How to choose an Automeg

HARNESS TEST SYSTEM SPECIFICATION

MK TEST SYSTEMS

www.mktest.com

When it comes to selecting an electrical harness test system, the range of options can be daunting.

The Automeg wire harness tester offers an extensive range of test system specifications, with the modular flexibility to suit your exact requirements.

This guide covers the main differences between our Automeg series specifications, as well as advice on what information we need to help determine the right spec for your application.

Contents

Introduction to Automeg

Automeg is an automatic high voltage wire, cable & harness test system. It offers powerful, flexible, simple to use and industry-compliant wire and cable harness testing capabilities.

Our sales team can work with you to help configure the perfect test system specification for your needs. In the first instance though, this quick guide to the range of Automeg models is a useful starting point. All Automeg models offer the following features:

- Continuity resistance measurement, low voltage isolation test (short circuit), and high voltage DC insulation resistance testing as standard.
- Optional high voltage AC HiPot testing, capacitance measurement LCR modules
- Optional function test stimulus switching modules and power supplies to enable actuation and function test. Note: This option is suitable for testing a small number of active components in the assembly under test. For testing larger amounts of active components, we recommend a full function test system from our E or M series.
- Integration with a range of third party sources, scopes and measurement modules.
- All systems can be configured to suit your operation and application. From static rack cabinets to heavy duty mobile cabinets suitable for shop floor and hangar environments; from distributed switching which spreads the system around large assemblies such as aircraft or vehicles; and portables built into a robust field deployment suitcase or rack format.
- MKAT, our powerful test management software. Our third generation proprietary software, MKAT combines ease of use with powerful test program creation and management capabilities.

"The F2500 enables quicker all-in-one testing, with fast error recognition showing the exact connection that caused the tests to fail."

Zander van der Steege
Project Test Engineer, Santon Switchgear

santon
superior switch solutions

"MK Test equipment has greatly improved our efficiency & accuracy when testing."

Sam Baker
Sales Manager, Itel Electronics
Automeg F1500

Itel Electronics

T 'T' series = Two wire measurement

This Automeg model range is named T for 'two' wire, because our T series applies 2 wire continuity resistance measurement.

If your test requirement demands a high test point count and only needs continuity resistance measurement down to 0.1Ω, then the T series is your entry level, lowest cost, automatic test option.

Available in 1000Vdc, 1500Vdc, 2500Vdc, 3000Vdc, 3500Vdc, 6000Vdc & 8000Vdc maximum insulation test voltages.

F 'F' series = Four wire measurement

The F series is our dedicated 4 wire test Kelvin measurement solution. As with the T model range, F stands for four wire.

When your continuity and resistance measurements need to be milliohm-accurate, the dedicated 4 wire F system guarantees you the best possible accuracy.

Due to its high accuracy, this Automeg series is ideal for testing critical cables, components, shielding joints and low resistance connections.

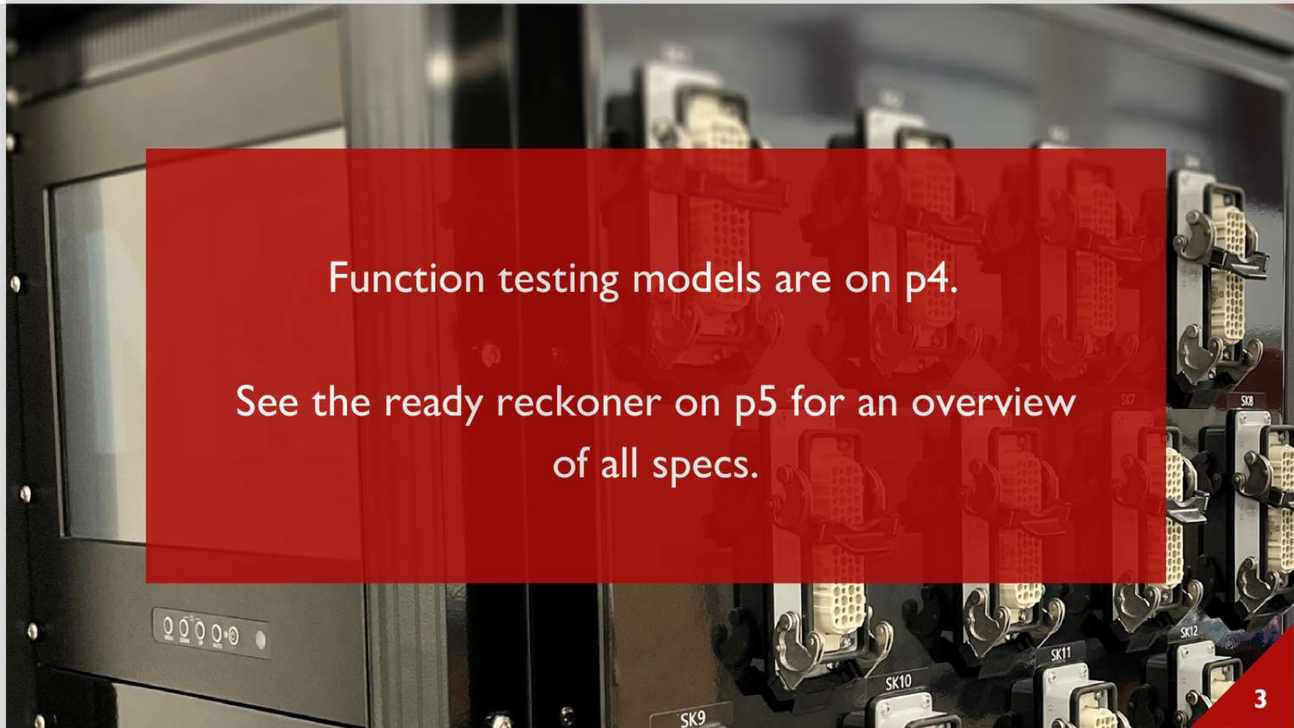
Available in 1500Vdc, 2500Vdc & 3500Vdc maximum insulation test voltages.

D 'D' series = Dual wire

The D series is our most popular model for standard electrical harness testing, with D standing for 'dual'. It offers both 2 wire and 4 wire resistance measurements, as well as the ability to mix these modes in a single test program.

The D series Automeg models can handle a mix of resistance measurements down to 2mΩ. The result is an extremely flexible system which enables rapid automatic testing of complex assemblies.

Available in 1500Vdc & 2500Vdc maximum insulation test voltages.



Function testing models are on p4.

See the ready reckoner on p5 for an overview of all specs.

E 'E' series = Entry level multibus function testing

The E series is our entry level multibus function test solution. It's the ideal solution if active component density is low or your designs are stable.

If your product has active components, or if you might need to function test active assemblies in the future, the E series offers both measurement and function test capability.

Each E series relay card can be used as either a measurement card or a functional stimulus switching card. The only restriction with the E series is that the card can be used for either measurement or stimulus switching during a subtest, so you need to plan your test interface to enable a full functional test.

Available in 1500Vdc, 2500Vdc, 3500Vdc & 5000Vdc maximum insulation test voltages.

M 'M' series = Multibus function testing

The M Series offers the highest level of flexibility. These systems can be used in both 2 wire and 4 wire kelvin measurements and they can also deliver functional stimulus from any test at any time. As with the E series, the card can be used for either measurement or stimulus switching during a subtest.

The M series simplifies your interface design. Each interface channel is able to both measure and stimulate, which means there's no need for a complex Y cable interface. When testing a contactor, for example, the system measures the resistance of a coil and then stimulates the coil using the same test points and same interface wire. It then measures the change in contact resistance concurrently.

If your active component density is high, or your active product format is flexible then the Automeg M series is your ideal system.

Available in 1500Vdc & 2500Vdc maximum insulation test voltages.

Specifications Ready Reckoner

TESTS & FEATURES	D1500(P)	D2500	E1500(P)	E2500	E3500	E5000	F1500	F2500	F3500	M1500	M2500	T1000	T1500	T2500	T3000	T3500	T6000	T8000
Test & Measurement																		
Continuity: Dual-wire	Y	Y																
Continuity: 4-wire			Y	Y	Y	Y	Y	Y	Y	Y	Y							
Continuity: 2-wire			Y	Y	Y	Y				Y	Y	Y	Y	Y	Y	Y	Y	Y
Shorts	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Insulation and Hi-Pot	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Capacitance	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Inductance	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Temperature & Humidity	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Function testing			Y	Y	Y	Y				Y	Y							
Layout options																		
Rack housing	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Single or distributed switching	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Static desktop	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Portable & ruggedised	Y		Y															
Features																		
Maximum insulation test voltage	1500Vdc	2500Vdc	1500Vdc	2500Vdc	3500Vdc	5000Vdc	1500Vdc	2500Vdc	3500Vdc	1500Vdc	2500Vdc	1000Vdc	1500Vdc	2500Vdc	3000Vdc	3500Vdc	6000Vdc	8000Vdc

About MK Test Systems

We've been designing and manufacturing automatic electrical test equipment for 30 years. In that time, we've provided systems to customers around the world, in the following industries:

- Aerospace
- Defence
- Rail
- Industrial, Power & Control
- Subsea
- Automotive

Our range of products enable rapid, automatic testing of engines, wiring harnesses, slip rings and other vital components.

We can work with you wherever testing is undertaken, at any stage of the product lifecycle. This may be at component manufacture stage - providing quality assurance to subcontractors - or at the final assembly stage, ensuring complete confidence in the final product.

Beyond this, we also provide testing solutions for MRO and servicing.

Talk to us

Our UK head office is supported by satellite locations in the US and Hong Kong. With our large global network of reps and distributors, you can be assured of local support, sales and training.

For your local contact details, please visit our website - www.mktest.com.

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