



**INVERTEK
DRIVES**
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OPTIDRIVE BRAKE RESISTOR USER GUIDE



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.

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.

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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Part No. 82-BRAKE-IN
Iss 1.00

OPTIBRAKE

Dynamic braking resistors

Optidrive Size 2 to 6

Optibrake dynamic braking resistors are designed specifically for the Optidrive range. For use with high inertia loads which need to be stopped rapidly, Optibrake dynamic braking resistors assist the Optidrive manage the electrical energy returned from the motor during braking, by converting it to heat energy.

Key Benefits

- Optidrive software protects the Optibrake from overload, hence no need for expensive overload relays are required
- Internal fusible element ensures fail safe operation
- Connects to side of drive, using heatsinking properties of heatsink to prevent overheating
- No space envelope penalty, fits on side of drive
- Serial parallel arrangements for more demanding applications

Key Physical Features

- IP21, robust assembly
- Wirewound
- Metal clad housing

Note:

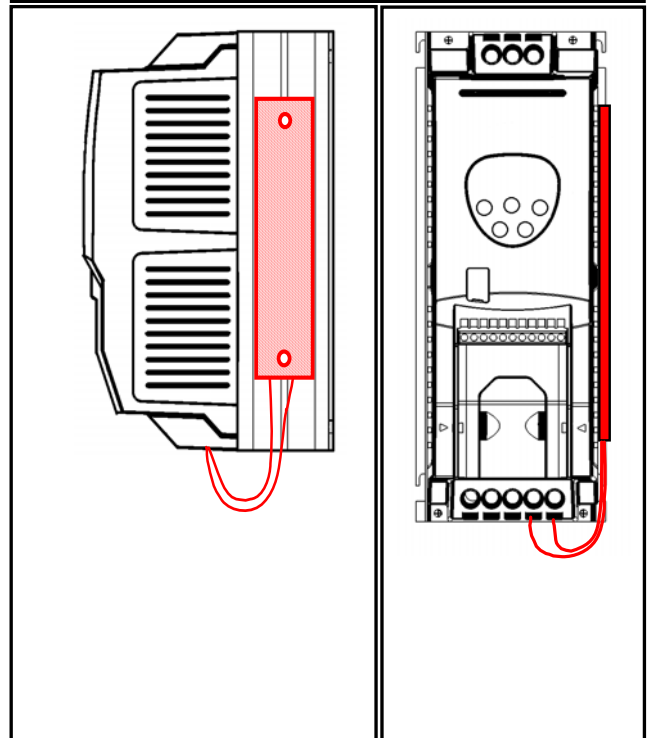
This is suitable for use on all OD, ODE, ODP and ODV types of Drive.

For Part No. information please see the Table below.

SPECIFICATIONS

Optibrake for Optidrive Size 2 and 3:
200 Watt continuous, 6kW peak for 0.132s
Dimensions 188 x 40 x 9mm

Optibrake for Optidrive Size 4:
500 Watt continuous, 25kW peak for 0.132s
Dimensions 330 x 80 x 12mm



EASY START UP

- Optibrake is designed to slide on to the side of the Optidrive heatsink creating a simple integrated assembly.
- Fixing screws for the Optibrake are provided along with spring washers. Ensure these are fastened securely before operation.
- Connect to the + and BR terminals on the Optidrive, orientation is not important.
- For OD and ODE Drives Only - To enable the Optibrake to work Parameter 34 of the drive needs setting to 1 (***NOT to 2 as this would disable software overload protection of the resistor***). Note to access P34 the value of P14 may need to be set to 101, refer to the Optidrive manual for further information.
- For ODP and ODV Drives – To enable the Optibrake to work set Parameter 2-23 to one of the following –
 - 0: Disabled
 - 1: Enable + lo power
 - 2: Enable + hi power
 - 3: Enable, no protection
- For heavy braking applications a maximum of two resistors can be fitted in parallel, one to either side of the Optidrive.

OPTION MODULE PART No's.

Size 2 and Size 3

- OD-BR100-IN
 - 100R, 200W Continuous
- OD-BRES2-IN
 - 50R, 200W Continuous

Size 4, 5 & 6

- OD-BRES4-IN
 - 33R, 500W Continuous

