This document shows the consumption current of control supply circuit vs. carrier frequency. Please design the power supply with sufficient margin in consideration of the consumption current.

**Current measurement:**

- Consumption current of low-side control supply $I_{CCL}$
- Consumption current of high-side control supply $I_{CH}$
- Total consumption current of U,V,W phase of bootstrap circuit $I_{CHB}$
- Total consumption current of control supply $I_{TOTAL} = I_{CCL} + I_{CH} + I_{CHB}$

**Measurement condition:**

- 2 phase modulation, 3 phase modulation
- $V_{DC} = 400V$, $V_{CCL} = V_{CCH} = V_B(*) = 15V$, $T_c = 25^\circ C$, no-load
Type name: 6MBP15XSD060-50, 6MBP15XSD060-50-F1
6MBP15XSF060-50, 6MBP15XSF060-50-F1

Typical Consumption current vs. Carrier frequency
2phase modulation, \( V_{\text{DC}} = 400V, V_{\text{CCL}} = V_{\text{CCH}} = V_{\beta} = 15V, T_{c} = 25^\circ\text{c} \)

Typical Consumption current vs. Carrier frequency
3phase modulation, \( V_{\text{DC}} = 400V, V_{\text{CCL}} = V_{\text{CCH}} = V_{\beta} = 15V, T_{c} = 25^\circ\text{c} \)
Type name: 6MBP20XSD060-50, 6MBP20XSD060-50-F1
6MBP20XSF060-50, 6MBP20XSF060-50-F1
Type name: 6MBP30XSD060-50, 6MBP30XSD060-50-F1
6MBP30XSF060-50, 6MBP30XSF060-50-F1

Typical consumption current vs. carrier frequency
2phase modulation, $V_{dc}=400V$, $V_{CCL}=V_{CCH}=V_\ell(*)=15V$, $T_c=25^\circ c$

Typical consumption current vs. carrier frequency
3phase modulation, $V_{dc}=400V$, $V_{CCL}=V_{CCH}=V_\ell(*)=15V$, $T_c=25^\circ c$
Type name: 6MBP35XSD060-50, 6MBP35XSD060-50-F1
6MBP35XSF060-50, 6MBP35XSF060-50-F1

Typical consumption current vs. carrier frequency
2phase modulation, $V_{dc}=400V$, $V_{CCL}=V_{CCH}=V_b(*)=15V$, $T_c=25^\circ C$

Consumption current [mA] vs. Carrier frequency $f_c$ [kHz]

Typical consumption current vs. carrier frequency
3phase modulation, $V_{dc}=400V$, $V_{CCL}=V_{CCH}=V_b(*)=15V$, $T_c=25^\circ C$
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   - Computers
   - OA equipment
   - Communications equipment (terminal devices)
   - Measurement equipment
   - Machine tools
   - Audiovisual equipment
   - Electrical home appliances
   - Personal equipment
   - Industrial robots etc

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   - Traffic-signal control equipment
   - Gas leakage detectors with an auto-shut-off feature
   - Emergency equipment for responding to disasters and anti-burglary devices
   - Safety devices
   - Medical equipment

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