OEM/Panel Builder Partner Program
Concept for power parts and core modules
OEM/Panel Builder Partner Program

Let’s grow
Agenda

Program
Creating win-win
Cooperation program
Concept – power parts and core modules
Benefits
Ratings and panel variants
Cooperation
Agreements
Training and support program
Tools & documentation
Events
Summary
OEM MV AIS concepts
Q&A
This program offers OEM (Original Equipment Manufacturer) / Panel Builder (PB) an easy and smooth way to start local added value for gas-insulated medium voltage (MV) switchgear and run a profitable switchgear business.

This concept utilizes well-proven ABB technology used in ABB’s ZX family of gas-insulated switchgear (GIS) for primary distribution.

The good image and references of ABB products makes it easy to get approval for locally added value OEM products.

Technical support with documentation and training courses from ABB factory in Ratingen, Germany combined with client knowledge and experience of the local market, reduced import duties, logistic and various other advantages guarantee successful cooperation / partnership.

ABB is ready to commit and is seeking for long term cooperation to be able to plan and develop the business and make necessary investments for all parties.
Creating win-win situation through partnership

OEM / Panel Builder strengths – ABB strengths

Creating new business opportunities through partnership and the combination of:

+ **OEM / Panel Builder** know-how of their respective markets, engineering and production capabilities

+ **ABB** experience, state-of-the-art technology and quality in the field of gas-insulated medium voltage switchgear

= **win-win** situation
OEM / Panel Builder cooperation program

OEM / Panel Builder cooperation

Strategic partnership

Results
– Capture more business opportunities
– Penetrate more markets / segments

Agreements
– Supply (commercial)
– Support (training)

OEM Added value

Tools and know-how

Concepts for Co-operation

ABB Products
Long term partnership with MV switchgear OEM / Panel Builder consisting of 3 principles:

1. ABB state of the art technology with standardized panel variants and software configurator
2. ABB cooperation agreement, technical documentation and technical support organization with training courses
3. Added value for OEM / Panel Builder

OEM / Panel Builder know-how of their respective markets/segments, engineering and production capabilities
OEM/Panel Builder benefits

1. Quick access to the market with MV GIS technology
2. Extension of current portfolio/Up-grade current portfolio
3. No further investment required
4. Fully type-tested products
5. Use of ABB product names with OEM / Panel Builder (PB) brand
6. Certified ABB partnership

Partner wins 2 years in the development of business
Ratings and standardized panel variants

**OEM panel variants (4x)**
ZX0.2

<table>
<thead>
<tr>
<th>Single busbar</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>… 36 kV</td>
<td>– Incoming and outgoing feeder panels</td>
</tr>
<tr>
<td>25 / 31.5 kA</td>
<td>– Bussectionaliser panels</td>
</tr>
<tr>
<td>630 / 1250 A</td>
<td>– Busriser panels **</td>
</tr>
</tbody>
</table>

**OEM panel variants (7x)**
ZX2

<table>
<thead>
<tr>
<th>Single busbar</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>… 36 kV *</td>
<td>– Incoming and outgoing feeder panels</td>
</tr>
<tr>
<td>… 40 kA</td>
<td>– Metering panels and sectionaliser</td>
</tr>
<tr>
<td>… 2000 / 2500 A</td>
<td>– Cable termination panels **</td>
</tr>
</tbody>
</table>

*Higher rated voltage on request  
** Other panel variants on request
### Cooperation for standardized panel variants

#### Cooperation program

<table>
<thead>
<tr>
<th>ZX0.2 / ZX2</th>
<th>ABB value</th>
<th>OEM value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>For small &amp; medium size partner</strong></td>
<td>Power parts with low voltage compartment (LVC)</td>
<td>Customization + testing</td>
</tr>
<tr>
<td>Level 1</td>
<td></td>
<td>• Engineering</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• LVC wiring</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Transformers / sensors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Relay</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• FAT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ZX0.2 / ZX2</th>
<th>Power parts w/o LVC</th>
<th>Manufacturing + assembling + testing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>For small &amp; medium size partner</strong></td>
<td></td>
<td>• Engineering</td>
</tr>
<tr>
<td>Level 2</td>
<td></td>
<td>• LVC manufacturing and wiring</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Transformers / sensors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• (ZX0.2: Busbar)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Relay</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• FAT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ZX0.2 / ZX2</th>
<th>Core modules (gas tanks)</th>
<th>Manufacturing + assembling + testing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>For large partner</strong></td>
<td></td>
<td>• Engineering</td>
</tr>
<tr>
<td>Level 3</td>
<td></td>
<td>• LVC manufacturing and wiring</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Transformers / sensors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• (ZX0.2 Busbar)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Relay</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Metal sheets, cable compartment frame, pressure relief ducts etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• FAT</td>
</tr>
</tbody>
</table>

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* Plus installation and commissioning, site acceptance test (SAT) and after sales service
## Agreements

<table>
<thead>
<tr>
<th></th>
<th>Supply &amp; Support Agreement</th>
<th>Supply &amp; Support Agreement</th>
<th>License Cooperation Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope of supply</strong></td>
<td>Power parts with LVC</td>
<td>Power parts w/o LVC</td>
<td>Core modules</td>
</tr>
<tr>
<td><strong>Labeling</strong></td>
<td>OEM / PB brand</td>
<td>OEM / PB brand</td>
<td>OEM / PB brand</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Manufactured under ABB license)</td>
</tr>
<tr>
<td><strong>Product name</strong></td>
<td>ZX0.2, ZX2</td>
<td>ZX0.2, ZX2</td>
<td>ZX0.2, ZX2</td>
</tr>
<tr>
<td><strong>Technology transfer</strong></td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>**Use of ABB TTD ***</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Fees and charges</strong></td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* TTD = Type Test Documentation
### Agreements (in detail)

<table>
<thead>
<tr>
<th>Supply &amp; Support Agreement</th>
<th>Supply &amp; Support Agreement</th>
<th>License Cooperation Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope of Supply</strong></td>
<td>Power parts (PP) + LVC + peripheral structure ¹</td>
<td>PP + peripheral structure ¹ w/o LVC</td>
</tr>
<tr>
<td><strong>External branding</strong></td>
<td>OEM / PB logo; w/o ABB logo</td>
<td>OEM / PB logo; w/o ABB logo</td>
</tr>
<tr>
<td><strong>Product name</strong> (External identification)</td>
<td>ZX0.2, ZX2</td>
<td>ZX0.2, ZX2</td>
</tr>
<tr>
<td><strong>Power Parts &amp; Core Modules</strong></td>
<td>Internal rating plates include ABB logo</td>
<td></td>
</tr>
<tr>
<td><strong>Label inside LVC (Internal labeling + identification)</strong></td>
<td>Engineered and wired by OEM / PB (labeled by OEM / PB)</td>
<td>LVC manufactured, assembled and wired by OEM / PB (labeled by OEM / PB)</td>
</tr>
<tr>
<td><strong>Warranty carried by ABB</strong></td>
<td>Power Parts + LVC (w/o wiring) = 24 months ²</td>
<td>Power Parts = 24 months ²</td>
</tr>
<tr>
<td><strong>Customization + Testing by OEM / PB</strong></td>
<td>Secondary engineering and wiring + FAT + SAT + Service</td>
<td>LVC manufacturing + secondary engineering, wiring + FAT + SAT + Service</td>
</tr>
</tbody>
</table>

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1 Peripheral structure: Cable comp., pressure relief ducts, end cover
2 Extendible at cost up on request
# Training and support program (1/2)

## Course part 1
**Type of training provided by ABB factory**
- Power parts
  - General information:
    - Understanding of MV GIS-philosophy
    - Information on MV GIS ZX types
    - Safety
  - Sales & Marketing
  - Product and configuration tool (basic)

<table>
<thead>
<tr>
<th>Time</th>
<th>Category participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 2 days</td>
<td>General Management, Sales and Marketing, Project Manager (optional)</td>
</tr>
</tbody>
</table>

## Course part 2
**Type of training provided by ABB factory**
- Power parts
  - Secondary engineering; part 1 (advanced)
  - DA relay’s (Basic) *
  - Transformers/sensors (Basic) *
  - Product and configuration tool (Advanced)
  - Primary engineering: selection of correct drawings and material for required panels
  - Secondary engineering (secondary interfaces and control of ZX panels); part 2 (advanced)
  - Manufacturing/assembly plus routine testing (FAT)

<table>
<thead>
<tr>
<th>Time</th>
<th>Category participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - 3 days</td>
<td>Testing engineer &amp; Design engineer, Tendering engineer, Project Manager</td>
</tr>
</tbody>
</table>
Training and support program (2/2)

Sales and marketing training
General product information & safety training
Introduction LVC assembly & wiring
General technology training
Training assessment programs
Software tool training

Production process / best practices
FAT
Suppliers references

Drawing transfer
Manufacturing & assembling support
Secondary Engineering support
Installation and commissioning support (via ABB Service organization)
Tools & documentation

OEM products and news

Developing high value partnerships. Growing together across the power products value chain.

ABB Medium Voltage Products. Our one-stop approach for every medium voltage application.

Distribution Automation. Recommended offering for medium-voltage switchgear.

Special Report. Medium-voltage products.
Tools & documentation

LVC assembly instruction

Concept

Documentations & tools

Software tool: OEM/ZXPro (configurator)
Tools & documentation

Feasibility study
Tools & documentation

www.abb.com/epmv
Tools & documentation

Roll-up

Poster

©ABB
Tools & documentation

SSA part A

Supply agreement

SSA part B

Support agreement
Events

OEM days
Customer days
OEM / Panel Builder exhibits
Benefits for OEM / Panel Builder partner

Summary

Extension of own portfolio – closing gaps

Added value – development possible
– Power parts (with LVC) - SSA
– Power parts (w/o LVC) - SSA
– Core modules (gas tanks) – volume based business plus investments - LCA

Due support and trainings from ABB MV GIS factory
Local Sales and Marketing support

OEM / Panel Builder partnership
OEM MV AIS concepts

UniSec

Air-insulated medium voltage switchgear for secondary distribution up to 24 kV, 1250 A, 25 kA

UniSafe

PowerCube type PB
Preassembled modules and enclosures for constructing medium voltage switchgear
Q&A

Questions

Answers
Thank you!