Her kan man teste sine formler
Fra Sk til Z

$$\begin{aligned}\overline{Z}_{max} &= \frac{U_n^{2\cdot}}{S_{kn,min}} \angle \text{arccot}\left(\frac{R}{X}\right)[\Omega] \\ &= \frac{10000^2}{37 \cdot 10^6} \angle \text{arccot}\,(0{,}168) \\ &= 0.45 + j2.67\Omega\end{aligned}$$

Kabel dimensionering strøm

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

$$\begin{aligned}Z_{trafo,prim,t3.1} &= \frac{U_n^2 \cdot e_k}{S_n} \angle cos^{-1}\left(\frac{P_{cu}}{S_n \cdot e_k}\right) \\ &= \frac{10500^2 \cdot 0.04}{315000} \angle cos^{-1}\left(\frac{3900}{315000 \cdot 0.04}\right) \\ &= 4.33 + j13.31\Omega\end{aligned}$$

$$Z_{kabel,Wtot} = l \cdot (r + jx) = 2.3 \cdot (0.206 + j0.081) = 0.47 + j0.19\Omega$$

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

$$\begin{aligned}I'_{k1,min,T3} &= \frac{U_n}{\sqrt{3} \cdot (Z_{net-max} + Z_{kabel-max} + Z_{T3})} \cdot \frac{1}{\sqrt{3}} \\ &= \frac{10000}{\sqrt{3} \cdot ((0.47 + j1.35) + (3.3 + j1.2) + (1.28 + j6.88))} \cdot \frac{1}{\sqrt{3}} \\ &= 311.61A\end{aligned}$$

$$
\begin{aligned}
I_{1/1,prim} &= \frac{S_n}{U_{trafo,prim,T3.1} \cdot \sqrt{3}} \\
&= \frac{315000}{10500 \cdot \sqrt{3}} \\
&= 17.32A
\end{aligned}
$$

$$
\begin{aligned}
Ik_{Ik2f,T0,min} &= \frac{U_n}{2 * (Z_{NT,max} + Z_{kabel,Wtot})} \\
&= \frac{10000}{2 \cdot ((0.45 + j2.67) + (0.47 + j0.19))} \\
&= 1664.26\text{A}
\end{aligned}
$$

$$
\begin{aligned}
Z_{NT} &= Z_{Net} + Z_{Trafo} \\
&= (0.2 + j1.88) + (4.5 + j1.6) \\
&= 4.70 + j3.48\Omega
\end{aligned}
$$

$$
\begin{aligned}
Z_{tot,kabel,max} &= \frac{Z_{W1}}{n_{W1}} + Z_{W2} \\
&= \frac{(1{,}8 \cdot 0.88 + j1.34)}{2} + (1{,}8 \cdot 2.45 + j2.1) \\
&= 5.20 + j2.77\Omega
\end{aligned}
$$

$$
\begin{aligned}
Ik_{1f,min} &= \frac{U_n}{\sqrt{3} \cdot (Z_{NT} + 2Z_{tot,kabel})} \\
&= \frac{400}{\sqrt{3} \cdot ((4.55 + j3.48) + 2 \cdot (5.20 + j2.77))} \\
&= 13.23kA
\end{aligned}
$$

$$
\begin{aligned}
Ik_{2f,min} &= \frac{U_n}{2 \cdot (Z_{NT} + Z_{tot,kabel})} \\
&= \frac{400}{2 \cdot ((4.55 + j3.48) + (5.20 + j2.77))} \\
&= 17.27kA
\end{aligned}
$$

$$
\begin{aligned}
Ik_{2f,par,min} &= \frac{U_n}{2 \cdot \left(Z_{NT} + \left(\frac{Z_{tot,kabel}}{n_{tot,kabel} - 1} + Z_{tot,kabel} \right) \right)} \\
&= \frac{400}{2 \cdot \left((4.55 + j3.48) + \left(\frac{(5.20 + j2.77)}{3 - 1} + (5.20 + j2.77) \right) \right)} \\
&= 13.77kA
\end{aligned}
$$

$$
\begin{aligned}
Ik_{3f,min} &= \frac{U_n}{\sqrt{3} \cdot (Z_{NT} + Z_{tot,kabel})} \\
&= \frac{400}{\sqrt{3} \cdot ((4.55 + j3.48) + (5.20 + j2.77))} \\
&= 19.94kA
\end{aligned}
$$