$$K_{47}^{1} = \begin{bmatrix}
\frac{-\mathbf{i}}{\sqrt{3}} & \frac{(13-\mathbf{i}\sqrt{3})\,U}{12\,t} & 0 & 0 & -\sqrt{\frac{2}{3}}+\frac{\mathbf{i}}{\sqrt{2}} & 0 & \frac{-(3\,\mathbf{i}+\sqrt{3})}{2\sqrt{2}} & \frac{3\,\mathbf{i}+\sqrt{3}}{6\sqrt{2}} & 0 & \mathbf{i}-\frac{1}{\sqrt{3}} & \frac{1}{\sqrt{2}}+\frac{\mathbf{i}}{\sqrt{6}} & \frac{\sqrt{2}\,U-\mathbf{i}\sqrt{6}\,U}{6\,t} & \frac{-\mathbf{i}}{2}+\frac{1}{\sqrt{3}} & \frac{(-3\,\mathbf{i}+\sqrt{3})\,U}{4\,t} \\
\frac{\frac{-\mathbf{i}}{12}\,(-13\,\mathbf{i}+\sqrt{3})\,U}{t} & \frac{\mathbf{i}}{\sqrt{3}} & \frac{-3\,\mathbf{i}+\sqrt{3}}{6} & 0 & 0 & \frac{-(3\,\mathbf{i}+2\sqrt{3})}{3\sqrt{2}} & 0 & 0 & -2\sqrt{\frac{2}{3}}+\frac{\mathbf{i}}{\sqrt{2}} & \frac{-((-\mathbf{i}+\sqrt{3})\,U)}{2\,t} & \frac{\sqrt{2}\,(1+\mathbf{i}\sqrt{3})\,U}{3\,t} & \frac{1}{\sqrt{2}}-\frac{\mathbf{i}}{\sqrt{6}} & \frac{(3\,\mathbf{i}+\sqrt{3})\,U}{12\,t} & \frac{6\,\mathbf{i}+\sqrt{3}}{6} \\
0 & \frac{-3\,\mathbf{i}-\sqrt{3}}{6} & 0 & 0 & \frac{\mathbf{i}\sqrt{6}\,U}{t} & \frac{1-\mathbf{i}\sqrt{3}}{\sqrt{2}} & 0 & 0 & 0 & 0 & 0 & \frac{-(\sqrt{2}\,(3\,\mathbf{i}+\sqrt{3}))}{3} & 0 & \frac{-\mathbf{i}}{2}\,(-\mathbf{i}+\sqrt{3}) \\
0 & 0 & 0 & -\mathbf{i}\sqrt{3} & \frac{\frac{\mathbf{i}}{2}\,(3\,\mathbf{i}+\sqrt{3})\,U}{t} & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
\sqrt{\frac{2}{3}}+\frac{\mathbf{i}}{\sqrt{2}} & 0 & \frac{\mathbf{i}\sqrt{6}\,U}{t} & \frac{(3+\mathbf{i}\sqrt{3})\,U}{2\,t} & 0 & 0 & \frac{-\mathbf{i}}{2}\,(-\mathbf{i}+\sqrt{3}) & \frac{-\mathbf{i}}{2}\,(-\mathbf{i}+\sqrt{3}) & 0 & 0 & -\mathbf{i}+\frac{1}{\sqrt{3}} & 0 & -\mathbf{i}\sqrt{\frac{3}{2}} & 0 \\
0 & \sqrt{\frac{2}{3}}-\frac{\mathbf{i}}{\sqrt{2}} & \frac{-1-\mathbf{i}\sqrt{3}}{\sqrt{2}} & 0 & 0 & 0 & \frac{U+\mathbf{i}\sqrt{3}\,U}{2\,t} & \frac{U}{t} & 1 & 0 & 0 & \mathbf{i}+\frac{1}{\sqrt{3}} & 0 & \frac{1}{\sqrt{2}} \\
\frac{-3\,\mathbf{i}+\sqrt{3}}{2\sqrt{2}} & 0 & 0 & 0 & \frac{1-\mathbf{i}\sqrt{3}}{2} & \frac{\frac{\mathbf{i}}{2}\,(\mathbf{i}+\sqrt{3})\,U}{t} & 0 & 1 & \frac{U+\mathbf{i}\sqrt{3}\,U}{2\,t} & \sqrt{2} & 0 & 0 & \frac{\frac{\mathbf{i}}{2}\,(\mathbf{i}+\sqrt{3})}{\sqrt{2}} & 0 \\
\frac{-(-3\,\mathbf{i}+\sqrt{3})}{6\sqrt{2}} & 0 & 0 & 0 & \frac{1-\mathbf{i}\sqrt{3}}{2} & -\left(\frac{U}{t}\right) & -1 & 0 & \frac{U+\mathbf{i}\sqrt{3}\,U}{2\,t} & \frac{\mathbf{i}\,(\mathbf{i}+\sqrt{3})}{\sqrt{2}} & \mathbf{i}-\frac{1}{\sqrt{3}} & 0 & \frac{\frac{\mathbf{i}}{2}\,(\mathbf{i}+\sqrt{3})}{\sqrt{2}} & 0 \\
0 & 2\sqrt{\frac{2}{3}}+\frac{\mathbf{i}}{\sqrt{2}} & 0 & 0 & 0 & -1 & \frac{\frac{\mathbf{i}}{2}\,(\mathbf{i}+\sqrt{3})\,U}{t} & \frac{\frac{\mathbf{i}}{2}\,(\mathbf{i}+\sqrt{3})\,U}{t} & 0 & 0 & 0 & -\mathbf{i}-\frac{1}{\sqrt{3}} & 0 & \frac{1}{\sqrt{2}} \\
\mathbf{i}+\frac{1}{\sqrt{3}} & \frac{(\mathbf{i}+\sqrt{3})\,U}{2\,t} & 0 & 0 & 0 & 0 & -\sqrt{2} & \frac{1+\mathbf{i}\sqrt{3}}{\sqrt{2}} & 0 & 0 & \frac{\mathbf{i}}{\sqrt{2}}+\frac{1}{\sqrt{6}} & -\left(\frac{(\mathbf{i}+\sqrt{3})\,U}{\sqrt{2}\,t}\right) & 0 & \frac{(3+\mathbf{i}\sqrt{3})\,U}{2\,t} \\
-\left(\frac{1}{\sqrt{2}}\right)+\frac{\mathbf{i}}{\sqrt{6}} & \frac{\frac{\mathbf{i}}{3}\sqrt{2}\,(\mathbf{i}+\sqrt{3})\,U}{t} & 0 & 0 & -\mathbf{i}-\frac{1}{\sqrt{3}} & 0 & 0 & \mathbf{i}+\frac{1}{\sqrt{3}} & 0 & \frac{\mathbf{i}}{\sqrt{2}}-\frac{1}{\sqrt{6}} & \frac{-\mathbf{i}}{\sqrt{3}} & \frac{(7-\mathbf{i}\sqrt{3})\,U}{6\,t} & \frac{\mathbf{i}}{\sqrt{2}}+\frac{1}{\sqrt{6}} & 0 \\
\frac{\frac{-\mathbf{i}}{3}\,(-\mathbf{i}+\sqrt{3})\,U}{\sqrt{2}\,t} & -\left(\frac{1}{\sqrt{2}}\right)-\frac{\mathbf{i}}{\sqrt{6}} & \sqrt{\frac{2}{3}}-\mathbf{i}\sqrt{2} & 0 & 0 & \mathbf{i}-\frac{1}{\sqrt{3}} & 0 & 0 & -\mathbf{i}+\frac{1}{\sqrt{3}} & \frac{(-\mathbf{i}+\sqrt{3})\,U}{\sqrt{2}\,t} & \frac{\frac{-\mathbf{i}}{6}\,(-7\,\mathbf{i}+\sqrt{3})\,U}{t} & \frac{\mathbf{i}}{\sqrt{3}} & \frac{(3\,\mathbf{i}+\sqrt{3})\,U}{3\sqrt{2}\,t} & \frac{\mathbf{i}}{\sqrt{2}}-\frac{1}{\sqrt{6}} \\
\frac{-\mathbf{i}}{2}-\frac{1}{\sqrt{3}} & \frac{-((-3\,\mathbf{i}+\sqrt{3})\,U)}{12\,t} & 0 & 0 & -\mathbf{i}\sqrt{\frac{3}{2}} & 0 & \frac{\sqrt{2}+\mathbf{i}\sqrt{6}}{4} & \frac{\sqrt{2}+\mathbf{i}\sqrt{6}}{4} & 0 & 0 & \frac{\mathbf{i}}{\sqrt{2}}-\frac{1}{\sqrt{6}} & \frac{-((-3\,\mathbf{i}+\sqrt{3})\,U)}{3\sqrt{2}\,t} & \frac{-\mathbf{i}}{2}\sqrt{3} & \frac{(5-\mathbf{i}\sqrt{3})\,U}{4\,t} \\
\frac{-((3\,\mathbf{i}+\sqrt{3})\,U)}{4\,t} & \mathbf{i}-\frac{1}{2\sqrt{3}} & \frac{1-\mathbf{i}\sqrt{3}}{2} & 0 & 0 & -\left(\frac{1}{\sqrt{2}}\right) & 0 & 0 & -\left(\frac{1}{\sqrt{2}}\right) & \frac{\frac{\mathbf{i}}{2}\,(3\,\mathbf{i}+\sqrt{3})\,U}{t} & 0 & \frac{\mathbf{i}}{\sqrt{2}}+\frac{1}{\sqrt{6}} & \frac{\frac{-\mathbf{i}}{4}\,(-5\,\mathbf{i}+\sqrt{3})\,U}{t} & \frac{-\mathbf{i}}{2}\sqrt{3}
\end{bmatrix}$$