Image sheet

Power Calibrators

MC133 / MC133i
MC133C / MC133Ci

Models / Parameters

MC133 / MC133i

Single phase calibrator

Both models

- AC voltage 1 … 600V
- DC voltage 1 … 280V
- AC/DC current 8mA … 30A
- Frequency DC, 15 … 1000Hz
- Phase 0 … 360°
- AC power 0 … 18kVA
- DC power 0 … 8.4kW
- AC/DC energy
- Built in process multimeter
- RS232, IEEE488 (SCPI)
- Can be extended up to 3 phase system

MC133 only

- Harmonic distortion (50 harmonic components)
- Interharmonic distortion
- Modulation and flicker
- Dip/Swell

MC133C / MC133Ci

Three phase calibrator

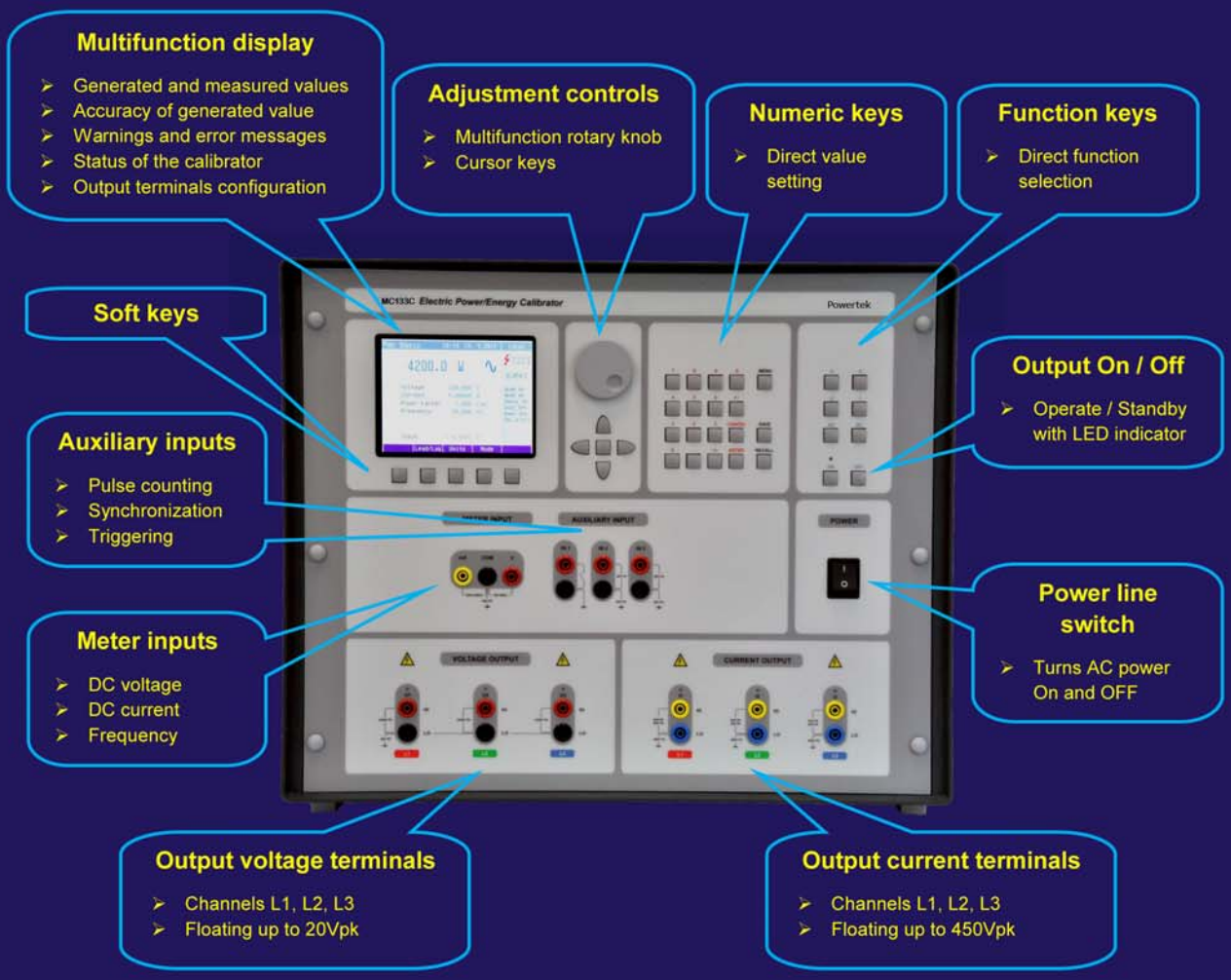
Both models

- AC voltage 1 … 600V
- DC voltage 1 … 280V
- AC/DC current 8mA … 30A (90A single phase)
- Frequency DC, 15 … 1000Hz
- Phase 0 … 360°
- AC power 0 … 54kVA
- DC power 0 … 25.2kW
- AC/DC energy
- Built in process multimeter
- RS232, IEEE488 (SCPI)

MC133C only

- Harmonic distortion (50 harmonic components)
- Interharmonic distortion
- Modulation and flicker
- Dip/Swell

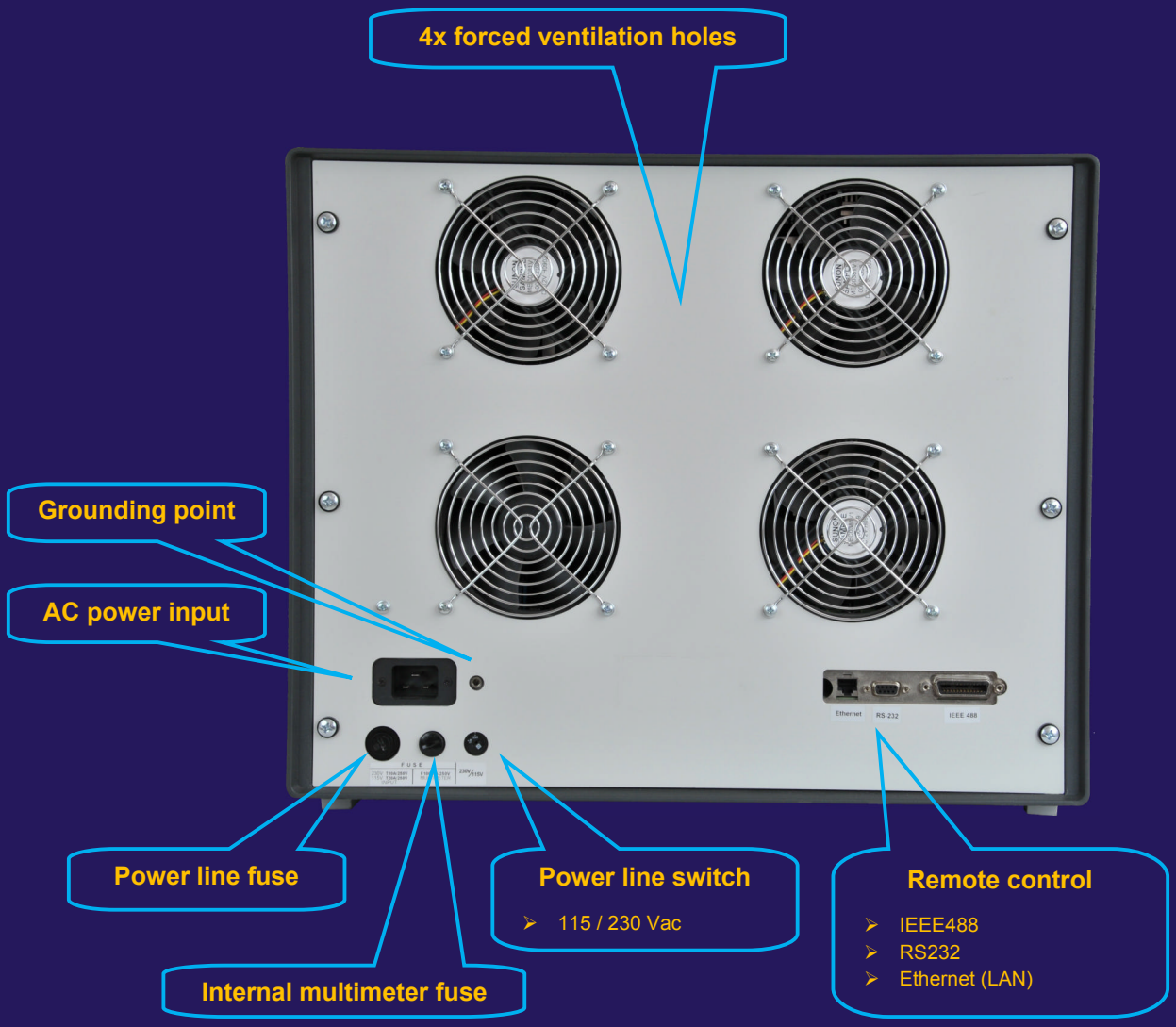
Front panel



Front panel is divided into a few sections:

- Large color TFT display with excellent visibility and soft keys
- Keyboard with the rotary knob and cursor keys
- Input terminals (auxiliary inputs, process meter input)
- Power line switch
- Output voltage and current terminals

Rear panel



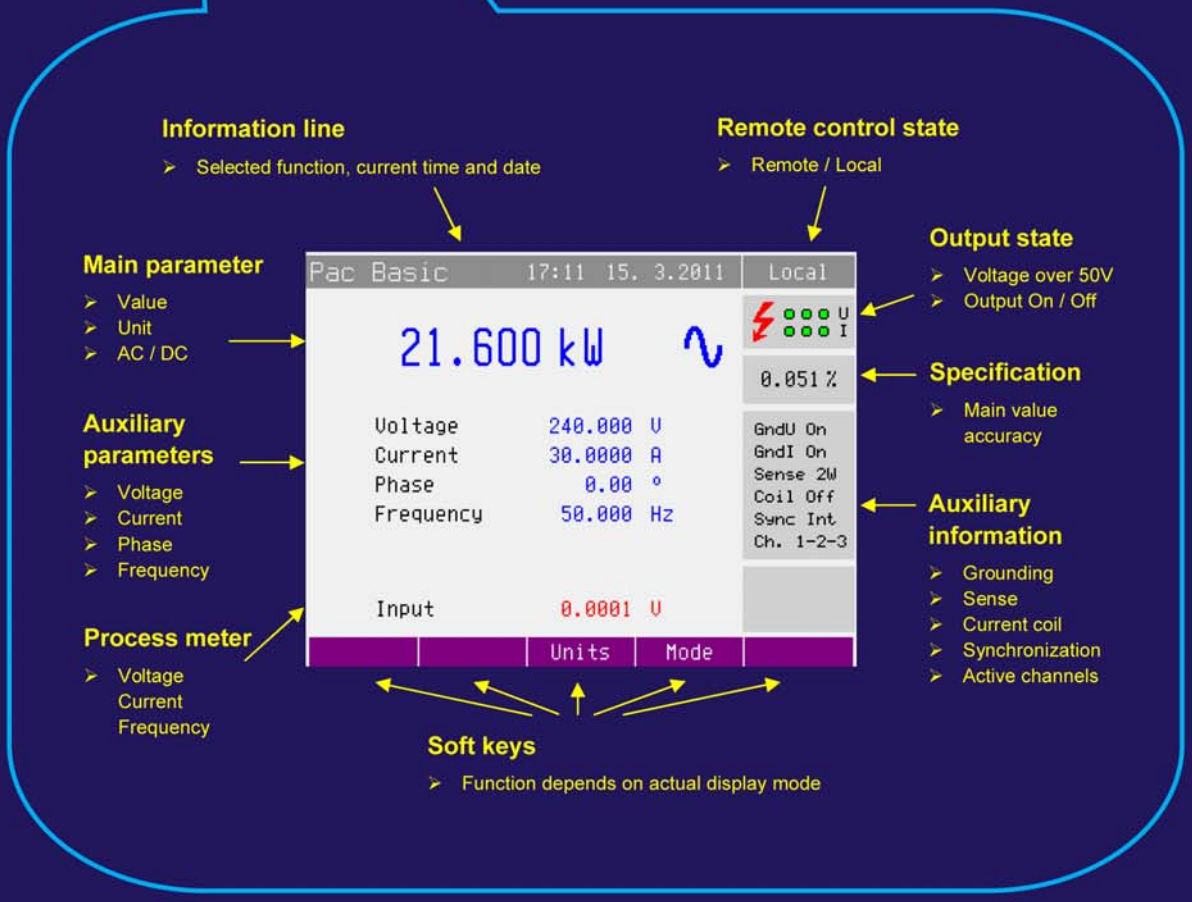
Rear panel contains:

- Ventilation holes
- Power supply input and fuse holder
- Remote control connectors (Ethernet, RS232, IEEE488)

Display

Colors used on display

- Red color indicates measured value
- Blue color indicates parameter or value that can be modified directly
- Black color indicates fix value, label, note or parameter that cannot be modified directly



Terminals

There are three terminal areas:

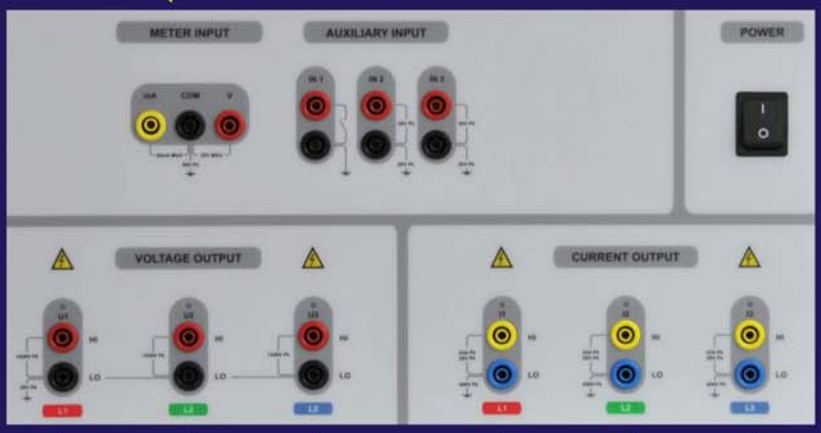
- Input terminals
  Meter input
  Auxiliary input
- Voltage output terminals
- Current output terminals

Meter input

- Voltage 10V, Frequency 10kHz
- Current 20mA

Auxiliary input

- Energy pulses counting
- External synchronization
- Dip/Swell trigger



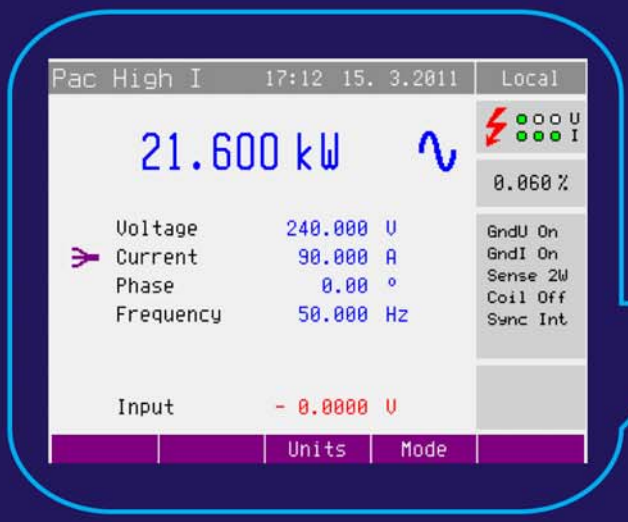
Voltage outputs

- Phases L1, L2, L3
- Common LO terminals floating up to 20Vpk

Current outputs

- Phases L1, L2, L3
- Independent LO terminals floating up to 450Vpk

High Current Adapter

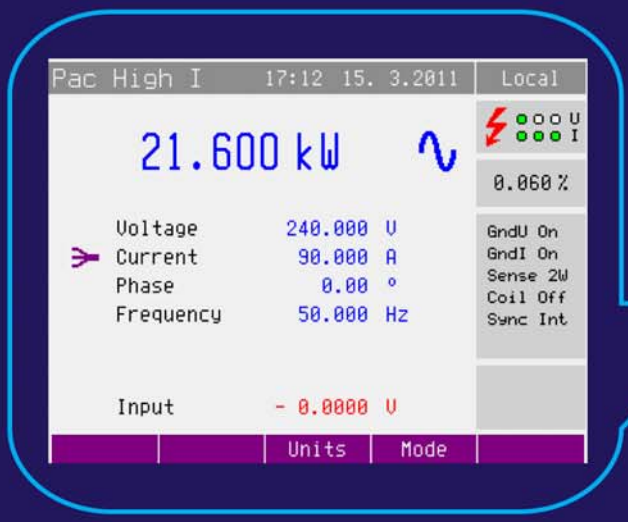


Option MC133C-01

- Parallel connection of three current outputs
- Standard option for three phase system

Direct current up to 90A

High Current Adapter



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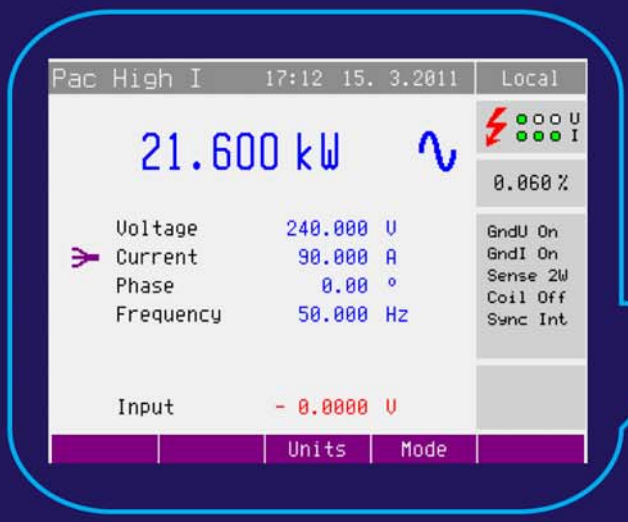

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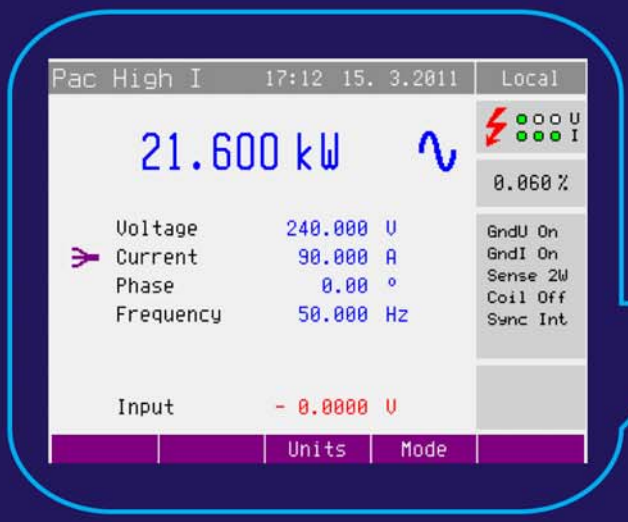

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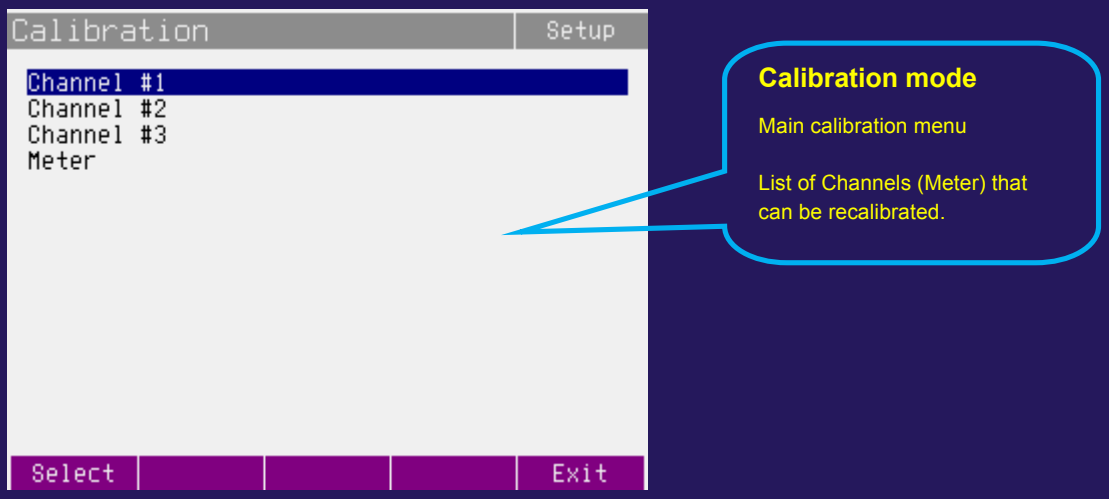
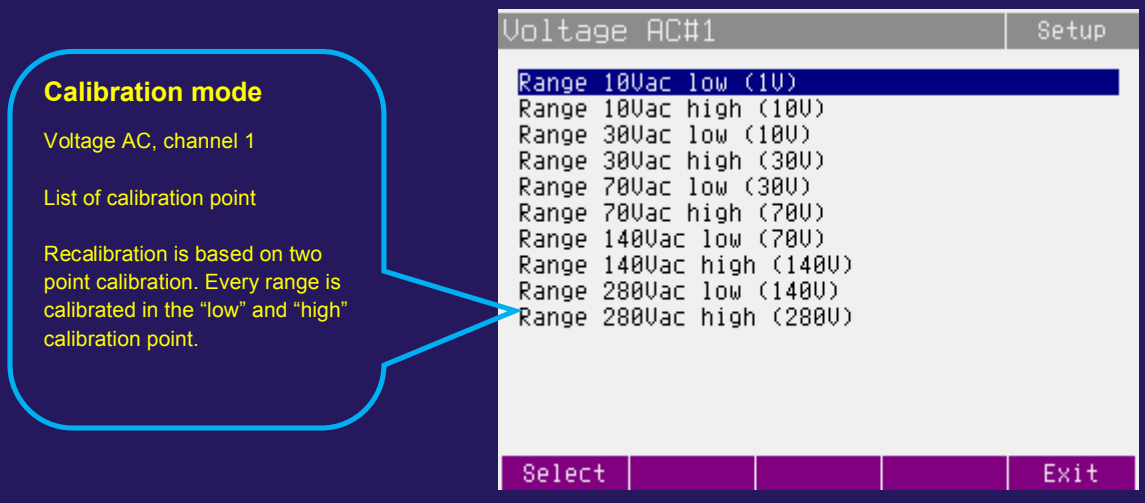
Recalibration procedure

All internal calibration data can be changed in CALIBRATION mode.

- Access to the calibration mode is protected by password.
- The entire recalibration can be done from instrument's keyboard.
- Instrument can be recalibrated completely or in selected functions (points).





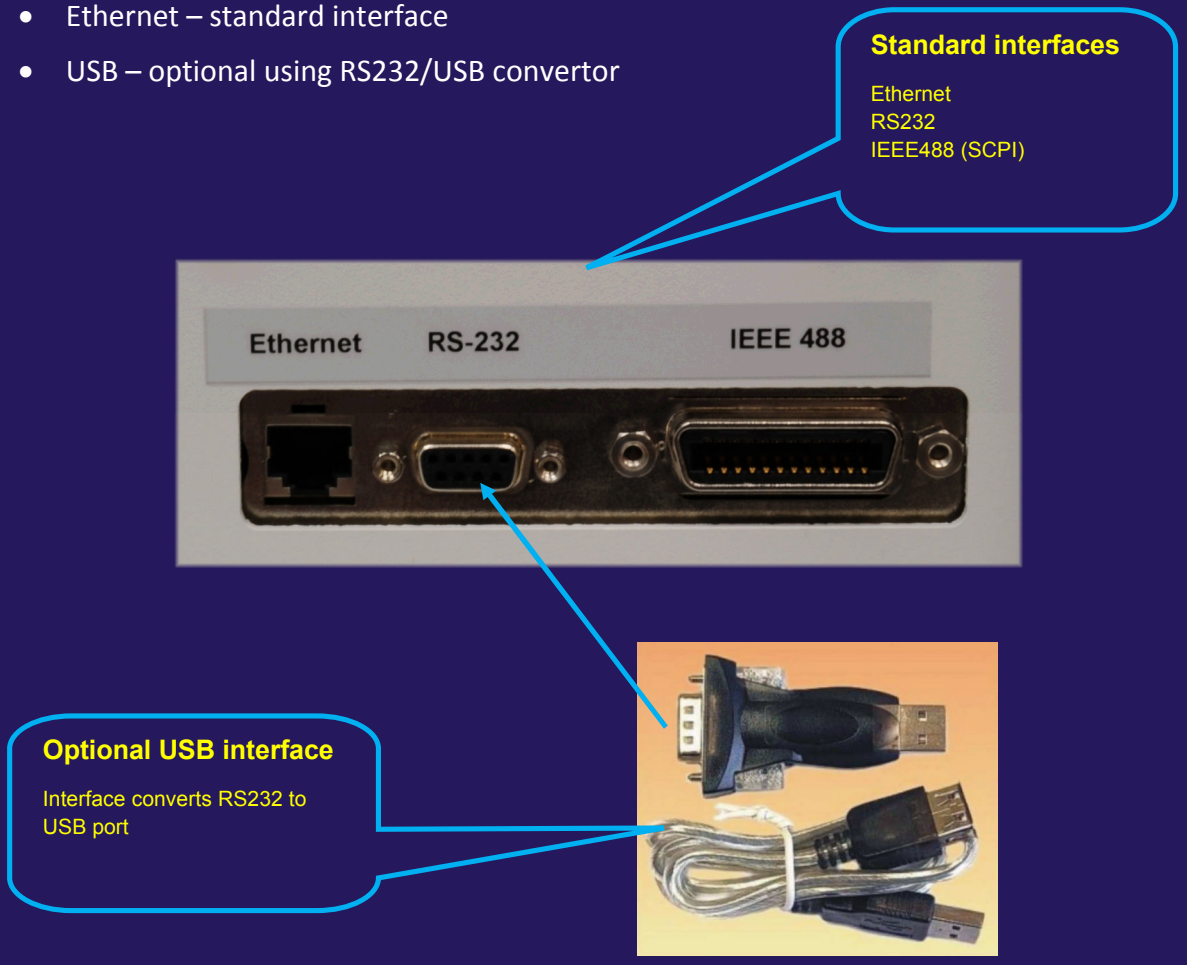
Remote control

Calibrator can be used in automated measuring systems.

Connectors for remote control are located on the rear panel.

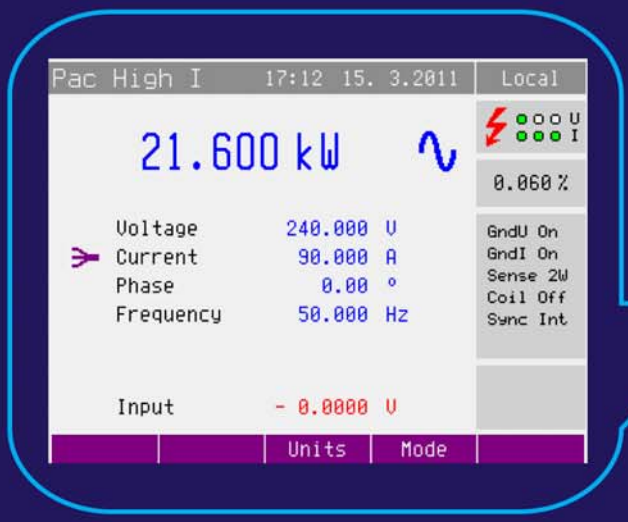
Following interfaces are available for connection to the controller (PC):

- IEEE488 (SCPI) – standard interface
- RS232 – standard interface
- Ethernet – standard interface
- USB – optional using RS232/USB convertor



All device functions can be controlled via the above mentioned interfaces. User's manual contains description of all commands. Syntax of commands is according to the SCPI standard.

High Current Adapter



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Software

Caliber (licensed software)

- Easy creation of calibration procedure using procedure wizard
- Automatic calibration of instruments
- Instruments control via USB, RS232, IEEE488, RS485, Ethernet, … (VISA)
- Calculated deviation and uncertainty in each point of test report
- Calibration uncertainty evaluated according to metrology standards
- Up to 20 instruments in one calibration point
- Windows 2000/XP/Vista/7 (32/64 bit)