

Output filters, motor chokes, and ferrite suppressors

Output filters and motor chokes can be inserted between the Altivar 312 drive and the motor to:

- Limit the dv/dt at the motor bb terminals (500 to 1500 V/μs), for cables longer than 164 ft. (50 m)
- Filter interference caused by opening a contactor placed between the filter and the motor
- Reduce the motor ground leakage current

The output filter range features LR filter cells.

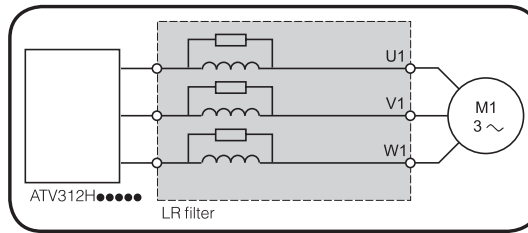
Ferrite suppressors are necessary on ATV312H●●●M2 and ATV312H018M3 to ATV312HU22M3 drives when an output contactor is used.

LR filter cell

This cell features 3 high-frequency chokes and 3 resistors.

The LR filter cell is particularly suitable for:

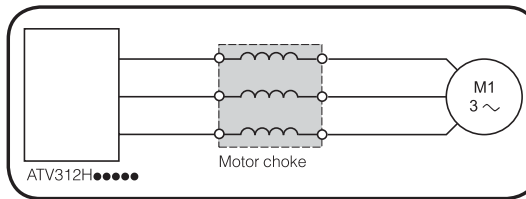
- Reducing the dv/dt at the motor terminals
- Using long motor cables (see specifications table page 51)



Motor choke

The motor choke is particularly suitable for:

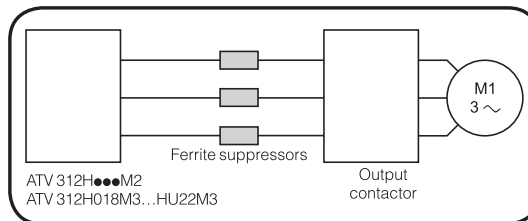
- Reducing overvoltages at the motor terminals (see length of motor cable in specifications table page 51)
- Minimizing the current wave, thus reducing motor noise



Ferrite suppressors for downstream contactor opening

Ferrite suppressors for downstream contactor opening are inserted on the motor cable between ATV312H●●●M2 or ATV312H018M3 to ATV312HU22M3 drives and the output contactor.

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Specifications ⁽¹⁾

		LR filter cells ⁽²⁾		Motor chokes	
		VW3A5845●	VW3A4552...A4555	VW3A4556	
Drive switching frequency	kHz	0.5...4	4		
Length of motor cable	Shielded cables	ft	≤ 330 ft. (≤ 100 m)	≤ 330 ft. (≤ 100 m)	
	Unshielded cables	ft	≤ 660 ft. (≤ 200 m)	≤ 660 ft. (≤ 200 m)	
Degree of protection		IP 20	IP 20	IP 00	

Part Numbers

Motor chokes						
Designation	For drives	Losses	Nominal current	Reference	Weight	
		W	A		lbs	kg
Motor chokes	ATV312HU22N4...HU40N4 ATV312HU40S6, HU55S6	65	10	VW3A4552	6.6	3
	ATV312HU22M2 ATV312HU22M3, HU30M3 ATV312HU55N4 ATV312HU75S6	75	16	VW3A4553	7.7	3.5
	ATV312HU40M3...HU75M3 ATV312HU75N4, HD11N4 ATV312HD11S6, HD15S6	90	30	VW3A4554	13.2	6
	ATV312HD15N4	80	60	VW3A4555	24.3	11
	ATV312HD11M3, HD15M3	–	100	VW3A4556	35.3	16

Ferrite suppressors for downstream contactor opening						
Designation	For drives	Sold in lots of	Unit reference	Weight		
				lbs	kg	
Ferrite suppressors for downstream contactor opening	ATV312H018M2	3	VW3A31451	0.7	0.3	
	ATV312H037M2 ATV312H018M3, H037M3	3	VW3A31452	0.4	0.2	
	ATV312H055M2...HU22M2 ATV312H055M3...HU22M3	3	VW3A31453	0.2	0.1	

(1) Filter performance is ensured if the cable lengths between the motor and the drive, given in the above table, are not exceeded. 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 filters may overheat.

(2) For other LR filter configurations, please consult your Customer Care Center.