AMK

AMKASYN

VARIABLE SPEED DRIVES

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Power supply chokes with several parallel AMKASYN systems with energy recovery

In large installations with several AZ/AW systems, reactions can occur on the power supply due to the energy recovery.
Due to the effective inductance of the power supply transformer, an interference voltage caused by commutation processes of energy recovery can be superimposed on the line voltage.
This can cause faults or defects in other loads (USV systems etc.). A fault of the AMKASYN system does not occur.
Assistance can be provided by an additional choke between the branch off to other loads and the AMKASYN systems.

The following reference values result from experience and approximate calculations:

from 5 parallel connected AZ60: additional three-phase series choke 3 x 75µH
from 10 parallel connected AZ60: additional three-phase series choke 3 x 100µH
in each case designed for the total current of the system

Larger chokes lead to a reduction of the input voltage. Unified dimensioning is not possible because of different system configurations (number and type of AWs, number of systems etc.) and effective inductive components due to transformer, power supply, cables etc. A test on site can be necessary in the individual case.

Example of three-phase commutation choke:

L = 3 x 100 µH
I_N = 300 A
max. reduction of inductance at 1.6 times nominal current: 20%
Supplier: Messrs. Tramag

The chokes are procured by AMK if necessary according to customer's requirements.