

The Raptor System: Raptor HV

Datasheet

Description

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The Raptor-HV, the High Voltage slave, is an optional product that extends the Raptor's applications to tests that require the use of high AC voltage, up to 2 KV. This product works in combination with a Raptor Master and is visually similar to it.

The Raptor HV connects to the master unit via the Expansion Port, from where it also takes the necessary power. The Raptor HV is a pluggable high voltage peripheral that takes advantage of all the valuable features in the Raptor Master including the electronically controlled switching amplifier, DSP based intelligence and a robust communication and device synchronization system. Naturally the HV's control is fully integrated in the master's console.

Power voltage generated by the master at the expansion port is raised by the HV up to two user selectable ranges, 1kV and 2kV, and the output is measured in current, voltage and phase angle to provide adequate injection control and application's feedback. Voltages and currents can be measured with very high precision to allow for a wide variety of applications.

In order to comply with international safety requirements, the Raptor HV's package includes an internal buzzer that signalizes the high voltage output activation and two connectors for an optional rotating warning lamp and an optional mushroom type emergency breaker. The internal buzzer can be disabled from the Raptor's console.

Other outstanding feature is the capacity to inject in frequencies different from the mains frequency, enhancing its electrical testing capacity.

The use of any of the Raptor C-XX systems with the Raptor HV provides a world-wide unique system, which combines both high current and high voltage injection, with the suitable power, for the main maintenance and commissioning test applications in substations and switchgear. It is an innovative and advanced substation test system that replaces the need for multiple test sets.

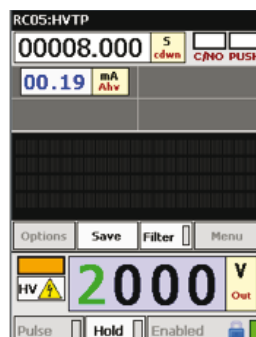
The Raptor HV weighs only 28 kg, and it has the same small and compact size than the rest of Raptor units, with wheels and folding handle, that provides a lower transportation cost and a reduction of manpower needs.

Features

- Two user selectable output ranges: 0-1000 VAC and 0-2000 VAC.
- Powered from the Raptor Master via expansion port.
- Controlled from the common Raptor Master's user interface.
- Integrated test voltage and current measurement.
- Supported by additional Test Templates.
- Audible safety buzzer.
- Detachable rotary warning lamp and Emergency stop button.
- Outstanding Raptor style portability.

Applications

- CT, VT and PT withstand voltage tests.
- CT and VT excitation current measurement, Knee Point.
- VT and PT ratio measurement.
- Polarity test in VT's secondary winding.
- Testing voltage sensors and converters.
- Step & Touch Voltage measurement.



RAPTOR HV

Raptor HV connected to a Raptor Master unit powered by 240 Vac, 50 Hz.

HIGH VOLTAGE POWER OUTPUT (@240Vac, 50Hz)

Output AC voltage	Max output AC current	Duty cycle
0..2 KV	1 A	Continuous
0..2 KV	2 A	3 min
0..2 KV	2.5 A	2 min
0..1KV	2 A	Continuous
0..1KV	4 A	3 min
0..1KV	5 A	2 min
Open circuit resolution	1 Vac	
Output frequency	20-400 Hz (Power reduction applied when outside the 50-60 Hz range)	

MEASUREMENT (INTERNAL) @ (10..100)% of the range / 50-60Hz

Secondary current (internal)

Ranges	0.08 / 0.8 / 8 Aac
Resolution	0.04 / 0.4 / 4 mAac
Frequency range	20 - 400 Hz
Level accuracy	0.1% of the value + 0.1% of the range
Phase angle accuracy	+/-0.25°

Secondary voltage (internal)

Ranges	1000 / 2000 Vac
Resolution	1 Vac
Frequency range	20 - 400 Hz
Level accuracy	0.1% of the value + 0.1% of the range
Phase angle accuracy	+/-0.25°

EXPANSION PORT

(cable length: 1.5 m)

Power input from the amplifier	160 Vac @ 16 A continuous - 32 A 3'
RS-485 communications link	Integrated in the expansion port
Bus supply	+5 V
Phase Synchronism	Yes
Main supply	230 Vac@1A

GENERAL

Power supply	from the Raptor MS's Expansion Port
Weight	28 Kg / 61.6 lbs
Protections	Overheating, Power supply failure, Communications failure
Safety	Integrated high intensity buzzer, External Warning Lamp connector, Mushroom type emergency stop connector
Transportation	Integrated wheels, fixed and adjustable handle
Ventilation	Forced

ORDERING INFORMATION

SYSTEM CONFIGURATION

RAPTOR C-05	1 x Raptor-HH + 1 x Raptor-MS
RAPTOR C-15	1 x Raptor-HH + 1 x Raptor-MS + 1 x Raptor-SL
RAPTOR C-25	1 x Raptor-HH + 1 x Raptor-MS + 2 x Raptor-SL
RAPTOR C-35	1 x Raptor-HH + 1 x Raptor-MS + 3 x Raptor-SL
RAPTOR C-XX + RAPTOR HV	Any of the above configurations + 1 x RAPTOR HV

