SAFETY
The REMOTE PANEL is designed to be used in conjunction with the ACS255 variable speed drive. It is intended for professional incorporation into complete equipment or systems. The ACS255 must be installed correctly to prevent a safety hazard. The ACS255 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 ACS255 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 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.

IMPORTANT SAFETY INFORMATION
Safety of machinery, and safety-critical applications
The level of integrity offered by the REMOTE PANEL/ACS255 control functions – for example stop/start, forward/reverse and maximum speed, is not sufficient for use in safety-critical applications without independent means of protection. All applications where malfunction could cause injury or loss of life must be subject to a risk assessment and further protection provided where needed.

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

CONFORMITY WITH STANDARDS FOR ACS255
• CE-marked for Low Voltage Directive.
• EN61000-4 EMC Generic Emissions Standard, Industrial Level.
• EN61000-2 EMC Generic Immunity Standard, Industrial Level.
• Enclosure ingress protection, EN60529, NEMA 250.
• Flammability rating according to UL 94.

GENERAL SPECIFICATION
Compatible Drives: ACS255
Signal Interface: Standard 6-way RJ45 connector
Supply Input: 10V – 36V DC, 30mA
RS485 signal: industry standard 2 wire +5V differential
Environmental: Operational 0 … 50 °C
Storage -40°C … 60°C
Relative Humidity < 95% (non condensing)
Protection rating: IP54
Max cable length: 20m (unscreened, total length)
100m (screened, twisted pair, total length)

MECHANICAL INSTALLATION
WARNING
• When installing the REMOTE PANEL, all ACS255 drives 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 ACS255 should be installed by qualified electrical persons and in accordance with local and national regulations and codes of practice.
• Refer to ACS255 manual for further details.

CAUTION
• Carefully inspect the REMOTE PANEL before installation to ensure it is undamaged.
• Store the REMOTE PANEL in its box until required. Storage should be clean and dry. Temperature range -40°C to +70°C.
• Install the REMOTE PANEL on a flat, flame-resistant vibration-free surface.
• Flammable material should not be placed close to the REMOTE PANEL.

ELECTRICAL INSTALLATION
The REMOTE PANEL uses a standard RJ45 6-Way connector as its electrical interface, which provides a simple solution for the user to setup their system using a standard RJ45 6-Way data cable. The signal layout of the connector is as follows:

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

System Setup
The ACS255 provides the power supply to the REMOTE PANEL via the RJ45 connection. Once the physical connection has been setup, the system is ready to operate. See picture blow.
**USER INTERFACE**

![Diagram of USER INTERFACE](image)

**NAVIGATE:**
- Used to display real-time information, to access and exit parameter edit mode and to store parameter changes.
- Used to increase speed in real-time mode or to increase parameter values in parameter edit mode.

**DOWN:**
- Used to decrease speed in real-time mode or to decrease parameter values in parameter edit mode.

**RESET:**
- When drive is in trip mode, this button is used to start a stopped drive or stop a running drive.

**START:**
- When in keypad mode, this button is used to start a stopped drive or stop a running drive.

**RESTORE / STOP:**
- When drive is in trip mode, this button is used to reset and return to normal operation.
- In normal operation, when in Keypad mode, this button is used to stop the ramping drive.

**SYSTEM SETUP**

Depending on the requirement of the application, the REMOTE PANEL can be used in the following four different ways:

- **One REMOTE PANEL with one ACS255.**
- **One REMOTE PANEL with up to 63 ACS255’s.**
- **Two REMOTE PANELS with one ACS255.**
- **Two REMOTE PANELS with up to 63 ACS255’s.**

**REAL TIME OPERATION**

Once the communication has been established between the ACS255 and REMOTE PANEL, the user can control the ACS255 by using the control buttons on the front panel of the REMOTE PANEL.

To monitor or change a parameter value:
- Press and hold the NAVIGATE key for more than 1 s when the drive is displaying "Stop". The display changes to "P1-01", indicating parameter 01 in parameter group.
- Press and release the NAVIGATE key to display the value of this parameter.
- Change to the required value using the UP and DOWN keys.
- Press and release the NAVIGATE key once more to store the change.
- Press and hold the NAVIGATE key for more than 1 s to return to real-time mode. The display shows "Stop" if the drive is stopped or the real-time information (e.g. speed, current or power) if the drive is running.

To change parameter group:
- Ensure that the "Long Parameter mode (Par L)" has been selected as shown below.

1. Go to Parameter 1602 (Par L Parameter group) and enter in your chosen parameter access code.
2. Press the Navigate button to exit and parameter 1600 will then be hidden and all parameters will be "Read only" (except for Parameter 1602 which will remain "Read Write").
3. Assign parameter via the REMOTE PANEL. Now it will be prevented.

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Different drive models can be used on the same REMOTE PANEL network providing a unique communications address is assigned to each.

**EASY STARTUP**

To setup the communication address:

By default, the REMOTE PANEL will try to communicate with the drive that has address 1 in the network following powering up for the first time.

The REMOTE PANEL will initially display "SCAN", after power up, which indicates that the REMOTE PANEL is searching for the drive with address number 1 in the network. Once the drive has been found, the message "LOAD" will be displayed on the REMOTE PANEL display window, which indicates that the REMOTE PANEL is reading the configuration information from the drive.

If the drive has an address greater than 1, the REMOTE PANEL will display the drive real-time status.

If the REMOTE PANEL doesn’t find drive address 1 in the network, i.e., there is only one drive in the network and its address is not equal to 1, the REMOTE PANEL will request the user to enter an alternative address. The display will be displayed on the REMOTE PANEL display window, which indicates the remote panel is reading the configuration information from the drive. Usually it will take 1~2 seconds for the REMOTE PANEL to read this information. After the data has been loaded, REMOTE PANEL will display the drive real-time status.

When the drive is in keypad mode, the button is used to start a stopped drive or stop a running drive.

When drive is in trip mode, the button is used to reset and return to normal operation.

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