$|\mathbf{a}| = \sqrt{9+16} = 5$. The scalar projection of $\mathbf{b}$ onto $\mathbf{a}$ is

$\text{comp}_{\mathbf{a}}\mathbf{b} = \dfrac{\mathbf{a}\cdot\mathbf{b}}{|\mathbf{a}|} = \dfrac{4\cdot 4 + (-3)\cdot 0}{5} = \dfrac{16}{5}$ and the vector projection of $\mathbf{b}$ onto

$\mathbf{a}$ is $\text{proj}_{\mathbf{a}}\mathbf{b} = \left(\dfrac{\mathbf{a}\cdot\mathbf{b}}{|\mathbf{a}|}\right)\dfrac{\mathbf{a}}{|\mathbf{a}|} = \dfrac{16}{5}\cdot \frac{1}{5}\langle 4, -3\rangle = \left\langle \frac{64}{25}, \frac{-48}{25}\right\rangle$.