OpenVVVF

TEST REPORT

Induction Motor Testbed

> Base documentation for the TECO MAX-IE3 induction motor testbed used for calibration validation.

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1. Induction Motor Testbed

PLACEHOLDER

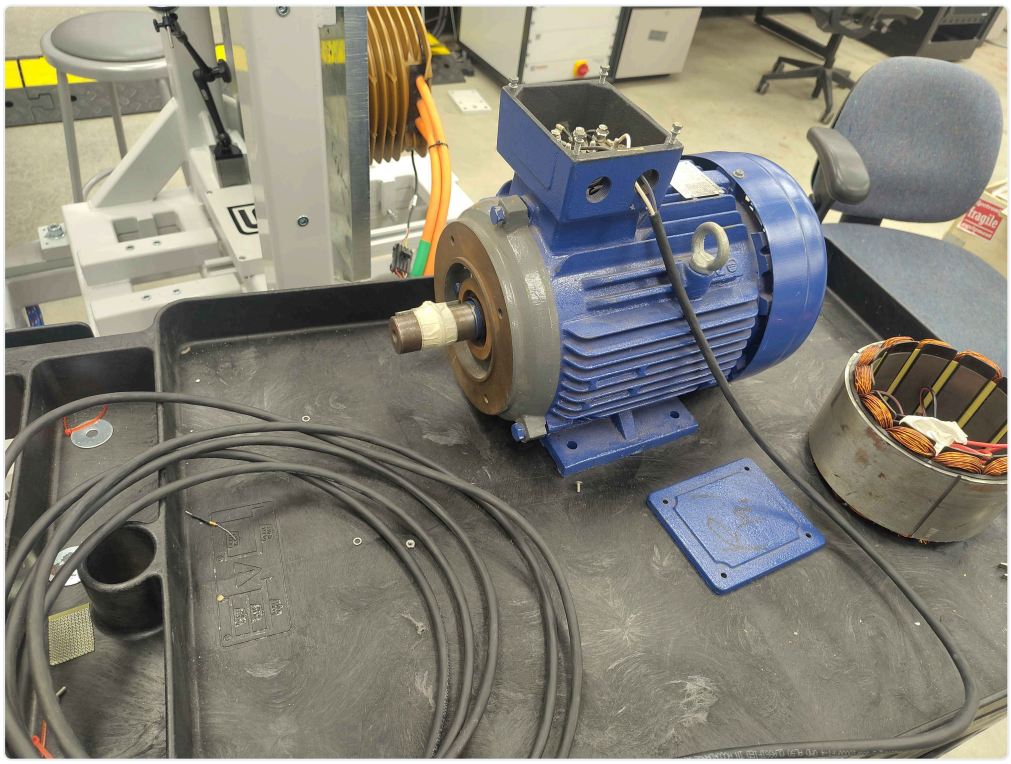
- add photos of the fixture, phase-lead access, and any additional instrumentation once the testbed is fully wired.

This document describes the induction-motor testbed used to validate the OpenVVVF motor self-commissioning routines. The same physical setup is used for both the resistance and inductance calibration reports.

1.1. Motor under test

Parameter	Value
Manufacturer	TECO Westinghouse
Model	MAX-IE3 3-phase induction motor
Type	Squirrel-cage induction machine
Power	10 HP / 7.5 kW
Frequency	60 Hz base
Voltage	208 V network
Current	26.3 A
Enclosure	TEFC

TECO MAX-IE3 nameplate



TECO MAX-IE3 motor on the test bench

1.2. Test fixture

The motor is mounted on a bench fixture with the conduit box open so the three phase leads are accessible for direct bench measurement and for connection to the inverter output. A shaft coupling/cover is used for basic mechanical safety during no-load electrical tests.

1.3. Instrumentation

- **LCR meter:** BK Precision 894 (20 Hz - 500 kHz)
- Used for DCR (DC resistance) reference measurements.
- Used for Ls-Rs (series inductance / resistance) reference measurements at 1 kHz.
- **Inverter:** OpenVVVF C2 chassis test fixture.
- **DC supply:** Variable DC bus for the inverter.
- **Current measurement:** Inverter phase-current sensors and independent current probe for cross-check.

1.4. Wiring and access

- Phase leads U, V, W are accessed at the motor conduit box.
- For LCR measurements the inverter is disconnected and the LCR meter is connected directly across the phase pair being measured.
- For inverter calibration runs the motor is connected to the C2 inverter output through appropriately rated cabling.

1.5. Safety notes

- The motor is a rotating machine; keep guards in place whenever power is applied.
- Lock out the inverter DC bus and discharge the DC-link capacitors before connecting or disconnecting leads.
- Verify phase rotation and current limits before running the calibration routine.

1.6. Related reports

- Induction Motor Resistance Calibration Validation
- Inductance Calibration Validation