

PoE Data Termination

When terminating data in Power over Ethernet (PoE) applications, it is very important not to disrupt the Powered Device's (PD) signature.

Before the Power Sourcing Equipment (PSE) applies power, it first verifies that a valid PD is connected. This is done by applying low voltages to the line and calculating the signature slope of the PD.

Only when the PSE detects valid signature parameters, will it apply its full output voltage to power the line.

This drawing shows an inexpensive method of terminating the data lines without affecting the PD's signature.

The important components here are the four $0.01\mu\text{F}$ capacitors that prevent the 75R termination resistors from affecting the PD's signature.

