AMK

AMKASYN
VARIABLE SPEED DRIVES

Application Note   No. AP 1997/14-1E

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Power supply monitoring AN-/AZ 10...60, AZ 05

A   Reaction to power supply faults on system runup

No.	Power supply fault	Reaction after Tr [s]	W No.	Shutdown Ta [s]	F No.	Fault text
1	Line voltage above 460V	-	-	0	1045	Line voltage > 460V
2	Line voltage below 340V	-	-	0	1046	Line voltage < 340V
3	Phase fault, phase failure	-	-	0	1050 .. 1056	Phase fault L1 ... Phase sequence L1/L2..
4	Fan voltage (230 V) (is not monitored in AZ 5)	-	-	0	1056	Phase sequence L1/L2..
5	Mains phase L2 or L3 missing	-	-	-	-	Switching power pack does not start, no indication

B   Reaction to power supply faults during operation

No.	Power supply fault	Reaction after Tr [s]	W No.	Shutdown Ta [s]	F No.	Fault text
1	Line voltage above 460V	36	1077	+ 4	1043	Line voltage fault
2	Line voltage above 540V	0	-	+ 0	1059	DC bus overvoltage
3	Line voltage below 340V	36	1078	+ 4	1043	Line voltage fault
4	Phase fault, phase failure	0.4	-	+ 0	1042	Power supply fault/ fuse
5	Fan voltage (230 V) missing, so that main contactor in the AN trips continuously (is not monitored in AZ 5)	0.4	-	+ 0	1042	Power supply fault/ fuse

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Principle: Power supply faults which are shorter than the time Tr are without effect as long as an inadmissible overvoltage or undervoltage does not occur in the DC bus circuit.

Remarks: The units AZ 10, AZ 20, AZ 40-1, AZ 60-1 also have a feed to the switching power pack from the DC bus circuit. In the case of phase failure L2 or L3 and sufficient energy, (e.g. braking energy) in the bus circuit, supplying the power pack from this is possible.

Abbreviations

Tr Reaction time after which there is a warning message. The system is then forcibly switched off after the time Ta. The binary output SBM/SBT is reset.

W No. Warning number

Ta Time after which the system shuts down

F No. Fault number