POWERSIDE®

All our energy, in your power

Industrial Power Corruptor

Industrial Power Corruptor (IPC)

Powerside's IPC produces substandard quality power, reliably and repeatedly. The IPC is used to test equipment immunity to sag. It is a standard generator for equipment certification: SEMI F47, SEMI E6, IEC 61000-4-11, IEC 61000-4-34, and other international standards.

Application

- Verify equipment sag immunity in factory acceptance tests
- Adapt design to ensure equipment complies with immunity requirements for the application
- Analyze and optimize design identify equipment inrush currents, power consumption profile

Features

- Generates single phase and 3-phase voltage, true phase to phase sags and swells.
- Handles high power, up to 480V, 200 A continuous, 50 or 60Hz
- Built-in standards: SEMI F47, SEMI E6, IEC 61000-4-11, IEC 61000-4-34, SAMSUNG, FAA, MIL SPEC, CBEMA, ITIC, and more
- User-friendly front panel control switches and displays
- Optional power flow monitoring
- Optional spectrum analyzer and vector scope optimized for power system harmonic monitoring
- Built-in 28-channel data acquisition system / digital oscilloscope with voltage and current sensors

SPECIFICATIONS

GENERAL INFORMATION	
Functionalities	Voltage Sag/Dip and Swell testing per SEMI F47, IEC 61000-4-11, CBEMA, ITIC, MIL, STD, FAA, SAMSUNG, and other international standards. With Power Flow Analysis option, also performs to SEMI E6, current inrush testing, harmonic current testing, and more.
Approvals	Designed to meet U.S. and Canadian safety standards, CE certification requirements, FCC requirements. Fully meets requirements of IEC-1010, and IEC-61000-4-11. Fully meets requirements and recommendations of SEMI F47.
Equipment Ratings	Rated as Class I equipment. Rated for Installation Category II (local level, appliances, portable equipment). Rated for Pollution Degree 2 (Normally, only non-conductive pollution occurs).
Operating Environment	Industrial Power Corruptor program for setup/operation of IPC, viewing real-time and downloaded data, and collecting information for test report generation. With Power Flow Analysis option, software includes vector scope, real-time oscilloscope, and real-time spectrum analyzer. ChannelScope II software for viewing, zooming, scrolling, and synchronizing power waveforms. FlowScope software for graphing and examining power flow over time. Requires PC with XP or above.
Communication	Front panel RJ-45 jack for serial connection to PC
Physical Properties	19 in rack-mount unit in rugged polyethylene case. Dimensions (W x H x L): 21 x 11 x 30 in (50 x 28 x 76 cm). Weight 130lbs (59kg).
PERMISSIBLE TEST CONDITIONS	
Voltage Range	100-480 Vrms, 50 or 60 Hz, 1-phase or 3-phase Voltage is limited to 240Vrms on some model numbers
Voltage Configuration	Single phase or 3-phase (Y or delta) connection to unit. Voltage dropout testing can occur on all phases simultaneously. Voltage sag and swell testing on a single pair of phases, or phase to neutral. Phase selection for events is done with front panel dial.
Load Current	Up to 200 Amps per phase continuous, depending on model number, 600 Amps peak. Front panel dial for user selection of current trip point.
SAG / SWELL TESTING	
Magnitude	0% (high impedance) to 125% of nominal voltage in 2.5% steps, limited to a maximum of 550Vrms
Duration	User selected duration from 1 cycle to 34 seconds in 1 cycle steps
Magnitude/Duration Margin	A front panel switch allows quick 5% or 10% increase in event magnitude and duration.
Phase Angle	Manual front panel "Arm" and "Fire" switches locally trigger event. Rear panel BNC connectors provide bi-directional 24V logic level (falling edge) trigger output and input capability.
Event Trigger Input/Output	100 to 240 Vac (±10%), 50/60 Hz, 4 Amps max

SAG / SWELL TESTING	
Semiautomatic Sequencing	As well as manual event configuration, the user can semi-automatically step through an industry standard recipe on a single or 3-phase system.
Switching Method	High speed, gapless switching, IGBT package with patented override design for long duration events
THREE PHASE VOLTAGE DROPOUT AND CURRENT INRUSH TESTING	
Magnitude	Full voltage and current rating of Industrial Power Corruptor
Max Instantaneous Current Recording	±600A instantaneous
Interruption Duration	0.3 to 34 seconds
Phase Angle	0 to 355 °C in 5 °C steps. Referenced to user selected voltage channel
Switching Method	Mechanical relays, with calibrated switching times to 0.4 milliseconds
DATA ACQUISITION	
Internal Analog Input Channels	13 internal voltage channels, 6 internal current channels, 3 protective earth current monitoring channels
External Analog Input Channels	3 front panel ±600V (AC or DC) channels, 6 front panel ±100V (AC or DC) channels
Analog Input Viewing	Three front panel meters (including min. and max. values) can be selected to display any data acquisition channel in real-time. Alternatively, these channels can be monitored using a connected PC and the software provided.
Resolution	15 bits equivalent per individual sample on 1000V / 1000A channels, 12 bits per individual sample on other channels, 16 bit equivalent for average and RMS measurements
Accuracy	Guaranteed accuracy ±1,0% FS on voltage and current. Typical accuracy ±0,25% FS (voltage and current), ±0,5% FS (power parameters), ±1,0% FS (harmonics), ±1° (between any voltage and current channel)
Sampling Rate	0.8 KHz to 7.68 KHz
Phase Lock	With Power Flow Analysis option, software phase-lock to user-selected voltage channel for precision harmonic and power flow calculations.

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