

# Intelligent Power Distribution Unit (iPDU)

## 75/100/150/225 kVA



AblereX understand the user needs of today's data centre are dynamic and constantly changing. With the Intelligent Power Distribution Unit (iPDU), the user need not worry about the constant changes in power requirements as the iPDU offers the flexibility of upgrading or downgrading the power distribution demands (42/84P Panel board) and monitors the load profile as well. The iPDU enhance the reliability of data centre electricity supply, reducing equipment installation time, and provide a complete loads protection.

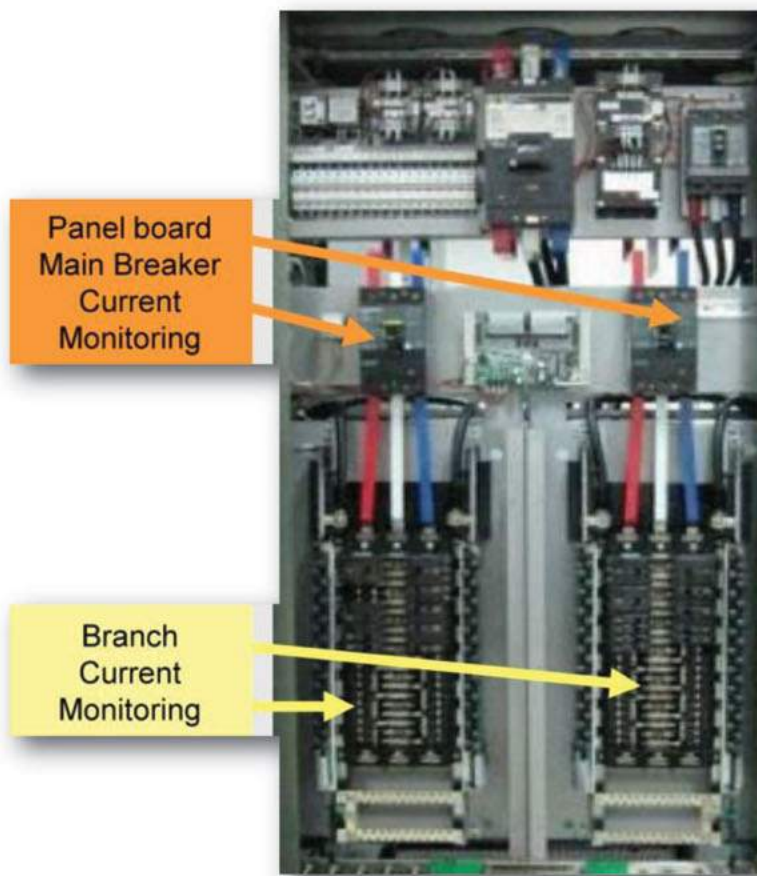
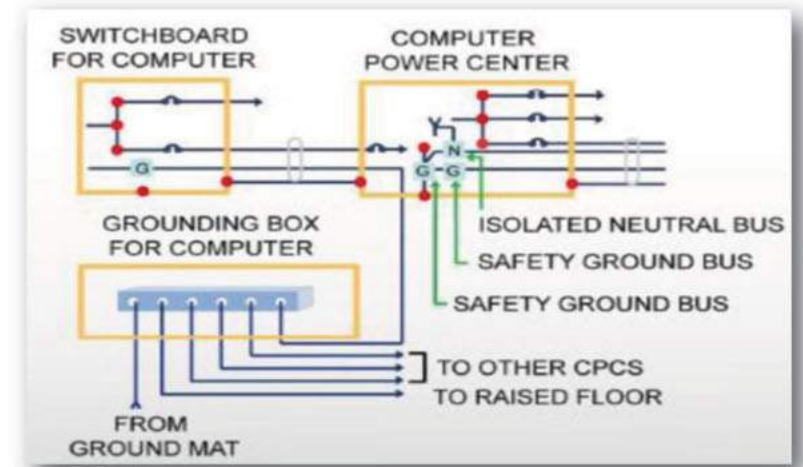
### **AblereX Intelligent Power Distribution Unit Features :**

- Affordable & Reliable Power Transmission and Distribution Centre.
- Advanced Main Breaker and Branch Circuit Power Management & Monitoring.
- Computer grade Grounding, Double sized Neutral and high K-factor isolation transformer.
- Real-time Communication and User-friendly LCD touch screen interface.
- Easy integration of data transmission with other commonly use building management system.
- Suitable with all type of non-linear loads.



## iPDU Neutral & Grounding Design:

- ▶ Isolated Oversize Neutral Bus Bar, capable of carrying neutral current 1.73~2 times of full load current.
- ▶ Computer Grade, Single-point Safety Ground Bar, compliance with Data Centre requirement.



## Advanced Load Power Management System:

- ▶ Can simultaneously measure up to 84 distributed MCBs in the panel boards.
- ▶ Main input measurements: Frequency, Three-phase voltage, Three-phase line voltage, Three-phase current, N-phase current, True RMS current, Maximum current limit, demand current, Maximum demand current limit, Single-phase and Total kW, Maximum kW value, kWh, Single-phase and Total Power Factor.
- ▶ Output distribution measurements: Three-phase current, Maximum current value, demand current, Maximum demand current limit, kW, Required kW, Maximum required kW limit, kWh and Power Factor.

## Hot-Swappable Plug In/Bolt On Breakers:

- ▶ The panel board is design to install with plug-in & blot on one-, two- and three-pole thermal-magnetic circuit breakers to provide overcurrent protection.
- ▶ These breakers are easy to install and come in various ratings.
- ▶ The can be safety add-ons and replace without down time.



## Control Panel with 7" LCD Touch Screen Display:

- ▶ The iPDU has a front access Touch Screen LCD panel, providing secured operating controls and configurations. The display panel provides parameters information, status, alarms, event logs for easy monitoring.



## EPO (Emergency Power Off) Button

- ▶ Shunt trip built-in to main circuit breaker.
- ▶ Allows immediate and complete shut down of the iPDU.



## Optionals / Accessories

### 1. K-Factor Power Distribution Isolation Transformer

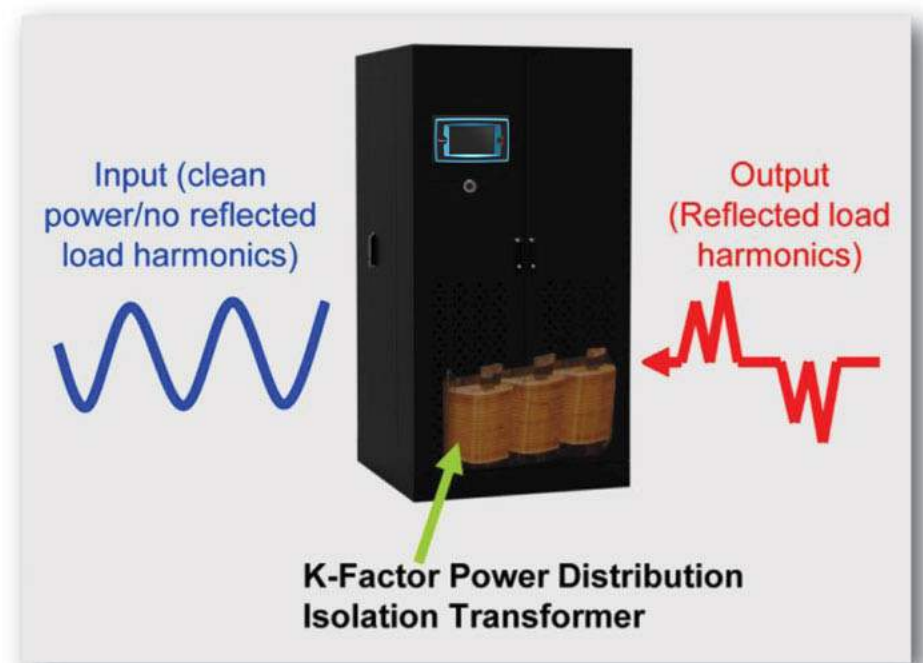
The K-Factor Power Distribution Transformer traps harmonics reflected by distribution loads, significantly reduce the harmonic content in the distribution system and improved reliability.

The K-Factor Power Distribution Transformer can be house inside the iPDU cabinet (iPDU-TX series only) or house separately in an external matching cabinet.

Varous ratings from 75VA to 600kVA are available.

#### K Factor Rating Versus Type of Non-linear Loads:

- K-1 Resistive type heating element/Incandescent lightings/ Motors/Transformers/Control/Distribution
- K-4 Welders/Induction heaters/HID lighting/Fluorescent lighting/Solid state control
- K-13 Telecommunication equipment/Branch Circuit in offices/ Health care facilities
- K-20 Main frame computers/VFD/Branch circuits with Data Processing equipment/PC



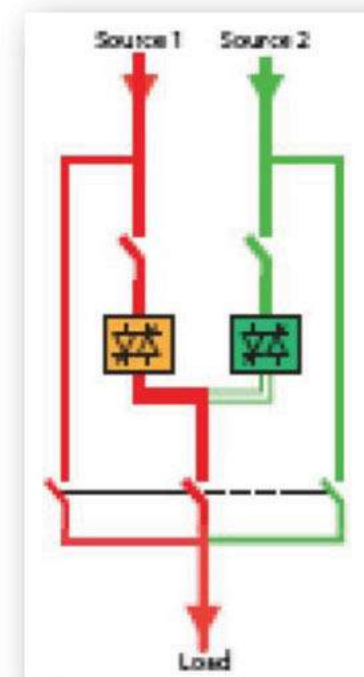
### 2. Static Transfer Switch (STS)

The optional STS provides highly available power supply for mission - critical applications. It provides manual & seamless automatic transfer between two fully independent AC power supply sources.

The STS is available in both 3-phase 3 poles or 4 poles switching, with various rating: 200-300-400-600-800A

The STS and associated switchgear is house in matching floor standing cabinet as the iPDU.

Size [A]	200	300	400	600	800
Distribution	Three-phases				
Rated Voltage [V]	208-220V / 380-415V / 440V				
RMS Voltage range	±10% of RMS Rated Voltage (Standard setting)				
Short Transients tolerance	±25% of RMS Rated Voltage (Standard setting)				
Input Frequency range	±2Hz (configurable up to ±5Hz)				
No Poles switched	3-poles or 4-poles switching				
Neutral systems	Compatible with all Earth Connection systems (IT-TT-TNS-TNc)				
Maintenance Bypass	Integrated and secured				
Transfer time [ms]	3ms typical (break before make)				
Crest Factor	≤3.5				



### 3. Remote Communication and Control Interface:

RS485 port with Modbus interface or Ethernet TCP/IP (RJ-45) connection is available to remotely monitor and control the iPDU.





# Intelligent Power Distribution Unit

## Technical Specification

MODEL	iPDU-TX-75	iPDU-TX-100	iPDU-TX-150	iPDU-TX-225	iPDU-75	iPDU-100	iPDU-150	iPDU-225
<b>INPUT</b>								
Capacity*1	75KVA	100KVA	150KVA	225KVA	75KVA	100KVA	150KVA	225KVA
Input Voltage	380~415Vac							
Voltage Range	± 15%							
No of Phases	Three Phase + Ground				Three Phase + Ground (+ Neutral)			
Power Factor	0.7~1							
Frequency	50Hz / 60Hz							
Input Current	From 100A~ 350A with respect to iPDU rated capacity.							
Input MCCB	From 125A ~ 400A with respect to iPDU rated capacity. Higher rating MCCB available upon request.							
<b>Output</b>								
Output Voltage	415/240 or 400/230 or 380/220 Vac *2							
No of Phases	Single, Line + Ground (+ Neutral)							
Output Waveform	Sinewave							
Frequency	50Hz / 60Hz							
Efficiency	96.5 to 98%				99%			
Crest Factor	Up to 3.5							
No of Poles per Cabinet	From 42P up to 84P*3 max.				From 42P up to 168P max.			
<b>Communication</b>								
standard	RS-485 or RS-422							
Options	TCP/IP (RJ-45)							
<b>Physical</b>								
Colour	Black							
Dimension W x D x H	1000 x 900 x 2000 (mm)	1000 x 1200 x 2000 (mm)		600 x 1000 x 2000 (mm)		800 x 1000 x 2000 (mm)		
<b>Environment</b>								
Operating Temperature	0~40°C							
Humidity	0% to 95%, Non Condensing							
Operating Altitude	Up to 2,000m							
Heat Dissipation	2.4KW	2.9KW	3.6KW	4.65KW	1.1KW			
Noise Interference	<55db				<50db			
Ventilation	Convection cooled							
<b>Safety Conformance</b>								
Quality Assurance	ISO9001 Certified							
Safety Standard	CNS 14816-2, IEC 60947-2							
<b>Transformer</b>								
Type	Dry, K-Factor				-			
Windings	Copper, H Class				-			
Coil Tap	2 (± 2 x 2.5)				-			
Overload Protection	Sensor Per winding				-			

\*1 Other Capacities are available upon request.

\*2 Various voltage ratings are available upon request.

\*3 168P available as option upon request.

Designed and Engineered by

