

INVERTER PULSE GENERATOR & PD DETECTOR

Nissin Pulse Electronics the pioneer of inverter pulse, has been continuously developing and upgrading custom-made inverter pulse generator over the year. NPE provides the solution for insulation test of magnet wire and motor for EV(HV).

Inverter Pulse Generator

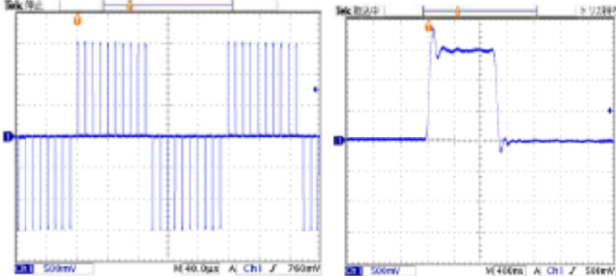
■FEATURES

NPE has developed Inverter pulse generator that simulates inverter surge on motor of electric vehicle and wire between inverter and motor.

This makes it possible to evaluate insulation quality under actual environment on motor of vehicles.

Additionally we supply NPD-1 which measure , partial discharge inception voltage under inverter surge voltage.

■OUTPUT WAVEFORM



Partial Discharge Detector (NPD-1)

■FEATURES

NPE has developed NPD-1 that is able to measure partial discharge (PD) on inverter surge voltage which could not measure with conventional PD detector.

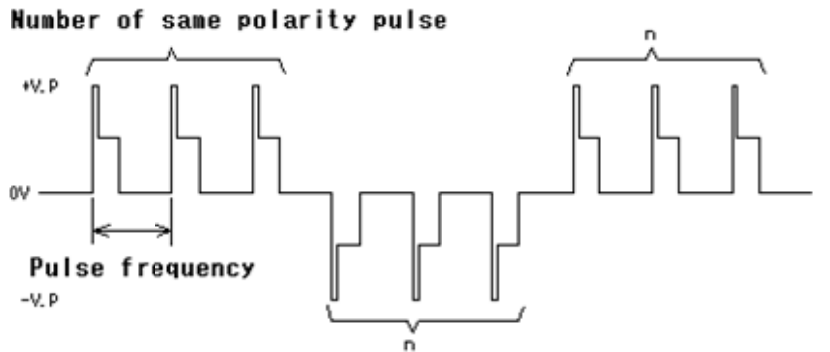
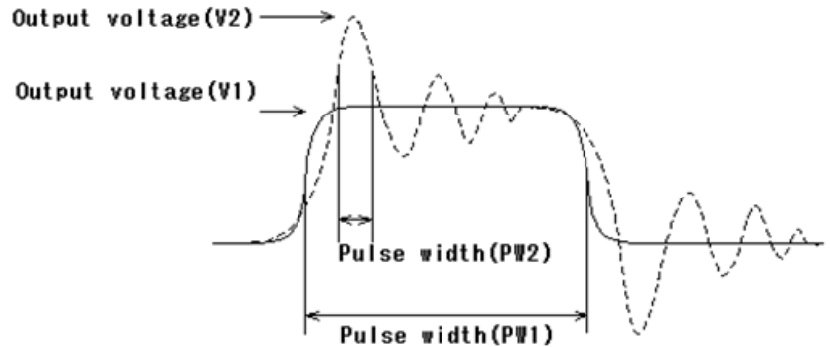
Also, NPD-1 can measure PD in pC with NCP-1 by calibrated with NPG-1.

<p>Mechanism of inverter surge</p>		
<p>Twisted pair cable</p>		<p>Apply inverter surge</p>
<p>Inverter Pulse Generator PG-W03KP-A</p>	<p>NPD-1</p>	<p>NPG-1</p>
	<p>NCP-1</p>	

TECHNICAL SPECIFICATIONS

Inverter Pulse Generator Type : PG-W03KP-A

Output voltage V1	0 ... ±3kV.p
Output voltage V2*	0 ... ±5kV.p
Pulse width PW1	1µs ... 1ms
Pulse width PW2**	100ns,200ns,300ns
Pulse rise & fall time <small>Peak(V1) to ground at load 100pF</small>	Less than 100 ns
Pulse Frequency	10Hz ... 100kHz
Number of same polarity pulse(n)	1 ... 999
Duty Factor	50% or less
Load Capacity	100pF or less
Input Voltage	200V,Single phase
Display	Discharge Voltage Discharge Current Pulse Frequency Polarity Inversion Freq. Integration time
Monitor	Output Voltage Waveform



*By LCR series resonance,V2 can change to x1.2 x1.5x and x1.7 times of V1. That is design value. Therefore the actual output may change by the oscillation condition of the parameter of test circuit (capacitance of test object, test lead etc.).

** PW2 time is design value. Therefore the actual output may change by the output circuit condition same as V2.

Partial Discharge Detector

Partial Discharge Detector	Calibration Pulse Generator	PD Coupler (Coupling capacitor)
Type: NPD-1	Type: NPG-1	Type: NCP-1
Method: Capacitance detection	Calibrator Output : 0 ... 1000pC	Maximum input voltage : 10kV
Amplification band: VHF	Repetition rate: 80,800,8000pps	
Sensitivity: 200pC or more		

Ambient conditions :

	Temperature	Humidity
Operation	0..40°C	40..80%
Storage	-10..45°C	40..80%



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Nissin pulse electronics has a policy of continuous product improvement. Therefore we reserve the right to change design and specification without notice.