

## POWER CONTROL UNIT PCU14

### Description

The PCU14 Power Control Unit is a compact, standalone microprocessor device for controlling one complete UHV vacuum system. It supports one ultra-high vacuum pump (e. g. turbo molecular pump, ion pump, cryo pump, etc.), electromagnetic vent valve, electromagnetic safety valve, fore vacuum pump and two vacuum gauges based on the 0..10V output standard. The full range of Oerlikon-Leybold gauges are implemented as standard : ITR100, ITR90, PTR237/9, PTR90, TTR90, but any other gauge from any other manufacturer can also be supported.

The PCU14 displays the state of all of the connected peripheral devices on a large LCD graphics display, providing clear readouts of important system parameters to the user.

The unit comprises several interlocks to protect the vacuum system in the event of power loss or in the case that a pump or other device might fail.

The front display MIMIC diagram can be customized by the user in order to represent their particular locations of chamber, valves, gauges and pumps, thereby providing an accurate, easy to follow representation of the system status. Four different and most popular configurations are implemented on the delivered unit. Customers can choose one of these fixed configurations and set it as the default display.

The unit is also fully **software controlled** and **web-enabled** so that it can be operated over any network, including the internet.

Only one communication interface can be chosen at time of order (please refer to table) but this can be easily changed in the future via simple rear panel plugin connection modules, without ever having to access the

internals of the unit.

### Application

- Control of any high and ultra high vacuum system
- Measurement of ultimate pressure
- Bakeable and non-bakeable systems
- Control and automation of pump down cycle
- Control and automation of venting cycle

The PCU14 has an externally attached UPS ensuring full control and protection of the vacuum system even on power failure.

It is available with full dedicated software application or library module.

### Additional information

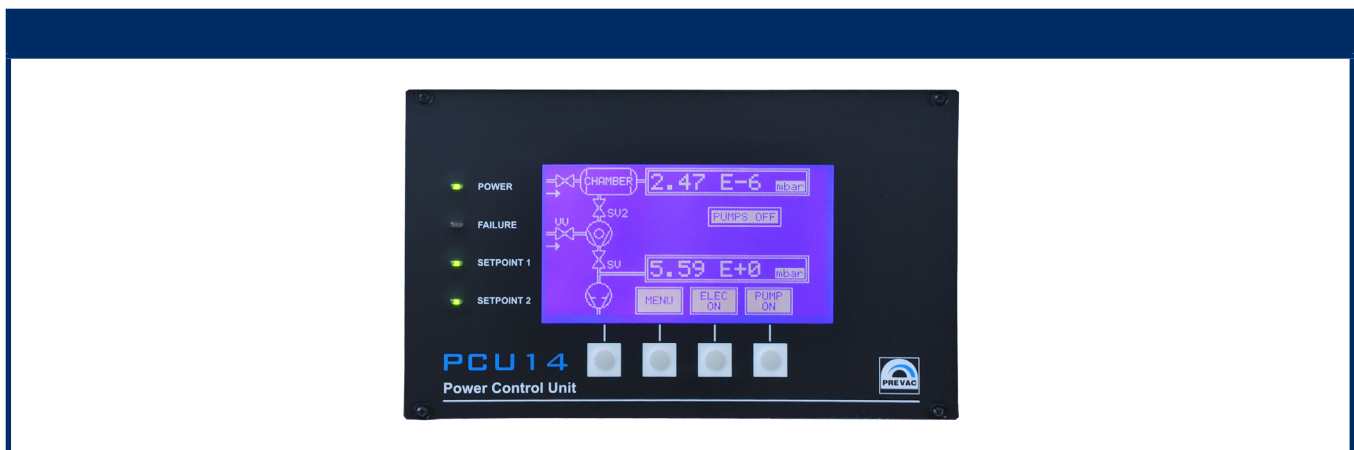
The PCU14 front control panel is divided into three parts:

- Center - graphical presentation of vacuum system with LCD MIMIC diagram
- Bottom - softkey buttons
- Left - LED panel which indicates the current state of the vacuum system (set-points, power, failures etc.)

### Mounting

19" rack mounting, ½ width, 3U height.

\* Only one communications interface can be used at once. Please specify at time of order.



## Software

Electronics can be controlled by PC with dedicated software or library.



Specification	
Measurement channels	2
Display range	1x10 <sup>-10</sup> - 1000 mbar
Display	LCD 240 x 128 dots
Suitable gauges in standard*	TTR211S, TTR90, PTR237, ITR90, ITR100
Supply	90 to 240VAC
Operating temperature	5 ± 50°C
Supported valves	any 24V 2A max
Supported fore vacuum pump	any 1 phase 230VAC 5A max or 1 - 3 phase with external interface
Supported TMP	RS234/485 connected via TURBO.DRIVE S any with the standard ON/OFF control
Communication Interface*	RS232/485/422, USB, Profibus DPV1, Modbus, EtherNet/IP, Bluetooth
Dimesions [mm]	1/2 of 3HE 19" (WxHxD) 212 x 128 x 250 mm
Weight, approx	1,5 kg