

Assignment of sine-wave filter and Power Module

Table 2- 1 Assignment of sine-wave filter and Power Module

Power Module	Unit rating of the Power Module	Suitable sine-wave filter
Line voltage 3 AC 380 ... 480 V		
6SL3310-1GE32-1AA3	110 kW	6SL3000-2CE32-3AA0
6SL3310-1GE32-6AA3	132 kW	6SL3000-2CE32-3AA0
6SL3310-1GE33-1AA3	160 kW	6SL3000-2CE32-8AA0
6SL3310-1GE33-8AA3	200 kW	6SL3000-2CE33-3AA0
6SL3310-1GE35-0AA3	250 kW	6SL3000-2CE34-1AA0
Line voltage 3 AC 500 ... 600 V		
6SL3310-1GF31-8AA3	110 kW	6SL3000-2CF31-7AA0
6SL3310-1GF32-2AA3	132 kW	6SL3000-2CF31-7AA0

Restrictions

The following restrictions must be taken into account when a sine-wave filter is used:

- The output frequency is limited to max. 115 Hz (at 500 – 600 V) and 150 Hz (at 380 – 480 V).
- The modulation type is permanently set to space-vector modulation without overmodulation.
- The maximum output voltage is limited to approx. 85% of the input voltage.
- Maximum permissible motor cable lengths:
 - Unshielded cable: max. 450 m
 - Shielded cable: max. 300 m
- During commissioning, the pulse frequency rises to double the factory setting. This induces current derating, which must be applied to the built-in units' rated currents listed in the technical specifications.

Note

If a filter cannot be parameterized (p0230 ≠ 3) during commissioning, then no provision is made for this SIEMENS sine-wave filter for the SINAMICS G130.

Table 2- 2 Technical specifications for sine-wave filters with SINAMICS G130

Article number SINAMICS G130	Voltage [V]	Pulse frequency [kHz]	Output current [A] ¹⁾
6SL3310-1GE32-1AA3	3-phase 380 – 480 VAC	4	172 A
6SL3310-1GE32-6AA3	3-phase 380 – 480 VAC	4	216 A
6SL3310-1GE33-1AA3	3-phase 380 – 480 VAC	4	273 A
6SL3310-1GE33-8AA3	3-phase 380 – 480 VAC	4	331 A
6SL3310-1GE35-0AA3	3-phase 380 – 480 VAC	4	382 A
6SL3310-1GF31-8AA3	3-phase 500 – 600 VAC	2.5	152 A
6SL3310-1GF32-2AA3	3-phase 500 – 600 VAC	2.5	187 A

¹⁾ The values apply to operation with a sine-wave filter and do not correspond with the rated current on the type plate.

Commissioning

When commissioning using the STARTER or AOP30, the sine-wave filter must be activated by means of appropriate selection screenforms or dialog boxes (p0230 = 3), see Chapter "Commissioning" in the SINAMICS G130 Operating Instructions.

The following parameters are changed automatically during commissioning.

Table 2- 3 Parameter settings for sine-wave filters with SINAMICS G130

Parameters	Name	Setting
p0230	Drive filter type, motor side	3: Siemens sine-wave filter
p0233	Power unit motor reactor	Filter inductance
p0234	Power unit sine-wave filter capacitance	Filter capacitance
p0290	Power unit overload response	Disable pulse frequency reduction
p1082	Maximum speed	Fmax filter / pole pair number
p1800	Pulse frequency	Nominal pulse frequency of the filter (see previous table)
p1802	Modulator mode	Space-vector modulation without overmodulation
p1909	Motor data identification, control word	Rs measurement only

Note

Activate the factory settings

When the factory settings are restored, parameter p0230 is reset.
The parameter must be reset if the system is commissioned again.