

# RIR1 S&C IntelliRupter Testing Package

## For testing S&C IntelliRupter® PulseCloser control modules with CMC test sets

The RIR1 S&C IntelliRupter Testing Package is a unique solution for testing the settings, functions, and logic of S&C IntelliRupter® PulseCloser control modules with CMC test sets both in the office and in the field.

It allows the analytical testing of S&C's PulseClosing Technology™ feature and can also provide verification of any operational sequence for an automatic restoration scheme. Furthermore a specifically developed S&C IntelliRupter® test template is provided.

To facilitate on-site testing comfortably, our compact and versatile CMC 353 (12.9Kg, 28.4 lbs) is the ideal test set to use with the RIR1 S&C IntelliRupter testing package.



S&C IntelliRupter® PulseCloser (Source: S&C)



S&C IntelliRupter Testing Package

The **RIR1 S&C IntelliRupter Testing Package** is a plug in solution that interfaces analog and I/O status signals between the S&C control module to be tested and the S&C docking station. It comprises the interface box to be placed between the control module and the docking station and a wiring harness consisting of three keyed cables which connect the interface box to the CMC 356, CMC 353 or CMC 256plus test set. It also contains a pre-configured IntelliRupter test plan using standard Protection modules of OMICRON 's Test Universe PC software for automated testing. The test plan can easily be customized by the user.

The CMC test set equipped with the LLO-2 option supplies 9 channels of low level analog signals (6 voltages and 3 currents) to the control module to simulate the following IntelliRupter sensor signals:

- > X-Side Voltages (1-Gnd, 2-Gnd, 3-Gnd)
- > Y-Side Voltages (1-Gnd, 2-Gnd, 3-Gnd)
- > Currents (1, 2, 3)

The current sensors on the IntelliRupter are Rogowski coils which provide a voltage output that is proportional to the integral of the primary current. The CMC test set has a Rogowski coil simulation built-in to the low level outputs which is configurable via the test software, allowing the user to work with primary current values in the test modules.

The following status outputs from the S&C control module are monitored via the interface unit and provide the binary input status to the CMC:

- > P1 Open Status & Close Command
- > P2 Open Status & Close Command
- > P3 Open Status & Close Command
- > Pulse Close Command
- > Re-Pulse Close Command

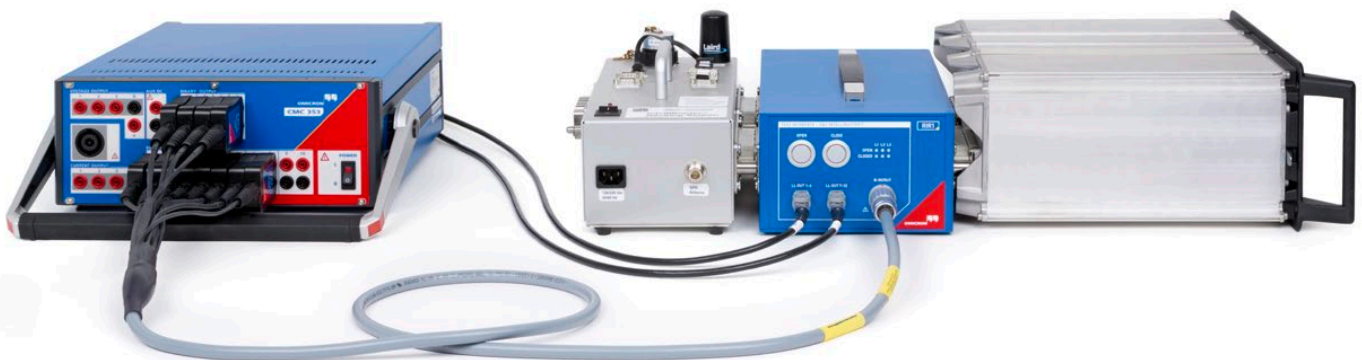
The status of the poles is also displayed via LEDs on the interface box for visual verification.

The testing package also allows the usage of the four contact outputs from the CMC test set as control inputs to the S&C control module to simulate the following conditions:

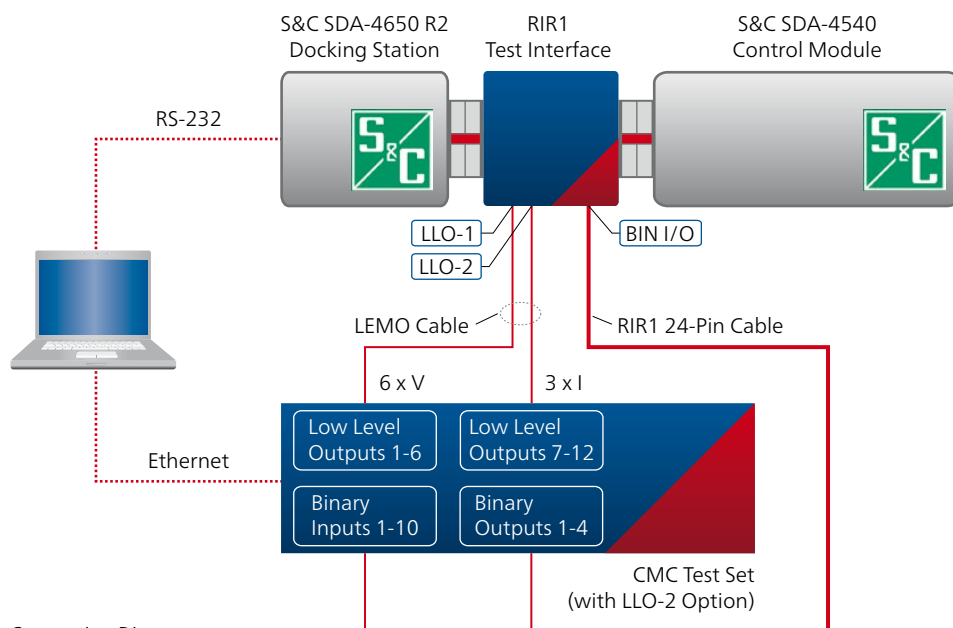
- > Ground Trip Block Enable
- > Manual Open Command
- > Manual Close Command
- > Disconnect Closed
- > Hot-Line Tag Enable

Up to four conditions can be simulated simultaneously.

In addition, the interface box provides the control module with the travel status of each switch pole, plus allows communication to the module via the S&C docking station and the S&C software.



Test Setup: CMC, S&C Docking Station (S&C product, required for each test), RIR1 Test Interface with cables, S&C IntelliRupter PulseCloser Control Module



Connection Diagram

Technical Data	RIR1 Test Interface	RIR1 24-Pin Cable	LEMO Cable
Dimensions (W x H x D)	9 x 6 x 15 in / 23 x 15 x 37 cm	7.8 ft / 2.4 m	6.6 ft / 2 m
Weight	7.7 lbs / 3.5 kg	2.9 lbs / 1.3 kg	0.5 lb / 0.22 kg

## Ordering Information<sup>1</sup>

Description	
	RIR1 S&C IntelliRupter Testing Package; for testing the settings, functions, and logic of S&C IntelliRupter <sup>®</sup> PulseCloser control modules with CMC test sets.
	Includes: 1x RIR1 Test Interface 2x LEMO Cable 1x RIR1 24-Pin Cable
Order Number	VEHZ1169

<sup>1</sup> This testing package requires the LLO-2 hardware option (additional 6 low level outputs) available for the test set models CMC 356, CMC 353 or CMC 256plus. This option can be ordered together with new devices or as an upgrade. The minimum Test Universe software package required for the PC-controlled operation of the CMC test set is the Standard Package. The S&C docking station required for each test is not included in this package.

OMICRON is an international company serving the electrical power industry with innovative testing and diagnostic solutions. The application of OMICRON products allows users to assess the condition of the primary and secondary equipment on their systems with complete confidence. Services offered in the area of consulting, commissioning, testing, diagnosis and training make the product range complete.

Customers in more than 160 countries rely on the company's ability to supply leading-edge technology of excellent quality. Service centers on all continents provide a broad base of knowledge and extraordinary customer support. All of this together with our strong network of sales partners is what has made our company a market leader in the electrical power industry.

For more information, additional literature, and detailed contact information of our worldwide offices please visit our website.