MNS Platform, low voltage systems
Rear Access Power Motor Control Center

Alberto Carini, Global Product Manager
MNS Platform, low voltage systems

Add Value to our customers

Sales

- Maximum safety; for the personnel and the plant
- Flexibility; to easy design and re-design our switchgear according customer needs
- Reduce maintenance; with proactive maintenance to prevent faults
- Proximity; local presence with a worldwide portfolio (ANSI/ UL & IEC)
- Simplicity; package projects to deliver an Integrated ABB solution

After sales

- Installation and commissioning: made by our technician worldwide present
- Customer Training
- Upgrades, Extensions and Retrofit solutions: available for aging and legacy switchgear solutions
- Service Agreements: to provide the best possibility for customers to ensure that the switchgear performs of the plant life cycle
- Spare Parts and Consumables

Delivering solutions not simple products
MNS Platform, low voltage systems

IEC Portfolio

**MNS R**
- Rear access PMCC
  - High performance
  - Stacked ACBs
  - Conventional & Intelligent MCC

**MNS iS**
- MCC with embedded intelligence
  - Proactive maintenance
  - Sensors technology
  - Integrated data concentrator

**MNS3.0**
- Front access PMCC
  - Wall standing installation
  - Fourth Level
  - Conventional & Intelligent MCC

**MNS-Up**
- PC with integrated UPS
  - Scalable 100 kW modules
  - Space savings
  - Faster installation and commissioning

One platform with dedicate solutions for each customer
# MNS Platform, low voltage systems

**Full ABB Solution**

<table>
<thead>
<tr>
<th>ACBs</th>
<th>MCCBs</th>
<th>Motor protection relays</th>
<th>Frequency drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>![ACBs Image]</td>
<td>![MCCBs Image]</td>
<td>![Motor protection relays Image]</td>
<td>![Frequency drivers Image]</td>
</tr>
</tbody>
</table>

- **Protection relays**
- **Soft Starters**
- **Switch disconnectors**
- **Metering device**
# MNS Platform; MNS R rear access switchgear

**Technical data**

## Top performances

<table>
<thead>
<tr>
<th>Electrical rating</th>
<th>Protection rating</th>
<th>Standards and approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Rated current main BB up to 8000A</td>
<td>• Degree of protection up to IP54</td>
<td>• Standards IEC 61439-1 &amp; -2</td>
</tr>
<tr>
<td>• Rated current distribution BB up to 4000A</td>
<td>• Internal separation up to 4b / 4 type 7</td>
<td>• Arc proof IEC TR 61641</td>
</tr>
<tr>
<td>• Short circuit current up 120kA (1 sec)</td>
<td>• Arc proof execution up to 100kA (0.3 sec)</td>
<td></td>
</tr>
<tr>
<td>• Service voltage up to 690V ac</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Service Frequency 50Hz – 60Hz</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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Safety

Safety for the personnel
- Switchgear successfully tested according criteria 1 to 5

Service continuity
- Switchgears tested also according additional criteria 6 & 7

Arc proof execution

Multifunction wall:
- Segregation and insulation of the distribution busbars
- Segregation of the main busbars from the functional units
- Sensible reduction of possible to have an internal arc
- IP2X guarantee also with drawers removed

Safety is a propriety for ABB
**MNS Platform; MNS R rear access switchgear**

**Availability**

To reduce downtime during the maintenance withdrawable option is available for all the circuits

- Air circuit breakers
- Molded Case Circuit Breakers
- Drawers

Higher level of segregation form allows for safety interventions keeping alive circuit not involved:

- Segregation form up to Form 4b, according IEC 61439
- Segregation form up to Form 4 type 7, according BS 61439

**Maximum availability in all the conditions**
# MNS Platform; MNS R rear access switchgear

## Flexibility

### Power connections

- All the possible configurations and solutions
  - Power cables entrance from the top or the bottom
  - Bus connection for higher current
  - Possibility to mix cable and bus duct connection in the same switchboard

### Main Busbars positioning

- Multiple position available inside the panel
  - Top
  - Middle
  - Bottom

### Busbars treatments

- Several options available according customer preference:
  - Tinned
  - Silvered
  - Sleeved

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*Design around customer needs*
Intelligent motor control center

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Possibility to install intelligent modules inside the withdrawable units like ABB M10x able to perform:

- Protections (26, 27, 37, 46, 49, 51LR, 66...)
- Measuring (A, V, Hz, kW, kVA, kWh...)
- Communication (Profibus DP, Modbus RTU)

**Multifunctional units**

**Proactive maintenance**

MService is the package to monitor and control the switchgear; it offers:

- Proactive maintenance = maintenance only when is needed
- A report per each fault and the possible solutions
- Complete data logging of the plant
- Reduction of the number and the durance of maintenance interventions
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Intelligent motor control center

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**Full integrated control system**

Installing the ABB Data concentrator you have:

- Connection point for the higher supervision systems like ECS and DCS
- Possibility of a single control point using ABB Touch screen
- Air circuit breakers and motor feeders in the same network
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MNS R Construction details
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Power center section with ACBs
MNS Platform; MNS R rear access switchgear

MNS R Construction details

- Power center section with ACBs
- Power center section with MCCBs
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MNS R Construction details

- Power center section with ACBs
- Power center section with MCCBs
- 600mm wide MCC section with drawers
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MNS R Construction details

- Power center section with ACBs
- Power center section with MCCBs
- 600mm wide MCC section with drawers
- MCCB (Fix-plug-with) for Energy distribution
MNS Platform; MNS R rear access switchgear
MNS R Construction details

- Power center section with ACBs
- Power center section with MCCBs
- 600mm wide MCC section with drawers
- MCCB (Fix-plug-with) for Energy distribution
- Withdraw. compact drawers 8E1/2 & 8E1/4
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MNS R Construction details

- Power center section with ACBs
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- Withdraw. full size drawers
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- Withdraw. full size drawers
- Multifunctional wall; only MCC sections
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- Power center section with ACBs
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- Multilevel Main copper busbars
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- Multifunctional wall; only MCC sections
- Multilevel Main copper busbars
- Power cables rear connection area
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MNS R Construction details

- Power center section with ACBs
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- 600mm wide MCC section with drawers
- MCCB (Fix-plug-with) for Energy distribution
- Withdraw. compact drawers 8E1/2 & 8E1/4
- Withdraw. full size drawers
- Multifunctional wall; only MCC sections
- Multilevel Main copper busbars
- Power cables rear connection area
- Stacked withdrawable ACBs up to 6300A
MNS Platform; MNS R rear access switchgear
Worldwide reference in all the industrial segments

- Chemical, Oil & Gas
- Data Center
- Infrastructures
- Water & Waste Water
- Marine
- Power