PoE Start-up Load

Some PoE applications start-up with a very light load, until the system has completed its initialization. If this time is >300mS and the start-up load is less then the minimum load specified in the Powered Device (PD) modules datasheet. The Power Sourcing Equipment (PSE) can disconnect the output if it fails to meet the Maintain Power Signature (MPS) threshold.
If the PoE application has a controller with a spare port available, this can be used to activate a temporary (minimum) load during initialization. Which can then be removed once the system is up and running.
However, if the application doesn't have a spare port that can be used; then Figure 1 shows two simple solutions, utilizing a MICREL MIC803 (RESET) chip.
The MIC803-30D4VC3 has a 3V threshold and will hold the /RESET pin low (after start-up) for ~1800mS (1120ms to 2400ms).
Options A and B have the same functionality, Option A uses a transistor and Option B uses a MOSFET.

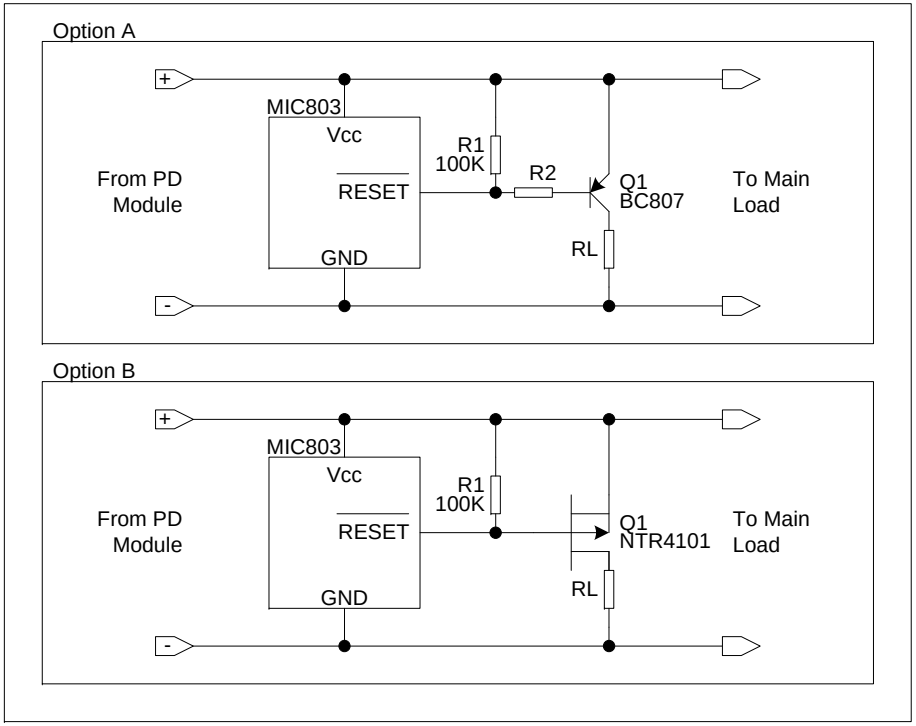

Figure 1

Voltage	R2	Output Load	RL
3.3V	1K6	100mA	33Ω
		200mA	16Ω
5V	2K4	100mA	47Ω
		200mA	24Ω

Table 1

Table 1 shows the component values required depending on the PD modules output voltage and minimum load specification.

Note: The MIC803 has a maximum Vcc and /RESET voltage of 6V, so it is only suitable for use with 3.3V and 5V PD modules.