

Variable speed drives for asynchronous motors

Altivar 71

Supply voltage 200...240 V 50/60 Hz

PF105779-16-M



ATV 71HU22M3Z

PF105775-13-M



ATV 71H037M3

PF105776-17-M



ATV 71HD37M3X

UL Type 1/IP 20 drives

Motor		Line supply				Altivar 71			Reference	Weight
		Line current (2)	Apparent power	Maximum prospective line Isc	Maximum continuous current (1)	Max. transient current for				
200 V	240 V						240 V	230 V	60 s	2 s
kW	HP	A	A	kVA	kA	A	A	A		kg
Single phase supply voltage: 200...240 V 50/60 Hz										
0.37	0.5	6.9	5.8	1.4	5	3	4.5	4.9	ATV 71H075M3 (3) (4)	3.000
0.75	1	12	9.9	2.4	5	4.8	7.2	7.9	ATV 71HU15M3 (3) (4)	3.000
1.5	2	18.2	15.7	3.7	5	8	12	13.2	ATV 71HU22M3 (3) (4)	3.000
2.2	3	25.9	22.1	5.3	5	11	16.5	18.1	ATV 71HU30M3 (3) (4)	4.000
3	—	25.9	22	5.3	5	13.7	20.6	22.6	ATV 71HU40M3 (3) (4) (5)	4.000
4	5	34.9	29.9	7	5	17.5	26.3	28.8	ATV 71HU55M3 (3) (4) (5)	5.500
5.5	7.5	47.3	40.1	9.5	22	27.5	41.3	45.3	ATV 71HU75M3 (3) (4) (5)	5.500
3-phase supply voltage: 200...240 V 50/60 Hz										
0.37	0.5	3.5	3.1	1.3	5	3	4.5	4.9	ATV 71H037M3 (3) (4)	3.000
0.75	1	6.1	5.3	2.2	5	4.8	7.2	7.9	ATV 71H075M3 (3) (4)	3.000
1.5	2	11.3	9.6	4	5	8	12	13.2	ATV 71HU15M3 (3) (4)	3.000
2.2	3	15	12.8	5.3	5	11	16.5	18.1	ATV 71HU22M3 (3) (4)	4.000
3	—	19.3	16.4	6.8	5	13.7	20.6	22.6	ATV 71HU30M3 (3) (4)	4.000
4	5	25.8	22.9	9.5	5	17.5	26.3	28.8	ATV 71HU40M3 (3) (4)	4.000
5.5	7.5	35	30.8	12.8	22	27.5	41.3	45.3	ATV 71HU55M3 (3) (4)	5.500
7.5	10	45	39.4	16.4	22	33	49.5	54.5	ATV 71HU75M3 (3) (4)	7.000
11	15	53.3	45.8	19	22	54	81	89.1	ATV 71HD11M3X (3) (4) (6)	16.000
15	20	71.7	61.6	25.6	22	66	99	109	ATV 71HD15M3X (3) (4) (6)	16.000
18.5	25	77	69	28.7	22	75	112	124	ATV 71HD18M3X (3) (6)	30.000
22	30	88	80	33.3	22	88	132	145	ATV 71HD22M3X (3) (6)	30.000
30	40	124	110	45.7	22	120	180	198	ATV 71HD30M3X (3) (6)	37.000
37	50	141	127	52.8	22	144	216	238	ATV 71HD37M3X (3) (6)	37.000
45	60	167	147	61.1	22	176	264	290	ATV 71HD45M3X (3) (6)	37.000
55	75	200	173	71.9	35	221	332	365	ATV 71HD55M3X (6) (7) (8)	59.000
75	100	271	232	96.4	35	285	428	470	ATV 71HD75M3X (6) (7) (8)	72.000

(1) These values are given for a nominal switching frequency of 4 kHz up to ATV 71HD15M3X or 2.5 kHz for ATV 71HD18M3X...HD75M3X drives for use in continuous operation.

The switching frequency is adjustable from 1...16 kHz up to ATV 71HD45M3X and from 1...8 kHz for ATV 71HD55M3X and ATV 71HD75M3X drives.

Above 2.5 or 4 kHz, depending on the rating, the drive will reduce the switching frequency automatically in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current, see derating curves on pages 60297/3 and 60297/5 to 60297/7.

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

(3) ATV 71HD55M3X and ATV HD75M3X are supplied as standard in a reinforced version for operation in specific environmental conditions (see the environmental conditions on page 60281/3).

To order ATV 71H●●●M3 and ATV 71HD11M3X...ATV 71HD45M3X drives in a reinforced version for specific environmental conditions, add the following at the end of the reference:

S337 for ATV 71H●●●M3. For example, ATV 71H037M3 becomes **ATV 71H037M3S337**, 337 for ATV 71H●●●M3X. For example, ATV 71HD11M3X becomes **ATV 71HD11M3X337**.

If a reinforced version of the drive is supplied for particular environmental conditions, it will feature a remote graphic display terminal.

(4) All drives come with a remote graphic display terminal as standard. To order an ATV 71H●●●M3, ATV 71HD11M3X or ATV 71HD15M3X drive without a graphic display terminal, add a Z at the end of the reference.

The drive will then come equipped with an integrated 7-segment display terminal.

For example, ATV 71H037M3 becomes **ATV 71H037M3Z**.

(5) A line choke must be used, see page 60289/8.

(6) Drive supplied without EMC filter. EMC filters are available as an option, see page 60290/4.

(7) Drive supplied as standard with a DC choke, which must be used when connecting the drive to the 3-phase supply.

For connections to the DC bus, the drive can be ordered without a DC choke by adding a D at the end of the reference.

For example, ATV 71HD55M3X becomes **ATV 71HD55M3XD**.

(8) Drive supplied without plate for EMC mounting.

A choke appropriate for the drive rating is supplied in a UL Type 1, IP 21 or IP 31 kit, which must be ordered separately:

- For ATV 71H037M3...HD45M3X, order the kit for IP 21 conformity, see page 60283/6,

- For ATV 71HD55M3X and HD75M3X, order the kit for UL Type 1 or IP 31 conformity, see pages 60283/5 and 60283/6.

Note: Consult the summary tables of possible drives, option and accessory combinations, see pages 60293/2 and 60293/3.

Variable speed drives for asynchronous motors

Altivar 71

Supply voltage 380...480 V 50/60 Hz

PF121610-13-M



ATV 71HU22N4

PF105773-15-M



ATV 71HU40N4Z

PF105781-32-M



ATV 71HC28N4

UL Type 1/IP 20 drives

Motor		Line supply				Altivar 71				Reference	Weight
Power indicated on plate (1)		Line current (2)		Apparent power	Maximum prospective line Isc	Maximum continuous current (1)		Max. transient current for			
kW	HP	380 V	480 V	380 V		380 V	460 V	60 s	2 s		
		A	A	kVA	kA	A	A	A	A	kg	
3-phase supply voltage: 380...480 V 50/60 Hz											
0.75	1	3.7	3	2.4	5	2.3	2.1	3.5	3.8	ATV 71H075N4 (3) (4)	3.000
1.5	2	5.8	5.3	3.8	5	4.1	3.4	6.2	6.8	ATV 71HU15N4 (3) (4)	3.000
2.2	3	8.2	7.1	5.4	5	5.8	4.8	8.7	9.6	ATV 71HU22N4 (3) (4)	3.000
3	–	10.7	9	7	5	7.8	6.2	11.7	12.9	ATV 71HU30N4 (3) (4)	4.000
4	5	14.1	11.5	9.3	5	10.5	7.6	15.8	17.3	ATV 71HU40N4 (3) (4)	4.000
5.5	7.5	20.3	17	13.4	22	14.3	11	21.5	23.6	ATV 71HU55N4 (3) (4)	5.500
7.5	10	27	22.2	17.8	22	17.6	14	26.4	29	ATV 71HU75N4 (3) (4)	5.500
11	15	36.6	30	24.1	22	27.7	21	41.6	45.7	ATV 71HD11N4 (3) (4)	7.000
15	20	48	39	31.6	22	33	27	49.5	54.5	ATV 71HD15N4 (3) (4)	16.000
18.5	25	45.5	37.5	29.9	22	41	34	61.5	67.7	ATV 71HD18N4 (3) (4)	16.000
22	30	50	42	32.9	22	48	40	72	79.2	ATV 71HD22N4 (3) (4)	30.000
30	40	66	56	43.4	22	66	52	99	109	ATV 71HD30N4 (3) (4)	37.000
37	50	84	69	55.3	22	79	65	118.5	130	ATV 71HD37N4 (3) (4)	37.000
45	60	104	85	68.5	22	94	77	141	155	ATV 71HD45N4 (3) (4)	44.000
55	75	120	101	79	22	116	96	174	191	ATV 71HD55N4 (3) (4)	44.000
75	100	167	137	109.9	22	160	124	240	264	ATV 71HD75N4 (3) (4)	44.000
90	125	166	134	109.3	35	179	179	269	295	ATV 71HD90N4 (5) (6)	60.000
110	150	202	163	133	35	215	215	323	355	ATV 71HC11N4 (5) (6)	74.000
132	200	239	192	157.3	35	259	259	388	427	ATV 71HC13N4 (5) (6)	80.000
160	250	289	233	190.2	50	314	314	471	518	ATV 71HC16N4 (5) (6)	110.000
200	300	357	286	235	50	387	387	580	638	ATV 71HC20N4 (5) (6)	140.000
220	350	396	320	260.6	50	427	427	640	704	ATV 71HC25N4 (5) (6)	140.000
250	400	444	357	292.2	50	481	481	721	793		
280	450	494	396	325.1	50	550	550	825	907	ATV 71HC28N4 (5) (6)	140.000
315	500	555	444	365.3	50	616	616	924	1016	ATV 71HC31N4 (5) (6)	215.000
355	–	637	512	419.3	50	671	671	1006	1107	ATV 71HC40N4 (5) (6)	225.000
400	600	709	568	466.6	50	759	759	1138	1252		
500	700	876	699	576.6	50	941	941	1411	1552	ATV 71HC50N4 (5) (6)	300.000

(1) These values are given for a nominal switching frequency of 4 kHz up to ATV 71HD30N4 or 2.5 kHz for ATV 71HD37N4...HC50N4 drives for use in continuous operation.

The switching frequency is adjustable from 1...16 kHz up to 71HD37N4...HC50N4 and from 2.5...8 kHz for ATV 71HD90N4...ATV 71HC50N4 drives.

Above 2.5 or 4 kHz, depending on the rating, the drive will reduce the switching frequency automatically in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current, see derating curves on pages 60297/3 and 60297/5 to 60297/7.

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

(3) ATV 71HD90N4...HC50N4 drives are supplied as standard in a reinforced version for operation in specific environmental conditions (see the environmental conditions on page 60281/3).

To order the ATV 71H075N4...HD75N4 drives in a reinforced version, add **S337** at the end of the reference. For example, ATV 71H075N4 becomes **ATV 71H075N4S337**.

If a reinforced version of the drive is supplied for specific environmental conditions, it will feature a remote graphic display terminal.

(4) All drives come with a remote graphic display terminal as standard. To order an ATV 71H075N4...ATV 71HD75N4 drive without a graphic display terminal, add a **Z** at the end of the reference.

The drive will then come equipped with an integrated 7-segment display terminal.

For example, ATV 71H075N4 without a graphic display terminal becomes **ATV 71H075N4Z**.

(5) Drive supplied as standard with a DC choke, which must be used when connecting the drive to the 3-phase supply.

For connections to the DC bus, the drive can be ordered without a DC choke by adding a **D** at the end of the reference.

For example, ATV 71HD90N4 becomes **ATV 71HD90N4D**.

(6) Drive supplied without plate for EMC mounting.

A choke appropriate for the drive rating is supplied in a UL Type 1, IP 21 or IP 31 kit, which must be ordered separately:

- For ATV 71H075N4...HD75N4, order the kit for IP 21 conformity, see page 60283/6,

- For ATV 71HD90N4...HC50N4, order the kit for UL Type 1 or IP 31 conformity, see pages 60283/5 and 60283/6.

Note: Consult the summary tables of possible drives, option and accessory combinations, see pages 60293/4 and 60293/5.

Variable speed drives for asynchronous motors

Altivar 71

Supply voltage 380...480 V 50/60 Hz

PF105774-17-M



ATV 71W075N4

UL Type 12/IP 54 drives with an integrated class A EMC filter

Motor		Line supply				Altivar 71				Reference (3)	Weight
		Line current (2)		Apparent power	Maximum prospective line Isc	Maximum continuous current (1)		Max. transient current for			
kW	HP	380 V	480 V	380 V	kA	380 V	460 V	60 s	2 s		kg
		A	A	kVA		A	A	A			
3-phase supply voltage: 380...480 V 50/60 Hz											
0.75	1	3.7	3	2.4	5	2.3	2.1	3.5	3.8	ATV 71W075N4	12.000
1.5	2	5.8	5.3	3.8	5	4.1	3.4	6.2	6.8	ATV 71WU15N4	12.000
2.2	3	8.2	7.1	5.4	5	5.8	4.8	8.7	9.6	ATV 71WU22N4	12.000
3	—	10.7	9	7	5	7.8	6.2	11.7	12.9	ATV 71WU30N4	13.000
4	5	14.1	11.5	9.3	5	10.5	7.6	15.8	17.3	ATV 71WU40N4	13.000
5.5	7.5	20.3	17	13.4	22	14.3	11	21.5	23.6	ATV 71WU55N4	16.000
7.5	10	27	22.2	17.8	22	17.6	14	26.4	29	ATV 71WU75N4	16.000
11	15	36.6	30	24.1	22	27.7	21	41.6	45.7	ATV 71WD11N4	21.000
15	20	48	39	31.6	22	33	27	49.5	54.5	ATV 71WD15N4	31.000
18.5	25	45.5	37.5	29.9	22	41	34	61.5	67.7	ATV 71WD18N4	31.000
22	30	50	42	32.9	22	48	40	72	79.2	ATV 71WD22N4	30.500
30	40	66	56	43.4	22	66	52	99	109	ATV 71WD30N4	38.500
37	50	84	69	55.3	22	79	65	118.5	130	ATV 71WD37N4	38.500
45	60	104	85	68.5	22	94	77	141	155	ATV 71WD45N4	61.500
55	75	120	101	79	22	116	96	174	191	ATV 71WD55N4	61.500
75	100	167	137	109.9	22	160	124	240	264	ATV 71WD75N4	61.500

(1) These values are given for the nominal switching frequency of 4 kHz up to ATV 71WD30N4, or 2.5 kHz for ATV 71WD37N4...WD75N4 drives for use in continuous operation.

The switching frequency is adjustable from 1...16 kHz for all ratings.

Above 2.5 or 4 kHz, depending on the rating, the drive will reduce the switching frequency automatically in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current, see derating curves on page 60297/13.

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

(3) All drives are supplied with a plate for EMC mounting.

Note: Consult the summary tables of possible drive, option and accessory combinations, see pages 60293/6 and 60293/7.

Variable speed drives for asynchronous motors

Altivar 71 on base plate

Supply voltage 380...480 V 50/60 Hz

PF105783-13-M



ATV 71PU40N4Z

UL Type 1/IP 20 drives on base plate with an integrated class A EMC filter

Motor		Line supply				Altivar 71				Reference (3) (4) (5)	Weight
Power indicated on plate (1)		Line current (2)		Apparent power	Maximum prospective line Isc	Maximum continuous current (1)		Max. transient current for			
kW	HP	380 V	480 V	380 V		380 V	460 V	60 s	2 s		
		A	A	kVA	kA	A	A	A	A		kg
3-phase supply voltage: 380...480 V 50/60 Hz											
0.75	1	3.7	3	2.4	5	2.3	2.1	3.5	3.8	ATV 71P075N4Z	2.700
1.5	2	5.8	5.3	3.8	5	4.1	3.4	6.2	6.8	ATV 71PU15N4Z	2.700
2.2	3	8.2	7.1	5.4	5	5.8	4.8	8.7	9.6	ATV 71PU22N4Z	2.700
3	–	10.7	9	7	5	7.8	6.2	11.7	12.9	ATV 71PU30N4Z	3.600
4	5	14.1	11.5	9.3	5	10.5	7.6	15.8	17.3	ATV 71PU40N4Z	3.600
5.5	7.5	20.3	17	13.4	22	14.3	11	21.5	23.6	ATV 71PU55N4Z	5.000
7.5	10	27	22.2	17.8	22	17.6	14	26.4	29	ATV 71PU75N4Z	5.000

(1) These values are given for a nominal switching frequency of 4 kHz for use in continuous operation.

The switching frequency is adjustable from 1...16 kHz.

Above 4 kHz, depending on the rating, the drive will reduce the switching frequency automatically in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current, see derating curves on page 60297/3.

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

(3) All ATV 71P●●N4Z drives are equipped with an integrated 7-segment display terminal.

(4) A DC choke must be used, see page 60289/5.

(5) All drives are supplied with a plate for EMC mounting and a thermal liner for mounting on the machine frame, see page 60283/4.

Note: Consult the summary tables of possible drive, option and accessory combinations, see pages 60293/8 and 60293/9.