ENHANCED IP-PDU

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RoHS

NORDEN Power Distribution Units are designed to improve uptime and energy efficiency while reducing operating costs. Based on the Sustainable. Upgradeable, and Maintainable concept. Norden's unique screw-free hot swap controller design allows quick and easy replacement of PDU modules. With this technology, users can upgrade the PDU firmware features and performance with time. and replacing the output modules allows the user to upgrade an input monitored PDU to a switched one.

COMPLIANCE

EN55022, EN61000,EN55035,IEC/EN 60950,IEC/EN62368, RoHS 2.0

FEATURES

2.0" TFT Colour High-resolution LCD display
Compact body design
Real-time Breaker status Monitoring
Screw free hot swap controller.
Accurate power metering capability
Daisy-Chain available.
Socket retention prevents accidental detachment of the device.
Upgradable & scalable output modules
Comprehensive rack environment monitoring
Outlet remote on/off control
Enhanced cyber security - Support Multiple communication protocols.
Historical data and graph

DESIGN & MATERIALS

Material of Construction	Metal/Aluminium Alloy Case
Shell Material & Colour	Aluminium, Black
Hot Swap Controller	Yes
Controller fixing	Screwless
Available Outlet type	IEC C13 ,C19, Shuko(CEE 7/3) , CEE 7/5
Outlet Locking	Available in C13 by default , For C19 upon request.
Socket retention	C13 only.
Outlet Combination & Quantity	Customizable
Replaceable socket module	Yes
Display	2.0-inch full coloured.
Indicator	RGB indicator stripe
Local button	3
Power Input Style	Left-end single input style.
Installation Style	Vertical & Horizontal
Mounting Style	Side brackets mounting (Horizontal) / Rear button mounting(Vertical)
Lead length	1.8 m, 3 m, 5 m (other cable length available on request)
Product Dimension & Weight	It keeps on varying according to PDU Customization

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ELECTRICAL PARAMETERS

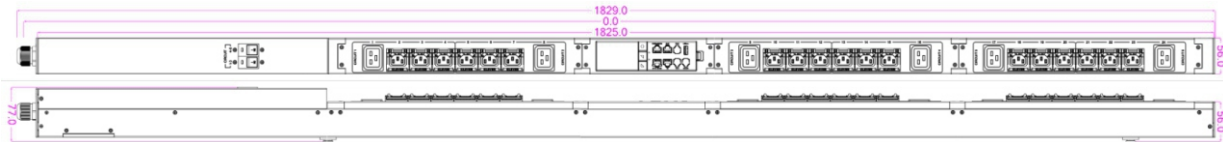|	
Phase	Single Phase /Three Phase
Plug Type	IEC 60309 16A(2P+E), IEC 60309 32A(3P+N+E)
Input Nominal Voltage	230VAC (L-N), 400 VAC (L1-L2-L3)
Output Nominal Voltage	230VAC
Maximum load current available	16A / 32A
Input frequency	50 or 60 Hz
Max Power Capacity	22kW
Surge Protector	Yes, (Optional)
Circuit Overload Protection (Breaker)	Yes, Hydraulic circuit breaker

ENVIRONMENTAL , COMMUNICATION & HARDWARE

Firmware	4.4
Processor	Ingenic X2000
Clock speed	1.2Ghz*2 (dual core)
Memory	128MB LPDDR3 RAM+ 128MB flash
Controller Power supply	12V + 12V output
Web Firmware Upgrade	Yes
Ethernet Port	TCP/IP-1000 Bit
IPv6/IPv4	Supported
Access	HTTP,HTTPS, SNMP(V1/V2C/V3), Telnet, SSH, Modbus-RTU&TCP, JSON & XML RPC, RESTful API, MQTT, AMQP, ODBC, Redis
Authentication	Radius, LDAP*
Network Service	TCP, SMTPS,SYSLOG,NTP/Data push
Input/phase/circuit Metering	Yes
Serial communication	Yes ,RS485
USB firmware update	Yes
Output Monitoring	Yes (Available with B & D Series)
Outlet Control	Yes (Available with C & D Series)
Breaker Status Monitoring	Yes
Metering Accuracy	+/- 1%
Cascading	Network cascading : 1 master with 9 slaves
	Modbus cascading : 1 master with 32 slaves
Monitoring Parameters	Voltage (V), Current (A), Active Power (kW), Apparent Power (kVA), Energy (kWh), Power Factor, Outlet status, Frequency
Alerts	Voltage, Current, Temperature, Humidity, Door contact, Water leakage, Smoke status
Working temperature	0~60°C
Operating Relative Humidity	5%~95%
Operating Elevation	0~3000 meters
Historical Data Recording	Yes, Voltage/ Current/ Power/Energy Consumption
Data Graphing	Yes
Batch PDU Setting	Yes
Metering component	Resistive volt ratio/shunter
Switching component	Normally open relay

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Sensor box extension	Yes , 2xTH port, 1 x water leakage port, 1 x smoke detector
Embedded Temperature/Humidity Ports	2
Embedded Door sensor	1
Syslog	Yes
Encryption	RSA , AES 256 , SM4
Outlet timing switch	Yes
Outlet sequential power on/off	Yes
System log	Operation and alarm log
Batch PDU firmware upgrade	Yes
Function upgradeable	Yes

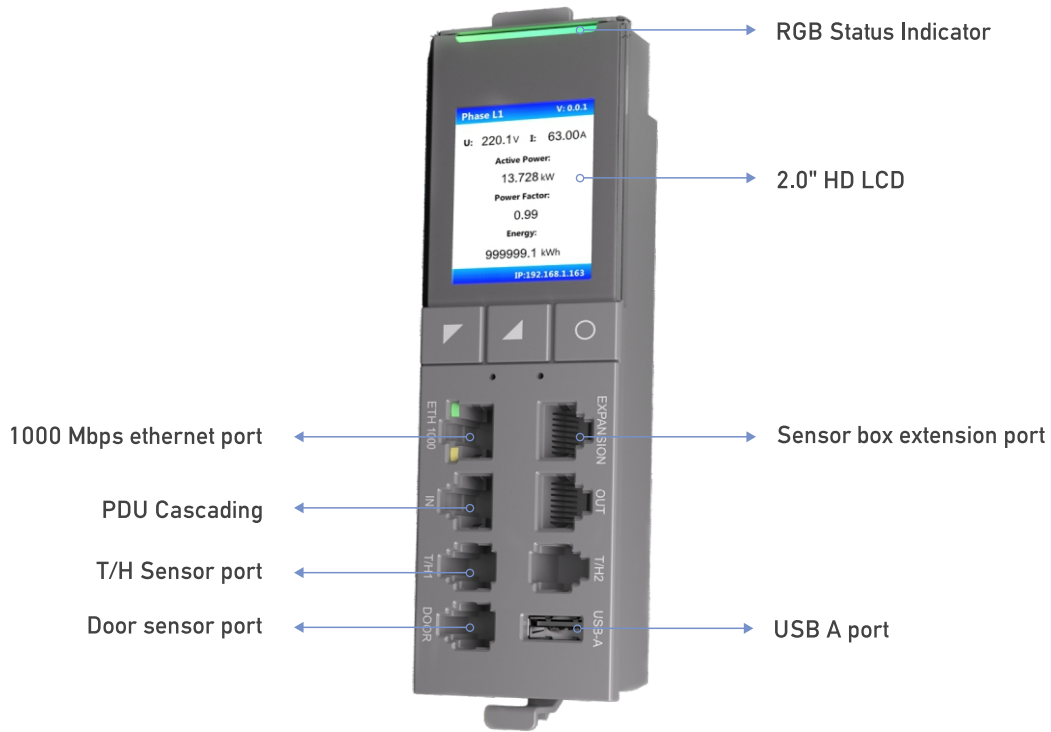*It will be available in the next version update.

Drawing

* Product Drawing & Picture is only for reference: The dimensions will vary according to the Horizontal or Vertical orientation
   & number of sockets

NEZPDU- PRODUCT FEATURES & DETAILS

NEZPDU Features	A Series – (Input Monitored Type– Basic)	B series – Input Monitored & Output Monitored (No controlling function)	C series – Input Monitored & Outlet Control (No output monitoring function)	D series – Total Monitored & Outlet control
Input monitoring • Total active energy, apparent/active power, power factor, frequency • Phase current, voltage, active power, power factor • Circuit current, voltage, active power, energy consumption • +/-1% accuracy kWh • 4-level threshold settings for phase current, voltage, active power • Phase current, voltage, active power real-time trend curve	✓	✓	✓	✓
Outlet control • Remotely switch on/off or power cycle of individual outlet • Outlet sequential power on/off • Outlet scheduled power on/off • Critical device protection (outlet won't be remotely controlled if this function is enabled) • Outlet power shutdown when overload • Outlet energy zero reset			✓	✓
Output monitoring • Outlet current, active power, power factor, active energy • 4-level threshold settings for outlet current and active power • Server power supply A/B load balancing monitoring		✓		✓
Rack environment monitoring • T/H x 2, door status x 2 as standard (optional smoke, water leakage sensors) • 4-level threshold settings for temperature and humidity	✓	✓	✓	✓
Historical data and graph • View and export the voltage/current/active power 24-hour curve of a selected day(energy data is exported in excel file) • View and export logs (operation and alarm) of a selected day	✓	✓	✓	✓
Network service • Standard protocols supported: HTTP(S), SSL/TLS, Telnet/SSH, SNMP v1/v2c/v3, SMTP(S), Modbus-RTU/TCP,JSON-RPC, XML-RPC, RESTful (API), MQTT, AMQP, Redis, ODBC • Authentication method supported: Radius, LDAP • Generate/upload/download, firewall and IP/MAC address white list • RES/RSA/SM4/SHA encryption • Network service: NTP, SMTP(S), SYSLOG, Data push	✓	✓	✓	✓
System maintenance • Webpage firmware upgrade and view firmware upgrade history • System settings file download and upload • PDU network diagnose and diagnostic message download • USB flash drive firmware upgrade, batch PDU firmware upgrade through cascading, batch PDU firmware upgrade in LAN.	✓	✓	✓	✓

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HOT - SWAP Controller

RGB Status Indicator

2.0" HD LCD

1000 Mbps ethernet port

PDU Cascading

T/H Sensor port

Door sensor port

Sensor box extension port

USB A port

STANDARD SOCKET COMBINATIONS

NEZPDU A series

		Socket combination	Single / Three phase	Remark
1U	8 Way	8x Lockable C13	Single phase	
2U	12 Way	8 x Lockable C13+4 x C19	Single / Three phase	Outlet Locking available in C19 upon request.
	12 Way	12 x Lockable C13	Single / Three phase	
	14 Way	8 x Lockable C13+6 x C19	Single phase	
	16 Way	16x Lockable C13	Single phase	
	16 Way	8 x Lockable C13+8 x C19	Single phase	
	16 Way	12 x Lockable C13+4 x C19	Single phase	

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		Socket combination	Single / Three phase	Remark
0U	12 Way	12 x Lockable C13	Single phase	Outlet Locking available in C19 upon request.
	16 Way	16 x Lockable C13	Single phase	
	20 Way	20 x Lockable C13	Single phase	
	24 Way	18 x Lockable C13+6 x C19	Single / Three phase	
	24 Way	20 x Lockable C13+4 x C19	Single / Three phase	
	24 Way	21 x Lockable C13+3 x C19	Single / Three phase	
	24 Way	12 x Lockable C13+12 x C19	Single / Three phase	
	24 Way	24 x Lockable C13	Single / Three phase	
	30 Way	24 x C13 + 6 x C19	Single / Three phase	
	36 Way	24 x C13 + 12 x C19	Single / Three phase	
	36 Way	30 x C13 + 6 x C19	Single / Three phase	
	42 Way	36 x C13 + 6 x C19	Single / Three phase	
	42 Way	42 x C13	Single / Three phase	
	48 Way	36 x C13 +12 x C19	Single / Three phase	

NEZPDU B/C/D series

		Socket combination	Single / Three phase	Remark
1U	8 Way	8x Lockable C13	Single phase	Outlet Locking available in C19 upon request.
2U	12 Way	8 x Lockable C13+4 x C19	Single / Three phase	
	12 Way	12 x Lockable C13	Single / Three phase	
	14 Way	8 x Lockable C13+6 x C19	Single phase	
	16 Way	16 x Lockable C13	Single phase	
	16 Way	8 x Lockable C13+8 x C19	Single phase	
	16 Way	12 x Lockable C13+4 x C19	Single phase	
0U	24 Way	18 x Lockable C13+6 x C19	Single / Three phase	
	24 Way	20 x Lockable C13+4 x C19	Single / Three phase	
	24 Way	21 x Lockable C13+3 x C19	Single / Three phase	
	24 Way	12 x Lockable C13+12 x C19	Single / Three phase	

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ORDERING GUIDE

*Please follow the above specified table with socket combinations and phases while quoting the part number.

IP-PDU	PDU Series	Mouting Type	Socket Combination		Socket Locking (C19)	Total Number of Sockets
			Section A	Section B		
NEZPDU	A: A Series B: B Series C: C Series D: D Series	H: Horizontal V:Vertical	AXX: C13 BXX: C19 CXX: CEE 7/3 EXX: UK KXX: CEE 7/5 N00: None	AXX: C13 BXX: C19 CXX: CEE 7/3 EXX: UK KXX: CEE 7/5 N00: None Special Customization SXXYY: C13 + CEE 7/3 GXXYY: C19 + CEE 7/3	0: None 1: With Lock	08: 08 Way 12: 12 Way 14: 14 Way 16: 16 Way 20: 20 Way 24: 24 Way 30: 30 Way 36: 36 Way 42: 42 Way 48: 48 Way

Protector	Phase	Plug Type	Current Carrying Capacity	Cable Length	Colour (X)	Socket Colour (Optional)
0: None 1: Surge Protector	2: Single Phase 3: 3-Phase	1: IEC 60309	2: 16 Amp 4: 32 Amp	0: 1.5 M 1: 1.8 M 2: 3.0 M 3: 5.0 M	BK: Black BL: Blue RD: Red	

* Please follow the specified socket combinations while quoting the part number
* For a better understanding of the PDU Series follow NEZPDU Product Features & Details
* The maximum number of sockets that horizontal can support is 8 Way in 1U and Upto 16 Way in 2U in Horizontal , Vertical (0U) is available from 12 Way onwards .
* For special customization in socket combination "XX" denotes the first socket type & "YY" denotes the second
* The PDU and socket come in black by default, but color customization is available upon request.
* Outlet Locking available for PDU's upto 24 way only, for PDU's above 24 way outlet locking will not be available.
* Socket Locking available in C13 by default and in C19 upon request.
* 20 Way socket combination is available only for PDUs in A series.
* Currently, the 48-way option is available only in the A series. For the B, C, and D series, the maximum available is limited to 24-way. The 48-way option will be available in the next version update.

Part No & Description (For Example)

A series NEZPDU:

| NEZPDU | A | V | A20 | B04 | 0 | 24 | 0 | 3 | 1 | 4 | 2 | BK |

Description: 24 Way (20 XC13 with Lock + 04 XC19), 32 A, IEC 60309 3P + N + E Plug, Basic Input Monitored 3-Phase Enhanced Intelligent PDU, 3 Meter Cable Length Vertical Installation

B series NEZPDU:

| NEZPDU | B | V | A20 | B04 | 0 | 24 | 0 | 3 | 1 | 4 | 2 | BK |

Description: 24 Way (20 XC13 with Lock + 04 XC19), 32A, IEC 60309 3P + N + E Plug, Input Monitored & Output Monitored 3-Phase Enhanced Intelligent PDU, 3 Meter Cable Length Vertical Installation

C series NEZPDU:

| NEZPDU | C | V | A20 | B04 | 0 | 24 | 1 | 3 | 1 | 4 | 2 | BK |

Description: 24 Way (20 XC13 with Lock + 04 XC19), 32A, Surge Protector, IEC 60309 3P + N + E Plug, Input Monitored & Outlet Controlled 3-Phase Enhanced Intelligent PDU, 3 Meter Cable Length Vertical Installation

D series NEZPDU:

| NEZPDU | D | V | A20 | B04 | 0 | 24 | 0 | 3 | 1 | 4 | 2 | BK |

Description: 24 Way (20 XC13 with Lock + 04 XC19), 32A, IEC 60309 3P + N + E Plug, Total Monitored & Outlet Controlled 3-Phase Enhanced Intelligent PDU, 3 Meter Cable Length Vertical Installation