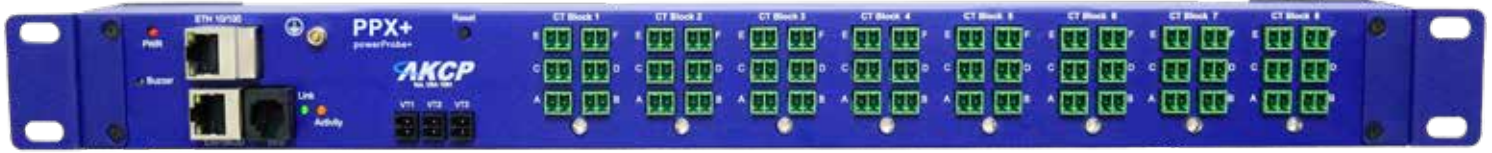


## powerProbeX+ (PPX+)



The powerProbeX+ branch circuit power monitoring device. Up to 48 individual circuits with billable grade accuracy are measured. Ideal for monitoring multiple circuits within co-location data centers for billing individual clients, or as an energy audit for facilities to determine which circuits are consuming the most power.

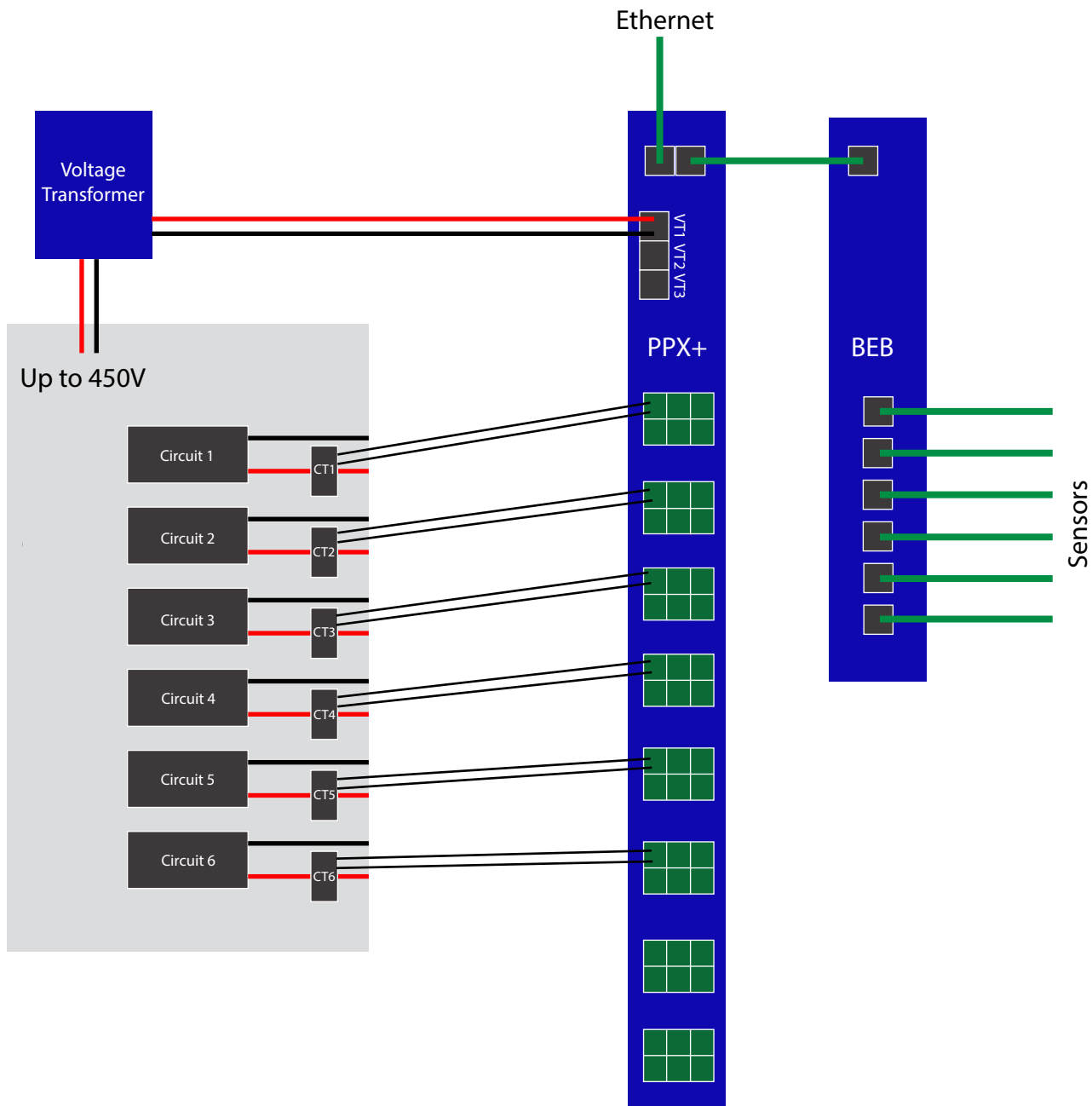
Suitable for both single phase or three phase power, it is equipped with 3x voltage inputs. The voltage inputs are assigned to each bank of 6x CT inputs under software control.

An external voltage transformer is utilized to isolate any high voltage from entering the PPX+ device.

The PPX+ is a cost effective way to monitor multiple circuits in your facility with billable grade accuracy at your power distribution panel.

A Modbus RS485 port is included for connection to third party-devices, as well as a Basic Expansion bus (BEB) port that connects with the AKCP expansion units for additional sensor ports or dry contacts as required.

# PPX+ - Connection Diagram



The above diagram shows 6 individual circuits connected to banks 1-6 of CT inputs on the PPX+. A single voltage transformer input of up to 450V is shown, however up to 3 different voltage inputs can be used with ranges from 100 up to 450V AC.

Also connected is a BEB unit with additional sensor ports. The BEB can be built up in your custom configuration with sensor ports, dry contacts, mini relays and A2D inputs.

# PPX+ - Technical Specification

<b>Dimension</b>	44 (W) x 44 (H) low profile design
<b>Expansion Port *</b>	EXP port connecting EXP Remote Units BEB port for connecting SPX+ BEB Remote Units
<b>Mounting</b>	0U Toolless rack mount, optional wall mount brackets, horizontal 1U mounting or DIN rail brackets.
<b>Power</b>	External 5.5V 3A Power Adapter Input Voltage and Current ratings : 100V~240V - 0.22A Options: External Dual 12-24VDC internal power supply External Dual 40-60 VDC internal power supply
<b>Status Indication</b>	LED indication for power LED for network connectivity LED for Voltage Input Assignment
<b>Components</b>	Manufactured using highly integrated, low power surface mount technology to ensure long term reliability.
<b>Operating Environment</b>	Temperature : Min. 0° C – Max.80° C Humidity: Min. 20% – Max. 80% (Non-Condensing)
<b>MTBF</b>	1,400,000 Hours based on field experience with sensorProbe+ units.
<b>Base Unit</b>	3 x Voltage Transformer inputs 8 x 6 CT blocks for total of 48 CT inputs Ethernet RJ45 EXP/Modbus RS485 RJ45 BEB RJ11
<b>Values</b>	Current (A) Voltage (V) Active Power (kW) Reactive Power (kW) Accumulated Reactive Energy (kWh) Accumulated Active Energy (kWh) Frequency (Hz)
<b>Max Sensors</b>	Maximum of 300 onlined sensors, including Expansion Units and virtual sensors.
<b>Maximum Number of Access Control Users</b>	500 Users 100 Users default
<b>Supported Protocols</b>	Rsyslog MQTT / MQTTS SNMP V1/2/3 IPV6 RADIUS TACACS HTTPS Encrypted E-mail
<b>Licensing</b>	
<b>Virtual Private Network (VPN) : VP</b>	VPN - Connect to AKCPro Server from your base unit through VPN over Ethernet or cellular network.
<b>Virtual Sensor pack : VS</b>	Virtual sensor (pack of 5 sensors). Maximum of 80 virtual sensors. * ** Every PPX+ comes with 5 free virtual sensors
<b>3rd Party PMS &amp; Modbus : PM</b>	3rd Party Modbus / PMS device. Up to 4 modbus devices with 15 sensors.* **
<b>500 Access Control user database : UA</b>	500 users for access control (PPX+ has 100 users as standard)
<b>IPV6 : SP-IPV6</b>	Support for IPV6 network addresses
<b>Radius : RAD</b>	Radius user authentication server connection. TACACS authentication to Radius.
<b>Important Notes</b>	* the powerProbeX+ units can only have 60 Modbus RS485 sensors (virtual sensor + modbus devices) ** the powerProbeX+ units can only have 60 Modbus TCP/IP sensors (virtual sensor + modbus devices)

## PPX+ - Technical Drawing

