000} = 228.14 - 7.0 \text{ V} = 221.14\text{V}$$

$$\text{FS Vd} = \frac{30 \times 20 \times 6.49 \text{ mV/Am} \times 1.155}{1000} = 221.14 - 4.5 \text{ V} = 216.64\text{V}$$

$$\text{Vd} = 216.64\text{V}$$

Question 4 (Find max voltage at load)



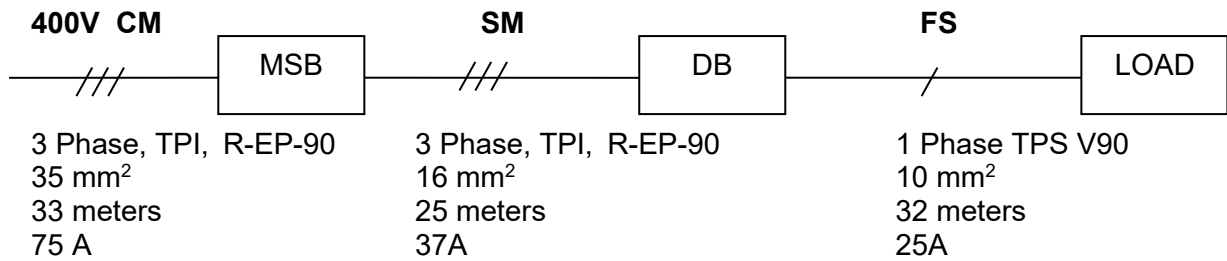
$$\text{CM Vd} = \frac{30 \times 65 \times 1.61 \text{ mV/Am}}{1000} = 400 - 3.14 \text{ V} = 396.86/\sqrt{3} = 229.4\text{V}$$

$$\text{SM Vd} = \frac{25 \times 32 \times 4.05 \text{ mV/Am} \times 1.155}{1000} = 229.4 - 3.74 \text{ V} = 225.65\text{V}$$

$$\text{FS Vd} = \frac{30 \times 20 \times 15.6 \text{ mV/Am} \times 1.155}{1000} = 225.65 - 10.8 \text{ V} = 214.85\text{V}$$

$$\text{Vd} = 214.85 \text{ V}$$

Question 5 (Find max voltage at load)



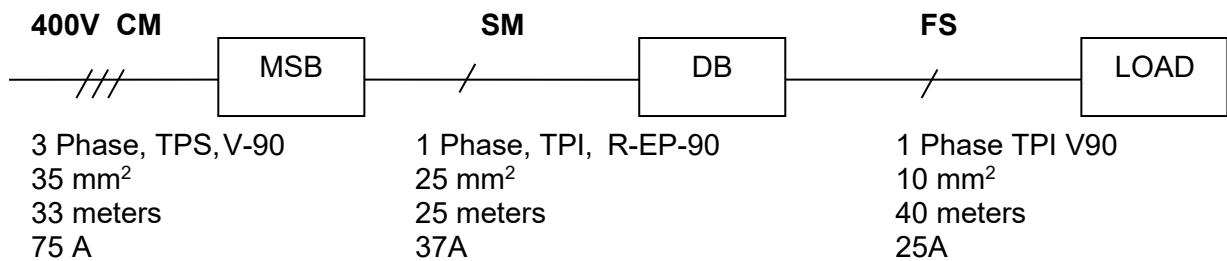
$$\text{CM Vd} = \frac{33 \times 75 \times 1.18 \text{ mV/Am}}{1000} = 400 - 2.9\text{V} = 397.1\text{V}$$

$$\text{SM Vd} = \frac{25 \times 37 \times 2.55 \text{ mV/Am}}{1000} = 397.1 - 2.358 = 394.74/\sqrt{3} = 227.91\text{V}$$

$$\text{FS Vd} = \frac{32 \times 25 \times 3.86 \text{ mV/Am} \times 1.155}{1000} = 3.6 \text{ V}$$

$$\text{Vd} = 227.91 - 3.6\text{V} = 224.31\text{V}$$

Question 6 (Find max voltage at load)



$$\text{CM Vd} = \frac{33 \times 75 \times 1.11 \text{ mV/Am}}{1000} = 400 - 2.75 \text{ V} = 397.25\text{V}/\sqrt{3} = 229.36\text{V}$$

$$\text{SM Vd} = \frac{25 \times 37 \times 1.62 \text{ mV/Am} \times 1.155}{1000} = 229.36 - 1.7\text{V} = 227.66\text{V}$$

$$\text{FS Vd} = \frac{40 \times 25 \times 3.86 \text{ mV/Am} \times 1.155}{1000} = 227.66 - 4.5\text{V} = 223.16\text{V}$$

$$\text{Vd} = 223.16\text{V}$$