

# ALL-TEST PRO 7™ PROFESSIONAL

MOTOR CIRCUIT ANALYSIS™ (MCA™)

MOTOR TEST INSTRUMENT



Get the motor health data you need to make a quick and informed decision.

- ⊙ Motor Circuit Analysis MCA™
- ⊙ Patented Test Value Static™ (TVS™)
- ⊙ Patented Dynamic Stator and Rotor Signatures
- ⊙ Includes MCA PRO™ Software

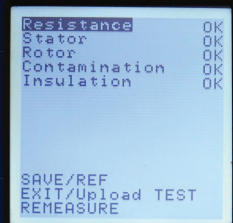
Safe, non-destructive MCA™ test **analyzes complete stator and rotor electrical health** in AC induction and synchronous motors and evaluates the electrical health of DC motors, generators, transformers, and more.

FAST AND ACCURATE MOTOR TESTING ANYTIME, ANYWHERE.

# ALL-TEST PRO 7™ PROFESSIONAL

MOTOR CIRCUIT ANALYSIS™ (MCA™)

MOTOR TEST INSTRUMENT



## WHY TEST MOTORS? BECAUSE MOTORS FAIL

Not all winding faults start as ground faults. Instead, they can start as a weakness in the winding insulation system that may eventually fault to ground when the motor stops running.

Motor testing is integral to the success and efficiency of your business. ALL-TEST Pro instruments ensure that testing your motor is safe, easy, and dependable.

**The ALL-TEST PRO 7™ PROFESSIONAL uses our proven, patented technology to look beyond vibration, temperature, and ultrasound test methods - giving you instant answers on your motor's health.**

Whether testing an AC or DC motor or a transformer, on-screen prompts step you through the testing process – **no user manual needed**. In just a few minutes, anyone can learn to use it.

## AT7™ PROFESSIONAL



### Tests Take Less Than 3 Minutes

Analyze complete stator and rotor electrical health in AC induction & synchronous motors.



### Predict Faults Before They Happen

Detects faults at their earliest stages before motor failure, including deteriorating or contaminated insulation, as well as “deep” winding faults.



### Perform Tests Anytime, Anywhere

With unmatched portability, ease of use, and safety features, the AT7™ PROFESSIONAL enables technicians to evaluate equipment in the field, on the shop floor, or at a service facility.



### Maximize Productivity & ROI

Finding just one fault using the AT7™ PROFESSIONAL can save your organization countless hours of downtime and provide thousands of dollars in savings.

LEARN MORE AT

# ALL-TEST PRO 7™ PROFESSIONAL

MOTOR CIRCUIT ANALYSIS™ (MCA™)

MOTOR TEST INSTRUMENT



Significantly Increase Your Plant's Profitability with the ALL-TEST PRO 7™ PROFESSIONAL.



Tests **all types of motors** (any voltage) including AC induction and synchronous; DC (series, shunt, compound); AC and DC traction; servo. Plus, generators, transformers, single phase motors and other coil-based devices. The **health of all motor components is evaluated**, including, but not limited to induction windings and rotor, DC field windings and armature, field and rotor coils in synchronous motors, primary and secondary windings in transformers; associated connections and cables.

## PATENTED TECHNOLOGY

### Motor Circuit Analysis (MCA)™

Rapid evaluation of the entire motor circuit. A deenergized non-destructive test method to assess the health of a motor from the Motor Control Center (MCC) or directly at the motor. Immediate and complete information on the status of the Stator, Rotor, Connections, Contamination, and Insulation to ground.

### Patented Dynamic Stator and Rotor Signatures

Used to evaluate the condition of the stator and squirrel-cage rotor in a single test. Perfect for testing new and repaired motors prior to acceptance.

### Patented Test Value Static (TVS)™

TVS™ is a sum calculated from the 3-phase MCA™ static test and is used as a reference value for the motor. Common types of faults in the rotor and stator windings will change TVS™.

## OBTAIN RETURN ON INVESTMENT *IN WEEKS (OR DAYS)*

Test newly installed motors to ensure proper installation and prevent startup failure.

Test motor spares to ensure they are in good condition and ready for service.

Troubleshoot motors that have quit running by testing from the MCC or at the motor.

LEARN MORE AT

# ALL-TEST PRO 7™ PROFESSIONAL

MOTOR CIRCUIT ANALYSIS™ (MCA™)

MOTOR TEST INSTRUMENT



EASY TO USE SOFTWARE

## MCA PRO™ and MCA PRO™ Enterprise software for Predictive Maintenance, Troubleshooting, and Quality Control of Electric Motors and Transformers.

- Easily Organize and manage motors and test records
- Create complete database for plant and motor nameplate data
- Provides trending and diagnostics for AC & DC motors and transformers
- Test and trend analysis reports

### The ALL-TEST PRO 7™ PROFESSIONAL includes:

- 3x Test Leads with heavy duty Kelvin Clips and push-pull connectors
- 1x Test Lead with 4mm safety plug and MC “Dolphin” clip
- Charging adapter, Universal input type 100-240VAC, output 9VDC @ 1.7A
- MCA PRO™ Software Dongle and software download certificate
- 1x USB cable 1m
- Durable and rugged hard case with pre-cut foam liner
- User Manual
- Warranty: 1 year limited; Optional 2 years available with calibration



REPRESENTED BY

### The ALL-TEST Pro Promise

ALL-TEST Pro delivers on **the promise of true predictive maintenance and troubleshooting**, with innovative diagnostic tools, software, and support that enable you to keep your business running. We ensure the reliability of motors in the field and help to maximize the productivity of maintenance teams everywhere, backing every ALL-TEST Pro product with unmatched motor testing expertise.



**Tesca Technologies Pvt. Ltd.**

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,  
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,  
Tel: +91-9829132777; Email: info@tesca.in, tesca.technologies@gmail.com  
Website: www.tescaglobal.com

LEARN MORE AT

# ALL-SAFE PRO®

ENERGIZED TESTING ACCESSORY



ARC FLASH  
DANGEROUS & POTENTIALLY DEADLY

GET THE CONDITION OF YOUR MOTOR SYSTEM  
PROCESS, THE RIGHT AND SAFE WAY



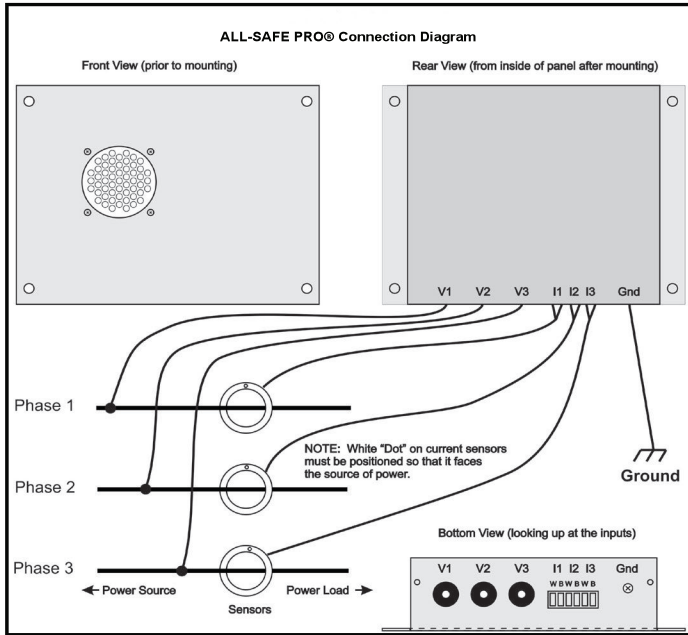
**Conduct safe, easy and accurate ESA testing in only 60 seconds with the ALL-SAFE PRO® motor connection box.**

The ALL-SAFE is perfect for route based maintenance and helps expedite the process and ensure safety for all staff involved in the data process. The ALL-SAFE PRO® is a permanently installed connection accessory for the ATPOL energized testing instruments. With this connection box, the tests are quickly and safely performed. Maintenance staff can safely and easily collect test data while the motor is energized and under load without opening the electrical panel.

With the ALL-SAFE PRO®, there is no need for special Personal Protective Equipment (PPE) or arc flash protective equipment. The energized testing instrument is compatible with the ATPOL Series of instruments and the ALL-SAFE PRO® cap for safety when not in use.

# ALL-SAFE PRO®

ENERGIZED TESTING ACCESSORY



Manufactured in the USA and conforming to UL 61010-1:2012 Ed.3+R:29Apr2016 and UL 61010-2-030:2012 Ed.1 and is certified to CSA C22.2 #61010-1:2012 Ed.3 and CSA C22.2#61010-2-030:2012 Ed.1.

It is CE certified for a rated input of 600V, measurement category III, pollution degree II, basic insulated electronic device. For motors generators over 600V it can be connected via potential transformers and current transformers.

## Technical Specifications

### Size (Enclosure-excludes dimensions of connection port to ATPOL III)

6" Wide x 4 3/4" High x 1 5/8" Deep  
(153mm x 120mm x 41mm)

### Weight (Enclosure Only-No Sensors)

0.8 lbs. (0.4kg)

### Operating Range

0 - 50 degrees C (32 - 122 degrees F)  
Relative humidity to 70% (non-condensing)

### Power Requirement

Nominal power is supplied by attached ATPOL

### Input Voltage

Input Range: 1 - 600V steady-state (direct input)

### Output Voltage

<5V when not connected to ALL-SAFE PRO®  
Adapter

Accuracy: No distortion of the original voltage when connected to ATPOL

Frequency Response: No derating of accuracy for harmonics or transients

## Input Current

Sensors convert to voltage <2V prior to entry into ALL-SAFE PRO® Current capacity dependent on current sensor ordered

## Output Current Measurement

Accuracy: accuracy of probe  
Frequency Response: dependent on current probe attached no de-rating of accuracy for harmonics through 1500 Hz

## Frequency

Range: 22 - 440 Hz fundamental frequency

## Safety

CE certified for a 600V cat III, pollution degree II, basic insulated electronic device.

Conforms to UL STD 61010-1:2004 UL 61010-1:2012 Ed.3+R:29Apr2016] and UL 61010-2-030:2012 Ed.1 and is certified to CAN/CSA C22.2 number 61010-1:2004 CSA C22.2#61010-1:2012 Ed.3 and CSA C22.2#61010-2-030:2012 Ed.1.

\*Specifications are subject to change without notice



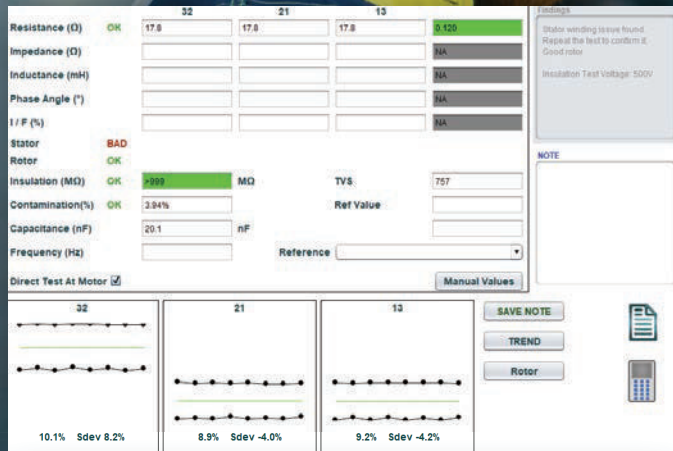
## Tesca Technologies Pvt. Ltd.

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension, Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India, Tel: +91-9829132777; Email: info@tesca.in, tesca.technologies@gmail.com Website: www.tescaglobal.com

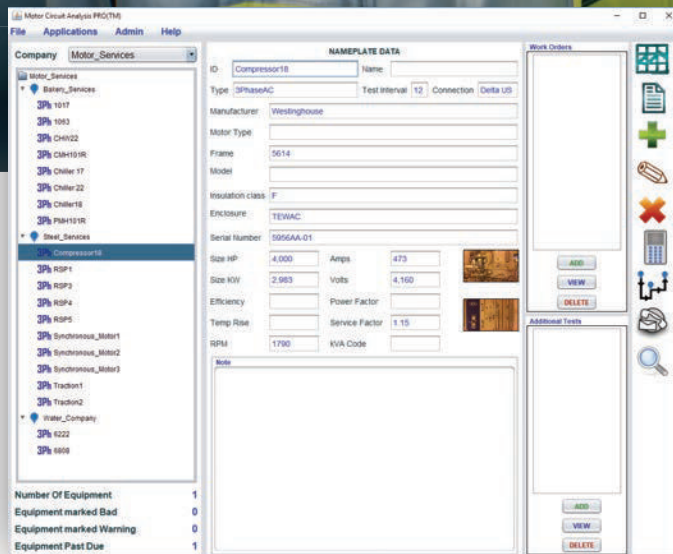
# MOTOR CIRCUIT ANALYSIS™ (MCA™) SOFTWARE

ALL-TEST PRO 7™ | ALL-TEST PRO 7™ PROFESSIONAL

ALL-TEST PRO 34™



Manage, track, trend, and report on your plant's motor maintenance.



- Motor Circuit Analysis™ (MCA™)
- Patented Test Value Static™ (TVS™)
- Patented Dynamic Stator and Rotor Signatures

ALL-TEST Pro's MCA™ Software Suite enables analysis, quality control, troubleshooting, and predictive maintenance for complete deenergized motor testing. This software integrates seamlessly with the AT7™, AT7™ PROFESSIONAL, AT34™ and AT5™ to create a complete analysis package for monitoring and maintaining electric motors.

FAST AND ACCURATE MOTOR TESTING ANYTIME, ANYWHERE.

PRELIMINARY

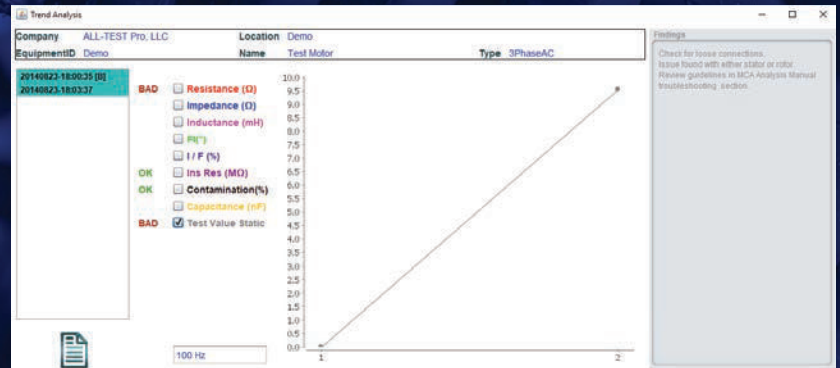
# MOTOR CIRCUIT ANALYSIS™ (MCA™) SOFTWARE

ALL-TEST PRO 7™ | ALL-TEST PRO 7™ PROFESSIONAL

ALL-TEST PRO 34™



MCA™ software enables you to manage your plant's motors on an expansive scale. By tracking, trending and reporting on the condition of your plant's motor maintenance, you will be able to reduce unproductive downtime, avoid unforeseen repair costs, and maximize the productivity of your maintenance team.



Our MCA™ software's intuitive analytics take the **guesswork out of interpreting** test results, including **built-in diagnostic algorithms** and **trending** as well as seven options for thorough, **flexible report types**. The software's comprehensive database provides **quick, easy access to all testing data**, organizing nameplate information and individual test results for all of your motors and transformers.

## PATENTED TECHNOLOGY

### Motor Circuit Analysis (MCA)™

Rapid evaluation of the entire motor circuit. A deenergized non-destructive test method to assess the health of a motor from the Motor Control Center (MCC) or directly at the motor. Immediate and complete information on the status of the Stator, Rotor, Connections, Contamination, and Insulation to ground.

### Patented Dynamic Stator and Rotor Signatures

Used to evaluate the condition of the stator and squirrel-cage rotor in a single test. Perfect for testing new and repaired motors prior to acceptance.

### Patented Test Value Static (TVS)™

TVS is a sum calculated from the 3-phase MCA™ static test and is used as a reference value for the motor. Common types of faults in the rotor and stator windings will change TVS™.

LEARN MORE AT



# MOTOR CIRCUIT ANALYSIS™ (MCA™) SOFTWARE

ALL-TEST PRO 7™ | ALL-TEST PRO 7™ PROFESSIONAL

ALL-TEST PRO 34™



It's time for your facility to predict and manage motor failures before they happen.

## MCA™ SOFTWARE

### Comprehensive Database

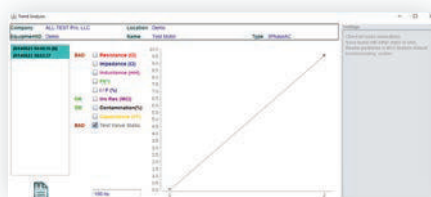
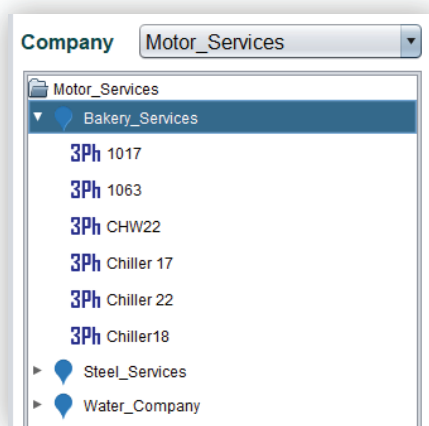
The heart of the MCA™ software is a database that collects and organizes the nameplate information and individual test results from all of your motors and transformers. A powerful, integrated search functionality enables access to data across all companies and locations by motor voltage, horsepower/kW, RPM, etc.

### Motor Trending for Predictive Maintenance

All measurements can be trend-graphed for condition monitoring. Increasing unbalances give you advance notice of deteriorating conditions. Planning for repairs and avoiding unscheduled downtime saves you money and time in the long run.

### Motor Diagnostics for Troubleshooting

MCA™ software applies proprietary algorithms and automatically diagnoses likely motor faults, taking the guesswork out of interpreting test data. It also provides a tabular and graphic view of the results for easy understanding.



Parameter	Value	Status
Resistance (Ω)	18.0	OK
Impedance (Ω)	234	OK
Inductance (mH)	171	OK
Phase Angle (°)	70.9	OK
I/F (%)	48.2	OK
Motor		
Insulation (MΩ)	150	OK
Capacitance (%)	1.7%	OK
Capacitance (pF)	38.2	OK
Frequency (Hz)	100	OK

### Evaluate New and Repaired Motors for Quality Control

Motor nameplate information is not required to evaluate the condition of the motor. Acceptance testing means that YOU are in control of your motors program. The first test provides the baseline for future comparison.

### Scheduling and Review

Review motors to be tested by date, trend condition, or what is currently in alarm. You can even record test results from infrared and other technologies.

### Manage Assets by Location

Records can be grouped by building/process for manufacturing sites, and customer name/location for service organizations. At a glance, the user can quickly identify equipment marked Bad, Warning, or Testing Past Due.

LEARN MORE AT

# MOTOR CIRCUIT ANALYSIS™ (MCA™) SOFTWARE

ALL-TEST PRO 7™ | ALL-TEST PRO 7™ PROFESSIONAL

ALL-TEST PRO 34™



## MCA™ SUITE OFFERINGS

### MCA Basic™ Software

- Comes standard with the ALL-TEST PRO 7™ and ALL-TEST PRO 34™
- AT7™ - single & 3-phase AC motor testing
- AT34™ - 3-phase AC motor testing

Parameter	Detail	Type	3PhaseAC	T13
Name	Test Motor			Connection Data USB
Manufacturer	ABB	Motor Type	AC Induction	
Model				
Serial No.				
Size HP	0.300	Amps	1.20	Ins Class
Size kW		Volts	200	Enclosure
Efficiency		Power Factor		Frame
Temp Rise		Service Fact		
IPM	300	IWA Code		
2016023-16:03:37				
Resistance (Ohm)	OK	32	21	13
Impedance (Ohm)		17.8	17.8	17.8
Inductance (mH)				0.120
Phase Angle (°)				NA
I / F (%)				NA
Stator	OK			
Rotor	OK			
Insulation (MOhm)	OK	-999		TVS Ref Value 757
Contamination(%)	OK	3.84%		Frequency
Capacitance (nF)		20.1		Direct Test at Motor
Findings:	Stator winding issue found. Repeat the test to confirm a good rotor.			
	Insulation Test Voltage: 500V			

### MCA PRO™ Software for AT7™ PROFESSIONAL

- Comes standard with the ALL-TEST PRO 7™ PROFESSIONAL
- Single and 3-phase AC motor testing
- Series, shunt, and compound wound DC motor testing
- Transformer testing
- Individual coil testing (test and compare up to 4 coils)
- Unique Rotor Grading System (RGS)
- Create unlimited 'routes' and maintenance schedules for predictive maintenance and condition monitoring
- Routes can maintain up to 100 pieces of equipment, scheduled for testing.
- Create, update, and print work orders within the system

### MCA PRO™ Enterprise Software

- All the features and functions of MCA™ PRO + multiple user accessibility
- 2, 5, 10, & 25 user licenses available
- Remotely analyze and generate reports
- Shared database to view individual motor history from multiple sites
- Easily determine reliability and quality of motor vendors
- Install onto as many client computers as needed. The number of concurrent users is limited to the number of purchased user licenses

REPRESENTED BY

### The ALL-TEST Pro Promise

ALL-TEST Pro delivers on **the promise of true predictive maintenance and troubleshooting**, with innovative diagnostic tools, software, and support that enable you to keep your business running. We ensure the reliability of motors in the field and help to maximize the productivity of maintenance teams everywhere, backing every ALL-TEST Pro product with unmatched motor testing expertise.




### Tesca Technologies Pvt. Ltd.

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension, Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India, Tel: +91-9829132777; Email: info@tesca.in, tesca.technologies@gmail.com Website: www.tescaglobal.com

LEARN MORE AT

# ALL-TEST PRO MD III™

COMPLETE MOTOR TESTING ASSEMBLY



Your key to  
successful predictive  
maintenance.

- Motor Circuit Analysis (MCA™)
- Electrical Signature Analysis (ESA)
- MCA PRO™, ESA and Power System Manager Software
- Hand Held, Light Weight and Portable

Includes all you need for complete energized and deenergized testing of motors, generators & transformers. Combine the power of Motor Circuit Analysis™ (MCA™) and Electrical Signature Analysis (ESA) to evaluate and trend your entire motor system.

FAST AND ACCURATE MOTOR TESTING ANYTIME, ANYWHERE.

# ALL-TEST PRO MD III™

## COMPLETE MOTOR TESTING ASSEMBLY

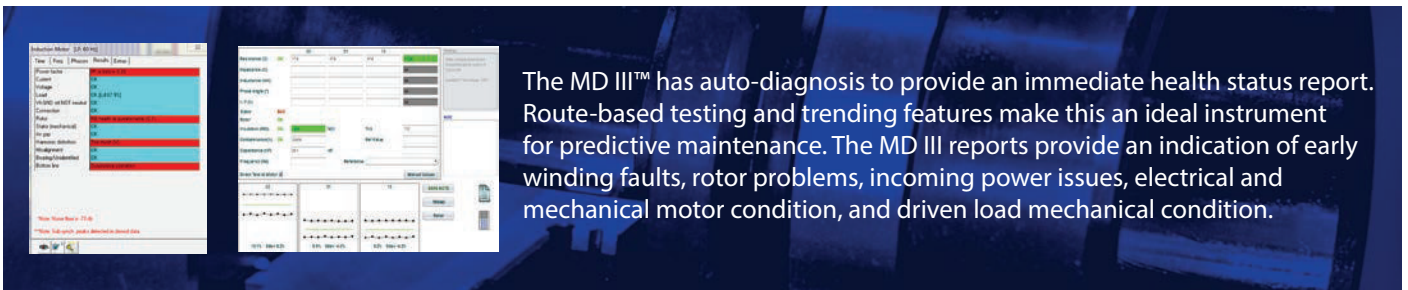


### Improve Your Plant's Productivity and Increase Profits with the MD III™ Assembly.

MCA and ESA testing using the MD III™ allows the technician to evaluate the entire motor system including incoming power, electrical and mechanical condition of the motor and mechanical condition of the driven load.

Motor Testing	Power Quality	Controls	Connections	Cables	Stator Elec.	Stator Mech.	Rotor	Air Gap	Insulation	Bearings	Alignment	Load	Drives
De-Energized (MCA)	---	X	X	X	X	X	X	X	X	---	---	---	---
Energized (ESA)	X	X	L	---	L	X	X	X	---	L	X	X	L
MD III™	X	X	X	X	X	X	X	X	X	X	X	X	L

Green (X) indicates that an early fault can be detected and trended for condition-based and predictive maintenance purposes. Yellow (L) indicates a fault can be detected, but not at its earliest stage.



The MD III™ has auto-diagnosis to provide an immediate health status report. Route-based testing and trending features make this an ideal instrument for predictive maintenance. The MD III reports provide an indication of early winding faults, rotor problems, incoming power issues, electrical and mechanical motor condition, and driven load mechanical condition.

### The MD III™ includes:

- Rugged hard-sided carrying case
- ALL-TEST PRO 7™ PROFESSIONAL
- ALL-TEST PRO On-Line II™
- MCA PRO™, Electrical Signature Analysis (ESA) and Power System Manager (PSM) Software, single user license
- DVD Instruction manual
- Warranty: 1 year limited; Optional extended warranty available



Enhance energized testing safety and improve testing productivity by installing the ALL-SAFE PRO® Connection Box. Bluetooth in ATPOL II™ allows for remote operation of the instrument.

**(6) ALL-SAFE's included with the MD III™ Productivity System.**

**Find out more about our Productivity System.**



LEARN MORE AT

### The ALL-TEST Pro Promise

ALL-TEST Pro delivers on **the promise of true predictive maintenance and troubleshooting**, with innovative diagnostic tools, software, and support that enable you to keep your business running. We ensure the reliability of motors in the field and help to maximize the productivity of maintenance teams everywhere, backing every ALL-TEST Pro product with unmatched motor testing expertise.



**Tesca Technologies Pvt. Ltd.**

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension, Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India, Tel: +91-9829132777; Email: info@tesca.in, tesca.technologies@gmail.com Website: www.tescaglobal.com