Application Note:

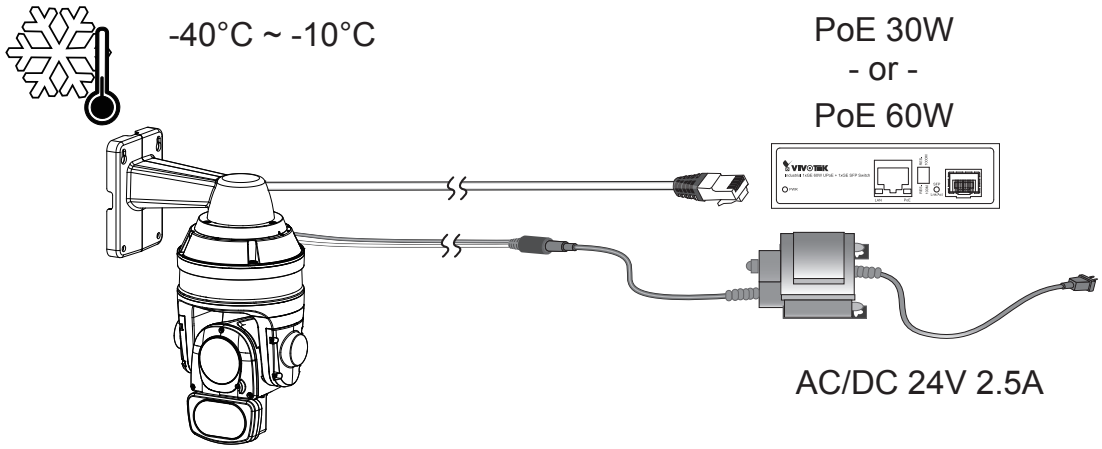
PoE PSE* Breakdown due to Insufficient Power in a Low Temperature Condition

* PSE: Power Sourcing Equipment

Fault Condition:

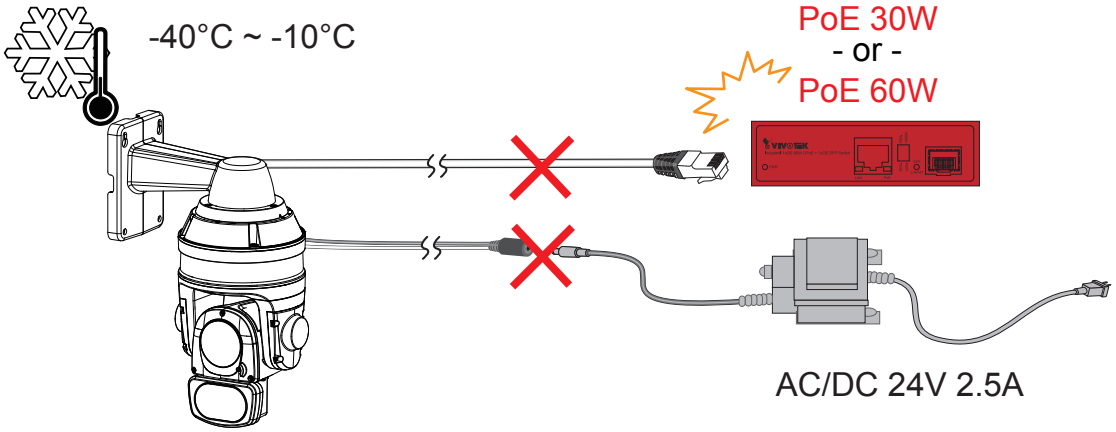
1. In a low temperature condition, -40°C ~ -10°C, the camera onboard heater sustains the normal operation.

   By default, if both the DC input and PoE are connected, the camera draws power from the DC first. The configuration below operates normally.



2. However, when power outage occurs on the DC input, the camera turns to PoE for power supply. In this case, the PoE can only provide 30W or 60W output. The PoE PSE can not deliver sufficient power to drive the onboard heater, and will enter a continuous reset state.

   The configuration will fail.



Solution:

To achieve real power redundancy, ensure you have sufficient power input from both DC and PoE PSE. Taking VIVOTEK's speed dome camera as an example, use a high power PoE that can deliver up to 90W of output. In the event of the failure of any of the power sources, the camera can continue normal operation in the low temperature environment.