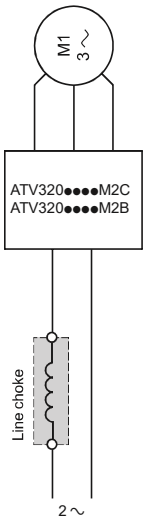
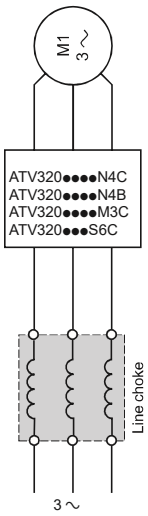
Variable speed drives
Altivar Machine ATV320
Option: Line chokes





Presentation

Line chokes

Line chokes, also known as line reactors, provide improved immunity against overvoltages on the supply mains and can reduce harmonic distortion of the current produced by the drive.
The recommended chokes limit the line current. They have been developed in line with standard IEC 61800-5-1 (VDE 0160 level 1 high-energy overvoltages on the line supply).
The inductance values are defined for a voltage drop between 3% and 5% of the nominal line voltage. Values higher than this will cause loss of torque.
The use of line chokes is recommended in particular under the following circumstances:

- Supply mains with significant disturbance from other equipment (interference, overvoltages)
- Supply mains with voltage imbalance between phases > 1.8% of nominal voltage
- Drive supplied by a supply mains with very low impedance (in the vicinity of a power transformer 10 times more powerful than the drive rating)
- Installation of a large number of frequency inverters on the same supply mains
- Reduction of overloads on the cos φ correction capacitors, if the installation includes a power factor correction unit

The prospective short-circuit current at the point of connection of the drive must not exceed the maximum value indicated in the reference tables (see page 12). The use of chokes allows connection to the following supply mains:

- Max. Isc 22 kA for 200/240 V
- Max. Isc 65 kA for 380/500 V

References

Drive Reference	Line current, without choke		Line current, with choke		Choke	
	U min. *(1)*	U max. *(1)*	U min. *(1)*	U max. *(1)*	Reference	Weight
	A	A	A	A		kg/*lb*
Single-phase supply voltage: 200…240 V 50/60 Hz						
ATV320U06M2●	6.8	5.8	5.2	4.3	**VZ1L007UM50**	0.880/*1.940*
ATV320U07M2●	8.9	7.5	7.0	5.9		
ATV320U11M2●	12.1	10.2	10.2	8.6	**VZ1L018UM20**	1.990/*4.387*
ATV320U15M2●	15.8	13.3	13.4	11.4		
ATV320U22M2●	21.9	18.4	19.2	16.1		
Three-phase supply voltage:200…240 V 50/60 Hz						
ATV320U02M3C	2.0	1.7	1.0	0.8	**VW3A4551**	1.500/*3.307*
ATV320U04M3C	3.6	3.0	1.8	1.6		
ATV320U06M3C	4.9	4.2	2.7	2.2		
ATV320U07M3C	6.3	5.3	3.5	2.9		
ATV320U11M3C	8.6	7.2	5.0	4.2	**VW3A4552**	3.000/*6.613*
ATV320U15M3C	11.1	9.3	6.6	5.5		
ATV320U22M3C	14.9	12.5	9.3	7.9	**VW3A4553**	3.500/*7.716*
ATV320U30M3C	19.0	15.9	12.4	10.4		
ATV320U40M3C	23.8	19.9	16.2	13.7	**VW3A4554**	6.000/*13.228*
ATV320U55M3C	35.4	29.8	21.6	18.1		
ATV320U75M3C	45.3	38.2	28.8	24.0		
ATV320D11M3C	60.9	51.4	40.9	34.4	**VW3A4555**	11.000/*24.251*
ATV320D15M3C	79.7	67.1	54.4	45.4		
Three-phase supply voltage: 380…500 V 50/60 Hz						
ATV320U04N4●	2.2	1.7	1.1	0.9	**VW3A4551**	1.500/*3.307*
ATV320U06N4●	2.8	2.2	1.4	1.2		
ATV320U07N4●	3.6	2.7	1.8	1.5		
ATV320U11N4●	4.9	3.7	2.6	2		
ATV320U15N4●	6.4	4.8	3.4	2.6		
ATV320U22N4●	8.9	6.7	5	4.1	**VW3A4552**	3.000/*6.613*
ATV320U30N4●	10.9	8.3	6.5	5.2		
ATV320U40N4●	13.9	10.6	8.5	6.6		
ATV320U55N4B	21.9	16.5	11.7	9.3	**VW3A4553**	3.500/*7.716*
ATV320U75N4B	27.7	21	15.4	12.1		
ATV320D11N4B	37.2	28.4	22.5	18.1	**VW3A4554**	6.000/*13.228*
ATV320D15N4B	48.2	36.8	29.6	23.3		
Three-phase supply voltage: 525…600 V 50/60 Hz *(2)*						
ATV320U07S6C	–	–	1,5	1.4	**VW3A4551**	1.500/*3.307*
ATV320U15S6C	–	–	2,6	2.4		
ATV320U22S6C	–	–	3.7	3.2		
ATV320U40S6C	–	–	6.5	5.8	**VW3A4552**	3.000/*6.613*
ATV320U55S6C	–	–	8.4	7.5	**VW3A4553**	3.500/*7.716*
ATV320U75S6C	–	–	11.6	10.5		
ATV320D11S6C	–	–	15.8	14,1	**VW3A4554**	6.000/*13.228*
ATV320D15S6C	–	–	22.1	20.1		

(1) Nominal supply voltage
(2) ATV320●●●S6C drives must not be used without a Line choke