

GF312V2

Portable Three Phase Multifunction Watt-hour Meter Calibrator

GF312V2 portable three phase multifunction watt-hour meter calibrator on-site is the newest product produced by our company by widely visiting users and referring to the advantages of the same kind of products home and abroad. The measured part of the product adopts high speed A/D transmission to send DSP to conduct digital processing, which largely improves measured degree of accuracy and stability. Central processing part adopts 32-bit ARM embedded technology to make instrument interface novel, function abundant, operation distinct and easy, and performance steady. Class of accuracy: Class 0.02, 0.05 or 0.1, range from 12A/600V or 120A/600V, with comfort design, small size and light weight. The model GF312V2 watt-hour meter calibrator is suit for electric power departments, measuring and quality examining departments and electric lab to field use.

Application

1. Power plant;
2. Electrical laboratory;
3. Energy meter factory;
4. Metrological service center;
5. Distribution power corporation;
6. Power engineering company;
7. Electricity power bureau & power company;
8. National Metrology and testing department;
9. Electrical Department of industrial and mining enterprises;



Features

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|--|--|
| 1. Screen capture function; | 2. Measurement of energy meter errors; |
| 3. 7 inch color TFT touch LCD; | 4. Measurement of clock error of energy meter); |
| 5. Self adjusted clamp-on CTs; | 6. Measurement of turn ratio & phase error for CT; |
| 7. Accuracy class: 0.05%, 0.1%; | 8. Large capacity storage device for mass memory; |
| 9. Measurement for energy register; | 10. Measurement voltage & current of harmonics of 2nd to 63st; |
| 11. RS232 port for PC software control; | 12. Power supply (lithium battery)/ 85-265V AC /U1Un (40-450V); |
| 13. USB and RS232 communication ports; | 14. Check wiring failures and calculation of electricity compensation; |
| 15. Measurement of U, I, P, Q, S, phase angle, power factor, frequency etc; | |
| 16. Input two pulse signal for master and slave meter synchronously calibration; | |

Parameters

| Electrical parameters | |
|-------------------------------------|--|
| Accuracy class | 0.02%, 0.05%, 0.1% |
| Power Supply | External power, 85-265V, 45-65Hz Phase voltage supply 40-450V, 45-65Hz Li-Battery supply |
| Voltage measurement | |
| Range | 0-600V |
| Error | $\pm 0.05\%$ (30-600V); $\pm 0.02\%$ (30-600V) |
| Harmonic | 2 nd -63 rd |
| Input impedance range | 245k Ω @ 250V; 10M Ω @5V |
| Stability | 0.01%/minute |
| Long term stability | <100 $\times 10E-6$ /Year |
| Current measurement | |
| Range (direct connection) | 1mA-12A or 1mA-120A |
| Range (clamp CT) | 1mA-120A |
| Clamp on CTs Optional | 5A, 20A, 100A, 200A, 500A, 1000A, 2000A, 3000A |
| Error (direct connection) | $\pm 0.05\%$ or $\pm 0.02\%$ |
| Error (clamp CT) | $\pm 0.2\%$ (1mA-120A) $\pm 0.5\%$ (other) |
| Harmonic | 2 nd -63 rd |
| Clamp diameter | 12mm or 18mm |
| Input impedance range | 0.04 Ω @ 0.05A-12A |
| Stability | 0.01%/minute |
| Long term stability | <100 $\times 10E-6$ /Year |
| Power measure error | |
| Active power (direct connection) | $\pm 0.05\%$ or $\pm 0.02\%$ |
| Active power (clamp CT) | $\pm 0.2\%$ (1mA-120A) |
| Reactive power (direct connection) | $\pm 0.1\%$ or $\pm 0.05\%$ |
| Reactive power (clamp CT) | $\pm 0.2\%$ (1mA-120A) |
| Stability | 0.01%/minute |
| Long term stability | <100 $\times 10E-6$ /Year |
| Energy measure error | |
| Active energy (direct connection) | $\pm 0.05\%$ or $\pm 0.02\%$ |
| Active energy (clamp CT) | $\pm 0.2\%$ (1mA-120A) |
| Reactive energy (direct connection) | $\pm 0.1\%$ or $\pm 0.05\%$ |
| Reactive energy (clamp CT) | $\pm 0.2\%$ (5mA-120A) |
| Stability | 0.01%/minute |
| Long term stability | <100 $\times 10E-6$ /Year |

Electrical parameters - continued
Phase angle

| | |
|------------|---------|
| Range | 0°-360° |
| Resolution | 0.001° |
| Error | ±0.015° |

Frequency

| | |
|------------|-----------|
| Range | 15Hz-70Hz |
| Resolution | 0.0005Hz |
| Error | 0.001Hz |

Reference Meter

| | |
|-----------------|---|
| Measuring modes | 2WA / 2WR / 2WAP 3WA / 3WR / 3WAP / 3WRCA / 3WRCB 4WA / 4WAb / 4WR / 4WRb / 4WAP / 4WAPb / 4WRC |
| Bandwidth | 3000Hz |
| Sampling | 16 bit 504 samplers/period |

Pulse output

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|-----------------|-------|
| Energy constant | 25000 |
| Pulse ratio | 1:1 |
| Output level | 5V |

Pulse input

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|-----------------|------------|
| Input channel | 2 |
| Input level | 3-12V |
| Input frequency | Max. 100Hz |

Display

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|------------|--------------------|
| Resolution | 800×480 |
| LCD | 7" TFT color touch |

Function

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|-----------------------|-------|
| Vector diagram | Yes |
| Waveform | Yes |
| Energy accumulation | Yes |
| CT ratio test | Yes |
| CT PT programmable | Yes |
| Local parameter input | Yes |
| Wiring emulation | Yes |
| Self-calibration | Yes |
| Recorder check | Yes |
| Data storage | Yes |
| GPS | Yes |
| Data storage qty | 10000 |

Electrical parameters - continued

| | |
|------------------------|-----------|
| External extend memory | Yes |
| Screen printing | Yes |
| Communication port | USB/RS232 |
| Communication with PC | Yes |
| Upload data | Yes |
| External mini printer | Yes |
| External keyboard | Yes |

Safety

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|--|-------------------|
| IP class according to DIN EN 60529 | IP42 |
| Declaration of conformity | CE & CNAS conform |
| Protection class according to DIN EN 61140 | II |
| Overvoltage category voltage measurement | CAT III 600V |
| Overvoltage category current | CAT III 600V |

Standard

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|----------------------|---|
| Isolation protection | IEC 61010-1:2002 |
| Energy measurement | IEC 60736; IR46; ANSI C12.20-2002; |
| Reference standard | IEC 62052-11 IEC62053-21 IEC62053-22 & IEC62053-23 IEC61010-1:2002 |

Mechanical parameters

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|-------------------------|------------|
| Dimensions (W×H×D) (mm) | 245×168×70 |
| Weight (kg) | 1.8 |

Environmental conditions

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|---------------------|----------------|
| Ambient temperature | -25°C to +50°C |
| Storage temperature | -30°C to +65°C |
| Relative humidity | 30%-95% |
| Power Consumstion | ≤13VA |

Accessories

