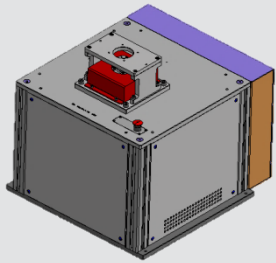


Product Brief



Key Features

- Built-in with a high accuracy reference encoder
- Communication protocol options:
 - SPI and SSI
 - Encoder Serial Link (ESL)
 - BiSS-C
 - RS485 half-duplex
- Recommended operating temperature range: 25°C ± 10°C
- Built-in servo motor system
- Compact size:
H 420 mm × W 420 mm × L 490 mm
- Calibration kit and PC software included
- Caters to DUT motor size up to 80 mm

Benefits

- Perform encoder configuration
- Calibrate the AR25 rotary encoders to meet accuracy of ±30 arc-seconds typical
- Fast installation and calibration of motor assembly
- Cost-effective solution

AR25-AC25

Accuracy Calibration Station

Overview

The AR25 Series Smart Absolute Encoder ASIC is designed to cater to the growing demand for space constraint applications. The AR25 is designed for encoder diameter from 30 mm to 60 mm. Hence, a through hollow shaft solution of up to 30 mm diameter is possible with this state-of-the-art encoder. Up to 25 bits single-turn absolute output can be configured via the built-in communication protocol.

The encoder ASIC, when subjected to assembly misalignment, may report high accuracy error when the mounting tolerance is exceeded. Factors that contribute to accuracy error are motor shaft radial run-out, code wheel to hub eccentricity, and hub to motor shaft eccentricity.

The AR25 Once-Around-Correction (OAC) feature compensates for the mounting assembly error electronically and eases the encoder manufacturing process.

This Accuracy Calibration Station is developed as a reference design and a tool to enable customers to perform accuracy calibration on the AR25 encoders to the required optimum accuracy performance.

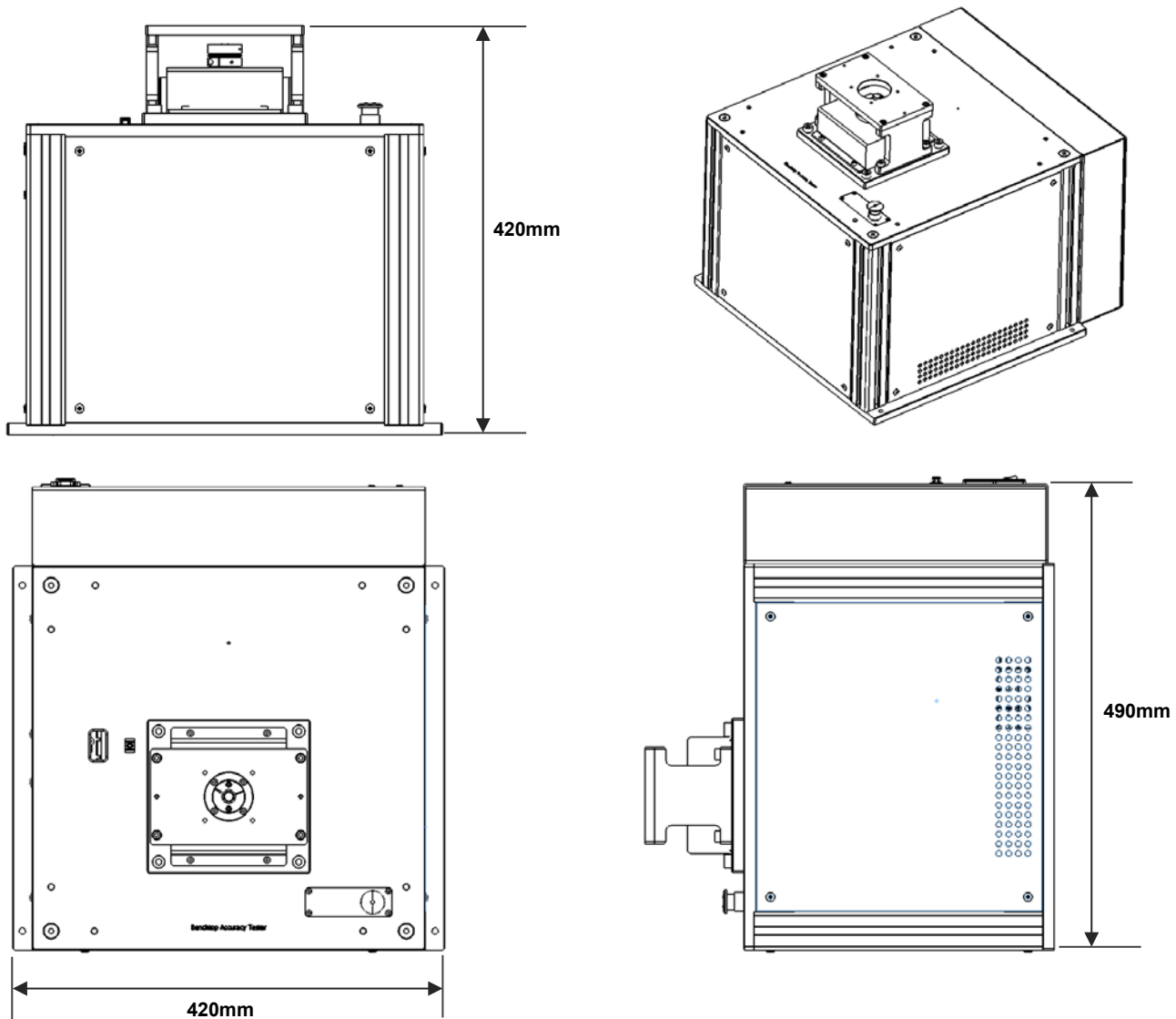
Ordering Information

Part Number	Description
AR25-AC25	Accuracy calibration station for AR25 Encoder Series

NOTE: This equipment should be used in a laboratory with controlled environment and be operated by trained technical personnel. Depending on the operating environment, customers should evaluate and implement any additional safety measures when operating this equipment.

Mechanical Outlines

Figure 1: Dimensions of the Calibration Station



NOTES:

- Dimensions are in millimeters.
- Third angle projection.
- Unless otherwise specified, all tolerances are within ± 2 mm.

Calibration System

Figure 2 shows the general overview of the AR25-AC25 calibration process flow.

Figure 2: AR25 Encoder Calibration Flow with the AR25-AC25

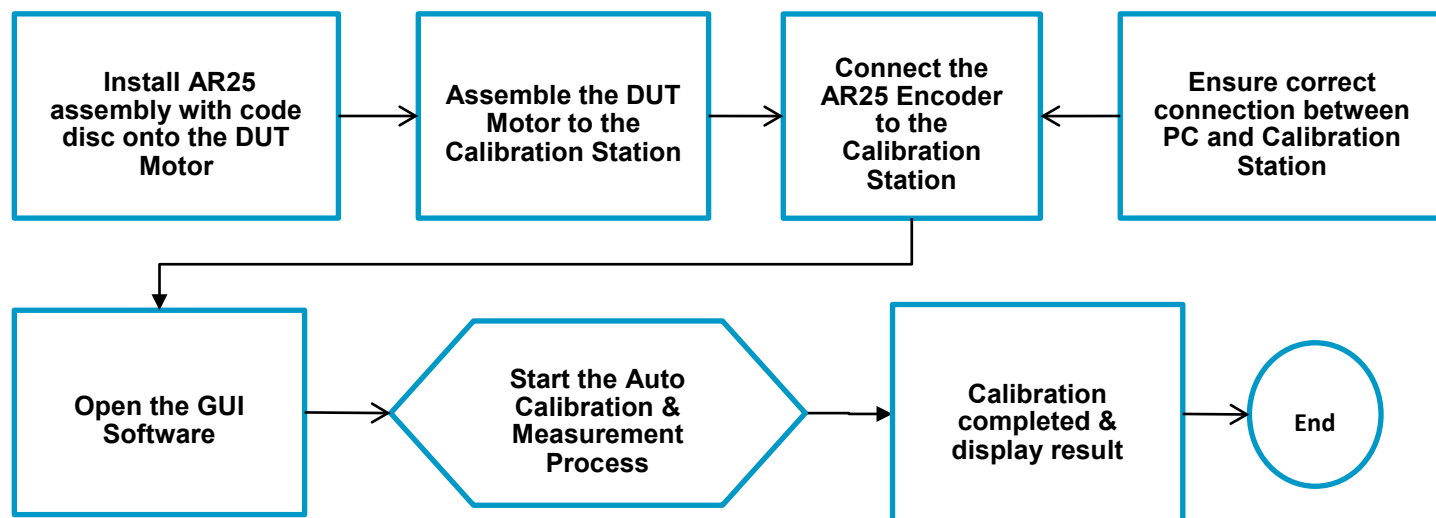


Figure 3: Overview of the Calibration System

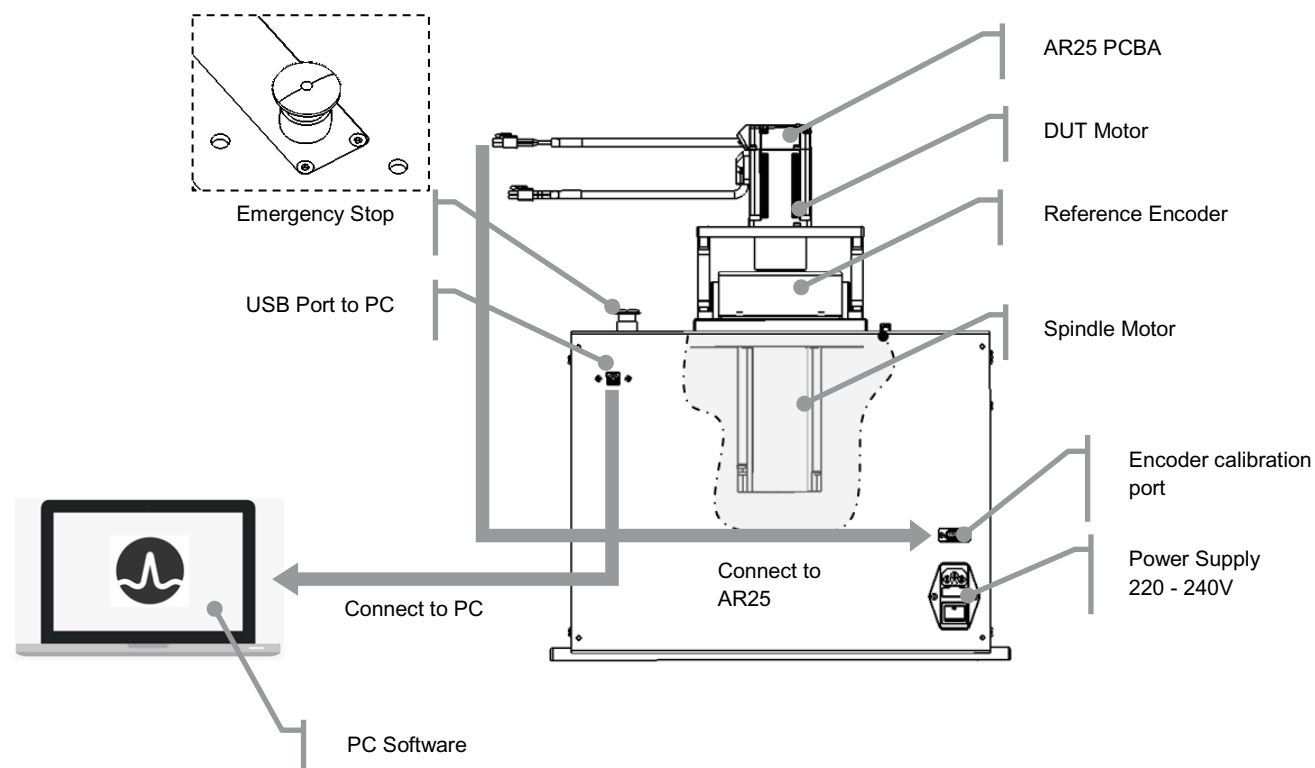
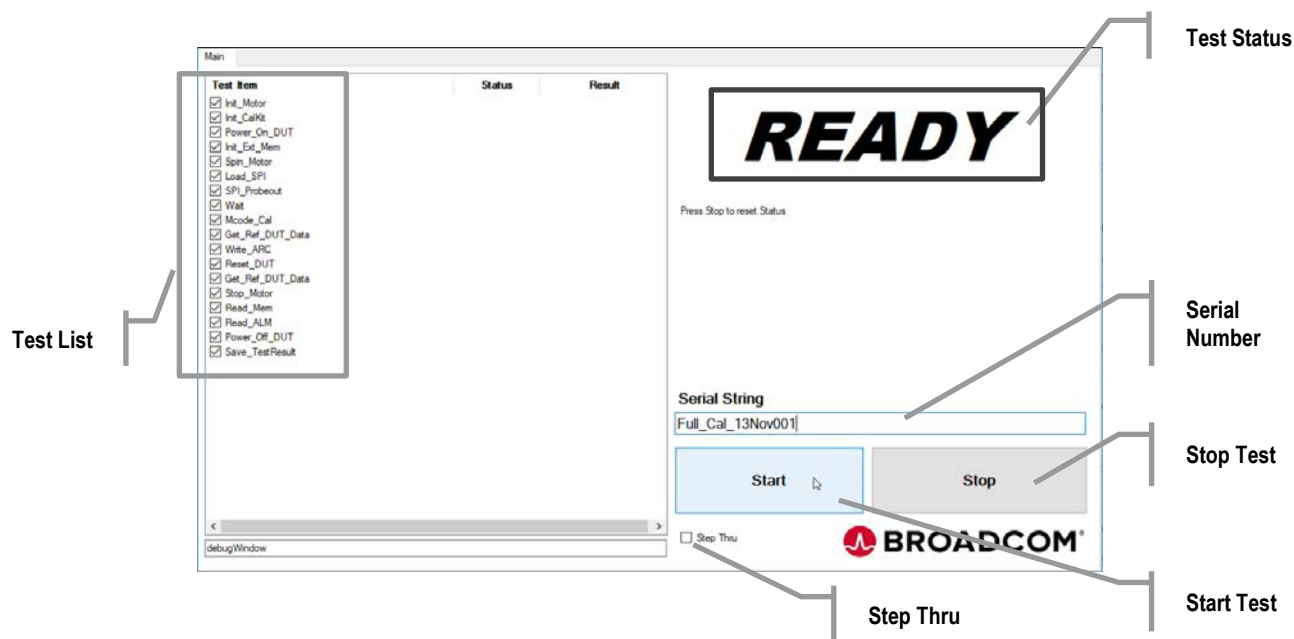


Figure 4: Typical User Interface of the Calibration Software

**Definitions:**

- **Test List:** List of test items. Checked box shows the test parameter is selected.
- **Test Status:** Indicates the status of calibration.
- **Serial Number:** DUT serial number input for data logging.
- **Start Test:** Begin calibration flow.
- **Stop Test:** Reset the calibration flow to READY state.
- **Step Thru:** Pause on every parameter.