

## RS485 Data Cable Splitter and Cables



### 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  $-40^{\circ}\text{C}$  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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## RS485 Data Cable splitter

*RS485 data cable splitter is an RJ11 1 to 2 way connection block*

The RS485 Data Cable splitter can be used in typical applications where the RJ11 communications port from an Optidrive Plus or Optidrive VTC is required to be connected to more than one other drive.

Typical applications are where communication is required from any of the following sources to multiple drives forming a network :

- Drive to Drive Communication / Master-Slave
- Drive Networks to Intelligent Controllers
- Fieldbus Communication
- Optiport Plus
- PC to Drive Network via USB-RS485 Converter

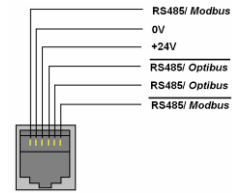
For further details please refer to the Drive User Guide.

### Note:

This Option is suitable for use on ODP and ODV Drives.

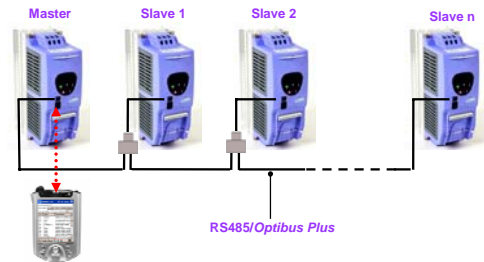
Part No. - OD-485SP-xx

### COMMUNICATION INTERFACE – 1 TO 2 WAY CONNECTION BLOCK

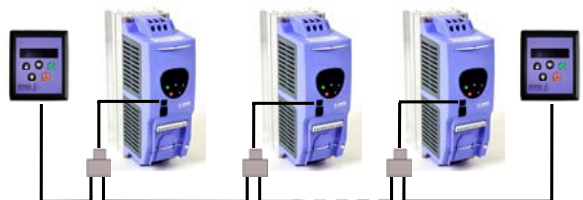


### EXAMPLES OF CONNECTING THE RS485 SPLITTER

- Master / Slave Drive Network with multiple drives



- Two Optiport Plus units with multiple drives



### NOTES

## RS485 Data Cables

*RS485 data cable splitters utilise the following available lengths of Cable with RJ11 terminations at each end*

| <u>Part No.</u> | <u>Description</u>      |
|-----------------|-------------------------|
| OD-48503-xx -   | RS485 data cable, 0.30m |
| OD-48510-xx -   | RS485 data cable, 1.0m  |
| OD-48530-xx -   | RS485 data cable, 3.0m  |