



ATV310H037N4E



ATV310HU15N4E



ATV310HU30N4E



ATV310HU75N4E

Drives										
Motor	Line supply					Altivar Easy 310				
Power indicated on rating plate (1)	Max. line current (2)		Apparent power		Max. prospective line Isc	Maximum continuous output current (In) (1)	Maximum transient current for 60 s	Dissipated power at maximum output current (In) (1)	Reference	Weight (3)
	380 V	460 V	460 V			380 V				
kW	HP	A	A	kVA	kA	A	A	W		kg/lb
<b>Three-phase supply voltage: 380...460 V 50/60 Hz</b>										
0.37	0.5	2.1	1.8	1.4	5	1.5	2.3	19.63	ATV310H037N4E	0.800/ 1.760
0.75	1	3.5	3.1	2.5	5	2.3	3.5	28.83	ATV310H075N4E	0.800/ 1.760
1.5	2	6.5	5.4	4.3	5	4.1	6.2	51.82	ATV310HU15N4E	1.100/ 2.430
2.2	3	8.8	7.2	5.7	5	5.5	8.3	66.32	ATV310HU22N4E	1.100/ 2.430
3	4	11.1	9.2	7.3	5	7.1	10.7	80.24	ATV310HU30N4E	1.800/ 3.970
4	5	13.7	11.4	9.1	5	9.5	14.3	102.72	ATV310HU40N4E	1.800/ 3.970
5.5	7.5	21.3	14.3	11.4	22	12.6	18.9	141.54	ATV310HU55N4E	1.800/ 3.970
7.5	10	26.6	22.4	17.8	22	17	25.5	203.87	ATV310HU75N4E	3.700/ 8.160
11	15	36.1	30.4	24.2	22	24	36	294.70	ATV310HD11N4E	3.700/ 8.160

Dimensions (overall)		
Drives with heatsinks	W x H x D	
	mm	in.
ATV310H037N4E	72 x 143 x 130	2.83 x 5.63 x 5.12
ATV310H075N4E	72 x 143 x 140	2.83 x 5.63 x 5.51
ATV310HU15N4E, HU22N4E	105 x 143 x 151	4.13 x 5.63 x 5.94
ATV310HU30N4E...HU55N4E	140 x 184 x 151	5.51 x 7.24 x 5.94
ATV310HU75N4E, HD11N4E	150 x 232 x 171	5.91 x 9.13 x 6.73

(1) These values are given for a nominal switching frequency of 4 kHz, for use in continuous operation. If operation above 4 kHz needs to be continuous, the nominal drive current should be derated by 10% for 8 kHz and 20% for 12 kHz.

The switching frequency can be set between 2 and 12 kHz for all ratings. Above 4 kHz, the drive will reduce the switching frequency automatically in the event of an excessive temperature rise. See the derating curves in the User Manual, available on our local website.

(2) Typical value for the indicated motor power and for the maximum prospective line Isc.

(3) Weight of product without packaging.

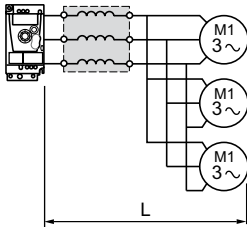
### Presentation

#### Line chokes

A line choke can be used to provide improved protection against overvoltages on the line supply and to reduce harmonic distortion of the current produced by the drive. They are recommended for ATV310...N4E drives. The recommended chokes limit the line current. They have been developed in line with standard EN 50178 (VDE 0160 level 1 high energy overvoltages on the line supply). The choke values are defined for a voltage drop between phases of between 3% and 5% of the nominal supply voltage. Values higher than this will cause loss of torque. These chokes should be installed upstream of the drive.

The use of line chokes is recommended in particular under the following circumstances:

- Close connection of several drives in parallel
- Line supply with significant disturbance from other equipment (interference, overvoltages)
- Line supply with voltage imbalance between phases above 1.8% of the nominal voltage
- Drive supplied by a line 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 line
- Reducing overloads on the cosφ correction capacitors, if the installation includes a power factor correction unit.



VW3A455●  
Motor choke

#### Motor chokes and LR filter cell

Motor chokes are required:

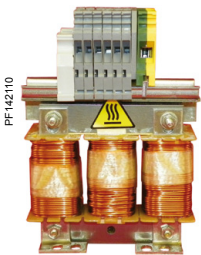
- When connecting more than 2 motors in parallel
- When the motor cable length (L), including tap-offs, is:
  - 25 m/82.2 ft maximum for a shielded motor cable (1),
  - 50 m/164.4 ft maximum for an unshielded motor cable (1).

LR filter cell comprises 3 high-frequency chokes and 3 resistors.

### References

#### Line chokes

For drives	Line current without choke				Choke	
	380 V		460 V		Reference	Weight
	A	A	A	A		
ATV310H037N4E	2.1	1.8	1.1	1	VW3A4551	1.500/3.310
ATV310H075N4E	3.5	3.1	1.9	1.7		
ATV310HU15N4E	6.5	5.4	3.5	2.9	VW3A4552	3.700/8.160
ATV310HU22N4E	8.8	7.2	5.1	4.4		
ATV310HU30N4E	11.1	9.2	6.6	5.6		
ATV310HU40N4E	13.7	11.4	8.5	7.1	VW3A4553	4.100/9.040
ATV310HU55N4E	21.3	14.3	11.6	9.9		
ATV310HU75N4E	26.6	22.4	15.2	12.8	VW3A4554	6.150/13.230
ATV310HD11N4E	36.1	30.4	22	18.9		



VW3A455●

#### Motor chokes and LR filter cell

For drives	Losses W	Nominal current A	Reference	Weight kg/lb
ATV310H037N4E...HU15N4E	150	10	VW3A58451 (2)	7.400/16.310
ATV310HU22N4E...HU40N4E	65	10	VW3A4552	3.700/8.160
ATV310HU55N4E	75	16	VW3A4553	4.100/9.040
ATV310HU75N4E...HD11N4E	90	30	VW3A4554	6.150/13.230

#### Dimensions (overall)

Line chokes or motor chokes, LR filter cell	W x H x D	
	mm	in.
VW3A4551	100 x 135 x 60	3.94 x 5.31 x 2.36
VW3A4552, A4553	130 x 155 x 90	5.12 x 6.1 x 3.54
VW3A4554	155 x 170 x 135	6.1 x 6.69 x 5.31
VW3A58451	169.5 x 340 x 123	6.67 x 13.39 x 4.84

(1) Motor cable length given for a switching frequency of 4 kHz.

(2) LR filter cell

#### Applications

The proposed combinations can:

- Protect people and equipment (when a short-circuit occurs)
- Maintain protection upstream of the drive in the event of a short-circuit on the power stage

Two types of combination are possible:

- Drive + circuit-breaker: Minimum combination
- Drive + circuit-breaker + contactor: Minimum combination with contactor when a control circuit is needed

#### Motor starters

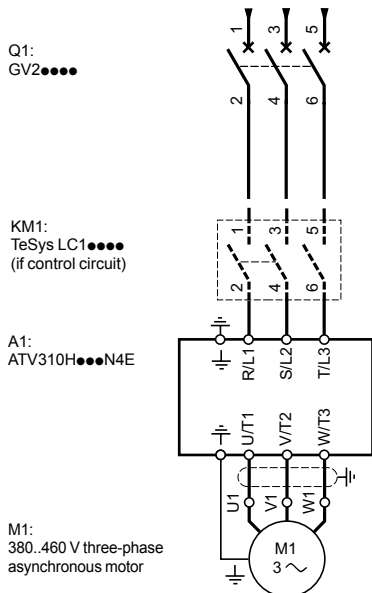
Standard power ratings of three-phase 4-pole 50/60 Hz motors (2)	Variable speed drive	Combination with control circuit (circuit-breaker + contactor)		TeSys contactor (1)
		Minimum combination (circuit-breaker only)	Operating range or rating	
kW HP		TeSys motor circuit-breaker (3)	A	
M1	A1	Q1		KM1
<b>Three-phase supply voltage: 380...460 V 50/60 Hz (4)</b>				
0.37	0.5	ATV310H037N4E	GV2P07 2.5 GV2L07 2.5	LC1D09
0.75	1	ATV310H075N4E	GV2P08 4 GV2L08 4	LC1D09
1.5	2	ATV310HU15N4E	GV2P14 10 GV2L14 10	LC1D09
2.2	3	ATV310HU22N4E	GV2P14 10 GV2L14 10	LC1D09
3	4	ATV310HU30N4E	GV2P16 14 GV2L16 14	LC1D09
4	5.4	ATV310HU40N4E	GV2P16 14 GV2L16 14	LC1D09
5.5	7.4	ATV310HU55N4E	GV2P22 25 GV2L22 25	LC1D09
7.5	10	ATV310HU75N4E	GV2P32 32 GV2L32 32	LC1D18
11	15	ATV310HD11N4E	GV2P40 40 GV2L40 40	LC1D25

(1) For a complete list of references for TeSys contactors, please visit our local website.

(2) Motor power indicated for combination with an ATV310H●●●N4E drive with the same rating.

(3) TeSys motor circuit-breakers:

- GV2 P●●: Thermal magnetic motor circuit-breakers with pushbutton control
- GV2 L●●: Magnetic motor circuit-breakers with control by rotary knob.



Motor starter with three-phase power supply