

SolarEdge P-Q Diagram for Three-phase inverters - Technical Note

Revision History

- Version 1.3, Nov 2025: Generalized version updated.

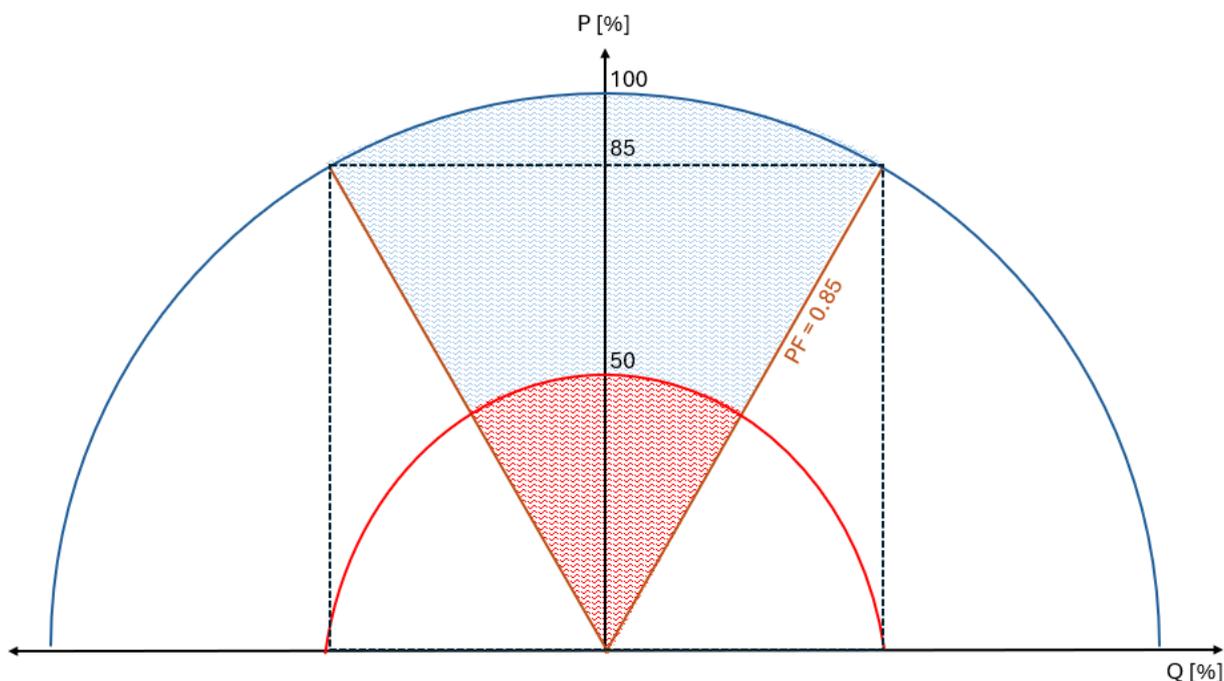
Application Details

This technical note outlines the operating points of SolarEdge commercial three-phase inverters with respect to ambient temperature across all regions, categorized as follows:

- [North America Inverters](#) with part numbers in the format SExxK-USxxlxxxx
- [Rest of the World Inverters](#) with part numbers in the format SExxK-xxxxlxxxx

North America Inverters

- For ambient temperatures up to 50 °C, the inverters can operate at any point within the **blue and red areas**, while remaining **within the ± 0.85 power factor** limits (see image below).
- At an ambient temperature of 55 °C, the inverters can operate only within the **red area**, while also remaining **within the ± 0.85 power-factor** limits (see image below).

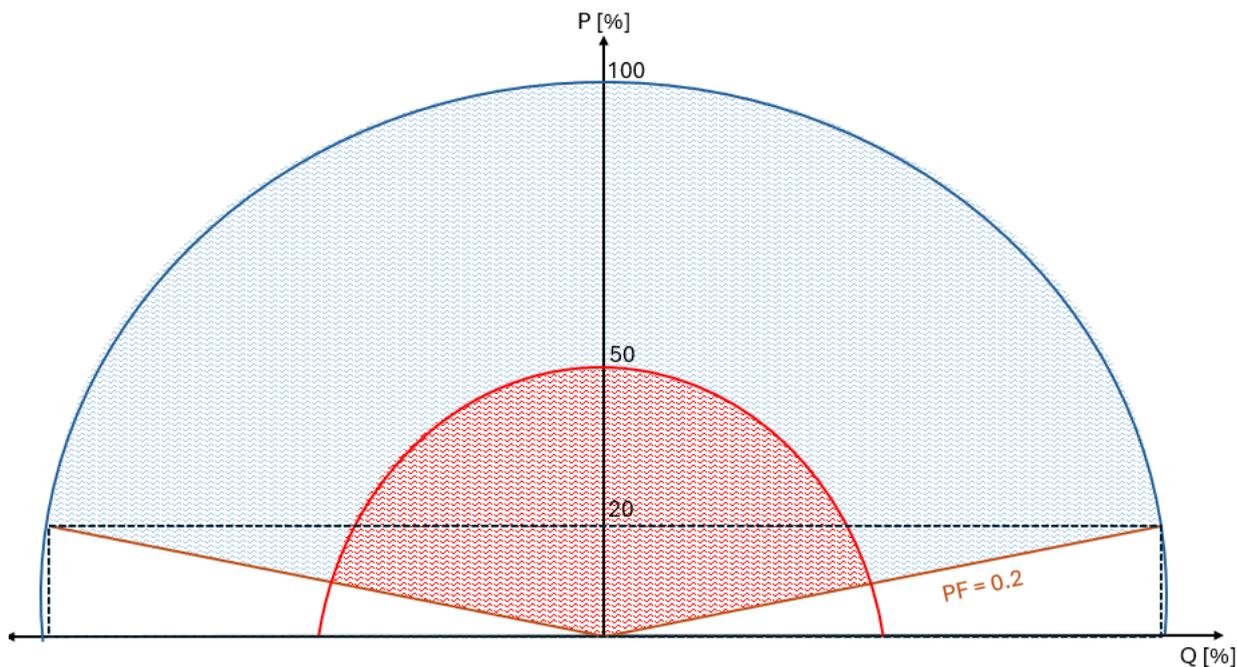


IMPORTANT NOTE

The inverter's power output begins to derate above 50°C. When the ambient temperature reaches 60°C, the inverter ceases operation, and no power is produced.

Rest of the World Inverters

- For ambient temperatures up to 50 °C, the inverters can operate at any point within the **blue and red areas**, while remaining **within the ± 0.2 power factor limits** (see image below).
- At an ambient temperature of 55 °C, the inverters can operate only within the red area, while also remaining **within the ± 0.2 power factor limits** (see image below).



IMPORTANT NOTE

The inverter's power output begins to derate above 55°C. When the ambient temperature reaches 60°C, the inverter ceases operation, and no power is produced.

For more information on SolarEdge products temperature derating, go to:

<https://knowledge-center.solaredge.com/sites/kc/files/se-temperature-derating-note.pdf>