

# »» RELIABLE AND FLEXIBLE POWER FOR YOUR DATA CENTRE

Highly efficient solutions for power distribution and monitoring



POWER DISTRIBUTION



SECURE CONNECTIONS



WIRE-FREE MONITORING





Daxten provides comprehensive power solutions to optimise resources, energy usage and efficiency in your data centre while ensuring reliable and flexible power supply at room, rack and IT equipment level.

Furthermore, we provide you with innovative and field-proven tools for monitoring power. By using these tools, you have access to all power parameters, energy consumption readings and PUE reports in real-time and at your fingertips. In addition to power monitoring, environmental monitoring adds temperature, humidity, air pressure, airflow and many more data sets to your data centre overview. We also offer a comprehensive management-tool that gives you an overview of all power and environmental data in your data centre at a glance.



## 1. Best Practice: **Power Distribution via Busway**

### Maximum flexibility, reliability and safety for the power supply to server cabinets

In data centres the reliability and availability of the IT hardware are the pillars of success. Modular, scalable and redundant power distribution is essential in achieving Tier I to IV classification. The Databar busway with 160, 250, 400, 630, 800 or 1000A is a unique open channel modular system designed for mission critical power distribution in data centres. The system has been developed to be extremely compact and features patent pending design innovations in the integral plug-n-play coupling system. This allows for simpler and faster installation and tap-off interlock mechanisms that put safety at the forefront.



Wire-free power monitoring for individual PDUs, tap-off or busway level is available from Packet Power.

#### DATABAR BUSWAY HIGHLIGHTS:

- » Modular continuous open channel busway system
- » Up to 1000 amps and 600V (rated operating voltage)
- » Tap-offs to be installed anywhere along the bar
- » Integral plug-n-play jointing system
- » Low profile housing accommodates 4 or 5 pole systems



#### DATABAR TAP-OFF HIGHLIGHTS:

- » Tap-offs (single and three phase) with 16, 32, 63 amp
- » Mechanically and electronically interlocked with busway
- » Tap-off mechanical interlock for safe installations
- » Takes only seconds to be installed on busway
- » Circuit breakers for all power designs





## 2. Best Practice: **Cabinet Power with intelligent PDUs**

### Reliable power supply for servers and network components at rack level

To power and monitor active hardware in data centre cabinets we offer intelligent PDUs with outlet monitoring, various levels of security and fuse protection. Depending on the model, the PDUs are accessible via the serial port, TCP/IP, web browser or wirelessly and integrate power and monitoring functions. Together with vendor specific management applications or third party DCIM or BMS systems, there are limitless ways to manage, monitor and control power in the data centre.

#### »»» RESIDUAL CURRENT MONITORING

Model-dependent we offer you PDUs with integrated residual current monitoring (type B, 1 or 3-phase) for increased security and availability.



#### PDU HIGHLIGHTS (MANUFACTURER AND MODEL DEPENDENT):

- » PDUs available with 8, 16, and 32 amps (further options upon request)
- » Single or three phase options – 1, 4, 8, 16, 24 or more power outlets
- » Integrated power monitoring capabilities
- » Threshold settings, SNMP traps and alerts
- » Remote power off/on
- » Sensor ports for environmental monitoring
- » Support for third-party DCIM and BMS tools

### Option: **On-demand custom PDUs**

#### Custom designed PDUs that meet your exact day to day power needs

In the case of customers having special requirements for their PDUs, customisation is a very good way to have a solution that fits perfectly into their individual IT or DC environment. The customer has the choice to specify their requirements, e.g. how many outlets, which voltage, amperage, type of circuit breaker, power and environmental monitoring capabilities and/or colour finish.

#### CUSTOM DESIGNED PDU HIGHLIGHTS:

- » Choice of number of power outlets
- » Available as single or three phase versions
- » Available with 8, 16, 32 or 63 amps
- » Option: wire-free power monitoring
- » Different colours available
- » Mounting options: horizontal or vertical
- » Optional: dual sided IEC locking power cables



### 3. Best Practice: **Secure Power to Device Connections**

#### Prevention of downtime with dual sided IEC locking power cables

The zLock+ dual sided locking cables simply replace existing power cables. The zLock+ power cable can be released by simply pulling the sliding rings of the C13 /C15 /C19/C20 connector or opening the twist lock on the C14/C20/C21 side. All connected IT devices are well protected against accidental and vibration disconnects and the resulting power supply disruptions, downtime and equipment damage.



Unique power cable that locks both ends. Requires no vendor specific mating plug or receptacle.

#### **LOCK+ DUAL LOCKING POWER CABLE HIGHLIGHTS:**

- » Unique power cable that locks both ends
- » Locks automatically and via twist lock
- » Prevents power cables from being dislodged
- » Increases the reliability of power distribution
- » Available in C14 to C13, C14 to C15, C14 to C19, C20 to C15, C20 to C19, C14 to C21 and C20 to C21
- » Choice of different colours and lengths



### 4. Best Practice: **Redundancy for Single Power Devices**

#### Micro Automatic Transfer Switches (ATS) add fail-safe power to any IT component

Reliable power for network devices and servers is a vital part in ensuring uptime in any data centre. For IT equipment with single power supplies, the micro ATS is essential in creating redundancy by providing power from two different sources. Without transfer switches, any power interruption can cause failures and downtime. Not only does the  $\mu$ ATS test the power supply, but also the incoming voltage. If incoming power is interrupted or if over or under voltage is detected, the source is switched from A to B preventing failures and keeping the IT equipment up and running.



**TOP HIGHLIGHT:**  
Also available with locking power cable connections to secure IT devices.



#### **MICRO AUTOMATIC TRANSFER SWITCHES HIGHLIGHTS:**

- » 1, 2 or 3 port versions
- » Requires 0U rack space
- » Supports 8 Amps for 208 to 240 Volts
- » Switches from power feed A to B within 9 and 11ms
- » Phases do not need to be aligned
- » Protects against over and under voltage
- » Upon request: Transfer switches with 4, 8, 16 or more ports



## 5. Best Practice: **Wire-Free Power & Environmental Monitoring**

**Increase resource utilisation, reliability and improve efficiency through monitoring**

For data centre and facility managers it is essential to ensure the most efficient usage of existing power and cooling capacities. To achieve optimal utilisation, regular monitoring of power and environmental parameters is critical. Monitoring data allows you to identify, analyse and resolve energy, thermal and reliability weaknesses while improving the PUE in your data centre. Our comprehensive wire-free monitoring solutions enable you to centrally control and manage several hundred environmental sensors (e.g. for temperature, humidity, pressure and leak detection) and energy parameters like Volts, Amperes, kW, kWh, kVA, phase angle and total current for any cabinet, PDU or single IT device. All data is transferred via wire-free radio connection and accessible by the EMX Energy Portal or third party SNMP or Modbus TCP/IP based DCIM or BMS applications.

### **PACKET POWER WIRE-FREE-MONITORING HIGHLIGHTS:**

#### **SMART POWER CABLES**

- » Easily attaches to IT equipment, PDUs and busway plug-ins
- » Support for IEC, NEMA, Hubbell, Russell Stoll and other connectors
- » 1 or 3 phases with 120 and 208-240 Volts for 10 up to 100 A
- » Data collection: V, A, W, power consumption, power factor and peak
- » Compatible with GUIs from different vendors
- » Wireless communications designed for data centres
- » Options for integration into busway plug-ins and other devices



#### **ENVIRONMENTAL MONITOR**

- » Easily collects temperature and humidity data
- » Supports hundreds of measurement points
- » Wireless data transfer to SNMP or Modbus gateway
- » Detects different temperature zones at rack level
- » Seamless integration of Packet Power leak detector probes



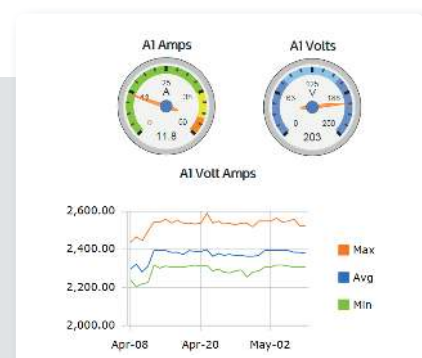
#### **GATEWAY**

- » Data consolidation for up to 150 monitoring units per gateway
- » Wireless-to-SNMP or Modbus Gateway
- » Transfers power and environmental data to DCIM solutions
- » Complete monitoring with only 2 IP addresses



#### **EMX ENERGY PORTAL**

- » Management tool for all wire-free monitoring units
- » Manages thousands of monitoring points
- » Captures, analyses and reports power and environmental data
- » Displays power values, temperature, humidity and differential pressure
- » Dynamic charts and diagrams show power and environmental values
- » Trend reports on power use, electricity costs and CO2 emissions
- » Access via (local) software, web and/or cloud service

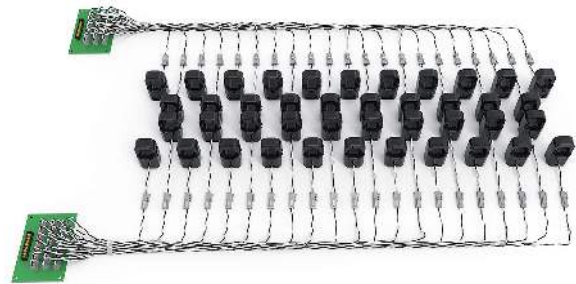




## 6. Best Practice: **Wire-Free Circuit Monitoring**

Easily add monitoring to individual circuits, switchgear and entire panels

Whether you need to measure main feeders to calculate PUE, monitor just a few branch circuits to allocate costs, or track an entire panelboard to balance loads more effectively, the Packet Power wire-free radio panel monitoring solutions give you the flexibility you need to measure what matters. Based on Packet Power's proven wire-free technology, the system can be installed without running data communications wiring and flexible current sensor harnesses make installation within the panel easy.



### WIRE-FREE CIRCUIT MONITORING HIGHLIGHTS:

#### FEATURES

- » Installs on PDUs, RPPs or panelboards from any vendor
- » Wire-free radio transmission of all monitoring data
- » Monitors any combination of single-, 2- and 3-phase circuits
- » Up to a maximum of 48 single-phase circuits per panel
- » Dual panel capability enables monitoring up to 96 circuits
- » Split and solid core CTs available

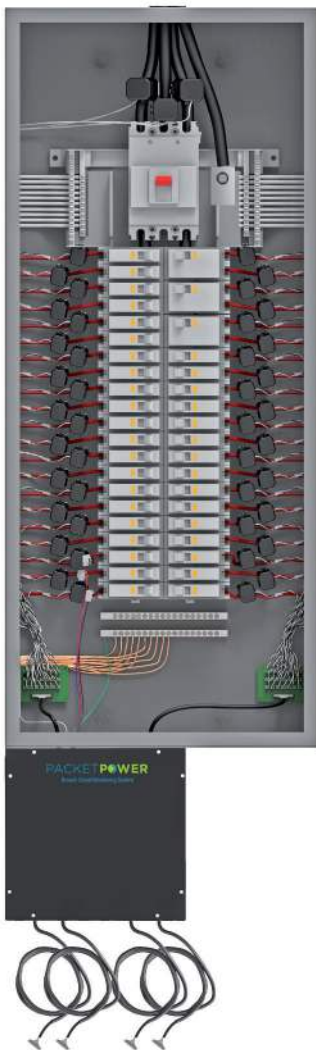
#### INSTALLS EASY

- » Simple, non-technical installation
- » No data wiring to panels needed
- » Simple configuration utility
- » Compatible with any existing hardware
- » Current sensor harnesses installs in minutes
- » Split core CTs install without having to disconnect critical systems



#### ALL DATA AT A GLANCE

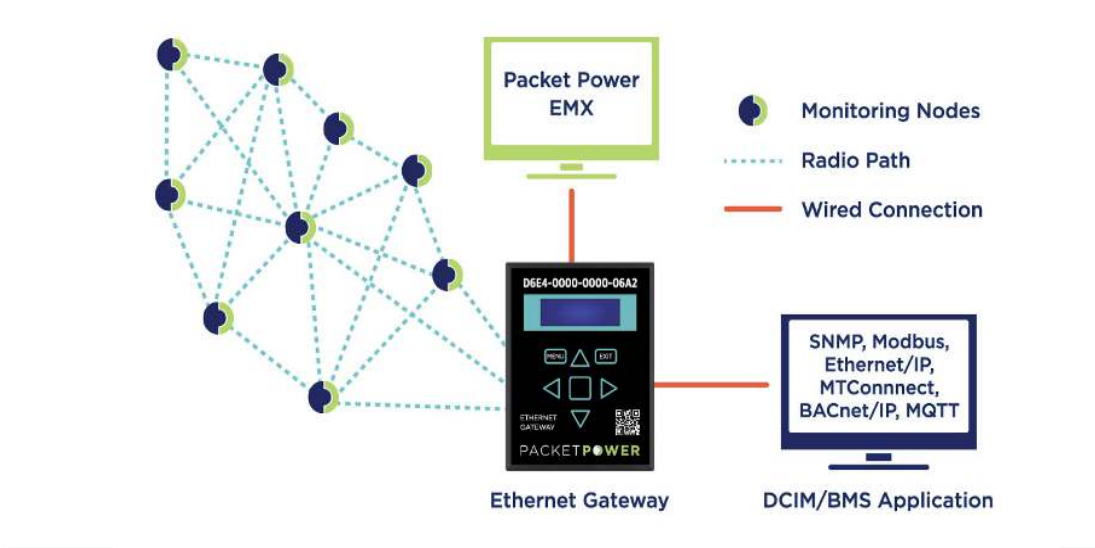
- » Measures V, A, VA, W, PF, Wh, THDi, THDv, Hz
- » Enables continuous energy monitoring to determine PUE
- » Local LED displays Amps on branch circuits
- » LED additionally displays V, A and W on main input circuit
- » Easily accesses all data via dedicated EMX Energy Portal
- » Sends data to any DCIM or BMS using SNMP or Modbus TCP/IP



## 7. Best Practice: DCIM Made Easy

### Cloud or local software based management tool for power and environmental monitoring

Many DCIM applications have to be extensively customised before they can provide useful information. Often this requires the use of expensive consultants and adds months to the deployment. Packet Power took a different approach with the EMX Energy Portal. It focuses on power and environmental monitoring and provides a great deal of useful information immediately on installation. The process of tailoring it to your specific needs is kept very simple. Choose the cloud option if you are focused on faster deployment time and minimal impact on IT. If your company has policies against storing information in the cloud, installing EMX locally may be the best fit. In any case, you will have all essential data centre data available at once.



#### EMX DCIM SOLUTION HIGHLIGHTS:

- » Tracks power at device, branch circuit, panel, PDU or switchgear levels
- » Provides real-time information on heat, humidity and pressure
- » Easily defines and manages realtime alerts even in the largest facilities
- » Quickly maps wire-free monitoring units to your facility layout
- » Gathers data from thirdparty Modbus or SNMP monitoring units
- » Displays realtime power and heat maps with 3D views of cabinet heat
- » Easily tracks adherence to industry standards/ service level agreements
- » Supports a wide range of cost-allocation methodologies



**VOLTA**  
Central London's Data Centre

"The Packet Power system allows us to precisely determine the utilisation of the individual racks. This makes it possible for us to integrate IT equipment right there in the cabinets, where appropriate reserves are available and balance out the loads and power density perfectly."

John Speers, Facilities Manager at Volta

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DC INFRASTRUCTURE



DC MONITORING



LEAK DETECTION