White Paper

DRV3/DSG1 *Lite* kit

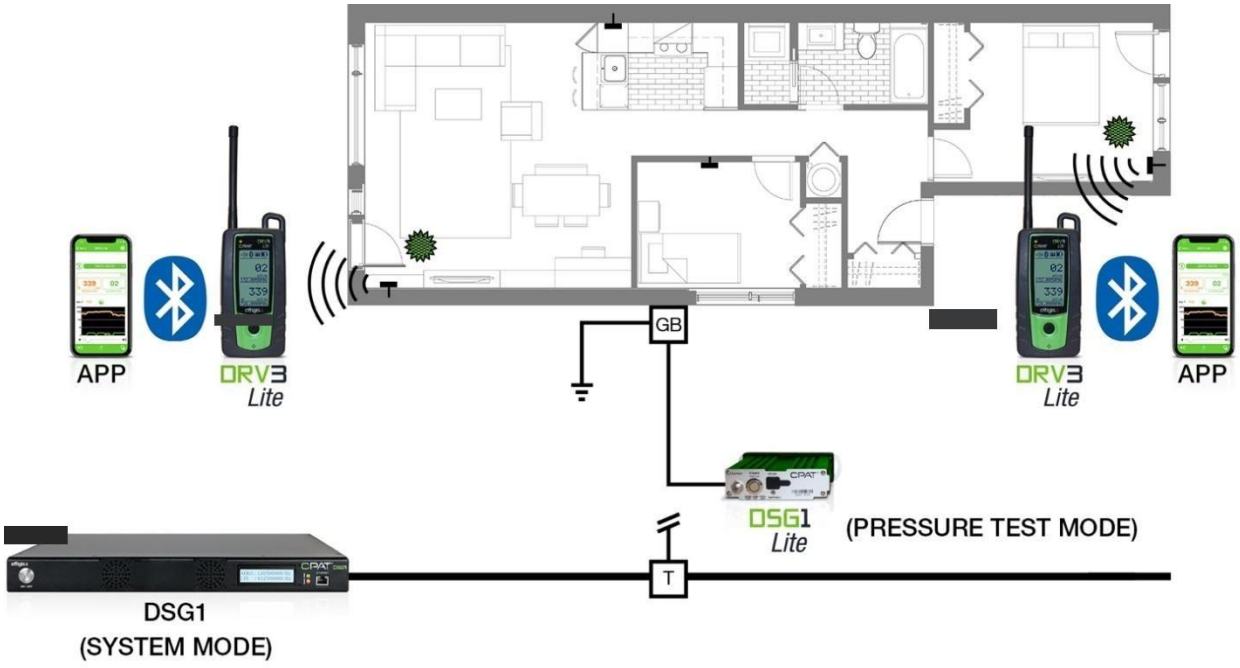
Smart Installs Just Became Smarter

Please direct all questions to your local CPAT Tech sales office representative, distributor, or contact CPAT Tech technical support at www.cpat.tech.

SHIELDING EFFECTIVENESS OF IN-HOME PASSIVE EQUIPMENT

A Motorola white paper entitled "*Shielding Effectiveness of In-Home Cable TV Wiring and Splitters* (1) indicated that a high-quality, well-terminated cable drop will exhibit sufficient shielding effectiveness (SE) to prevent interference in fields greater than 10 volts per meter (V/m).

The same paper concluded that an SE value of 100 dB corresponds to the SE value needed to meet the threshold for interference for 256 QAM DTV signals, at the minimum FCC required level of -12 dBmV, and an applied field of 1 V/m.



TRACKING POTENTIAL CABLE SHIELDING INTEGRITY ISSUES

The Gap between the External Plant and the Customer's Premise

While operators have relatively good control over the external plant in terms of SE, it could be quite a different story at the customer's premises. Some customers will add a TV set or two, or wire a newly constructed room using non-professional passive equipment, such as splitters, and terminated coaxial cables.

In the Motorola white paper, it was demonstrated that SE could differ as much as 50 dB between the cable operator's professionally installed passive equipment (coaxial drop and splitters) and the same type of passive equipment of a lower build quality purchased and installed by the client.

HOW DO WE FIGHT BACK?

Pre-emptive Quality Control with Leakage Pressure Testing

The first step would be for you to use the best quality passive equipment to increase your plant's SE. Check whether your cable installation procedure has been correctly applied by your staff and contractors. The operator's staff should discard any passive equipment not provided by the company, since this equipment will likely have insufficient SE against interferences.

Once a cable installation or service call has been completed, add a proactive step to your service procedure by performing a leakage pressure test to ensure that there is no cable leakage present. A leakage pressure test is conducted by applying a high RF level set of carriers at the drop input. While using a cable leakage receiver, your staff will walk through each room on the customer's premises to make sure that there are no leaks present before they leave, thus avoiding a potential expensive truck roll.

Controlled quality installations have become even more important with the additional LTE spectrum falling directly into the broadband cable spectrum. Increase shielding effectiveness across the plant by using a pre-emptive approach, whereby you will be adding an installation quality control process while your staff is already at the customer's premises.

THE SOLUTION

Detecting both High Level and Leakage Carriers with a Dual-Mode Meter

The DRV3 *Lite* is your dual-mode, dual frequency agile, and all-digital leakage portable find-and-fix meter. It can operate either in 'pressure test mode', detecting high-level carriers generated by the portable DSG1 *Lite* signal generator, or in 'system mode', detecting leakage carriers generated from the DSG1 signal generator located at the headend.

The technician can switch from system to pressure test mode by pressing a single button. With its dual-tuner design, the DRV3 *Lite* provides simultaneous visual and audio indication of detected leaks in the VHF and UHF bands.

Our total package DRV3 *Lite* / DSG1 *Lite* or DSG1 ensures total quality for in-home and MDU installations, by tracking potential cable shielding integrity issues. It provides an effective and unique opportunity for the fulfillment technicians to proactively certify their installations before they become costly service calls.

FEATURES AND BENEFITS

FEATURES	BENEFITS
In-Home Certification Program (egress and ingress pressure tests)	Reduces service calls, as the majority of shielding integrity issues originate from the customer's premises.
	Reduces repeat service call rate and cost by resolving problems on the first visit
	Validates technician's or subcontractors' CPAT Tech mobile app timestamps.
	Increases visibility of in-home issues through a documented, time-stamped detection and repair process.
	Increases effectiveness by identifying hard-to-find egress/ingress using high-level test signals.
Dual-Mode Leakage Testing	System Mode: Detects leakage carriers generated from the DSG1 located at the headend.
	Pressure Test Mode: Detects high-level carriers generated by the portable DSG1 *Lite*
Mobile Application	Real-time repair tickets
	Possibility to create events in 'offline' mode (no service coverage)
	Pre-and-Post fix measurements
	Ability to close out leaks/events
CPAT WEB server	Allows unlimited authorized users to access the CPAT Tech Server network management application.
	Displays a real-time view of leakage/ingress events, thus making a proactive maintenance program more efficient by shortening the lifecycle of leakage/ingress events and reducing the number of service calls
	Stores data in an open format to facilitate custom reports and integration with other systems.

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