



ATV630...M3
ATV630...N4
ATV650...N4
ATV650...N4E

Altivar Process drive with sinus filter

Sinus filter

Presentation

Sinus filters allow Altivar Process drives to operate with long motor cables:

- 500 m (1,640 ft) with a shielded cable
- 1,000 m (3,280 ft) with an unshielded cable

The minimum switching frequency at which sinus filters can operate is 4 kHz. This is the default value when the sinus filter function is activated on the variable speed drive (please refer to the programming guide on our website www.schneider-electric.com).

The output frequency must be less than 100 Hz.

At 100% load, the voltage drop is less than 8% with output frequency 50 Hz and switching frequency 4 kHz.

Applications

For applications requiring:

- Long cable runs
- Motors connected in parallel
- Submersible pumps sensitive to dv/dt
- An intermediate transformer between the drive and the motor

Sinus filters

For drives	Nominal current	Degree of protection	Reference (1)	Weight
	A	IP		kg/ lb
Three-phase supply voltage: 200...240 V				
ATV630U07M3	6	20	VW3A5401	10.000/ 22.046
ATV630U15M3...U30M3	15	20	VW3A5402	13.500/ 29.762
ATV630U40M3	25	20	VW3A5403	20.000/ 44.092
ATV630U55M3...D11M3	50	20	VW3A5404	35.000/ 77.162
ATV630D15M3...D22M3	95	20	VW3A5405	60.000/ 132.277
ATV630D30M3...D45M3	180	00	VW3A5406	90.000/ 198.416
ATV630D75M3 (2)	305	00	VW3A5407	134.000/ 295.419

(1) The filters are designed to operate in a switching frequency range of between 4 and 8 kHz.

(2) In "Normal Duty", apply a derating of 1 to the drive nominal power with a minimum switching frequency of 4 kHz.

For example: An ATV630D75M3 drive with sinus filter can be used on a 55 kW motor.

Variable speed drives

Altivar Process: Output filters

Option: Sinus filters

Sinus filters (continued)				
For drives	Nominal current	Degree of protection	Reference (1) (2)	Weight
	A	IP		kg/ lb
Three-phase supply voltage: 380...480 V				
ATV630U07N4...U22N4 ATV650U07N4...U22N4 ATV650U07N4E...U22N4E	6	20	VW3A5401	10.000/ 22.046
ATV630U30N4...U55N4 ATV650U30N4...U55N4 ATV650U30N4E...U55N4E	15	20	VW3A5402	13.500/ 29.762
ATV630U75N4...D11N4 ATV650U75N4...D11N4 ATV650U75N4E...D11N4E	25	20	VW3A5403	20.000/ 44.092
ATV630D15N4...D22N4 ATV650D15N4...D22N4 ATV650D15N4E...D22N4E	50	20	VW3A5404	35.000/ 77.162
ATV630D30N4...D45N4 ATV650D30N4...D45N4 ATV650D30N4E...D45N4E	95	20	VW3A5405	60.000/ 132.277
ATV630D55N4...D90N4 ATV650D55N4...D90N4 ATV650D55N4E...D90N4E	180	00	VW3A5406	90.000/ 198.416
ATV630C13N4...C16N4 (3)	305	00	VW3A5407	134.000/ 295.419

IP 21 protection kit for IP 20 filters			
Description	For sinus filter	Reference	Weight kg/ lb
Mechanical kit including cover and cable clamps	VW3A5401	VW3A53901	1.000/ 2.205
	VW3A5402		
	VW3A5403	VW3A53902	1.300/ 2.866
	VW3A5404	VW3A53904	2.700/ 5.952
	VW3A5405	VW3A53905	3.200/ 7.055

(1) The filters are designed to operate in a switching frequency range of between 4 and 8 kHz.

(2) When used with **ATV650U07N4/N4E...D90N4/N4E** drives, the filter must be mounted in a separate enclosure to maintain IP 55 protection for the installation.

(3) In "Normal Duty", apply a derating of 1 to the drive nominal power with a minimum switching frequency of 4 kHz. For example:
An ATV630C13N4 drive with sinus filter can be used on a 110 kW motor.
An ATV630C16N4 drive with sinus filter can be used on a 132 kW motor.