APPENDIX A – ERRATA

Errata 1 - Correction to equation (14) in Publication V

How are single-phase earth faults occurring in 110 kV networks experienced in the 0.4 kV networks?

In Publication V, equation (14) calculates the effect of single-phase earth faults in a 110 kV network on a 0.4 kV network. Equation (14) was calculated supposing the 110/20 kV transformer connections to be YNd0 and the 20/0.4 kV to be Dyn0. Thus, angle α in equation (12) in Publication V was assumed to have a value of $\alpha = 0°$. However, the typical transformer connections in Finland are YNd11 for 110/20 kV and Dyn11 for 20/0.4 kV and so the angle should have a value of $\alpha = 30°$. This was also mentioned in the text of Publication V. With a value of $\alpha = 30°$ equation (14) in Publication V should be written as

$$\begin{aligned}
\underline{U}'_R &= -\underline{a} - \frac{\underline{Z}_{S1}}{(2\underline{Z}_{F1} + \underline{Z}_{F0}) + (2\underline{Z}_{S1} + \underline{Z}_{S0})}) \\
\underline{U}'_S &= -1 + \frac{2\underline{Z}_{S1}}{(2\underline{Z}_{F1} + \underline{Z}_{F0}) + (2\underline{Z}_{S1} + \underline{Z}_{S0})}) \\
\underline{U}'_T &= -\underline{a}^2 - \frac{3\underline{Z}_{S1}}{(2\underline{Z}_{F1} + \underline{Z}_{F0}) + (2\underline{Z}_{S1} + \underline{Z}_{S0})})
\end{aligned} \qquad (14)$$

However, this correction does not change the conclusion that single-phase earth faults occurring in the 110 kV network are seen only as shallow voltage sags in the 0.4 kV network.

Errata 2 - Correction to Figure 1 in Publication VIII

In Publication VIII in Figure 1, the horizontal axis “remaining voltage (%)” now reads
>90 >80 >70 >60 >50 >40 >30 >20 >10

It should read
<90 <80 <70 <60 <50 <40 <30 <20 <10