B. All equipment shall be visually inspected before installation to ensure that no obvious damage has occurred during transit and storage. Where relevant ranges, duty, labelling etc., shall also be checked.

C. Pre-Installation tests do not require detailed test procedures or documentation unless equipment is designed for installation on an existing and functioning site. Witness/ approval of pre-Installation tests shall be at the discretion of the Engineer.

1.3.22.25 Factory Acceptance Tests (FAT)

A. The FAT shall demonstrate compliance with specified requirements and duly approved Functional Design Specifications (FDS).

B. The FAT shall ensure compatibility of interconnected equipment, the proving of their interconnections and the interchange ability of modular items, plus operational/failure mode testing and recovery from failure.

C. The FAT shall be conducted using suitable and duly approved simulation equipment to ensure satisfactorily operation of the PLC.

1.3.22.26 Installation

A. Input/output modules shall be provided with adequate cabling support to avoid strain on the termination headers.

B. The I/O wiring shall be loomed to allow for the removal of the individual I/O card header complete with the attached wiring. For each I/O module, the header shall be clearly identified as to which module it relates.

C. PLC I/O wiring shall be wired directly to terminal blocks. Terminal blocks shall be installed to display a logical physical order coinciding with the associated PLC input identification order.

D. Each wiring termination between I/O modules and incoming/outgoing terminals shall be identified with the relevant alphanumeric I/O address.

E. Provide protection against lightning and/or power surges to protect electronic devices and telecommunication links against surges induced in signal and power lines. The protection device shall be such that the limiting-level shall not interfere with the normal operation of the system and shall be below the electronic device's surge withstanding rating.