



**INVERTEK
DRIVES**
www.invertek.co.uk

OPTIDRIVE OPTIFILTERS



SAFETY NOTICES

WARNING is given where there is a hazard that could lead to injury or death of personnel.

CAUTION is given where there is a hazard that could lead to damage to equipment.

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 89/336/EEC, Electromagnetic Compatibility.

WARNING

Within the European Union, all machinery in which this product is used must comply with the Directive 89/392/EEC, Safety of Machinery. In particular, the equipment should comply with EN60204-1.

WARRANTY

Complete Warranty Terms and Conditions are available upon request from your IDL Authorised Distributor.

CAUTION

• Store the Option in its box until required. It should be stored in a clean and dry environment. Temperature range -40°C to $+60^{\circ}\text{C}$.

• Install the Option onto the Optidrive by inserting the row of 11 pins into the terminal connector of the Optidrive, ensuring that the terminals are tightened.

• If the Option is being used with Size#1 Optidrive, care should be taken to support the Option when the terminal screws of the Option are being tightened or loosened.

WARNING

• Optidrives 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.

User Guide

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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.

SAFETY

This option is specifically designed to be used with the Optidrive variable speed drive product 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.

System design, installation, commissioning and maintenance must be carried out only by personnel who have the necessary training and experience. They must read carefully this safety information and the instructions in this Guide and follow all information regarding transport, storage, installation and use of the Option module, including the specified environmental limitations.

Please read the IMPORTANT SAFETY INFORMATION below, and all Warning and Caution boxes elsewhere.

STANDARDS CONFORMITY

An Optidrive fitted with this Option complies with the following standards:

- CE-marked for Low Voltage Directive.
- IEC 664-1 Insulation Coordination within Low Voltage Systems.
- UL 840 Insulation Coordination for electrical equipment.
- EN50081-2 EMC Generic Emissions Standard, Industrial Level.
- EN50082-2 EMC Generic Immunity Standard, Industrial Level.
- Enclosure ingress protection, EN60529 IP00, NEMA 250.
- Flammability rating according to UL 94.

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OPTIFILTER

RFI line filters

Optidrive Size 1, 2 & 3

Footprint or side mounting filters for compliance with EMC standards for conducted emissions.

Note: all Optidrives inherently comply with the EMC radiated emission standards (EN 61000), when good wiring practice is employed.

Optifilters are mechanically easy to install and to retrofit and the provision of filter-drive cables significantly reduces electrical wiring time.

A key feature of all Optifilters is the predominant use of high specification inductive components rather than lower cost capacitive components. This substantially improves earth leakage performance and is of particular benefit for medical, domestic and multi-drive system applications where earth leakage breakers will trip less readily.

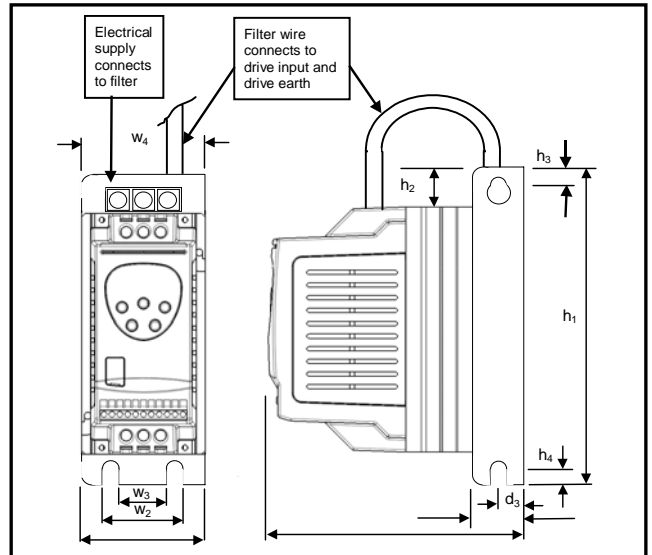
Note:

This is suitable for use on all OD, ODE, ODP and ODV types of Drive.
For Part No. information please see the Table below.

EASY START UP

- Optifilter is designed to slide on to the back of the Optidrive heatsink creating a simple integrated assembly.
- Fixing holes for the combined assembly are the same as for the standalone drive; longer screws are provided.
- The electrical supply connects to the filter; connection of the supply earth to the filter earth is essential.
- The filter wire (see diagram above) connects to the drive input and drive earth points as per the label on the wire.
- These filters contain capacitors that are connected between phase and earth; a leakage current will flow during normal operation, therefore a good earth connection is essential and must be connected before applying power to the filter.

*** When screened motor cable is used and connected as per the Optidrive manual employing good wiring practice, the integrated Optifilter and Optidrive assembly meets the European standard for EMC for motor - drive cable lengths defined in the table opposite.**



Part No. (OD-xxxx-xx)	F1121	F1341	F2121	F2341	F3341	
Drive Size	1	1	2	2	3	
Supply voltage +/- 10%	V 220- 240	220- 480	220- 240	220- 480	220- 480	
Phases	1	3	1	3	3	
Output current max	A 16	6	25	16	30	
Earth leakage	mA <1.6	<30	<1.6	<30	<30	
Dimensions						
W1	mm	90	90	114	114	186.60
W2	mm	65.50	65.50	75.50	75.50	148
W3	mm	54.50	54.50	64.50	64.50	137
W4	mm	60	60	70	70	146.60
h1	mm	200	200	300	300	300
h2	mm	30	30	20	20	20
h3	mm	5.50	5.50	5.50	5.50	6.22
h4	mm	6.50	6.50	6.50	6.50	6.50
d1	mm	175	175	225	225	225
d2	mm	46	46	51	51	51
d3	mm	23	23	25.60	25.60	-
Weight (filter only)	kg	0.5	0.5	0.9	0.9	0.9
*Compliance with Conducted Emissions standards						
EN 50081-1 (Domestic): motor-drive cable length						
Effective Switching Frequency	8kHz	m	10	3	5	5
	16kHz	m	5	3	5	5
	32kHz	m	5	3	5	5
EN50081-2 (industrial): motor-drive cable length						
Effective Switching Frequency	8kHz	m	40	10	35	30
	16kHz	m	30	10	30	30
	32kHz	m	25	8	25	25

*** When screened cable is used and connected as per Optidrive manual employing good wiring practice**

