$$\mathcal{L} = \mathbb{E}_{Q(Z_{1:T} \mid \mathbf{y}, \mathbf{x})} \left[\log p(\mathbf{x} \mid \mathbf{y}, Z_{1:T}) - \sum_{t=2}^{T} \mathrm{D}_{\mathrm{KL}} \left(Q(Z_t \mid Z_{1:t-1}, \mathbf{y}, \mathbf{x}) \right) \right] - \mathrm{D}_{\mathrm{KL}} \left(Q(Z_1 \mid \mathbf{x}) \parallel P(Z_1) \right)$$