

Specification Sheet

ItemCode: 0711241631

Description: Contactor Moving Contact Travel and Force Test Bench
Rev0

Application Software installed
on Laptop/ PC



Table Top Control Panel



Contactor Under
Test



Deliverable:

- Table Top Control Panel
- Application Software License
- Force and Stroke Measurement tool

Optional Accessories/ Not included in this Item Code:

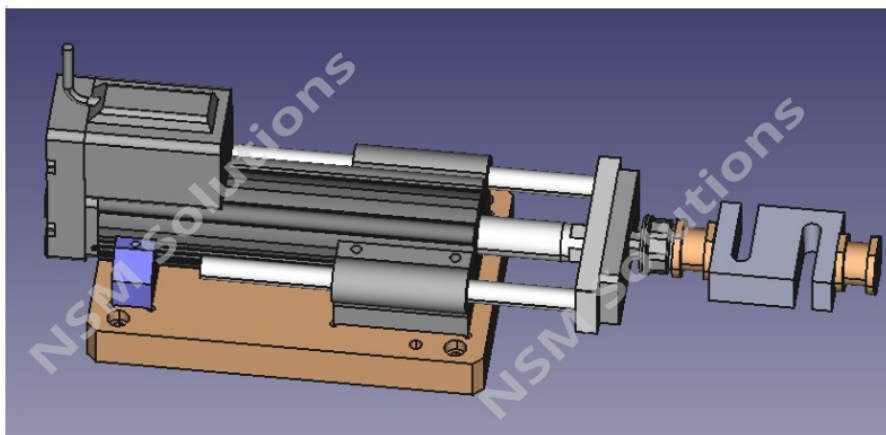
- Fixture for Mounting 'Contactor' and 'Force and Stroke Tool'.
 - It is mandatory for testing, but it needs to be customized as per customer Contactor sizes. Hence, it is not included in this ItemCode for BOM management.
- Laptop/ PC.

Tests:

- Contact Gap, Over Travel, Total Travel (Unit: mm).
- Return and Contact Spring Force (Unit: N).

Force and Stroke Measurement Tool:

- Electrical Actuator: 100 mm Stroke (Accuracy: Better than 0.1 mm)
- Force Sensor (Compression Type): 10N. (Accuracy: Better than 0.1N)
- 2 Digital Inputs of 24V DC for Contactor Continuity.



Inbuilt Voltage Source to energize Contactor Coil:

- 0-600V AC and DC (full wave rectified waveform)
- Voltage Taps: 110V 3A, 220V 2A, 600V 1A
- Voltage can be varied manually by Variac.

Graphs:

- Force vs Stroke
- Continuity vs Stroke

Other Salient Features:

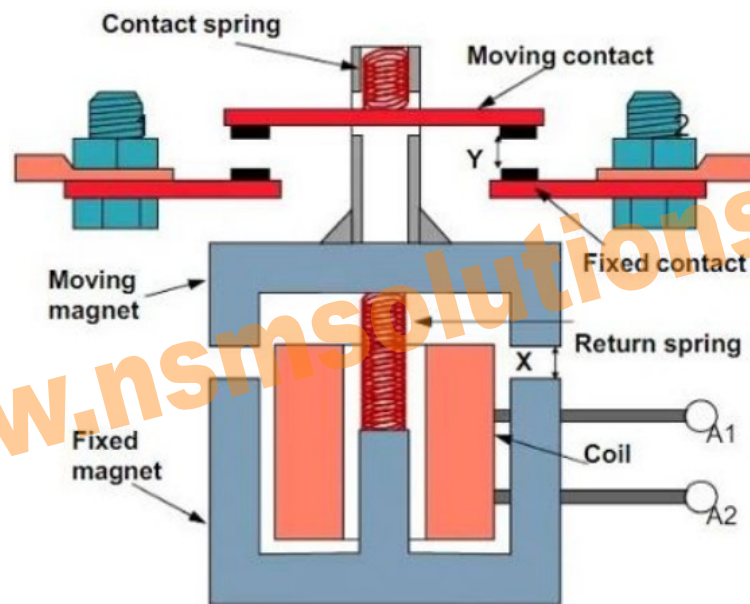
- Data Logging and Traceability
- Test Recipe Master: Add/ Edit/ Delete Test Recipes
- Result CSV file direct email facility. No need of Pen drive.
- Auto Mode: For Production Use
- Calibration Mode: For Calibration of internal instruments
- Multi-User system with different authorities: Engineering, Quality, Maintenance, Production, Operator
- System Health Check: For Preventive and Corrective Maintenance
- Industry 4.0 compliant system
- Machine to Machine communication capability
- 21CFR compliant

Note:

In this Test Bench, “Contact Spring Force” gets measured in effect of “Return Spring Force” and not stand alone. Reader’s discretion is advised.

To understand the terminologies of the parameters being measured and tested, please refer the theory on next page.

General Contactor Construction:



Terminology:

- Y = Contact Gap.
- X = Total Travel
- X-Y = Over Travel.
- Return Spring Force: Force required to travel distance 'Y' in above image.
- Contact Spring Force: Force required to travel distance 'X-Y' in above image.

Theoretical Explanation:

- Keep Contactor in Off condition.
- By using Pen/ Pencil, Press Moving Magnet (Bridge) slowly till the Contact gets Closed. This gap is called as "Contact Gap" and Force required to travel this distance is called as "Return Spring Force".
- Press the Bridge further till it reaches the dead end. This gap is called as "Over Travel" and Force required to travel this distance is called as "Contact Spring Force", in effect of 'Return Spring Force'.
- Addition of "Contact Gap" and "Over Travel" is called as "Total Travel".

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