

Her kan man teste sine formler
 Fra Sk til Z

$$\begin{aligned}\bar{Z}_{min} &= \frac{U_n^2 \cdot c_{max}}{S_{kn,max}} \angle \arccot \left(\frac{R}{X} \right) [\Omega] \\ &= \frac{10000^2 \cdot 1}{115 \cdot 10^6} \angle \arccot(0,2) \\ &= 0.17 + j0.85\Omega\end{aligned}$$

Kabel dimensionering strøm

$$\begin{aligned}I_{z,min} &= \frac{I_B}{K_t \cdot K_s \cdot K_{tm} \cdot K_n} \\ &= \frac{132}{1.03 \cdot 0.85 \cdot 0.85 \cdot 1} \\ &= 181\end{aligned}$$

$$\begin{aligned}Z_{trafo,prim,t1} &= \frac{U_n^2 \cdot e_k}{S_n} \angle \cos^{-1} \left(\frac{P_{cu}}{S_n \cdot e_k} \right) \\ &= \frac{10500^2 \cdot 0.04}{630000} \angle \cos^{-1} \left(\frac{4600}{630000 \cdot 0.04} \right) \\ &= 1.28 + j6.88\Omega\end{aligned}$$

$$Z_{kabel} = l \cdot (r + jx) = 1 \cdot (0.125 + j0.087) = 0.13 + j0.09\Omega$$

1.452647927062851637

w

$$\begin{aligned}I_{1f,max.T1} &= \frac{U_n}{\sqrt{3} \cdot (Z_{net,min} + Z_{trafo.T1} + Z_{W1})} \\ &= \frac{10000}{\sqrt{3} \cdot ((0.5 + j0.2) + (0.175 + j0.88) + (0.206 + j0.075))} \\ &= 3974.47A\end{aligned}$$