



Output Filters (Chokes) for Optidrive Installation Guide IP20 & IP66

Using Output Chokes

AC Inverters use a fast switching PWM technique to create a variable frequency AC Output to the connected motor. The fast switching of the output of the drive when connected with long motor cables results in a reflected voltage at the motor which can be up to three times the AC supply voltage, with very fast rise time. Output chokes help to reduce this peak voltage, and increase the rise time, to reduce the stress applied to the motor insulation and prevent damage. Output chokes are recommended whenever

- The connected motor is not 'Inverter Rated' or suitable for Inverter use.
- High capacitance motor cable is used
- The motor cable length exceeds the maximum limit shown in the relevant product user guide for shielded cable, or 150% of this value for unshielded cable. Using an output choke allows these values to be increased to 200% of the value shown for shielded cable, and 300% of the value shown for unshielded cable, e.g.
 - If the maximum allowed cable length for a given product shown in the User Guide is 25m, the limits are
 - 25 metres of shielded cable
 - 37.5 (e.g. 150%) metres of unshielded cable
 - 50 metres of shielded cable with an output choke fitted
 - 75 metres of unshielded cable with an output choke fitted

Important Safety Information

This option is specifically designed to be used with the Optidrive variable speed drive product range and is intended for professional incorporation into complete equipment or systems. If installed incorrectly it may present a safety hazard. The Optidrive uses high voltages and currents, carries a high level of stored electrical energy, and is used to control mechanical plant that may cause injury. Close attention is required to system design and electrical installation to avoid hazards in either normal operation or in the event of equipment malfunction. Optidrive and the Options should be installed only by qualified electrical persons and in accordance with local and national regulations and codes of practice.

Electric shock hazard! Disconnect and **ISOLATE** the Optidrive before attempting any work on it. High voltages are present at the terminals and within the drive for up to 10 minutes after disconnection of the electrical supply.

Where the electrical supply to the drive is through a plug and socket connector, do not disconnect until 10 minutes have elapsed after turning off the supply.

It is the responsibility of the installer to ensure that the equipment or system into which the product is incorporated complies with the EMC legislation of the country of use. Within the European Union, equipment into which this product is incorporated must comply with 2004/108/EC, Electromagnetic Compatibility.

Within the European Union, all machinery in which this product is used must comply with the Directive 2006/42/EC, Safety of Machinery. In particular, the equipment should comply with EN60204-1.

The manufacturer accepts no liability for any consequences resulting from inappropriate, negligent or incorrect installation.

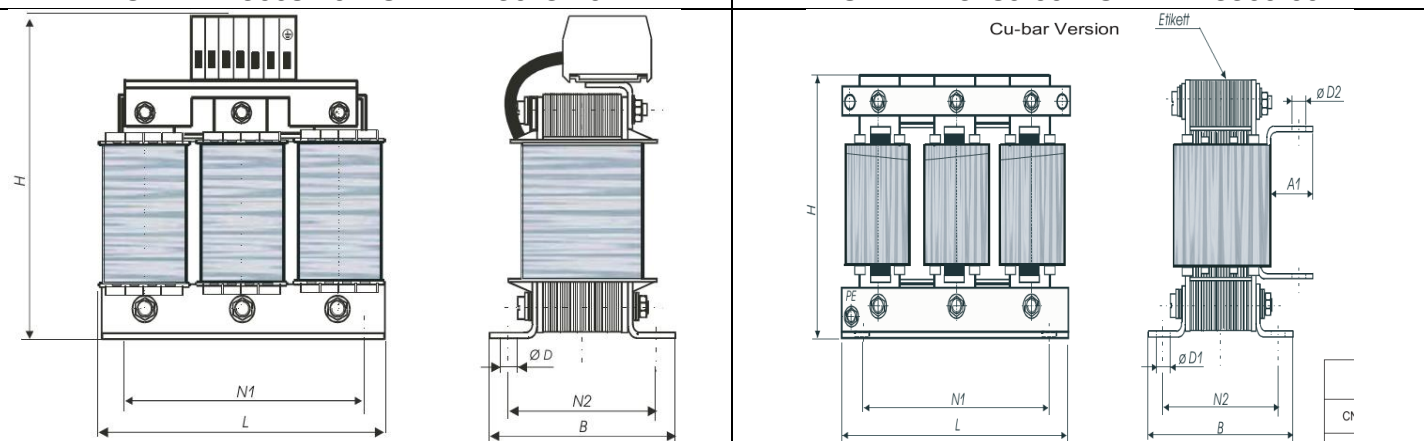
The contents of this User Guide are believed to be correct at the time of printing. In the interests of a commitment to a policy of continuous improvement, the manufacturer reserves the right to change the specification of the product or its performance or the contents of the User Guide without notice.

Dimensions – Open Type

Part Number	Optidrive Size	Connection	L (mm)	H (mm)	B (mm)	N1 (mm)	N2 (mm)	∅D (mm)	Rated Volts	Rated Amps	Inductance (mH)	Weight (kg)
OPT-2-M3008-20	1	2.5 mm ²	95	107	61	56	43	4	500 Max	8	2.0	1.5
OPT-2-M3012-20	2	4 mm ²	125	158	76	100	55	5		12	1.7	2.8
OPT-2-M3030-20	3	10 mm ²	155	185	66	130	57	8		30	0.5	4.2
OPT-2-M3075-20	4 & 5	35 mm ²	190	223	92	170	68	8		75	0.22	8.6
OPT-2-M3180-00	5 & 6	11 mm	360	263	180	264	122	10 x 18	400 Max	180	0.09	30
OPT-2-M3300-00	7	9 mm	380	310	180	248	139	10 x 18		300	0.053	48

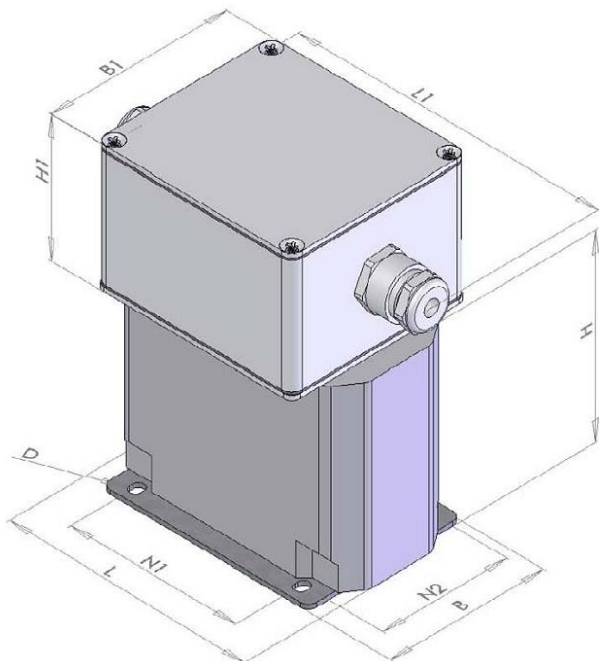
OPT-2-M3008-20 – OPT-2-M3075-20

OPT-2-M3180-00 – OPT-2-M3300-00

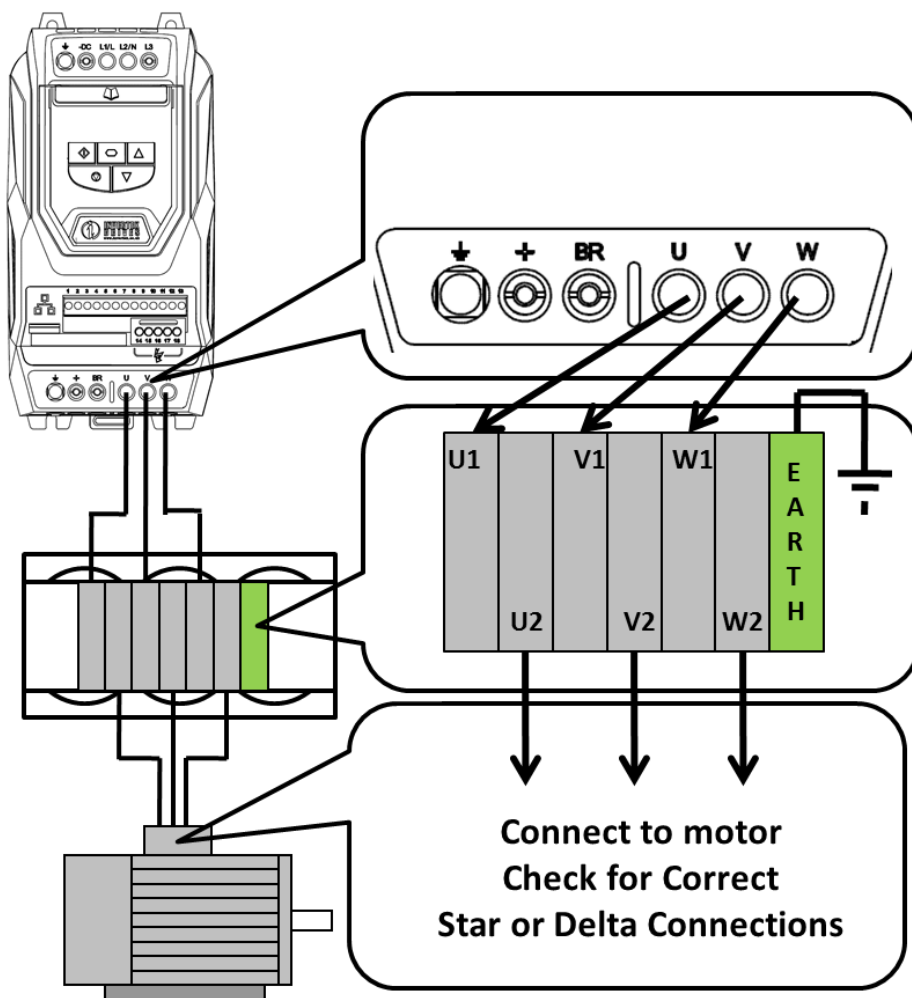


Mounting Dimensions – Enclosed Versions

Part Number	Optidrive Size	Connection (mm ²)	L (mm)	H (mm)	B (mm)	N1 (mm)	N2 (mm)	ØD (mm)	L1 (mm)	H1 (mm)	B1 (mm)	Rated Volts	Rated Amps	Inductance (mH)	Weight (kg)
OPT-2-M3008-66	1	2.5	115	85	74	80	60	5.5 x 7	151	60	85	600 Max	8	2.0	1.7
OPT-2-M3012-66	2	2.5	140	110	87	100	70	5.5 x 12	151	60	85		12	1.2	3.2
OPT-2-M3018-66	3	10	140	110	87	100	70	5.5 x 12	151	60	85		18	0.9	3.2



Installation Schematic Diagram





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