

# Variable speed drives

## Altivar 312

Options: output filters, motor chokes and ferrite suppressors

### Presentation

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

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

The output filter range comprises LR filter cells.

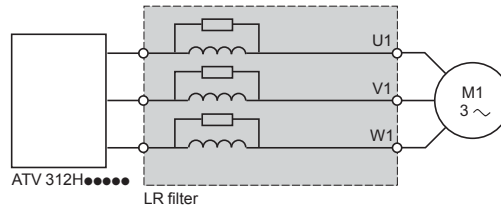
Ferrite suppressors are necessary on ATV 312H●●●M2 and ATV 312H018M3...HU22M3 drives when an output contactor is used.

#### LR filter cell

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

The LR filter cell is particularly suitable for:

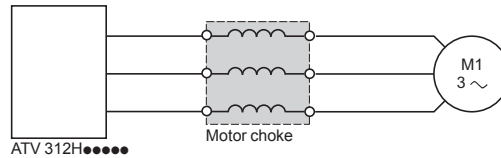
- Reducing the dv/dt at the motor terminals
- Using long motor cables (see characteristics table page 60427/3)



#### Motor choke

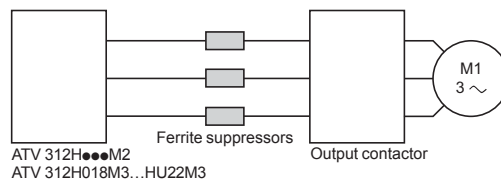
The motor choke is particularly suitable for:

- Reducing overvoltages at the motor terminals (see length of motor cable in characteristics table page 60427/3)
- 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 ATV 312H●●●M2 or ATV 312H018M3...HU22M3 drives and the output contactor.



Characteristics (1)					
		LR filter cells (2)	Motor chokes		
		VW3 A5845●	VW3 A4 552...A4 555	VW3 A4 556	
Drive switching frequency	kHz	0.5...4	4		
Length of motor cable	Shielded cables	m	≤ 100	≤ 100	
	Unshielded cables	m	≤ 200	≤ 200	
Degree of protection		IP 20	IP 20	IP 00	
References					
LR filter cells					
Designation	For drives	Losses	Nominal current	Reference	Weight
		W	A		kg
LR filter cells	ATV 312H018M2...HU15M2 ATV 312H018M3...HU15M3 ATV 312H037N4...HU40N4 ATV 312H075S6...HU55S6	150	10	VW3 A58451	7.400
	ATV 312HU22M2 ATV 312HU22M3, HU30M3 ATV 312HU55N4 ATV 312HU75S6	180	16	VW3 A58452	7.400
	ATV 312HU40M3...HU75M3 ATV 312HU75N4...HD15N4 ATV 312HD11S6, HD15S6	220	33	VW3 A58453	12.500
Motor chokes					
Designation	For drives	Losses	Nominal current	Reference	Weight
		W	A		kg
Motor chokes	ATV 312HU22N4...HU40N4 ATV 312HU40S6, HU55S6	65	10	VW3 A4 552	3.000
	ATV 312HU22M2 ATV 312HU22M3, HU30M3 ATV 312HU55N4 ATV 312HU75S6	75	16	VW3 A4 553	3.500
	ATV 312HU40M3...HU75M3 ATV 312HU75N4, HD11N4 ATV 312HD11S6, HD15S6	90	30	VW3 A4 554	6.000
	ATV 312HD15N4	80	60	VW3 A4 555	11.000
	ATV 312HD11M3, HD15M3	–	100	VW3 A4 556	16.000
Ferrite suppressors for downstream contactor opening					
Designation	For drives	Sold in lots of		Unit reference	Weight
					kg
Ferrite suppressors for downstream contactor opening	ATV 312H018M2	3		VW3 A31451	0.300
	ATV 312H037M2 ATV 312H018M3, H037M3	3		VW3 A31452	0.200
	ATV 312H055M2...HU22M2 ATV 312H055M3...HU22M3	3		VW3 A31453	0.100

(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 Centre.