

Mains Conditions

Mains Voltage

The Altivar Process Drive Systems are designed for standard industrial mains TT and TN with following mains voltage:

- Rated voltage U_n : 3 AC 380 V -10 % ... 415 V +6 %, 50/60 Hz \pm 5 %

NOTE: Other voltages and the use in IT mains or "Corner grounded networks" are available on request.

The mains voltage must comply with the requirements according to IEC 60038 and EN 50160:

- Unbalance between phases: < 2 %
- Total harmonic factor THD(v): < 10 %
- Maximum single harmonic: < 5 %

⚠ CAUTION
INCOMPATIBLE LINE VOLTAGE
Ensure that the line voltage corresponds with the supply voltage of the frequency inverter before you switch the inverter on to configure it. An incompatible line voltage may cause damage of the inverter.
Failure to follow these instructions can result in injury or equipment damage.

Undervoltage behavior

In case of short-time mains voltage drops outside the specified tolerance, operation is still possible.

Mains undervoltage	Restriction
-10 % of nominal voltage	Starting the drive and continuous operation possible ⁽¹⁾
-15 % of nominal voltage	Starting the drive and operation ⁽¹⁾ for 10 s per 100 s possible
-20 % of nominal voltage	Operation ⁽¹⁾ for less than 1 s possible
-30 % of nominal voltage	Operation ⁽¹⁾ for less than 0.5 s possible
(1) With nominal current	

If the mains voltage does not return within the specified time, an undervoltage shut-down occurs.

Non-grounded Mains

The Altivar Process Drive Systems can be prepared for the use in non-grounded mains (IT mains or "Corner grounded networks").