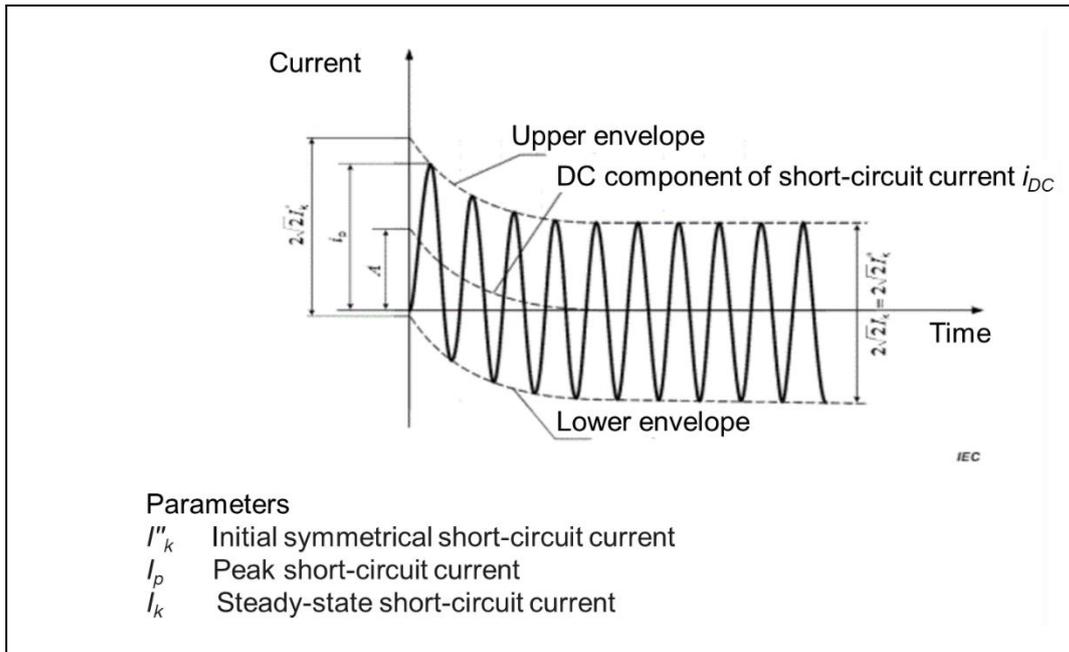




PCS2000-108K-MB1 Short-Circuit Current Capability

1. This document describes the short-circuit current capability of Huawei PCS2000-108K-MB1 Smart PCS in on-grid and off-grid scenarios. Do not copy or spread the content of this document without Huawei's written consent. Otherwise, it will be deemed as an infringement.
2. According to IEC 60909-0:2016, i_p , I''_k , and I_k are used to calculate the inverter short-circuit current.



3. I_k is the steady-state short-circuit current, which is the RMS value of the current over 5 grid cycles (100 ms) after the device has experienced a problem. For the inverter, I_k is not greater than the maximum output current (I_{acmax}), because in the case of a fault, the maximum reactive current is controllable by the firmware due to the filter. Generally, I_k refers to the short-circuit capability.
4. I''_k is the initial symmetrical short-circuit current. If the impedance remains at the zero-time value, then I''_k is the RMS value of the AC symmetric component of the expected short-circuit current applicable to the short-circuit instant. In the converter, we take the RMS value for the first 20 ms.
5. i_p is the peak short-circuit current, which is the highest possible instantaneous value of the expected short-circuit current.
6. Therefore, the maximum short circuit current limit in the on-grid scenario is as follows:



SmartPCS Model	Maximum AC Apparent Power (Long-term) (kVA)	Rated Output Voltage (Line Voltage) (V)	Short-Circuit Current Contribution (I_k) (Steady State) (A)	Initial Short-Circuit Current (I'_k) (1 Cycle or 20 ms) (A)	Peak Short-Circuit Current (i_p) (A)
PCS2000-108K-MB1	118.8	380	180.5	270.8	561.5

7. Particularly, when the PCS2000-108K-MB1 is used in the off-grid scenario, the device can set up a voltage source by itself. In this case, the actual output short-circuit current capability of the device is described as follows:

SmartPCS Model	Working Conditions	Short-Circuit Current (300 ms, Considering Deep LVRT) (A)
PCS2000-108K-MB1	Off-grid voltage source	I_n (164.1A)