# DOBLE PROTECTION TESTING

Maximize Capabilities of Your Doble Power System Simulators

## **COMMUNICATION ACCESSORIES**



#### F6051 IRIG-B Converter

The F6051 converts IRIG-B to time signals accepted by F6 power system simulators. Use the F6051 to subscribe directly to station clocks for precise network time references during PMU, IEC 61850 or end-to-end tests.



#### F6052 Universal Time Synchronizer

The F6052 is a portable time source that maintains accurate synchronization with station clocks for over 8 hours. Use the F6052 for remote test situations when access to time signals via satellite or station clock isn't available.



#### F6053 PTP Subscriber

The F6053 converts PTP to time signals accepted by F6 power system simulators. Use the F6053 to keep precise time with IEDs as required for peer-to-peer network communications like IEC 61850 G00SE messaging and Sampled Values data streaming.

#### F6895

#### GPS Receiver/Antenna

The F6895 option includes a GPS antenna/receiver with 100ft. cable and is used with the F6885 GPS Receiver Interface to provide a GPS signal to the test instrument.



# TRANSDUCER METERING TEST OPTIONS



F6071 Infrared Optical Pickup

The F6071 Infrared Optical Pickup is used to sense infrared pulses from device LEDs. Allows automated calibration of solid state watthour, varhour and vahour meters.



F6072 Visible Light Optical Pickup The F6072 Visible Light Optical Pickup is available for those solid state meters that have a visible calibration LED.



**F6073 Meter Disk Sensor** The F6073 Meter Disk Sensor is a suction mount reflective pickup assembly used to sense the disk rotation of an induction type meter.



# **OPTIMIZATION ACCESSORIES**



#### F5850

#### Testing Interface for the IntelliRupter® PulseCloser® Fault Interrupter

Use the F5850 to effectively test and verify correct operation of the IntelliRupter® PulseCloser® Fault Interrupter. The F5850 is a portable test interface that is used in combination with your power system simulator to test setting and logic schemes of the IntelliRupter<sup>®</sup> Fault Interrupter Control Module.



#### F6300e **External Amplifier**

Use Doble's F6300e External Amplifier with your Power System Simulator for critical high burden relay testing and to perform necessary system modeling with 3rd party software. This amplifier features 12 enhanced current sources. When combined with Doble's Protection Suite software, you will have the ultimate flexibility to test complex schemes using the new Power System Model engine to test models that require multiple currents such as bus differential schemes and multiwinding transformer models.



#### F6816

#### External Input/Output Unit

Double the number of inputs and outputs you can use for testing with the F6816, a unit that provides eight additional inputs and 8 additional outputs. With 16 inputs and outputs you can monitor and control a large number of relay contacts. This is helpful in elaborate end-to-end tests and dynamic testing of protection schemes.

# **Field Calibration Unit**

Properly calibrate your power system simulator with the F6080 Field Calibration Module, which helps save time and money by giving you the capability to calibrate your test system in the field. The F6080 provides automatic recalibrations of voltage and current sources for all ranges. It also checks and calibrates logic inputs and outputs. Protection Suite Software is used to test the calibration.

# F6350e

F6080

#### **External Amplifier**

Use Doble's F6350e External Amplifier with your Power System Simulator for critical high burden relay testing and to perform necessary system modeling with 3rd party software. This amplifier features 6 voltage and 6 enhanced current sources. When combined with Doble's Protection Suite software, you will have the ultimate flexibility to test complex schemes using the new Power System Model engine to test models that require multiple currents such as bus differential schemes and multiwinding transformer models.



#### **Compact AC Current Clamp** High Accuracy Voltage Output Current Clamp

Doble's Compact AC Current Clamp is designed to help you perform precise protection testing in wiring tight circuits. This highly accurate current probe is used with your Doble protection series test instruments (and the F6820 AIM option) for monitoring and recording parameters.

### Lead Bag



# **Complete Cable Kit** Inside this durable bag you will find all the leads and related

components needed for your standard relay tests. This set includes all your cables with retractable test leads, lugs, spade connectors, crocodile clips, adapters, clip connectors and more.



#### **Doble Engineering Company**

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Specifications are subject to change without notice. Doble is an ISO 9001 & ISO/IEC 17025 & 17034 Certified Company. Doble is an ESCO Technologies Company.

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