



Gopal Electronics

DXL-780

Precision Power Analyzer



Basic Accuracy 0.1%

Key Features

- Most Accurate at low pf
- 22 key for user friendly operation
- Phase to phase, Phase to neutral, two watt meter method
- Four quadrant power measurement
- Tamper proof calibration when set default
- Auto / Manual range selection
- Panel mountable enclosure
- Selectable Measurement speed

Scope of Measurement

- True RMS V, Mean V, Peak V (3 phase)
- True RMS A, Mean A, Peak A (3 Phase)
- Power P & Power Factor PF (3 Phase)
- Frequency
- Harmonics up to 31 order
- Vdc DC Voltage
- Equipment inside temperature
- Equipment On time

Range

0 to 700 Voltage (P-N)
80Amp. Direct Measurement
CT-PT Ratio Scalable
8 Range of Voltage
8 Range of Current
40Hz to 200Hz

Measurement Speed

- Accurate = 1 second display update time
- Fast - S1 = 1 second display update time
- Fast - S2 = 500ms display update time
- Fast - S3 = 250ms display update time



DXL780 is suitable for transformer & motor testing. It has 8 range of voltage & 8 range of current which is Auto or manually selectable. User interface by 22key become more easy and understandable. And the most efficient programming technique used to implement FIR & IIR filter that gives steady result and option of selectable display update rate.

Harmonics measurement is included up to 31th order. Harmonics of Voltage / current can be selected easily by up down key. Fast - Accurate & Hold key provided to directly select the measurement speed and hold the result.



```
U1 700.00 I1 80.000
U2 700.00 I2 80.000
U3 700.00 I3 80.000
U 700.00 I 80.000
```

```
P1 560.00 PF1 1.0000
P2 560.00 PF2 1.0000
P3 560.00 PF3 1.0000
P 1680.0 PF 1.0000
```

```
Peak-U mean-I
U1 989.94 I1 80.000
U2 989.94 I2 80.000
U3 989.94 I3 80.000
```

```
HARM.-INPUT SELECT
U1- I1-
U2- I2-
U3- I3-
```

```
CT SCALE
[Min:0.01 max:500]
001.00
```

```
PH1-U PH1-I
U 700.00 I 8.0000
Um 699.99 Im 7.9999
Up 989.94 Ip 11.313
```

Operational Power

Particular	Value
Power plug socket type	250V IEC 320 C14
Power Mains cord type	MC-4S-6A-250V-AC
Power supply normal operation	(110V to 220V) ± 15%
Withstand Voltage	264V AC 50/60 Hz Maximum
Power consumption	5 VA Max / 2Watt
Power supply type	SMPS with OCOV + impulse protection
Fuse protection	1.0A / 250V inside + outside

Harmonics Specification

Harmonics	Specificaion/Accuracy
	Fundamental Freq. 50 to 60Hz
Bandwidth	50Hz to 60Hz
Signal Processing	DFT(Discreet Fourier Transform)
Sampling Frequency	8Khz
No. of Harmonics	32
Voltage	5%
Current	5%

Frequency Accuracy

24Hours Accuracy of Freuency, Sine wave when selected accurate mode, filters time 16 seconds, (Display update time 1 second), Cal Temp = 25°+-

Range of Frequency	Full Scale Value	Accuracy ± (% Reading + % Range)
30hz to 200Hz	200	0.1 + 0.1

Accuracy of Current

Range of current	Full Scale Value	Accuracy @ 50Hz ± (% Reading + % Range)	Resolution 5digit	Temperature co-efficient ± ppm
0.6A	.600000	0.1% R + 0.1% R	1 µA	100 ppm
1.2A	1.20000	0.1% R + 0.1% R	10 µA	100 ppm
2.5A	2.50000	0.1% R + 0.1% R	10 µA	100 ppm
5.0A	5.00000	0.1% R + 0.1% R	10 µA	100 ppm
10A	10.0000	0.1% R + 0.1% R	100 µA	100 ppm
20A	20.0000	0.1% R + 0.1% R	100 µA	100 ppm
40A	40.0000	0.1% R + 0.1% R	100 µA	100 ppm
80A	80.0000	0.1% R + 0.1% R	100 µA	100 ppm

Accuracy of Voltage

Range of Voltage	Full Scale Value	Accuracy @ 50Hz ± (% Reading + % Range)	Resolution 5digit	Temperature co-efficient ± ppm
5V	5.00000	0.1% R + 0.1% R	10 µV	100 ppm
11V	11.0000	0.1% R + 0.1% R	100 µV	100 ppm
22V	22.0000	0.1% R + 0.1% R	100 µV	100 ppm
44V	44.0000	0.1% R + 0.1% R	100 µV	100 ppm
88V	88.0000	0.1% R + 0.1% R	100 µV	100 ppm
175V	175.000	0.1% R + 0.1% R	1 mV	100 ppm
350V	350.000	0.1% R + 0.1% R	1 mV	100 ppm
700V	700.000	0.1% R + 0.1% R	1 mV	100 ppm

Accuracy of Power

Range of Power	Full Scale Value	Accuracy @ 1PF ± (% Reading + % Range)	Accuracy Lead, Lag 0.5PF ± (% Reading + % Range)	Accuracy Lead, Lag 0.1PF ± (% Reading + % Range)	Accuracy Lead, Lag 0.0PF ± (% Reading + % Range) % of VA
5V * 0.6A	3.00000	0.1 + 0.1	0.1 + 0.1	0.8 + 0.8	0.5 + 0.5
11V * 1.2A	13.2000	0.1 + 0.1	0.1 + 0.1	0.8 + 0.8	0.5 + 0.5
22V * 2.5A	55.0000	0.1 + 0.1	0.1 + 0.1	0.8 + 0.8	0.5 + 0.5
44V * 5.0A	220.000	0.1 + 0.1	0.1 + 0.1	0.8 + 0.8	0.5 + 0.5
88V * 10A	880.000	0.1 + 0.1	0.1 + 0.1	0.8 + 0.8	0.5 + 0.5
175V * 20A	3500.00	0.1 + 0.1	0.1 + 0.1	0.8 + 0.8	0.5 + 0.5
350V * 40A	14000.0	0.1 + 0.1	0.1 + 0.1	0.8 + 0.8	0.5 + 0.5
700V * 80A	56000.0	0.1 + 0.1	0.1 + 0.1	0.8 + 0.8	0.5 + 0.5

Display Page

Page Name	Display parameter (page by page)
Connection type	Neutral to Phase, Phase to Phase , Two Watt meter
V-I	V1rms,V2rms,V3rms, SysV, I1rms, I2rms, I3rms, Sys Irms
P-PF	P1,P2,P3, total P, PF1,PF2,PF3, sys PF
SYSTEM	average V, average I, total P, average PF, Hz, °C, ON TIME
Vm-Ip	V1mean,V2mean,V3mean, average Vmean, I1 peak, I2 peak, I3 peak, average I peak
Vp-I _m	V1peak,V2 peak,V3 peak, average V peak I1mean,I2mean,I3mean,average I _m mean
PHASE-1	V1rms, V1mean, V1peak, I1rms, I1mean, I1peak
PHASE-2	V2rms, V2mean, V2peak, I2rms, I2mean, I2peak
PHASE-3	V3rms, V3mean, V3peak, I3rms, I3mean, I3peak
HARMONICS	Up to 31 order

Specification

Warm up time	30 minutes (For specified accuracy)
Number of channels	3 Voltage , 3 Current
Maximum Direct Voltage Input	700V RMS Phase to Neutral / 1000V peak
Voltage multiplier / PT scaling	0.01 to 500.00
Voltage Input Impedance	2.82 MΩ Phase to Neutral
Maximum Direct Current Input	80A rms / 113V peak
Current multiplier / CT scaling	0.01 to 500.00
Recommended CT	20VA to 100VA class 0.1
Power multiplier / Watt scaling	0.001 to 2.000
Operating Temperature	10 °C to 45 °C
Operating Humidity	20% to 75% RH (non condensation)
Storage temperature	-20 °C to 48 °C
Length x Width x Height	L= 330mm, W= 518mm, H= 183mm (± 2mm)
Length x Width x Height with fittings	L= 375mm, W= 567mm, H= 193mm (± 2mm)
Panel cut out size	L= 332mm, W= 520mm, H= 185mm (± 2mm)
Net Weight	4.7Kg without accessories (± 0.2Kg)
Weight with packing	9.5 Kg (± 0.2Kg)
Display type	LCD 4 x 20 line, jumbo Character, Yellow Black
Measuring Terminals	Measuring Terminals 1/4" BSW for current, 4mm banana plug for voltage
Housing	Equipped with MS case to meet stringent EMC requirements.
Fitting hardware nut bolt screw	All screw nut bolt used stainless steel (silver finish)
Environmental	98% of total weight material recyclable

About Us

Gopal Electronics was established in 1989 by Mr. Gangaram Panchal in Ahmedabad (India), who has over 40 years of experience in magnetic measurement of soft and hard magnetic material. He invented the first product that was the single sheet watt loss tester for watt loss measurement



of motor stamping and EI type laminations. That product proves as very good solutions for the trades and suppliers of electrical stamping to evaluate their material grade. We setup our new manufacturing unit at naroda, Ahmedabad in 1995. Then the development chain starts and we developed range of products like Digital Iron Loss Tester, Holiday Detector, 3 Phase Power Analyzer Epstein tester, Franklin Tester, Turns ratio meter etc. Our range of products is world renowned. These instruments are endorsed by reputed companies like ABB, BHEL, Tata Steel, Emco Ltd, Alstrom (Areva), Crompton Greaves (Germany) etc.



Exporting to More than 45 Countries



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Galaxy Stampings

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Weg
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Kryfs
MKS Transformer
Polmot motor
Rajastan transformer
SR Electrosteel
Voltec



Gopal Electronics (Works)

Plot-11, Part-3, Amarnath Estate,
Naroda Dehgam Road, Naroda
Ahmedabad-382330
Gujarat - India

Gopal Electronics (Sales Office)

505, Peהל Lake View, B/h Auda Lake,
Nr. Vaishnodevi circle, Khoraj
Ahmedabad-382481
Gujarat - India

Tele : +91 79 4039 7192

Cell : +91 94295 88576

Email : gopal@gopalelectronics.com | sales@gopalelectronics.com

Web : www.gopalepstein.com | www.gopalelectronics.com

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