Measurement Error In A Single Indicator

$$x_i = v + \lambda \, \eta_i + \varepsilon_i$$

With $\lambda = 1$, $V(y) = \psi + \theta$ and reliability $= \psi/V(y)$

V(y) is estimated as the sample variance, which means that reliability * sample variance = ψ and $\theta = (1-\text{reliability})$ * sample variance.

In Mplus: f BY y@1; y@a;

where $a = \theta$.