Initial Assembly Water Meters

Requirements for Initial Assembly of Water Meters

V1.0.0 (DEC/2023)

eletra
energy solutions

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1 INTRODUCTION TO INITIAL ASSEMBLY

The Initial Assembly phase is a crucial milestone in the production cycle. This stage not only ensures the efficient organization of components but also integrates the pre-configuration of commands, both in the PIMS and the configurator software (SDK).

In a scenario where operational excellence is paramount, Initial Assembly plays a fundamental role in ensuring the integrity and compliance of the process. Besides laying the foundation for the precise execution of assembly, it represents the first line of defense in maintaining quality standards, ensuring that each component is properly positioned and ready for the next stages of production.

As we delve into the details of the requirements and the meticulous execution of this process, we highlight not only its functional importance but also its impact on operational efficiency and the quality of the final product. Initial Assembly is not just a transition between stages; it is a critical link that embodies precision and excellence in each component that undergoes this essential phase of the production cycle.

2 INITIAL ASSEMBLY

2.1 Step Function

- Carry out the transfer of the component to the Assembly MO in the PIMS.
- Perform pre-configuration of commands for the initial assembly step recorded in the PIMS and configurator software (SDK).

2.2 Requirements

1 - The user provides the number of positions on the workbench.

2 - The user enters the Barcode of the MO (can be typed or scanned).

- Check if the MO exists; otherwise, report the error “MO number not found! Contact PCP.”
- Check if the MO is valid; otherwise, report the error “Expired MO, please contact PCP.”
- Check if the Technical Sheet is approved; otherwise, report the error “Technical sheet not approved, contact Technical Support.”
- Check if the Technical Sheet is active; otherwise, report the error “Technical sheet not active, contact Technical Support.”
- Check if the Technical Sheet is valid; otherwise, report the error “Expired Technical Sheet, contact Technical Support.”
- Verify if the product has been approved (Requirement to be verified with Engineering).

3 - The fields “Product Description,” “Product Quantity,” and “Quantity Reported” must be filled after reading the data from the MO code. Read-only.

- If the “Product Quantity” and “Quantity Reported” fields are equal, no process should be possible, and the message “The quantity of meters in the MO has already been filled” should be displayed.

4 - Select the COM communication port with the meter in all positions.

- If no COM port is available, show the error “No serial port found, contact IT or Maintenance.”

5 - The system will read the serial number of the PCBA from the meter’s memory using the configured protocol.

- Check if the PCBA serial number is registered to another MO; if so, display the error “PCBA registered in MO .”
- The PCBA MUST NOT be in use by any Assembly MO (including the current MO).

- TDS MUST match in the sheet and PIMS; if not, display the error “Technical Data Sheets divergent from the registered TDS in the PIMS MO. TDS Sheet: . TDS PIMS: . Contact the Process.”
- PTH packaging MUST exist, except for MOs with already assembled meters.
- The system will verify if the meter comes assembled according to a check made with the TDS number.

6 - Write the parameterization commands as listed in the PIMS software.

7 - Insert the PCBA into the current Assembly MO in the PIMS and EletraEA. Display the message “Process Completed Successfully.”

3 Change log

3.1 Version 1.0.0

- Requirements for initial assembly of water meters.