SAFETY

Optipad is designed to be used in conjunction with the Optidrive variable speed drive ranges listed. It is intended for professional incorporation into complete equipment or systems. The Optipad can be used to control the operation of the Optidrive ranges ODE-2, ODP-2 and ODV-2 (hereafter referred to as Optidrive). The drive must be installed correctly to prevent 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 and the Optidrive User Guides and follow all information regarding transport, storage, installation and use, including the specified environmental limitations.

Please read the IMPORTANT SAFETY INFORMATION below, and all Warning and Caution boxes within this document.

IMPORTANT SAFETY INFORMATION

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.

Dr David Jones, R&D Director

SAFETY

When installing the Optipad, all Optidrives should be disconnected and ISOLATED before attempting any work. High voltages are present at the terminals and within the drive for up to 10 minutes after disconnection of the electrical supply. The Optidrives should be installed by qualified electrical persons and in accordance with local and national regulations and codes of practice.

Please refer to the relevant Optidrive user manual for further details.

MECHANICAL INSTALLATION

THROUGH PANEL MOUNT

The panel on to which the Optipad is to be mounted should be cut out in accordance with the diagram below.

ELECTRICAL INSTALLATION

Electrical Interface

The Optipad uses a standard RJ45 8-Way connector as its electrical interface, which provides a simple solution for the user to setup their system using a standard RJ45 8-Way data cable. The signal layout of the connector is as follows:

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Optidrive / Optibus</td>
</tr>
<tr>
<td>2+5</td>
<td>RS485 + / Optibus</td>
</tr>
<tr>
<td>3+6</td>
<td>+24V</td>
</tr>
<tr>
<td>4+7</td>
<td>+5V</td>
</tr>
<tr>
<td>8</td>
<td>NC</td>
</tr>
</tbody>
</table>

Incorrect cable connection may damage the drive. Extra care should be taken when using third party cable.

System Setup

The Optipad provides the +24V power supply to the Optipad via the RJ45 connection. Once the physical connection has been setup, the system is ready to operate. See picture below:

Note: The location of the RJ45 connector on the Optidrive will vary depending on the Optidrive range and model.

CAUTION

Incorrect cable connection may damage the drive. Extra care should be taken when using third party cable.

WARNING

1. When installing the Optipad, all Optidrives should be disconnected and ISOLATED before attempting any work. High voltages are present at the terminals and within the drive for up to 10 minutes after disconnection of the electrical supply. The Optidrives should be installed by qualified electrical persons and in accordance with local and national regulations and codes of practice.

2. Please refer to the relevant Optidrive user manual for further details.

Important Measures

1. Carefully inspect the Optipad before installation to ensure it is undamaged.

2. Store the Optipad in its box until required. Storage should be clean and dry. Temperature range -40°C to +60°C.

3. Install the Optipad on a flat, flame-resistant vibration-free surface.

4. Flammable material should not be placed close to the Optipad.

5. Verify that the installation meets the requirements for the environment in which the system is used.

6. The system design, installation, commissioning and maintenance must be carried out only by personnel who have the necessary training and experience.

7. System setup and operation should be carried out in accordance with the instructions in this User Guide.
**EASY STARTUP**

To set up the Optipad communication address

By default, the Optipad will try to communicate with the drive that has Address 1 in the network after powering up for the first time. The Optipad will extend the communication address to 2 if it is operating in K mode or when an additional keypad mode is enabled.

**DRIVE OPERATION**

To change parameter group (ODP2 & ODV2 drives only)

Ensure that extended parameter group access is enabled. The default extended parameter access code is 101 and this should be entered in P1-05 or P1-04 to enable the extended parameter group access.

Enter parameter edit mode with parameter number PX.XX displayed. Press NAVIGATE button and then simultaneously press and release the UP and DOWN key to change the parameter group number until the required parameter group is displayed.

**LOCKING ACCESS TO THE PARAMETERS**

To prevent unauthorized access to the parameters via the Optipad set the following parameter values based on the Optipad product range in use:

- ODP2 or ODV2 Range: P2-39 = 1
- ODE Range: P39 = 1

Once this parameter has been set, access to parameters via the Optipad will be locked. Use the UP and DOWN keys to select the desired parameter access.

**NOTE**

For detailed parameter listing and functional setup, please refer to the corresponding Optidrive handbook.

**REAL TIME OPERATION**

Once the communication has been established between the drive and the Optipad, the user can operate and monitor the drive by using the control buttons on the front panel of the Optidrive (except Optidrive HVAC).

To monitor or change a parameter value

- Press and hold the NAVIGATE key for more than 1s when the drive is stopped then release the key.
- Press and release the NAVIGATE key to display the value of the parameter to be edited.
- Change to the required value using the UP and DOWN keys.
- Press and release the NAVIGATE key once more to store the change.

**TRROUBLE SHOOTING**

**SYMPTOM**

Display ‘Err ’ message

**EXPLANATION**

The Optipad and Optidrive has failed. Displayed after detecting a communication error with the drive.

**DISPLAY MESSAGES**

**TROUBLE SHOOTING**

**SYMPTOM**

Display ‘Err ’ message

**EXPLANATION**

The Optipad and Optidrive has failed. Displayed after detecting a communication error with the drive.

**Note:** Cable splitter available from Invertek Drives Ltd on request.