

MotorTest

Line

Safety, Surge and Functional Tests

Motortest Line is a hardware and software system for end-of-line testing of single- and three-phase asynchronous electric motors.



Main features

- Dielectric Strength Test
- Insulation Resistance Test
- Ohmic Resistance Test with Temperature Compensation
- Functional Test
- Surge Test and Winding Reversal Control
- Partial Discharges
- Maximum motor power: 10 KVA
- Automatic bridging (star or delta connection)
- Power supply from the mains, variable power supply or inverter
- Computers and software in the LabVIEW environment
- acquisition of measurements from the instruments
- automatic setting of thresholds and power supplies





Dielectric strength test to ground

Adjustable test voltage: 0 - 3000 Vac, class2. Tripping current: 0.2 to 16 mA class 3

Insulation Resistance Test

Fixed test voltage: 500 VdcMeasuring range: 2 - 200 M-ohmCalibration control: n. 2 4mm sockets

Option:Adjustable test voltage 0 - 800Vdc (0-10V analog signal)

Ohmic Resistance Test

Range 0.05 – 500 Ohm, class 0.5Temperature compensation 0 - 50 °C, class 1

Surge test (short coil check)

Adjustable test voltage: 500 - 2500 Vp, class 2 Tripping current: 0.2 to 16 mA, class 3Measuring range: 0.3 - 3000 mH, class 1

- (Opt) Winding Reversal Control (start-end) during the Surge Test (only on motors without jumpers)
- (Opt) Partial Discharge Test (PD or microdischarge or Corona Effect)during the Surge test with indication of the number of micro-discharges, range from 0 - 250

Functional test (only with 50 or 60 Hz sinusoidal power supply)

Instrument with backlit liquid crystal display, 10000 points (4 digits), digit height 12 mm

Voltage measurement: 80 to 500 Vac three-phase, 50 to 290 Vac single-phase, class 0.2

Current measurement: direct max 16 A class 0.2, or from TA Frequency: from 47 to 63 Hz +/- 0.15 Hz Power: precision class 0.5 Power supply: 230 Vac 50 Hz Serial communication with PC and Intesys MotorTEST-Line software Reading update: 1.1 seconds Front size 96x96 mm

3 15.6 A

Functional test with motors powered by inverter

Power, voltage, and current measurement by reading the inverter parameters via digital communication between the control PC and our inverter. Customer-specific inverters can be used and installed.

Power supply of the engines under test Star or delta connection

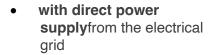
The system allows the connection of the motor both with and without jumpers; in this second case In this case, the star or delta connection of the



motor is performed automatically from the device according to the programming made in the SW. It is also possible to set from the SW **Star/Delta starter**in order to limit the inrush current in higher power motors.

Power supply types

The motor's power input is independent and this allows it to work in different modes:





- with power supply regulated by a motorized electromechanical variator with control integrated in our software
- with three-phase solid-state power supplywhich performs 3 functions: regulator, stabilizer and 50/60 Hz frequency converter
- with inverter for variable speed motorsThe inverter we supply is already integrated with both our hardware and our MotorTEST-Line software. It is possible to use a customer's inverter.





19" rack type measurement and control cabinet of 32 units on wheels. The device is made with

modular technique, i.e. with functional modules (simplifies maintenance operations).

Exitfor connection to the motor under test on industrial connector.

Exitfor connection to the line control PLC on industrial connector and with clean relay contacts.

The measurement and control section is powered by 230Vac which is in turn buffered by a UPS to avoid sudden shutdowns which could be harmful to the PC and Windows.

MotorTEST-Line management

softwaredeveloped in LabVIEW environment, easy to use with the possibility of presetting repetitive control data (e.g. measurement tolerances and dielectric strength voltages and currents).

- The control tolerances of each data can be set as desired
- Storage of the statistical data file with one row of data for each test performed (exportable to Excel, Access, Lotus, etc.)
- Storage of the Batch Test Certificate

The system is supplied with CE certificate of conformity, Calibration Certificate, Software and Operating Manual in Italian or English

Test stations with protection, connectors and quick-connect terminals

Test station with single- or double-sliding guard, level 4 safety, motor connection with push-button terminals suitable for stripped wires and eyelets, OK and KO lights, and autostart signal generated by closing the guard. Quick-fit connectors for six-pole bases and spring-loaded terminals for quick connection of individual cables are available.

