

## Multifunction calibrator of alternating and direct voltage and current

### Calmet C101F

- Voltage source up to 1100V
- Current source up to 20A
- Small dimensions and light weight - 16kg
- High output power
- Option C101FC with 100A AC subrange
- Output power 40VA for 20A AC/DC
- Software Calpro 101
- Interface RS232C
- Calibration Certificate



The C101F Calibrator enables generating of:

- direct (DC) and alternating (AC) voltages up to 1100V in five subranges 0.1-1-10-100- 1000V,
  - DC and AC currents up to 20.5A in five subranges 0.001-0.01-0.1-1-10A (the C101FC option up to 100A AC).
- Frequency of alternating signals may be chosen from values 50Hz (synchronized with power supply frequency), 60Hz, 400Hz or can be programmed in range 45.00...2000Hz. Output signal can be set by means of external keyboard or by standard interface RS232C from PC computer.

The C101F Calibrator is characterised by high accuracy, high output power, small dimensions and light weight.

### Technical parameters of C101F Calibrator

| Parameter  | Range  |                     |                 |              |                |                      |                  |               |                  |                 |
|--|--|---------------------|-----------------|--------------|----------------|----------------------|------------------|---------------|------------------|-----------------|
|  | 100mV  | 1V                  | 10V             | 100V         | 1000V          | 1mA                  | 10mA             | 100mA         | 1A               | 10A             |
| Resolution   | 100nV  | 1μV                 | 10μV            | 100μV        | 1mV            | 1nA                  | 10nA             | 100nA         | 1μA              | 10μA            |
| Settings range   | 1...<br>205mV  | 0.01...<br>2.05V    | 0.1...<br>20.5V | 1...<br>205V | 10...<br>1100V | 0.01...<br>2.05mA    | 0.1...<br>20.5mA | 1...<br>205mA | 0.01...<br>1.1A  | 0.1...<br>20.5A |
| Uncertainty *)<br>[% of set value+<br>% setting range] | DC   | 0.03<br>+0.005      | 0.02<br>+0.002  |              |                | 0.02<br>+0.003       |                  |               | 0.03<br>+0.003   |                 |
|  | AC   | 0.05<br>+0.005+50μV |                 |              |                | 0.05<br>+0.005+0.5μA |                  |               | 0.05<br>+0.005   |                 |
| Maximum load   | 20mA   | 1100mA              |                 | 200mA        | 30mA           | 11V                  |                  |               | 2V@20A<br>4V@10A |                 |
| Frequency  | DC; 50Hz synchronized with power supply; 60±0.01Hz and 400±0.1Hz<br>45.00...99.99±0.01Hz, 100.0...999.9±0.1Hz, 1000...2000±1Hz |                     |                 |              |                |                      |                  |               |                  |                 |
| Temperature coefficient                                | ±0.1 of uncertainty value / 1°C<br>in environment temperature +5...+18°C and +28...+40°C                                       |                     |                 |              |                |                      |                  |               |                  |                 |
| Weight and dimensions                                  | 16kg and 478 (width)x194 (height)x342 (depth) mm   |                     |                 |              |                |                      |                  |               |                  |                 |
| Power supply   | 230V ±10% / 45...65Hz / 200VA  |                     |                 |              |                |                      |                  |               |                  |                 |

DC – direct voltage and current, AC – alternating voltage and current

\*) Absolute Uncertainty with 95% Confidence Level includes the traceability to external standards, 12th months stability, influences of ambient temperature, power supply voltage and load regulation in reference conditions and nonlinearity. For frequency band above 500Hz-linear rise up to double value for frequency 2kHz, typically.

### Additional technical parameters of C101FC Calibrator (option with additional 100A AC range)

| Parameter                 | Range                                     |
|---------------------------|---|
| Settings range            | 1...100.0000A                             |
| Resolution                | 100μA                                     |
| Uncertainty*)             | 0.2% of setting +0.05% of range           |
| Maximum load              | 0.5V@100A and 0.8V@50A                    |
| Additional 100A terminals | Laboratory terminal for eyelet adapter M8 |
| Frequency                 | 45.00...99.99±0.01Hz, 100.0...400.0±0.1Hz |

### How do you choose calibration set for testing voltage and current meters?

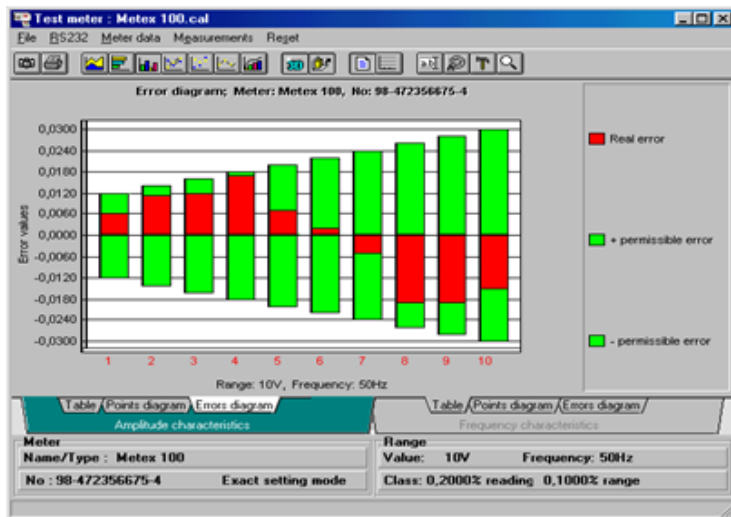
Meter under test accuracy class [%]

|       |  |                                |  |                         |
|-------|--|--------------------------------|--|-------------------------|
| 10    | Medium accuracy class C101F Calibrator | High accuracy class Calibrator | Medium accuracy class C101F Calibrator | High accuracy class DMM |
| 1     |  |                                |  |                         |
| 0,1   | High accuracy class Calibrator         | One Calibrator                 | Set of Calibrator and DMM              | High accuracy class DMM |
| 0,01  |  |                                |  |                         |
| 0,001 | Set of Calibrators                     | One Calibrator                 | Set of Calibrator and DMM              |                         |

Set of medium accuracy Calibrator and high accuracy DMM are a low cost and more versatile solution



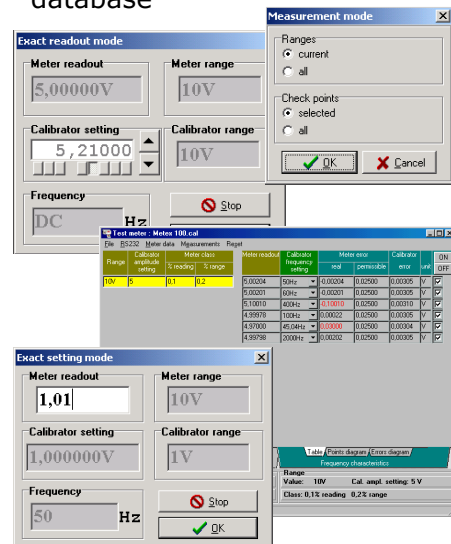
C101F and C101FC Calibrators have sufficiently high output power to control the coils in order to check clamps and clamp meters up to 1000A DC and AC.



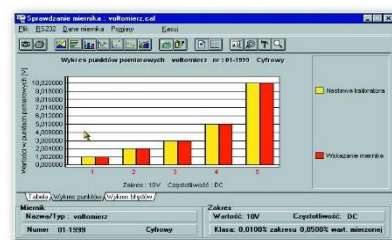
- control of the C101F Calibrator functions using PC computer – simulation of calibrator’s keyboard on the PC screen by means of keyboard and/or mouse



- computer-aided analog and digital devices testing – measurement procedures, editing tables of measurements with automatic errors calculation of testing devices, creating database



- graphical visualisation of measurements in the form of tables and various charts



Calmet sp. z o.o.  
 Kukulcza 18, 65-472 Zielona Gora, Poland  
 Phone +48 68 324 04 56 Fax +48 68 324 04 57  
 E-mail: mail@calmet.com.pl Web access: http://www.calmet.com.pl