$$K_{96}^{1} = \begin{bmatrix}
-\mathbf{i}\sqrt{3} & \frac{\frac{\mathbf{i}}{2}\left(\mathbf{i}+\sqrt{3}\right)U}{t} & \frac{3+\mathbf{i}\sqrt{3}}{\sqrt{2}} & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
\frac{U+\mathbf{i}\sqrt{3}U}{2t} & \frac{-\mathbf{i}}{2}\sqrt{3} & -\left(\frac{U}{\sqrt{2}t}\right) & 0 & 0 & \frac{3\mathbf{i}}{\sqrt{2}} & 0 & 0 & 0 & 0 & -\sqrt{\frac{3}{2}} & 0 & 0 & 0 & \frac{\sqrt{3}}{2} & -\left(\frac{\sqrt{\frac{3}{2}}U}{t}\right) \\
\frac{\mathbf{i}\left(3\,\mathbf{i}+\sqrt{3}\right)}{\sqrt{2}} & \frac{U}{\sqrt{2}t} & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & \frac{-3\,\mathbf{i}\,U}{\sqrt{2}t} & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 1-\mathbf{i}\sqrt{3} & 0 & 0 & 0 & 0 & -2 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & \frac{\mathbf{i}\left(\mathbf{i}+\sqrt{3}\right)}{\sqrt{2}} & 0 & \frac{3+\mathbf{i}\sqrt{3}}{\sqrt{2}} & 0 & 0 & \frac{\mathbf{i}\left(\mathbf{i}+\sqrt{3}\right)}{\sqrt{2}} & 0 & 0 & 0 & 0 \\
0 & \frac{3\,\mathbf{i}}{\sqrt{2}} & 0 & 0 & 0 & 0 & -\left(\frac{U}{t}\right) & 0 & 0 & 0 & 1 & \frac{\frac{\mathbf{i}}{2}\left(\mathbf{i}+\sqrt{3}\right)U}{t} & 0 & 0 & -\left(\frac{1}{\sqrt{2}}\right) & 0 \\
0 & 0 & 0 & -1-\mathbf{i}\sqrt{3} & \frac{1+\mathbf{i}\sqrt{3}}{\sqrt{2}} & \frac{U}{t} & 0 & 0 & \frac{1-\mathbf{i}\sqrt{3}}{2} & -\left(\frac{\sqrt{2}U}{t}\right) & \frac{-\left(U+\mathbf{i}\sqrt{3}U\right)}{2t} & \frac{1+\mathbf{i}\sqrt{3}}{2} & \frac{\mathbf{i}\left(\mathbf{i}+\sqrt{3}\right)U}{\sqrt{2}t} & \frac{\mathbf{i}\left(\mathbf{i}+\sqrt{3}\right)}{\sqrt{2}} & 0 & -1+\mathbf{i}\sqrt{3} \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & -\mathbf{i}\sqrt{3} & \frac{\frac{\mathbf{i}}{2}\left(3\,\mathbf{i}+\sqrt{3}\right)U}{t} & \frac{3+\mathbf{i}\sqrt{3}}{\sqrt{2}} & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & \frac{\mathbf{i}\left(3\,\mathbf{i}+\sqrt{3}\right)}{\sqrt{2}} & 0 & \frac{-\mathbf{i}}{2}\left(-\mathbf{i}+\sqrt{3}\right) & \frac{\left(3+\mathbf{i}\sqrt{3}\right)U}{2t} & 0 & 0 & 0 & \frac{\mathbf{i}}{2}\left(\mathbf{i}+\sqrt{3}\right) & 0 & -\mathbf{i}\sqrt{6} & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & \frac{\sqrt{2}U}{t} & \frac{\mathbf{i}\left(3\,\mathbf{i}+\sqrt{3}\right)}{\sqrt{2}} & 0 & 0 & 0 & \frac{\left(-1-\mathbf{i}\sqrt{3}\right)U}{\sqrt{2}t} & 0 & 0 & 0 & 0 \\
0 & \sqrt{\frac{3}{2}} & 0 & 0 & 0 & -1 & \frac{U-\mathbf{i}\sqrt{3}U}{2t} & 0 & 0 & 0 & 0 & -\left(\frac{U}{t}\right) & \frac{1-\mathbf{i}\sqrt{3}}{\sqrt{2}} & 0 & -\mathbf{i}\sqrt{\frac{3}{2}} & 0 \\
0 & 0 & 0 & 2 & \frac{1+\mathbf{i}\sqrt{3}}{\sqrt{2}} & \frac{U+\mathbf{i}\sqrt{3}U}{2t} & \frac{\mathbf{i}}{2}\left(\mathbf{i}+\sqrt{3}\right) & 0 & \frac{1+\mathbf{i}\sqrt{3}}{2} & \frac{\left(1-\mathbf{i}\sqrt{3}\right)U}{\sqrt{2}t} & \frac{U}{t} & 0 & -\left(\frac{\sqrt{2}U}{t}\right) & \frac{-1-\mathbf{i}\sqrt{3}}{\sqrt{2}} & 0 & -1+\mathbf{i}\sqrt{3} \\
0 & 0 & 0 & 0 & 0 & 0 & \frac{\left(1+\mathbf{i}\sqrt{3}\right)U}{\sqrt{2}t} & 0 & 0 & 0 & \frac{-1-\mathbf{i}\sqrt{3}}{\sqrt{2}} & \frac{\sqrt{2}U}{t} & 0 & 0 & -1-\mathbf{i}\sqrt{3} & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & \frac{1+\mathbf{i}\sqrt{3}}{\sqrt{2}} & 0 & -\mathbf{i}\sqrt{6} & 0 & 0 & \frac{1-\mathbf{i}\sqrt{3}}{\sqrt{2}} & 0 & \mathbf{i}\sqrt{3} & \frac{\frac{-\mathbf{i}}{2}\left(-3\,\mathbf{i}+\sqrt{3}\right)U}{t} & \frac{3+\mathbf{i}\sqrt{3}}{\sqrt{2}} \\
0 & \frac{-\sqrt{3}}{2} & \frac{-3\,\mathbf{i}\,U}{\sqrt{2}t} & 0 & 0 & \frac{1}{\sqrt{2}} & 0 & 0 & 0 & 0 & -\mathbf{i}\sqrt{\frac{3}{2}} & 0 & 1-\mathbf{i}\sqrt{3} & \frac{\left(3-\mathbf{i}\sqrt{3}\right)U}{2t} & \frac{-\mathbf{i}}{2}\sqrt{3} & \frac{\mathbf{i}\sqrt{\frac{3}{2}}U}{t} \\
0 & \frac{\sqrt{\frac{3}{2}}U}{t} & 0 & 0 & 0 & 0 & 1+\mathbf{i}\sqrt{3} & 0 & 0 & 0 & 0 & 1+\mathbf{i}\sqrt{3} & 0 & \frac{\mathbf{i}\left(3\,\mathbf{i}+\sqrt{3}\right)}{\sqrt{2}} & \frac{\mathbf{i}\sqrt{\frac{3}{2}}U}{t} & 0
\end{bmatrix}$$