

Variable speed drives

Altivar 212

IP 21 drives



ATV 212H075M3X
EMC plate not mounted



ATV 212HD15N4
EMC plate not mounted



ATV 212HD55N4
EMC plate not mounted

IP 21 drives (frequency range from 0.5 to 200 Hz)										
Motor Power indicated on rating plate	Line supply				Altivar 212					
	Line current (1)		Apparent power	Maximum prospective line Isc	Max. continuous output current (In) (2)	Maximum transient current for 60 s	Dissipated power at maximum output current	THDI (3)	Reference	Weight
	200 V	240 V	240 V		230 V		240 V			
kW	HP	A	A	kVA	kA	A	A	W	%	kg

Three-phase supply voltage: 200...240 V 50/60 Hz, without EMC filter (4)											
0.75	1	3.3	2.7	1.1	5	4.6	5.1	63	31.3	ATV 212H075M3X	1.800
1.5	2	6.1	5.1	2.1	5	7.5	8.3	101	31.6	ATV 212HU15M3X	1.800
2.2	3	8.7	7.3	3	5	10.6	11.7	120	30.7	ATV 212HU22M3X	1.800
3	—	—	10	4.2	5	13.7	15.1	146	32.4	ATV 212HU30M3X	3.050
4	5	14.6	13	5.4	5	18.7	19.3	193	31.1	ATV 212HU40M3X	3.050
5.5	7.5	20.8	17.3	7.2	22	24.2	26.6	249	30.7	ATV 212HU55M3X	6.100
7.5	10	27.9	23.3	9.7	22	32	35.2	346	30.8	ATV 212HU75M3X	6.100
11	15	42.1	34.4	14.3	22	46.2	50.8	459	35.5	ATV 212HD11M3X	11.550
15	20	56.1	45.5	18.9	22	61	67.1	629	33.3	ATV 212HD15M3X	11.550
18.5	25	67.3	55.8	23.2	22	74.8	82.3	698	32	ATV 212HD18M3X	11.550
22	30	80.4	66.4	27.6	22	88	96.8	763	35	ATV 212HD22M3X	27.400
30	40	113.3	89.5	37.2	22	117	128.7	1085	32.1	ATV 212HD30M3X	38.650

Motor Power indicated on rating plate	Line supply				Altivar 212					
	Max. line current (1)		Apparent power	Maximum prospective line Isc	Max. continuous output current (In) (2)	Maximum transient current for 60 s	Dissipated power at maximum output current	THDI (3)	Reference	Weight
	380 V 480 V		380 V		(5)		380 V			
kW	HP	A	A	kVA	kA	A	A	W	%	kg

Three-phase supply voltage: 380...480 V 50/60 Hz, with integrated category C2 or C3 EMC filter (4)												
0.75	1	1.7	1.4	1.1	5	2.2	2.4	55	32.8	ATV 212H075N4	2.000	
1.5	2	3.2	2.5	2.1	5	3.7	4	78	30.9	ATV 212HU15N4	2.000	
2.2	3	4.6	3.6	3	5	5.1	5.6	103	30.5	ATV 212HU22N4	2.000	
3	—	—	6.2	4.9	4.1	5	7.2	7.9	137	31.2	ATV 212HU30N4	3.350
4	5	8.1	6.4	5.3	5	9.1	10	176	30.6	ATV 212HU40N4	3.350	
5.5	7.5	10.9	8.6	7.2	22	12	13.2	215	30.5	ATV 212HU55N4	3.350	
7.5	10	14.7	11.7	9.7	22	16	17.6	291	30.9	ATV 212HU75N4	6.450	
11	15	21.1	16.8	13.9	22	22.5	24.8	430	30.4	ATV 212HD11N4	6.450	
15	20	28.5	22.8	18.7	22	30.5	33.6	625	30.9	ATV 212HD15N4	11.650	
18.5	25	34.8	27.8	22.9	22	37	40.7	603	30.5	ATV 212HD18N4	11.650	
22	30	41.1	32.6	27.3	22	43.5	47.9	723	31.9	ATV 212HD22N4S	11.650	
22	30	41.6	33.1	27.3	22	43.5	47.9	626	30.7	ATV 212HD22N4	26.400	
30	40	56.7	44.7	37.3	22	58.5	64.4	847	30	ATV 212HD30N4	26.400	
37	50	68.9	54.4	45.3	22	79	86.9	976	30.3	ATV 212HD37N4	38.100	
45	60	83.8	65.9	55.2	22	94	103.4	1253	30.2	ATV 212HD45N4	38.100	
55	75	102.7	89	67.6	22	116	127.6	1455	32.7	ATV 212HD55N4	55.400	
75	100	141.8	111.3	93.3	22	160	176	1945	31.1	ATV 212HD75N4	55.400	

Dimensions (overall)			
Drives (5)		W x H x D	
		EMC plate mounted	EMC plate not mounted
		mm	
ATV 212H●●●M3X	ATV 212H●●●N4	mm	
ATV 212075M3X...U22M3X	ATV 212075N4...U22N4	107 x 192 x 150	107 x 143 x 150
ATV 212U30M3X, U40M3X	ATV 212U30N4...U55N4	142 x 232 x 150	142 x 184 x 150
ATV 212U55M3X, U75M3X	ATV 212U75N4, D11N4	180 x 307 x 170	180 x 232 x 170
ATV 212D11M3X...D18M3X	ATV 212D15N4...D22N4S	245 x 405 x 190	245 x 330 x 190
ATV 212D22M3X	ATV 212D22N4, D30N4	240 x 542 x 214	240 x 420 x 214
—	ATV 212D37N4, D45N4	240 x 663 x 244	240 x 550 x 244
ATV 212D30M3X	ATV 212D55N4, D75N4	320 x 723 x 290	320 x 605 x 290

(1) Typical value for the indicated motor power and for the maximum prospective line Isc.
 (2) These values are given for a nominal switching frequency of 12 kHz up to ATV 212HD15M3X and up to ATV 212HD15N4 or 8 kHz for ATV 21HD18M3X...HD30M3X and ATV 212HD18N4...HD75N4, for use in continuous operation. The switching frequency can be set between 6 and 16 kHz for all ratings. Above 8 kHz or 12 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. The nominal motor current must not exceed this derating value. See the derating curves on our website www.schneider-electric.com.
 (3) Total current harmonic distortion in accordance with IEC/EN 61000-3-12.
 (4) Drives are supplied with an EMC plate, for customer assembly.
 (5) Value given at 380 V (IEC)/460 V (NEC).

▲ Marketed 2nd half 2011



ATV 212W075N4

ATV 212WD22N4,
ATV 212WD22N4C

UL Type 12/IP 55 drives (frequency range from 0.5 to 200 Hz)

Motor Power indicated on rating plate	Line supply				Altivar 212			Reference	Weight	
	Line current (1)		Apparent power 380 V	Maximum prospective line Isc	Max. continu- ous output current (In) (2)	Maximum transient current for 60 s	THDI (3)			
	380 V	480 V								
kW	HP	A	A	kVA	kA	A	A	%	kg	
Three-phase supply voltage: 380...480 V 50/60 Hz, with integrated category C2 or C3 EMC filter										
0.75	1	1.7	1.4	1.1	5	2.2	2.4	32.8	ATV 212W075N4	7.000
1.5	2	3.2	2.5	2.1	5	3.7	4	30.9	ATV 212WU15N4	7.000
2.2	3	4.6	3.6	3	5	5.1	5.6	30.5	ATV 212WU22N4	7.000
3	–	6.2	4.9	4.1	5	7.2	7.9	31.2	ATV 212WU30N4	9.650
4	5	8.1	6.4	5.3	5	9.1	10	30.6	ATV 212WU40N4	9.650
5.5	7.5	10.9	8.6	7.2	22	12	13.2	30.5	ATV 212WU55N4	9.650
7.5	10	14.7	11.7	9.7	22	16	17.6	30.9	ATV 212WU75N4	10.950
11	15	21.2	16.9	14	22	22.5	24.8	30.9	ATV 212WD11N4	30.300
15	20	28.4	22.6	18.7	22	30.5	33.6	30.4	ATV 212WD15N4	30.300
18.5	25	34.9	27.8	23	22	37	40.7	30.5	ATV 212WD18N4	37.400
22	30	41.6	33.1	27.3	22	43.5	47.9	30.7	ATV 212WD22N4	49.500
30	40	56.7	44.7	37.3	22	58.5	64.4	30	ATV 212WD30N4	49.500
37	50	68.9	54.4	45.3	22	79	86.9	30.3	ATV 212WD37N4	57.400
45	60	83.8	65.9	55.2	22	94	103.4	30.2	ATV 212WD45N4	57.400
55	75	102.7	89	67.6	22	116	127.6	32.7	ATV 212WD55N4	61.900
75	100	141.8	111.3	93.3	22	160	176	31.1	ATV 212WD75N4	61.900

Three-phase supply voltage: 380...480 V 50/60 Hz, with integrated category C1 filter

0.75	1	1.7	1.4	1.1	5	2.2	2.4	32.8	ATV 212W075N4C	7.500
1.5	2	3.2	2.6	2.1	5	3.7	4	30.9	ATV 212WU15N4C	7.500
2.2	3	4.6	3.7	3	5	5.1	5.6	30.5	ATV 212WU22N4C	7.500
3	–	6.2	5	4.1	5	7.2	7.9	31.2	ATV 212WU30N4C	10.550
4	5	8.2	6.5	5.4	5	9.1	10	30.6	ATV 212WU40N4C	10.550
5.5	7.5	11	8.7	7.2	22	12	13.2	30.5	ATV 212WU55N4C	10.550
7.5	10	14.7	11.7	9.7	22	16	17.6	30.9	ATV 212WU75N4C	11.850
11	15	21.1	16.7	13.9	22	22.5	24.8	30.9	ATV 212WD11N4C	36.500
15	20	28.4	22.8	18.7	22	30.5	33.6	30.4	ATV 212WD15N4C	36.500
18.5	25	34.5	27.6	22.7	22	37	40.7	30.5	ATV 212WD18N4C	45.000
22	30	41.1	33.1	27.1	22	43.5	47.9	30.7	ATV 212WD22N4C	58.500
30	40	58.2	44.4	38.3	22	58.5	64.4	30	ATV 212WD30N4C	58.500
37	50	68.9	54.4	45.3	22	79	86.9	30.3	ATV 212WD37N4C	77.400
45	60	83.8	65.9	55.2	22	94	103.4	30.2	ATV 212WD45N4C	77.400
55	75	102.7	89	67.6	22	116	127.6	32.7	ATV 212WD55N4C	88.400
75	100	141.8	111.3	93.3	22	160	176	31.1	ATV 212WD75N4C	88.400

Dimensions (overall)

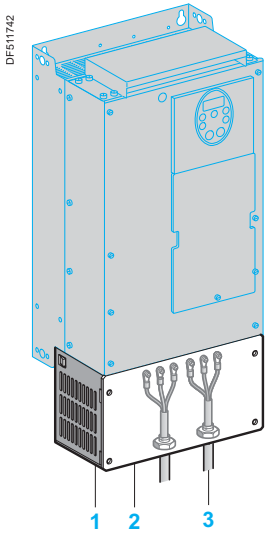
Drives	W x H x D
ATV 212W	mm
075N4 (C)...U22N4 (C)	215 x 297 x 192
U30N4 (C)...U75N4 (C)	230 x 340 x 208
D11N4 (C), D15N4 (C)	290 x 560 x 315
D18N4 (C)	310 x 665 x 315
D22N4 (C), D30N4 (C)	284 x 720 x 315
D37N4 (C), D45N4 (C)	284 x 880 x 343
D55N4 (C), D75N4 (C)	362 x 1000 x 364

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

(2) These values are given for a nominal switching frequency of 12 kHz up to ATV 212WD15N4 and up to ATV 212WD15N4C or 8 kHz for ATV 212WD18N4...WD75N4 and ATV 212WD18N4C...WD75N4C, for use in continuous operation.

The switching frequency can be set between 6 and 16 kHz for all ratings. Above 8 kHz or 12 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. The nominal motor current must not exceed this derating value. See the derating curves on our website www.schneider-electric.com.

(3) Total current harmonic distortion in accordance with IEC/EN 61000-3-12.



UL Type 1 conformity kit

UL Type 1 conformity kit (for mounting outside the enclosure)

When the drive is mounted directly on a wall outside the enclosure, this kit can be used to ensure UL Type 1 conformity when connecting the cables via a tube. The shielding is connected inside the kit.

The kit consists of:

- All the mechanical parts **1** including a pre-cut plate **2** for connecting the tubes **3**
- Fixing accessories
- A manual

References

For drives	Reference	Weight kg
ATV 212H075M3X...HU22M3X ATV 212H075N4...HU22N4	VW3 A31 814	0.500
ATV 212HU30M3X, HU40M3X ATV 212HU30N4...HU55N4	VW3 A31 815	0.500
ATV 212HU55M3X, HU75M3X ATV 212HU75N4, HD11N4	VW3 A31 816	0.900
ATV 212HD11M3X...HD18M3X ATV 212HD15N4...HD22N4S	VW3 A31 817	1.200
ATV 212HD22M3X ATV 212HD22N4, HD30N4	VW3 A9 206	4.000
ATV 212HD37N4, HD45N4	VW3 A9 207	5.000
ATV 212HD30M3X ATV 212HD55N4, HD75N4	VW3 A9 208	7.000

┌ Rail mounting kit

This kit enables easy installation of ATV 212H075M3X...HU22M3X and ATV 212H075N4...HU22N4 drives by mounting them directly on a 35 mm wide ┌ rail.

Reference

For drives	Reference	Weight kg
ATV 212H075M3X...HU22M3X ATV 212H075N4...HU22N4	VW3 A31 852	0.350

PCSoft software workshop

This PC software workshop is a user-friendly tool for setting up Altivar 212 drives. It includes various functions such as:

- Configuration preparation
- Setup
- Maintenance

It can be downloaded free of charge from our website www.schneider-electric.com.

It operates in the following PC environments and configurations:

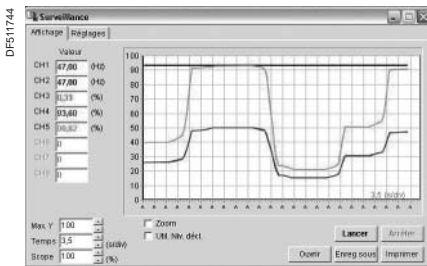
- Microsoft Windows® 98, Microsoft Windows® 2000, Microsoft Windows® XP
- Pentium® 233 MHz or higher, hard disk with 10 MB available, 32 MB RAM
- 256 colour, 640 x 480 pixels or higher definition monitor

Connection

The PCSoft software workshop must be connected directly to the Modbus port on the drive using the PC serial port connection kit.

Reference

Designation	Composition	Reference	Weight kg
PC serial port connection kit for point-to-point Modbus connection	<ul style="list-style-type: none"> ■ One 3 m cable with two RJ45 connectors ■ One RS 232/RS 485 converter with one 9-way female SUB-D connector and one RJ45 connector 	VW3 A8 106	0.350



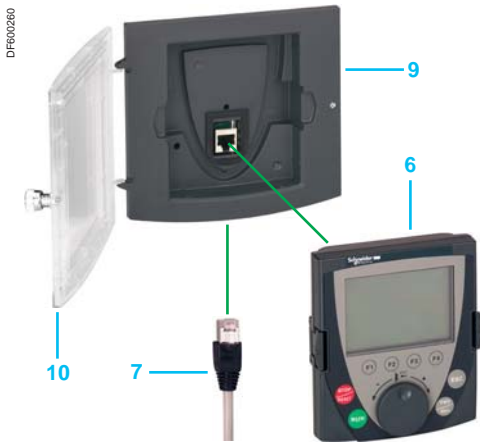
"Monitoring" function in PCSoft software workshop



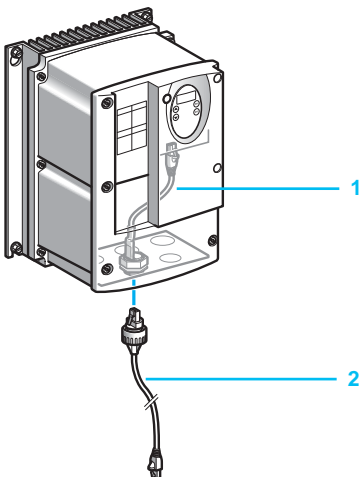
Remote graphic display terminal



Remote mounting accessories for graphic display terminal



Remote location of the graphic display terminal on enclosure door: 6 + 7 + 9 if IP 54, 6 + 7 + 9 + 10 if IP 65



Remote mounting accessories for RJ45 connection with IP 55 degree of protection

Remote graphic display terminal

This graphic display terminal, common to all Schneider Electric's variable speed drive ranges, provides a user-friendly interface for configuration, debugging and maintenance. In particular, it is possible to transfer and store up to 4 configuration files.

Used as a portable unit or mounted on an enclosure door, it can also be connected to several drives using remote mounting accessories (see below) or multidrop connection accessories (see page 60332/2).

It is supplied with six languages installed (Chinese, English, French, German, Italian and Spanish). The available languages can be modified using the Multi-Loader configuration tool (VW3 A8 121, page 60331/6).

Its maximum operating temperature is 60°C, and it features IP 54 protection; this can be increased to IP 65 when mounted on an enclosure door.

Description

- 1 Graphic display:**
 - Plain text display on 8 lines of 24 characters, 240 x 160 pixels, large digit display
- 2 Assignable function keys F1, F2, F3, F4:**
 - Dialogue functions: direct access, help screens, navigation
 - Application functions: "Local Remote", preset speed
- 3 ESC key:** aborts a value, a parameter or a menu to return to the previous selection
- 4 Motor local control keys:**
 - RUN: starts the motor
 - STOP/RESET : stops the motor/resets drive faults
 - FWD/REV: reverses the direction of rotation of the motor
- 5 Navigation button:** for quick, easy access to the drop-down menus
 - Rotate ±: goes to the next/previous line, increases/decreases the value
 - Press: saves the current value (ENT)

References

Designation	Item no.	Length m	Reference	Weight kg
Remote graphic display terminal	6	–	VW3 A1 101	0.180
A remote-mounting cable				
VW3 A1 104 R●●● and an RJ45 adaptor				
VW3 A1 105 must be provided				

Accessories for mounting the graphic display terminal remotely

Remote cables	7	1	VW3 A1 104 R10	0.050
equipped with 2 RJ45 connectors		3	VW3 A1 104 R30	0.150
		5	VW3 A1 104 R50	0.250
		10	VW3 A1 104 R100	0.500

Female/female RJ45 adaptor	8	–	VW3 A1 105	0.010
Remote mounting kit for mounting on an enclosure door IP 54 degree of protection	9	–	VW3 A1 102	0.150
Door for remote mounting kit VW3 A1 102 Can be used to provide IP 65 degree of protection	10	–	VW3 A1 103	0.040

Remote mounting accessories for RJ45 connection with IP 55 degree of protection

Internal IP 55 cables equipped with an RJ45 connector and an IP 55 RJ45 base. For remote location of the drive's RJ45 port while maintaining IP 55 protection	1	0.3	VW3 A0 1500	0.050
		0.6	VW3 A0 1502	0.100
IP 55 cable equipped with an RJ45 connector and an IP 55 RJ45 connector. For connecting an drive equipped with a VW3 A0 150● cable	2	3	VW3 A0 1501	0.130



Configuration with SoMove Mobile software for mobile phones via Bluetooth® wireless connection

SoMove Mobile software for mobile phones

The SoMove Mobile software converts any compatible mobile phone into a remote graphic display terminal, offering an identical Human-Machine Interface (see page 60331/5).

Particularly suitable for on-site or remote maintenance operations, the SoMove Mobile software can be used to edit and save configurations, import them from a PC and export them to a PC, or a drive, via the Bluetooth® wireless link.

It communicates via Bluetooth® wireless link with the drive, which is equipped with the Modbus-Bluetooth® adaptor (VW3 A8 114).

It requires a mobile phone with minimum features, please consult our website www.schneider-electric.com.

The SoMove Mobile software and drive configuration files can be downloaded from our website www.schneider-electric.com.

References

Designation	Reference	Weight kg
SoMove Mobile software for mobile phones	Download from our website www.schneider-electric.com	–
Modbus-Bluetooth® adaptor	VW3 A8 114	0.155

Enables any non-Bluetooth® device to communicate using this technology.

It comprises:

- 1 Bluetooth® adaptor (range 10 m, class 2) with an RJ45 connector
- For SoMove: 1 x 0.1 m cable with 2 RJ45 connectors
- ... (1)

Multi-Loader configuration tool

The Multi-Loader tool enables several configurations to be copied from a PC or a drive and loaded onto another drive; the Altivar 212 drives must be powered-up.

Reference

Designation	Reference	Weight kg
Multi-Loader configuration tool	VW3 A8 121	–

Supplied with:

- 1 cable equipped with 2 RJ45 connectors
- 1 cable equipped with one type A USB connector and one mini B USB connector
- 1 x SD memory card
- 1 x female/female RJ 45 adaptor
- 4 AA/LR6 1.5 V batteries
- 1 anti-shock protection
- 1 carrying handle

Documentation

The Altivar 212 range is also presented on a DVD-ROM which includes all the Schneider Electric technical documentation on variable speed drives and soft start/soft stop units.

The DVD-ROM includes the technical documentation (programming manuals, installation manuals, quick reference guides), brochures and catalogues.

The content of the DVD-ROM is also available on our website www.schneider-electric.com.

Designation	Reference	Weight kg
“Description of the Motion & Drives offer” DVD-ROM	VW3 A8 200	0.100

(1) Also includes other components for connecting compatible Schneider Electric devices.



Configuration with the Multi-Loader tool connected to the Altivar 212 drive

Motor chokes

The motor choke enables operation with motor cables longer than the maximum standard permitted lengths.

It is also used to:

- Limit overvoltages at the motor terminals
- Filter interference caused by opening a contactor placed between the filter and the motor
- Reduce the motor earth leakage current

Choke performance is ensured by not exceeding the cable lengths given below. For an application with several motors connected in parallel, the cable length must include all cabling. If a cable longer than that recommended is used, the motor chokes may overheat.

References

For drives	Maximum motor cable length			Losses W	Nominal current A	Sold in lots of	Unit reference	Weight kg
	For a maximum switching frequency kHz	Shielded cable m	Unshielded cable m					
Three-phase supply voltage: 200...240 V 50/60 Hz								
ATV 212H075M3X...HD11M3X	6	100	150	350	90	–	VW3 A5 103	10.000
ATV 212HD15M3X	6	100	150	430	215	3	VW3 A5 104	15.500
ATV 212HD18M3X...HD30M3X	6	150	300	430	215	3	VW3 A5 104	15.500
Three-phase supply voltage: 380...480 V 50/60 Hz								
ATV 212H075N4...HD11N4	6	100	150	350	90	–	VW3 A5 103	10.000
ATV 212W075N4...WD11N4								
ATV 212W075N4C...WD11N4C								
ATV 212HD15N4	6	100	150	430	215	3	VW3 A5 104	15.500
ATV 212WD15N4								
ATV 212WD15N4C								
ATV 212HD18N4, HD75N4	6	150	300	430	215	3	VW3 A5 104	15.500
ATV 212WD18N4, WD75N4								
ATV 212WD18N4C, WD75N4C								



VW3 A5 103

IP 20 protection kit

VW3 A5 10● motor chokes provide IP 00 degree of protection as standard.

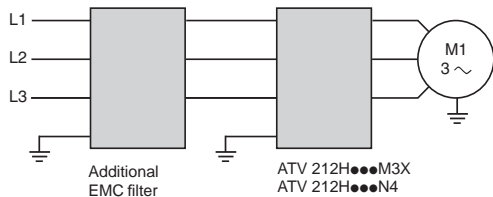
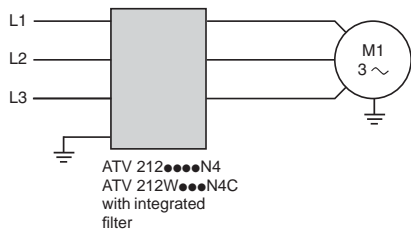
This kit gives the VW3 A5 104 choke IP 20 degree of protection.

Designation	For motor choke	Reference	Weight kg
Mechanical kit including an IP 20 cover and cable clips	VW3 A5 104	VW3 A9 612	–

Variable speed drives

Altivar 212

Management of electromagnetic compatibility
Integrated EMC filters and optional additional filters



Mounting the filter beside the Altivar 212 drive



Mounting the filter under the Altivar 212 drive

Integrated EMC filters

Altivar 212 drives, except for ATV 212H●●●●M3X, have integrated radio interference input filters to comply with the EMC standard for variable speed electrical power drive "products" IEC/EN 61800-3, edition 2, category C1, C2 or C3 in environment 1 or 2 and to comply with the European EMC (electromagnetic compatibility) directive.

Drives	Maximum length of shielded cable ⁽¹⁾ according to			Leakage current ⁽²⁾
	EN 55011 class B Gr1 IEC/EN 61800-3 Category C1	EN 55011 class A Gr1 IEC/EN 61800-3 Category C2 Category C3		
	m	m	m	mA
IP 21 drives				
ATV 212H075N4...HU22N4	–	20	20	4.5
ATV 212HU30N4...HU55N4	–	5	20	5.8
ATV 212HU75N4, HD11N4	–	5	20	2.9
ATV 212HD15N4, HD18N4	–	5	20	4.8
ATV 212HD22N4S	–	–	5	25.3
ATV 212HD22N4, HD30N4	–	–	20	25.3
ATV 212HD37N4, HD45N4	–	–	20	21.5
ATV 212HD55N4, HD75N4	–	–	100	9.1
UL Type 12/IP 55 drives				
ATV 212W075N4...WU22N4	–	5	–	4.5
ATV 212WU30N4...WU55N4	–	5	20	5.8
ATV 212WU75N4	–	5	10	2.9
ATV 212WD11N4, WD15N4	–	5	10	13.3
ATV 212WD18N4	–	5	20	9.4
ATV 212WD22N4, WD30N4	–	5	–	25.3
ATV 212WD37N4, WD45N4	–	–	20	21.5
ATV 212WD55N4, WD75N4	–	–	100	9.1
ATV 212W075N4C...WU22N4C	20	20	20	18.4
ATV 212WU30N4C...WU55N4C	20	50	50	42.8
ATV 212WU75N4C	20	50	50	37.2
ATV 212WD11N4C, WD15N4C	20	50	50	81
ATV 212WD18N4C	20	50	50	77.2
ATV 212WD22N4C, WD30N4C	20	50	50	84.5
ATV 212WD37N4C, WD45N4C	20	50	50	53.6
ATV 212WD55N4C, WD75N4C	20	20	50	56.9

Additional EMC input filters

Applications

Additional EMC input filters enable drives to meet more stringent requirements: they are designed to reduce conducted emissions on the line supply below the limits of standards EN 55011 group 1, class A or B, and IEC/EN 61800-3 category C1, C2 or C3.

The additional EMC filters can be mounted beside or under the drive. The drive's power supply is then connected directly via the filter output cable.

The filters act as a support for the drives and are attached to them via tapped holes.

⁽¹⁾ Maximum lengths for shielded cables connecting motors to drives for a switching frequency of 6 to 16 kHz. If motors are connected in parallel, the sum of the cable lengths must be taken into account.

⁽²⁾ Maximum earth leakage current at 480 V 60 Hz on a TT system.

Additional EMC input filters (continued)

Use according to the type of line supply

Additional filters can only be used on TN (neutral connection) and TT (neutral to earth) type systems.

Standard IEC/EN 61800-3, appendix D2.1, states that on IT systems (isolated or impedance earthed neutral), filters can cause permanent insulation monitors to operate in a random manner.

In addition, the effectiveness of additional filters on this type of system depends on the type of impedance between neutral and earth, and therefore cannot be predicted.

If a machine has to be installed on an IT system, the solution would be to insert an isolation transformer and connect the machine locally on a TN or TT system.

ATV 212●●●●N4 and ATV 212W●●●●N4C drives have integrated EMC filters. These filters can be easily disconnected for use on the line supply and, if necessary, reconnected just as easily (see the User Manual).

References

For drives	Maximum length of shielded cable (1) according to		In (2)	If (3)	Loss (4)	Reference	Weight
	EN 55011 class B Gr1 IEC/EN 61800-3 category C1	EN 55011 class A Gr1 IEC/EN 61800-3 category C2 or C3					
	m	m	A	mA	W		kg
Three-phase supply voltage: 200...240 V 50/60 Hz							
ATV 212H075M3X	20	20	15	6.7	0.47	VW3 A31 404	1.000
ATV 212HU15M3X	20	20	15	6.7	1.6	VW3 A31 404	1.000
ATV 212HU22M3X	20	20	15	6.7	3.3	VW3 A31 404	1.000
ATV 212HU30M3X	20	20	25	17.8	3.6	VW3 A31 406	1.650
ATV 212HU40M3X	20	20	25	17.8	6.2	VW3 A31 406	1.650
ATV 212HU55M3X	–	20	47	20.6	3.7	VW3 A31 407	3.150
ATV 212HU75M3X	–	20	47	20.6	6.8	VW3 A31 407	3.150
ATV 212HD11M3X	–	20	83	14.5	9.1	VW3 A31 408	5.300
ATV 212HD15M3X	–	20	83	14.5	16	VW3 A31 408	5.300
ATV 212HD18M3X	–	20	83	14.5	23.1	VW3 A31 408	5.300
ATV 212HD22M3X	–	100	90	40.6	27.1	VW3 A4 406	15.000
ATV 212HD30M3X	–	20	180	86.3	23.1	VW3 A4 408	40.000

Three-phase supply voltage: 380...480 V 50/60 Hz

ATV 212H075N4	20	50	15	13.8	0.13	VW3 A31 404	1.000
ATV 212HU15N4	20	50	15	13.8	0.45	VW3 A31 404	1.000
ATV 212HU22N4	20	50	25	13.8	0.9	VW3 A31 404	1.000
ATV 212HU30N4	20	50	25	37	1	VW3 A31 406	1.650
ATV 212HU40N4	20	50	25	37	1.6	VW3 A31 406	1.650
ATV 212HU55N4	20	50	25	37	3	VW3 A31 406	1.650
ATV 212HU75N4	20	90	47	42.8	1.9	VW3 A31 407	3.150
ATV 212HD11N4	20	90	47	42.8	3.9	VW3 A31 407	3.150
ATV 212HD15N4	20	50	49	42.8	9.2	VW3 A31 409	4.750
ATV 212HD18N4, HD22N4S	20	50	49	42.8	13.8	VW3 A31 409	4.750
ATV 212HD22N4	–	100	90	84.5	7.3	VW3 A4 406	15.000
ATV 212HD30N4	–	100	90	84.5	13.5	VW3 A4 406	15.000
ATV 212HD37N4	100	100	92	106	16	VW3 A4 407	17.000
ATV 212HD45N4	100	100	92	106	23	VW3 A4 407	17.000
ATV 212HD55N4	100	100	180	193	18	VW3 A4 408	40.000
ATV 212HD75N4	100	100	180	193	34	VW3 A4 408	40.000

(1) The above table gives the maximum lengths for shielded cables connecting motors to drives for a switching frequency of 6 to 16 kHz. These limits are given as examples only as they vary depending on the stray capacitance of the motors and the cables used. If motors are connected in parallel, the sum of the cable lengths must be taken into account.

(2) Nominal filter current.

(3) Maximum earth leakage current at 230 V and at 480 V 60 Hz on a TT system.

(4) Via heat dissipation.



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