

# Reflex 510

## Contactor & Power Relay Test System



The Reflex 510 is a versatile modular parametric test system designed for production testing and engineering analysis of multi-pole and multi-contact contactors and power relays. It tests in accordance with the MILPRF-83536A electrical characteristics test procedure.

### Key features:

- Compliant with MIL 83536A & 6106L
- Form A, B, C Contact styles
- Multi-pole configurations up to 64 contacts
- High-Power Contact Loads
- Low & Medium Power Loads
- AC and DC Coil drive
- Easy to Use ARTWorks Software
- Comprehensive data logging
- Automatic report generation
- 19" rack mounting
- EEPROM based fixture ID for automated test program selection.
- Built in functional test capability



### Test Parameters

The following test types are provided to meet MIL-PRF-83536A electrical characteristics tests:

#### Fixture check

Coil Resistance

Coil Current

Coil Back EMF

Contact resistance (static contact resistance)

Contact Voltage Drop

Operate and Release Voltage, including:

- Pickup Voltage
- Hold Voltage
- Dropout Voltage

Timing measurement, including:

- Operate and Release Times
- Contact Simultaneity
- Break before Make
- Contact Bounce
- Contact Break Bounce

Dynamic CR, including:

- Dynamic Contact Resistance
- Contact Stabilisation time

Neutral Screen

Coil diode confirm present or absent

Internal shorts test

**Basic system description:** The system comprises of a standard 9U high 19 inch rack, which is sub-divided into three smaller 3U high 19 inch racks. The racks are used to locate a variety of different module types configured according to the contactor test requirement.

A Windows based PC controller and a number of 19" rack mounting programmable power supplies complete the configuration. These power supplies are used to provide coil and contact load power as required.

The Reflex 510 comprises of 6 main elements:

- Measurement rack
- Load rack
- Coil interface rack
- Power loads & power supplies
- PC controller
- ArtWorks software

**Measurement rack:** Analogue measurement, switch control, power regulation and intermediate contact load modules are configured in the upper 3 U rack. The main system power switch and associated power indicator is mounted on the front of this rack.

**Load rack:** High-current contact switching modules, conditioning modules to protect the analogue instrumentation and an interface panel to the external contact load power supply are configured in the central 3U rack, together with interface wiring to the front panel device coil and contact connectors.

**Coil interface rack:** The lower 3U rack houses a universal input, switched down system power supply, which is controlled by the front panel power key switch. The rest of the lower rack houses the coil control and coil measurement interface circuitry.

**Power loads & power supplies:**

19" rack mounting programmable laboratory style power supplies provide coil and contact load power as required. For very high power real load testing, the system can be configured to control a power contactor, for use with user supplied external power and load hardware.

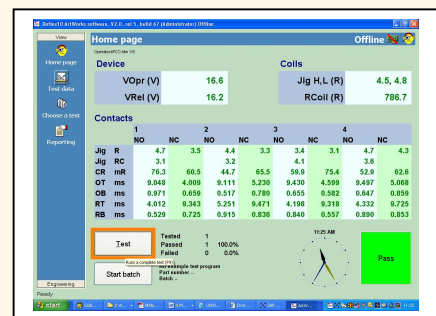
**PC controller:** A 19" rack mounting or external free standing PC is used to control the system using the supplied Artworks software which runs under Windows 2000, XP, Vista or Windows 7 operating systems.

**Artworks software:** The operator display presents the user with a clear view of the test data. Test programs can be quickly loaded or new programs created using the test program wizard. Data logging can be enabled or disabled by the operator as required.

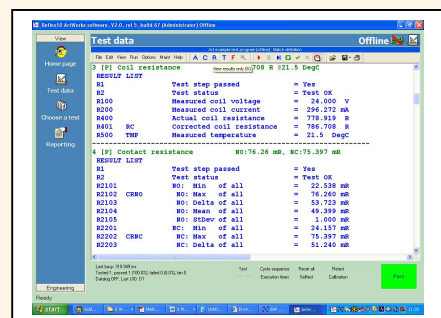
The system performs a comprehensive set of self-test checks at the time the system is switched on and the software initialised. Power rail and system temperature monitoring features are also measured along with basic system functionality.

The test programs are compatible with the entire RT290 and Reflex parametric test system range thus allowing programs to be easily transferred between machines.

**Operator Interface:**



**Test Programming:**



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