ABB Select Remote I/O (RIO) Cabinets
Reduce design and installation costs

Overview
ABB Select Remote I/O Cabinets allow customers to install standardized cabinets early during a project, then select the type of I/O later. They arrive ready for installation close to field devices, allowing shorter field cable runs and reducing or eliminating field junction boxes.

Suitable for mounting on either wall or metal framework, these heavy gauge stainless steel enclosures offer the best protection in even the harshest environments.

Any project can benefit from ABB Select Remote I/O Cabinets:
• In greenfield projects, the space required for traditional, large cabinet rooms can now be allocated for other purposes.
• In brownfield projects where additional I/O is required, but space is limited, this solution is an advantageous alternative because it digitally marshals signals instead of using space- and labor-intensive marshalling panels.

Benefits
• Reduces design costs
• Shortens delivery lead times
• Enables late changes to I/O allocation without escalating costs
• Speeds deployment
• Eliminates the need for cabinet re-wiring
• Reduces field labor resources, time and expenses
• Provides external power to field devices

Description and Components
These solutions house Select I/O Module Termination Unit (MTU) field connection units and I/O termination units together with ancillary equipment, such as power supplies and networking gear.

Environmental conditions:
• Ambient temperature = -40°C to +55°C
• Humidity = 5% to 95% r.h.

Hazardous area variants:
• (ATEX) IP66, Zone 2 IIB T3
• (America) NEMA 4, NEC Class 1 Division 2

Non-hazardous area variants:
• (IEC) IP66
• (America) NEMA 4

ABB Select Remote I/O Cabinets are self-contained, pre-wired, factory-tested cabinets that can be easily installed and connected to field wiring, power and network cables.
Capabilities

ABB Remote Select I/O Cabinets comprise a series of MTUs with 16 slots, each slot capable of implementing a specific type of Signal Conditioning Module (eg, AI, AO, DI, DO).

These Signal Conditioning Modules (SCMs) are available in many different types, including:
- Process Control and SIL3 certified I/O
- Both Process Control and SIL3 certified I/O with built-in intrinsically safe isolators (no external barriers required)
- SIL3 Digital Output 3A (no safety relay required)
- SIL3 Analog Output
- HART communication
- Sequence of events capability
- Loop supervision
- Current limitation per channel
- Channel-to-channel galvanic isolation

This arrangement enables field loops of 2-wire, 3-wire or 4-wire design to be directly connected, and allows the MTU to provide external power to field devices such as 3-wire transmitters up to a combined total of 40A per cabinet.

This combination of features comes in a standardized design capable of supporting an infinite combination of I/O. And our standardized Remote I/O Cabinets can be made available early in the project schedule, allowing the actual I/O modules to be installed at the time of commissioning.

Why choose ABB?

ABB Remote Select I/O Cabinets are an enhancement to the existing ABB Ability 800xA System, and they provide a comprehensive range of I/O modules that reduce labor, time, risk and cost.

Ordering information

The following sizes are currently readily available to order. Please inquire with your local ABB office for other sizes and configurations. Custom sizes and configurations are available to special order.

The following variants are currently available:

<table>
<thead>
<tr>
<th>Enclosure material:</th>
<th>Cable entry:</th>
<th>DC Power:</th>
<th>Networking:</th>
<th>Cabinet heater:</th>
</tr>
</thead>
<tbody>
<tr>
<td>● 304 stainless steel</td>
<td>● Plain gland plate</td>
<td>● System &amp; Field combined 20A n+n</td>
<td>● Splice box</td>
<td>● None</td>
</tr>
<tr>
<td>○ Painted mild steel</td>
<td>○ Drilled gland plate</td>
<td>○ Separate ‘Field power’ 10A n+n</td>
<td>○ Wireless HART adaptor</td>
<td>○ Self-regulating heater (fed from aux supply)</td>
</tr>
<tr>
<td>○ 316 stainless steel</td>
<td>○ Multi cable transit</td>
<td>○ Separate ‘Field power’ 20A n+n</td>
<td></td>
<td></td>
</tr>
<tr>
<td>○ Separate ‘Field power’ 40A n+n</td>
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</tbody>
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Product ID/SKU | Product name | Brief description
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RIO Sa CE 100x120 112-IO | Select RIO Cabinet - Safe area | 1000mm(w) x 1200mm(h) x 300mm(d) cabinet to accommodate up to 112 I/O
RIO Ex CE 80x120 112-IO | Select RIO Cabinet - ATEX Zone 2 | 800mm(w) x 1200mm(h) x 400mm(d) cabinet to accommodate up to 112 I/O
RIO Ex UL 80x120 112-IO | Select RIO Cabinet - NEC Class 1 Division 2 | 800mm(w) x 1200mm(h) x 400mm(d) cabinet to accommodate up to 112 I/O
RIO Ex CE 60x120 48-IO | Select RIO Cabinet - ATEX Zone 2 | 600mm(w) x 1200mm(h) x 400mm(d) cabinet to accommodate up to 48 I/O
RIO Ex UL 60x120 48-IO | Select RIO Cabinet - NEC Class 1 Division 2 | 600mm(w) x 1200mm(h) x 400mm(d) cabinet to accommodate up to 48 I/O

Contact information

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