Abstract. Let $R$ be an associative ring with identity. First we prove some results about zero-divisor graphs of reversible rings. Then we study the zero-divisors of the skew power series ring $R[[x;\alpha]]$, whenever $R$ is reversible and $\alpha$-compatible. Moreover, we compare the diameter and girth of the zero-divisor graphs of $\Gamma(R)$, $\Gamma(R[x;\alpha,\delta])$ and $\Gamma(R[[x;\alpha]])$, when $R$ is reversible and $(\alpha,\delta)$-compatible.