

Motor Genie® MCA™ Quickstart Guide



TURN DATA INTO DIAGNOSIS

Download the Motor Genie®
Condition Calculator app

FOR SQUIRREL CAGE ROTOR MOTORS <1000V

FUNCTIONS



MOTOR GENIE TEST

Performs an evaluation of the motor winding system. With the phase-to-phase results of impedance, phase angle and current frequency response, the MG algorithm conducts a phase balance between the 3 phases and confirms symmetry or reveals deviation.



RES

RESISTANCE TEST

Performs a phase-to-phase survey of the resistance of the winding. Unbalances are typically due to connection issues.



INS

INSULATION TEST (Insulation to Ground)

Performs a SAFETY check of the condition of the insulation to ground of the electrified components of the motor.

Before conducting an insulation to ground test, all equipment in the tested circuit must be able to handle the load (i.e. VFDs, relays, controllers, etc...)



SET

SET

Opens the SETUP menu to manage stored test data, set date and time options, or take manual tests/measurements.



PWR
OFF

PWR OFF

Turns the device off. The instrument will power off automatically after 5 minutes of inactivity.

NOTE: In order to save a complete set of test data, the tests must be done in the following order: RES, INS, Motor Genie Test.

If tests are not conducted in order, the Results Screen after the Motor Genie Test may display NoR (No Results).



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Steps for Comprehensively Testing a New Motor from Junction Box or at the Motor Control Center

1 INS Test	2 RES Test	3 Motor Genie Test	4 Results & Saving Data
<p>Select INS icon</p> <ul style="list-style-type: none"> • Press OK <p>Connect Blue to phase 2 and Yellow to ground</p> <ul style="list-style-type: none"> • Hold the TEST key until value stabilizes (>5G max) <p>Results will be saved in temporary memory.</p>	<p>Select RES icon</p> <ul style="list-style-type: none"> • Press OK <p>Connect Black to phase 1, Blue to phase 2 and Red to Phase 3 (yellow ground not required)</p> <ul style="list-style-type: none"> • Press OK <p>Resistance results 'Warn' and 'Bad' typically indicate a connection issue.</p> <ul style="list-style-type: none"> • Press OK <p>Results will be saved in temporary memory.</p>	<p>Select 'Motor' icon</p> <ul style="list-style-type: none"> • Press OK <p>Connect Black to phase 1, Blue to phase 2 and Red to Phase 3 (yellow ground not required)</p> <ul style="list-style-type: none"> • Press OK <p>100Hz is default</p> <p>Save Phase T1-T2 results by pressing 'Test' key twice slowly</p> <ul style="list-style-type: none"> • Press F2 <p>Save in Phase T1-T3 results by pressing 'Test' key slowly</p> <ul style="list-style-type: none"> • Press F2 <p>Save in Phase T2-T3 results by pressing 'Test' key twice slowly</p> <ul style="list-style-type: none"> • Press OK <p>Results Screen will appear</p>	<p>To Save Data:</p> <p>Select 'SAVE'</p> <ul style="list-style-type: none"> • Press OK <p>Select 1 of 7 save slots. If existing results are saved, a date/time stamp will appear at the bottom of the screen. If the bottom appears blank, there are no existing results in that save slot.</p> <p>*The INS, RES, and Motor Genie tests must be conducted in this order to successfully save all test data.</p>

NOTE: Wait for audible 'beep' sound to confirm successful button press.

