



**INVERTEK
DRIVES**
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OPTIDRIVE DUAL ANALOGUE INPUT MODULE



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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Explanation

The Dual Analog Input Module can be used in applications where the speed reference for the drive is required to be switched between two references.

The typical application is where a drive is controlled remotely using a current reference but needs to have a local option of control usually with a potentiometer.

Note

This option is available for the following drives:

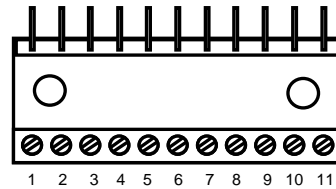
Suitable for Optidrive (OD)
Part number OD-2ANIN-xx

Suitable for Optidrive E (ODE)
Part number ODE-2ANIN-xx

SPECIFICATIONS

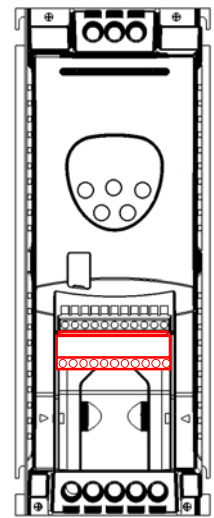
Analog input 1 : +/- 10V DC or 4...20mA
Analog input 2 : +/- 10V DC or 4...20mA
Max input voltage : +/- 50V DC
Environmental : -10°C ... +50°C
Conformity : IP00, UL94V-0

OPTION MODULE COMPONENT LAYOUT



Note :

The signal connected to the input of digital input 3 is used to switch between Analog input 1 (terminal 6) and Analog input 2 (terminal 7).



Optidrive size 2

Option PCB inserted into Optidrive control terminal strip.

All 11 terminal screws on the Optidrive must be tightened to ensure good electrical contact and correct functionality.

OPERATION

Switching between a voltage and a current speed reference

- Connect the voltage signal to terminal 6 and the current signal to terminal 7 of the option module. Each of these signals is referenced to terminal 9 (0V). The digital signal used to switch between the voltage and current inputs should be connected to terminal 4 (digital input 3).

Set the Optidrive parameters as follows :

P-19 = 0, P-16 = 4-20mA (or 0-20mA / 20-4mA depending on required format)

When digital input 3 is open, the voltage format signal (connected to terminal 6) will be selected.

Hand – Off – Auto operation

- The required analog reference signals should be connected to terminals 6 and 7 as described above. This mode of operation requires a 2-pole change-over, centre-off switch. The first pole of the switch is used to enable the drive, where both "Hand" and "Auto" positions should be connected to digital input 1. The second pole of the switch is connected to digital input 3, as described above. The common connection point of each of the switches should be connected to terminal 1 (0V).

In a typical configuration, "Hand" will enable the drive using the voltage (local) reference, "Auto" will enable the drive using the current (remote) reference.

OPTION MODULE CONTROL TERMINALS



* Analog inputs should be connected to terminals 6, 7 & 8.

NOTES