SrNo-252614 - 3 Station Overload Relay Test Bench

PC-Based OLR Trip-Time Testing With Three-Station Throughput

Item	Details
Document Type	Product Datasheet
Product	SrNo-252614 - 3 station Overload Relay Test Bench
Revision	0
Date	2026-11-01
Prepared By	NSM Industrial Solutions Pvt Ltd
Website	www.nsmsolutions.com

The **SrNo-252614 - 3 station Overload Relay Test Bench** is a guarded, PC-controlled system for IEC 60947-4-1-referenced laboratory evaluation of overload relays for repeatable trip-time testing, result recording, and engineering traceability.

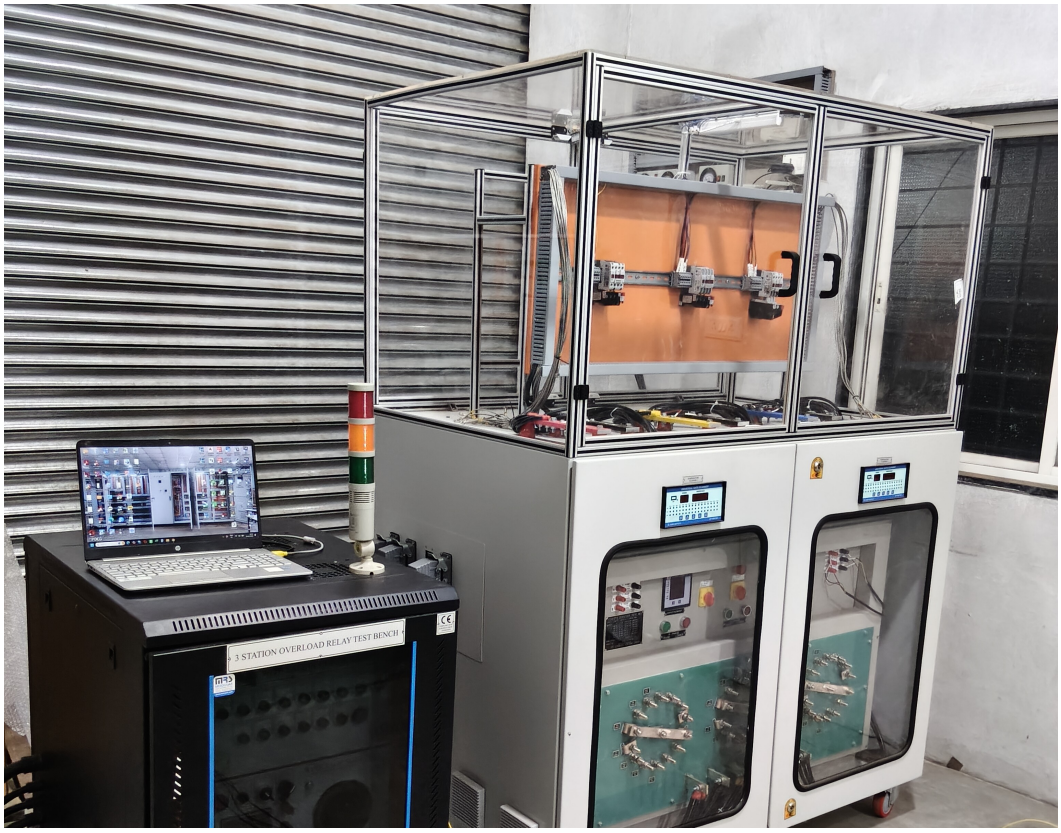


Figure 1: Complete three-station overload relay test bench

Complete three-station overload relay test bench

Designed for: Quality-department laboratories, product R&D teams, and engineering-validation environments.

Key Advantages

Capability	Benefit
Three dedicated DUT stations	Efficient repeated testing for laboratory and engineering work
Up to three DUTs in one run	The same selected test mode and common test condition can be applied to three compatible relays at the same time
PC-based operation	Guided test execution, live status indication, and controlled sequencing
Recipe-based testing	Repeatable test settings for different relay ranges and test modes
Trip-class coverage	Suitable for overload relays of trip classes 10, 20, 30, and 40
Trip-time and I^2t recording	Directly captured test data for review and traceability
Guarded DUT area	Transparent protective covers and monitored safety functions
Temperature monitoring	24 thermocouple channels for test and equipment monitoring

Test-Bench Configuration

Item	Configuration
Product	PC-based overload relay trip-time test bench
Project serial number	SrNo-252614
DUT stations	3
Test execution	One selected test sequence at a time, applied to up to 3 compatible DUTs
Intended OLR current-setting range	0.1 A to 32 A, subject to DUT type, test mode, validated recipe, and agreed test conditions
Supported trip classes	10, 20, 30, and 40
Current source	3-phase AC, up to 300 A
Voltage sources	2 x 0-500 V AC/DC manual voltage sources; DC mode provides a full-wave-rectified waveform
Test data	Current, trip feedback, trip time, I^2t, temperature, and result status
Temperature monitoring	24 thermocouple channels using two temperature scanners
Control and recording	PC-based software with recipe, result summary, result detail

Test Modes

The software package provides range-specific recipes for the configured OLR test program. The A+B, C, and D labels refer to IEC-referenced test points used for overload-relay evaluation:

Recipe label	Test-point purpose
A	Reference or no-trip point, as applicable to the relay type
B	Overload operating point
C	Defined moderate-overload trip point
D	High-overload trip-class point, commonly 7.2 x Ir where applicable

The applicable current setting, trip class, ambient condition, and test duration are selected according to the DUT and approved test procedure.

Three stations may participate in the same selected test sequence.

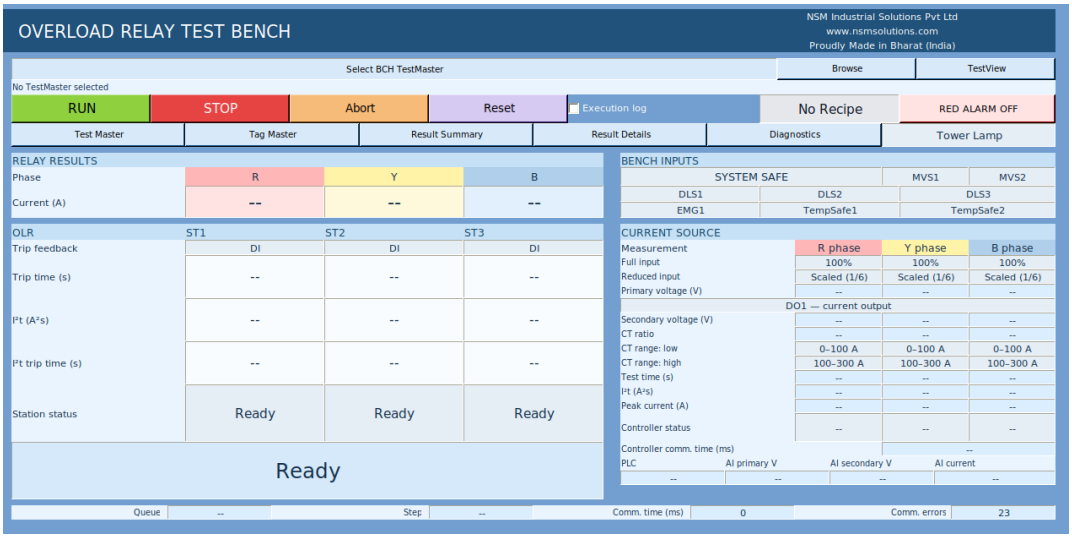


Figure 2: PC-based operator interface

Auto screen for PC-based test control and result management

Safety and Construction

- Guarded DUT mounting area with transparent protective covers
- Safety-controller-based monitoring of the defined safety inputs
- Controlled contactor and current-source switching
- Current-source protection and phase-wise fused input arrangement
- Industrial panel construction with dedicated control, source, and DUT sections

IEC Reference

The bench supports IEC 60947-4-1-referenced evaluation of overload-relay current settings, time-current characteristics, all-pole operation, and two-pole/phase-loss operating limits.

The bench supports trip classes 10, 20, 30, and 40. Current multiples, ambient conditions, tolerances, and acceptance criteria are selected from the DUT manufacturer's characteristics and the approved test plan. The applicable standard edition governs final acceptance; this datasheet describes test-bench capability and does not itself constitute an IEC certification.

Typical Applications

- Quality-department overload-relay verification
- Laboratory characterization and comparison
- Relay characteristic comparison
- Product R&D and engineering validation
- Controlled recording of trip-time and thermal test results