MNS® iRPP
The ABB’s Power Distribution Units

Alberto Carini, June 2013
MNS® iRPP
Introduction

- What is MNS® iRPP (intelligent Remote Power Panel)
  - ABB’s MNS® iRPP offers complete power distribution and monitoring with up to 128 poles in a space-saving design.

- MNS® iRPP key features:
  - Safe
  - Reliable
  - Scalable
  - Hot swappable branch circuits
  - Moves, add-ons and changes are accomplished without powering down the complete RPP
  - Continuous monitoring with user configurable alarms
  - Choice of top / bottom cable entry to suit non-raised / raised floor applications
MNS® iRPP
Typical iRPP application

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ABB offer

Power supply for the servers’ units; Data Center sub distribution
MNS® iRPP
Main characteristics

Performances design on the DataCenter application

- 400V
- 400A
- 50 kA x 1s

Compact design to be installed side by side with the Rack 19’ Server units:

- W = 600/800mm
- D = 600mm
- H = 2200mm
MNS® iRPP  
Value proposition

Flexibility

- Outputs can be replaced easily and quickly, reducing the component non-availability time (MTTR)

Safety

- The SMISLINE TP plug-in socket system is fully protected against direct contact (IPXXB).
MNS® iRPP Overview

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SMISSLINE-TP

- Allows for load-free plugging in and unplugging of branch devices without additional personal safety equipment and without powering down the RPP
- Five directly pluggable protection devices
- Offers unrivalled flexibility, expandability and availability
- Finger proof IP2XB
MNS® iRPP
Overview

Current measurement system (CMS)

- Most compact, neat and hassle-free current measurement system
- Current sensors get mounted directly on the SMISLLINE MCB, thus eliminating the need of cumbersome incoming cables
- Quick start-up & reduced chances of errors
- Easy & quick installation
- High availability
The energy analyzer has dual function. First, it provides the voltage and pf reference value to the PLC for calculating all the power/energy values for the branch circuits.

Second, it provides the following data for the complete RPP:

- Active power
- Apparent power
- Reactive power
- Current
- Voltage
- Frequency
- Power factor
- Total harmonic distortion
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PLC AC500
- ABB’s flagship PLC offers a wide range of performance levels and scalability within a single, simple concept
- Designed to perform with ease varied communication tasks
- Flexible
- High data transmission speed
- Multiple communication options
- Easy configuration
- Simple networking
- Integrated web server
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HMI CP660

- Highly flexible
- Specifically designed for advanced applications in complex systems or processes
- Better information representation to ease human-machine interaction
- Choice of screen size
- Resolution: 800 x 600
Main circuits
- Voltage, L-L and average [V]
- Voltage, L-N and average [V]
- Current per phase [A]
- Max. current [A] per phase
- Current demand [kW] per phase
- Max. current demand [kW] per phase
- Energy [kWh] per phase
- Real power [kW] per phase
- Power factor per phase and total
- Frequency [Hz]
- Voltage, THD [%]
- Current, THD [%]

Branch circuits
- Current [A]
- Max. current [A]
- Current demand [A]
- Max. current demand [kW]
- Energy [kWh]
- Real power [kW]
- Real power [kW] demand
- Real power [kW] demand max.
- Branch CB On/Off
- Branch CB rating
MNS® iRPP
Alarms indication

- Over-/under voltage
- Over current
- Phase loss
- Over-/under frequency
For more information about the ABB Portfolio for Data Center:

- UPS
- Management systems
- Transformers
- LV Switchgears
- MV Switchgears
- 19' rack panels

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