$$\begin{array}{ccc}
\Omega(A) \lhook\joinrel\longrightarrow & P_A \longrightarrow\!\!\!\rightarrow & A \\
\Omega(Id_A)-Id_{\Omega(A)} \downarrow \quad \overset{\phi}{\diagdown} & \downarrow p_{Id_A}-Id_{P_A} & \downarrow Id_A-Id_A=0 \\
\Omega(A) \lhook\joinrel\longrightarrow & P_A \longrightarrow\!\!\!\rightarrow & A
\end{array}$$