EXTERNAL PARTNER TRAINING

ReliaGear® LV SG
Low voltage switchgear
Javier Lopez, Product Marketing Manager
Low voltage product team

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Agenda

1. Low voltage switchgear product offering
2. Product positioning
3. Product value proposition
4. Product features and scope
5. Configurations
6. Commercialization package
7. Q & A
### Product strategy

**Low voltage switchgear**

<table>
<thead>
<tr>
<th>Product</th>
<th>Load center</th>
<th>Lighting panelboard</th>
<th>Power panelboard</th>
<th>Switchboard</th>
<th>LV Motor Control</th>
<th>LV Switchgear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trademark name(s)</td>
<td>PowerMark Gold</td>
<td>ReliaGear LP</td>
<td>ReliaGear neXT</td>
<td>ReliaGear SB</td>
<td>ReliaGear LV MCC</td>
<td>ReliaGear LV SG/Entellisys</td>
</tr>
<tr>
<td>UL certification</td>
<td>UL 67</td>
<td>UL 67</td>
<td>UL 67</td>
<td>UL 891</td>
<td>UL 845</td>
<td>UL 1558</td>
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<tr>
<td>Typical application</td>
<td>Residential</td>
<td>Light commercial</td>
<td>Heavy commercial</td>
<td>Light industrial</td>
<td>Light/Heavy industrial</td>
<td>Heavy industrial</td>
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<tr>
<td>Maximum amperage</td>
<td>225</td>
<td>800</td>
<td>1,200</td>
<td>6,000</td>
<td>3,200</td>
<td>6,000</td>
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</tbody>
</table>

**ReliaGear family of low voltage products**
LV ANSI switchgear portfolio offering
Non-arc resistant and arc-resistant switchgear

**AKD-20®/ReliaGear LV SG**

- 600VAC system up to 8000 A horizontal bus @ 150 kA
- Entelliguard G Breakers up to 6000 A, 150 kA
- ArcWatch, inso-iso bus

**ReliaGear LV SG - July**

- Emax 2 ACB with Ekip trip unit
- 8 different communication protocols
- ABB Ability™ Readiness

**AKD-20® AR/MNS® SG AR**

- 600 VA system up 4000 A, 100 kA
- Uses Emax 2 breakers
- Plenum and plenum-less designs available

**MNS SG AR**

- IEEE Type 2B – robust construction
- Available in AKD-20 and Entellisys platforms
- 600 VAC system up to 5000 A, 65 kA

**Entellisys®**

- Entellisys 5.6 - April
- 600 VAC system up to 5000 A breaker @ 150 kA @ 480 V
- AR 600 VAC system up to 5000 A, 65 kA
- Bus differential protection (Integral) and Dynamic ZSI
- Remote control/monitor outside of arc flash boundary (up to ½ mile)
- 156 samples/cycle for protection
- 64 samples/cycle for WFC...31st harmonic
- Redundant architecture
- IEC 61850 GOOSE for digital communications

Leadership in arc flash mitigation, digital and predictive diagnostics
ReliaGear LV SG
Product positioning
Product positioning

ReliaGear LV SG
- New technology with Emax 2 breakers
- Lead product offering which covers the majority of applications/segments
- Ability to capture price for features that offer customer value
- AKD-20 for ratings currently not available with ReliaGear LV SG

Entellisys
- Advanced safety, communications and predictive diagnostics capability – Remote HMI, bus differential, advanced ZSI

ReliaGear as primary non-AR platform with Entellisys for specific applications
Market positioning

The higher the complexity, the more competitive ReliaGear LV SG + Entellisys

<table>
<thead>
<tr>
<th>Complexity</th>
<th>Ability to compete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light</td>
<td>- Cost effective solution</td>
</tr>
<tr>
<td>Heavy</td>
<td>- Market price levels</td>
</tr>
<tr>
<td></td>
<td>- Portfolio features</td>
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<tr>
<td></td>
<td>- Meet customer requirement</td>
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<tr>
<td></td>
<td>- Perceived value</td>
</tr>
<tr>
<td>Light</td>
<td>ATO schemes</td>
</tr>
<tr>
<td>Heavy</td>
<td>Communication</td>
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<td></td>
<td>Metering</td>
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<td></td>
<td>Multi-source ground fault</td>
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<td>Remote HMI</td>
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<td></td>
<td>Bus differential</td>
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<tr>
<td></td>
<td>HRG detection</td>
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<tr>
<td></td>
<td>Selectivity</td>
</tr>
<tr>
<td></td>
<td>Arc flash mitigation</td>
</tr>
<tr>
<td></td>
<td>Arc-resistant construction</td>
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</tbody>
</table>

Expanding to more complex markets while keeping current segments and volume

November 9, 2021

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Target segments
Increase focus in faster growing segments... Continue to build core...

<table>
<thead>
<tr>
<th>Key growth drivers (&gt;6% CAGR)</th>
<th>Fastest growing segments</th>
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</thead>
<tbody>
<tr>
<td>Data Centers</td>
<td>Mission Critical messaging</td>
</tr>
<tr>
<td>Healthcare</td>
<td>Increase focus – Critical power team, FAEs, account managers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High-potential segments (3-5% CAGR)</th>
<th>Medium growth segments</th>
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<tbody>
<tr>
<td>F&amp;B</td>
<td>Safe, smart and sustainable messaging</td>
</tr>
<tr>
<td>Industrials</td>
<td>Expand focus – Industrial and Utility sales team, agents, partners &amp; AM</td>
</tr>
<tr>
<td>Utilities</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Core market (1-2% CAGR)</th>
<th>Core segments for ABB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Construction</td>
<td>Safe, smart and sustainable and mission critical applications</td>
</tr>
<tr>
<td>Oil &amp; Gas</td>
<td>Build on strengths in segments – segment managers, channel</td>
</tr>
</tbody>
</table>
Product value proposition
ReliaGear LV SG switchgear
Specifications

Incorporating the best of both worlds: cutting-edge Emax 2 ACB with Ekip trip unit technology, integrated into the proven AKD evolving switchgear platform
- 3P3W and 3P4W – 600/347 Vac, 480/277 Vac
- Fully rated 100 KAIC at 600/347 Vac, 480/277 Vac and 208/120 Vac
- Main circuit breakers: up to 5000 A
- Main bus: up to 8000 A
- Air circuit breakers: 250–5000 A
- Non-arc resistant
- UL1558 and CSA C22.2 No.31 compliant
- Enclosures: NEMA Type 1 and 3R
- Seismic ratings: 1.33g sds a z/h of 1 CBC-2019/IBC-2018
- Depths: 54-74 inches
- Widths: 22-38 inches

Launched July 2021
ReliaGear LV SG
Safe, smart and sustainable

Value proposition
- ReliaGear LV SG incorporates the best of both worlds: cutting edge Emax 2 ACB technology integrated into the proven AKD low voltage switchgear platform
- ReliaGear LV SG meets the ever-expanding needs of the marketplace with flexibility to scale for tomorrow by providing enhanced safety, reliability, circuit protection and diagnostics

Target markets
- This new generation LV switchgear platform provides the latest technological innovations and reliability
- ReliaGear LV SG switchgear meets the demands of industrial, utility, critical power and large commercial applications
  • Data centers
  • Hospitals
  • Oil, chemical and gas
  • Food and beverage
  • Universities and colleges
  • Water
  • Stadiums

Messaging
- New technology from Ekip Touch trip units offers best-in-class reliability, monitoring and diagnostics, and flexibility
  • Integrated auto-transfer
  • 1% metering option
  • 8 different communication protocols
  • Bluetooth connectivity
- Customers are now able to add additional protection and functionality to the breaker via ABB Ability Marketplace™, while the breaker is operational, by using Ekip Connect Software
### ReliaGear LV SG switchgear

#### Features and benefits

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Advance electronics - Ekip Touch and higher Trip Units</td>
<td>1. Reliability and functionally - update TU firmware, add additional protection features, measures, functionalities to the breaker via ABB Ability Marketplace™ with breaker in the closed position using Ekip Connect Software</td>
</tr>
<tr>
<td>2. Watchdog inside Ekip TU improves reliability as electronic circuit periodically checks the continuity of internal connections</td>
<td>2. An alarm cause by trip coil, rating plug or current sensor (ANSI 74), a message shows in the Ekip Touch. If a protection function intervenes, the unit always checks that the circuit breaker has been opened through auxiliary contacts that indicate the position of the main contacts</td>
</tr>
<tr>
<td>3. Improved preventive maintenance capabilities with Emax 2 Ekip Touch integration and/or Ekip Connect software</td>
<td>3. Ekip Touch and/or Ekip Connect software provides status of contact wear in terms of percentage, viewable via trip unit HMI or software</td>
</tr>
<tr>
<td>4. E1.2 integration...15’ minimum stack width**</td>
<td>4. Allows for maximum power density and optimization of lineups</td>
</tr>
<tr>
<td>5. M-T-M or Utility-Gen auto transfer built in and integral 1% metering accuracy</td>
<td>5. No external relays, PLCs or devices required. Optional sync check module on breaker for closed transitions. No external CTs, PTs or meters required</td>
</tr>
<tr>
<td>6. Modular thermal monitoring available with Emax 2 Ekip Trip Unit</td>
<td>6. Ability to signal preset alarms, and programmable commands based on the set thresholds for (3) analog inputs for temperature sensing (2 wires) and (1) analog input for 4-20mA current loop. It improved maintenance capabilities for temperature as condition monitoring solutions embedded in the system</td>
</tr>
</tbody>
</table>

**Available in Phase 2**
**ReliaGear® LV SG**

**Key highlights with Emax 2**

<table>
<thead>
<tr>
<th>Pillar</th>
<th>Argument</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance</strong></td>
<td>Emax 2 is by volume still the smallest in the market with very good performances and very compact circuit breaker with innovated trip unit.</td>
<td>Strong acceptance in the marketplace</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>Embedded All-in-One functionality (like embedded ATS, power controller, etc.)</td>
<td>Removing other components like PLCs, wiring, etc. Smaller footprint, more competitive, etc.</td>
</tr>
<tr>
<td></td>
<td>Tons of I/O options with huge programming capability.</td>
<td>No need for external COMM translators, less Ethernet Switches, etc.</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>Everything is embedded (via plug in modules) and we have the broadest offering of communication protocols in the market.</td>
<td>No need for external COMM translators, less Ethernet Switches, etc.</td>
</tr>
<tr>
<td><strong>Ease of use</strong></td>
<td>Only one with Touch graphical HMI.</td>
<td>Lower labor cost.</td>
</tr>
<tr>
<td><strong>Safe and reliable</strong></td>
<td>Only LV PCB with I-ZSI (outside of EntelliGuard G). Allows to have I protection overlapping between layers optimizing safety and reliability.</td>
<td>Lower arc flash risk</td>
</tr>
<tr>
<td></td>
<td>Very proud protection range (power protections, generator protections, etc)</td>
<td>Can allow the replacement of other devices like special relays.</td>
</tr>
<tr>
<td><strong>Energy management</strong></td>
<td>Class 1% (only Emax 2 and one other competitor have this functionality). Combined with the HMI can help replace external meters and sensors in some cases.</td>
<td>Replace external meters and sensors.</td>
</tr>
<tr>
<td><strong>Datalogger</strong></td>
<td>Most complete in the marketplace by far. Very good for troubleshooting and root cause analysis.</td>
<td>Uptime</td>
</tr>
<tr>
<td><strong>Network analyzer</strong></td>
<td>Only CB with this package in the market. Should help us replace some network analyzer applications.</td>
<td>Less external devices and lower footprint for equipment.</td>
</tr>
</tbody>
</table>

**Click here for additional competitive details**
## Product selection

ReliaGear LV SG + Entellisys

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
<th>ReliaGear LV SG</th>
<th>Entellisys 5.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circuit breaker</td>
<td></td>
<td>Emax 2</td>
<td>Entellisys E</td>
</tr>
<tr>
<td>Remote control</td>
<td></td>
<td>Emax 2 Option / Accessory/HW</td>
<td>Embedded / Optional</td>
</tr>
<tr>
<td>Communication systems</td>
<td></td>
<td>8 Protocols</td>
<td>2 protocols</td>
</tr>
<tr>
<td>Harmonic analysis</td>
<td></td>
<td>Emax 2 Option / Accessory/HW</td>
<td>Embedded / Optional</td>
</tr>
<tr>
<td>Predictive maintenance</td>
<td></td>
<td>Emax 2 Option / Accessory/HW</td>
<td>Embedded / Optional</td>
</tr>
<tr>
<td>Sequence of event log</td>
<td></td>
<td>Emax 2 Option / Accessory/HW</td>
<td>Embedded / Optional</td>
</tr>
<tr>
<td>ABB Ability™</td>
<td></td>
<td>Emax 2 Option / Accessory/HW</td>
<td>Not Available</td>
</tr>
<tr>
<td>HMI</td>
<td>Remote HMI</td>
<td>External Hardware</td>
<td>Optional</td>
</tr>
<tr>
<td>ATO (Basic)</td>
<td>Automatic Throwover scheme - 2 breaker</td>
<td>Emax 2 Option / Accessory/HW</td>
<td>Embedded / Optional</td>
</tr>
<tr>
<td>ATO (Basic)</td>
<td>Automatic Throwover scheme - 3 breaker</td>
<td>Emax 2 Option / Accessory/HW</td>
<td>Embedded / Optional</td>
</tr>
<tr>
<td>ATO (Advanced)</td>
<td>Automatic Throwover scheme - 2 breaker</td>
<td>EXT Relay/PLC / HW Relays</td>
<td>Embedded / Optional</td>
</tr>
<tr>
<td>ATO (Advanced)</td>
<td>Automatic Throwover scheme - 3 breaker</td>
<td>EXT Relay/PLC / HW Relays</td>
<td>Embedded / Optional</td>
</tr>
<tr>
<td>ATO (Advanced)</td>
<td>Automatic Throwover scheme - 4 breaker</td>
<td>EXT Relay/PLC / HW Relays</td>
<td>Embedded / Optional</td>
</tr>
<tr>
<td>ATO (Advanced)</td>
<td>Automatic Throwover scheme - 5 breaker</td>
<td>EXT Relay/PLC / HW Relays</td>
<td>Embedded / Optional</td>
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<tr>
<td>Diagnostics</td>
<td>Waveform capture</td>
<td>Emax 2 Option / Accessory/HW</td>
<td>Embedded / Optional</td>
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<tr>
<td>Diagnostics</td>
<td>Event recording</td>
<td>Emax 2 Option / Accessory/HW</td>
<td>Embedded / Optional</td>
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<tr>
<td>HRGF</td>
<td>Hi-resistance ground detection and location</td>
<td>External Relay (Igard/Startco)</td>
<td>Embedded / Optional</td>
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<tr>
<td>HRGF</td>
<td>Hi-resistance ground detection</td>
<td>External Relay (Igard/Startco)</td>
<td>Embedded / Optional</td>
</tr>
<tr>
<td>HRGF</td>
<td>High-resistance ground tripping priority</td>
<td>External Relay (Igard/Startco)</td>
<td>Embedded / Optional</td>
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<tr>
<td>Metering</td>
<td>Meter - harmonics</td>
<td>Emax 2 Option / Accessory/HW</td>
<td>Embedded / Optional</td>
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<tr>
<td>Metering</td>
<td>Meter - basic</td>
<td>Emax 2 Option / Accessory/HW</td>
<td>Embedded / Optional</td>
</tr>
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<td>MSGF</td>
<td>Multi-source ground fault</td>
<td>Emax 2 Option / Accessory/HW</td>
<td>Embedded / Optional</td>
</tr>
<tr>
<td>RELT</td>
<td>Reduce energy let thru</td>
<td>Emax 2 Option / Accessory/HW</td>
<td>Embedded / Optional</td>
</tr>
<tr>
<td>Sync Check</td>
<td>Sync check relay</td>
<td>Emax 2 Option / Accessory/HW</td>
<td>Embedded / Optional</td>
</tr>
<tr>
<td>ZSI</td>
<td>Dynamic/directional ZSI</td>
<td>EXT Relay/PLC / HW Relays</td>
<td>Embedded / Optional</td>
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<tr>
<td>ZSI</td>
<td>Bus differential</td>
<td>EXT Relay/PLC / HW Relays</td>
<td>Embedded / Optional</td>
</tr>
<tr>
<td>RCP</td>
<td>Reverse current protection</td>
<td>External Relay/Hard Wired</td>
<td>Embedded / Optional</td>
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</tbody>
</table>
Product features and scope
ReliaGear LV SG advantages

Safe
Enhanced protection
- Closed door racking
- ZSI on instantaneous
- RELT ready
- Full remote operation

Smart
Easy to install
- Integrated auto transfer
- 1% metering option
- 8 different communication protocols
- Bluetooth connectivity

Sustainable
Outstanding reliability
- ABB Ability™ (PM data)
- Ekip Connect for settings uploads
- Ekip connect commissioning reports
- User replaceable accessories (fast and simple)
Emax 2

Main pillar to ReliaGear LV SG

Emax 2 improves the efficiency of all electrical plants, creating the new standard for:

1. **Performance**
   - Satisfying all major requirements at the right size

2. **Control**
   - Optimization of power flow even in emerging microgrid application

3. **Connectivity**
   - Integration into any digital systems

4. **Ease of use**
   - Simplified user experience during all customer interactions during the product lifecycle

Emax 2 is far more than a circuit breaker
Air circuit breakers

High performance for main or feeders

<table>
<thead>
<tr>
<th>kAIC Rating (508V)</th>
<th>Version</th>
<th>250A</th>
<th>400A</th>
<th>800A</th>
<th>1200A</th>
<th>1600A</th>
<th>2000A</th>
<th>3200A</th>
<th>4000A</th>
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<td>V-A</td>
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Rating Overlap

*Target for Q1 2021 release
Emax 2
Breaker frames and trip unit offering

4 Envelopes (E1.2, E2.2, E4.2 and E6.2)

- Drawout, 3P
- Circuit breaker and switch disconnectors
- Same electronic trip across the family
- Same auxiliary terminal box
- Same height and depth from E2.2 to E6.2

Ekip Touch: the smart trip unit

- Ready to be upgraded and customized
  - ABB Ability Marketplace™ ready
  - Advanced protection sets included:
    - Modified Differential Ground Fault
    - 2I…Reduced Energy Let Through Ready
  - Embedded Bluetooth antenna
  - Internal voltage sensing pre-installed¹

Ekip Hi-Touch: the ultimate trip unit

- Ekip Touch Plus a lot more preloaded:
  - Class 1% accuracy
  - Directional protection for complex grids
  - Dual setting for smart grids and arc-flash
  - Enabled Internal voltage sensing and Self-power

¹: LSIG: Adjustable L, S, I, and G
LT adjustable from 0.4-1.0 in .001 increments

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ReliaGear LV SG new designs

Drawout level overview

1. Breaker mount racking mechanism (E2.2 – E6.2)
2. Positive position racking indicator
3. Overhead lifting beam
4. Compartment shutters standard offering
5. Shutter padlocking locking provision (8mm dia.)
6. Cradle mounted kirk interlock
What is All-In-One innovation?
Embedded functionality

**Generator protection**
Dedicated ANSI protection functions available with Ekip G trip units

**Digital selectivity**
Cabled selectivity
Communication based selectivity
- Ekip link
- IEC 61850

**Adaptive protection**
Dual setting capability to adapt protection levels to the real working conditions of the system

**Embedded solutions**
Example: embedded Automatic Transfer Switch
Emax 2 option modules

**Cartridge modules**
- Ekip supply
- Ekip link
- Ekip com
- Ekip signaling
- Ekip synchrocheck

**Expansion modules**
- Ekip Signaling 4K: (4I + 4O): installed in the front of the breakers with Ekip Touch trip units for E2.2…E6.2
- Ekip Signaling 10K: (11I + 10O): external DIN rail mounted, up to four modules allowed per trip unit
- If fully equipped, E2.2 … E6.2 can provide up to 50 outputs and 54 inputs; up to 44 outputs and 48 inputs for E1.2

![Cartridge modules](image1)
![Expansion modules](image2)
Plug and play modules

- Plug and play communication cartridge modules enable direct communication with the seven most common industrial communication protocols and the cloud:
  - Modbus RTU, Modbus TCP, Profinet, DeviceNet, Profinet, Ethernet/IP, IEC 61850 and Com Hub; Ekip Link also available
- Multiple modules can be used simultaneously
- Additionally, Emax 2 offers a wide range of analog and digital I/O to acquire external measurement (i.e. temperature) and signals

The most flexible and comprehensive connectivity offering
**Emax 2**

Connectivity

**Embedded Bluetooth**

- Easy protection setting and information access
- Possibility to upgrade the circuit breaker using software packages available on ABB Ability™ Marketplace
- Safe commissioning of the device
- Import and export of the CB settings
- Option available without Bluetooth

---

**Always connected and up to date**
**Emax 2 - Trip Unit**

High accuracy measurement

**Certified for IEC 61557-12**

- Class 1 in Energy and Power according IEC 61557-12
  - Accuracy: Current 0.5%, Voltage 0.5%, Power 1%, Energy 1%
- Low current detection, starting from 0.4% of $I_n$
- Perfectly suitable for SCADA integration
- Analysis of energy demand

Ready for energy efficiency
Emax 2 – Ekip Trip Unit
Upgradable solution

Emax 2 evolves during the lifecycle

- With dedicated software packages it is possible to fully customize the circuit breaker
- Using the new BLE connectivity through the ABB Ability Marketplace™, Emax 2 can be upgraded in the field using a smartphone and evolve during the lifecycle
  - Measurements
  - Protections
  - Network analyzer
  - Datalogger

Customized and scalable solutions
Arc flash mitigation optional
Active arc flash mitigation reduces equipment damage and downtime

**TVOC-2 light sensing relay**
- Detects arc flash and triggers breaker trip.
- Uses array of point-lens sensors to detect arc flash
- Sensors mounted in bus, cable and breaker compartments
- Response time <4ms + breaker clearing time
- Expandable up to 30 sensors per unit
- Optional current sensing unit

**REA101 light sensing relay**
- Fiber loop routed through equipment
- Current sensing capability with enable/disable control
- Triggers upstream breaker trip
- <4ms response time + breaker clearing time
AB pname ty™ energy and asset manager

Customer application

- **Smart breaker technology**
  - Process engineering

- **Perform primary protections and advanced metering**
  - Main protections
  - Embedded current and voltage sensors

- **Advanced communications**
  - Embedded communications such as Modbus, IEC 61850, and EtherNet/IP

- **Intelligent protections**

- **Energy management**
  - Reduce energy consumption
    - Energy metering and Power Quality
    - Spread connectivity
    - Avoid waste

- **Energy billing optimization**
  - Tariff optimization
  - Load shifting/Peak shaving
  - Cost allocation

- **Smart facility management**

- **Predictive maintenance**
  - Health assessment
    - ABB or legacy GE installed switching device status based on condition monitoring, extending lifecycle

- **Operation strategy**
  - Scheduling maintenance to ensure stable running without unexpected shutdown
  - Alerting via email/SMS

- **Reduce energy consumption**
  - Energy metering and Power Quality
  - Spread connectivity
  - Avoid waste

- **Energy billing optimization**
  - Tariff optimization
  - Load shifting/Peak shaving
  - Cost allocation

- **Smart operation and maintenance**

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Configurations
ReliaGear LV SG new designs

Subsystem level overview

Sub systems
1. Breaker compartment
2. Chimney
3. Bus compartment
4. Cable compartment
5. Top wire trough
6. Rear wire trough*
7. Overhead hoist
8. Main bus locations
9. Neutral bus locations
10. Ground bus locations
11. Main bus insulation and riser bus isolation covers*
12. Cable compartment segmentation*

*Not shown
More efficiency in switchgear
- Four construction sizes
- High short circuit rating in a compact size
- Flexible circuit breaker stacking capabilities
- Embedded functionalities, avoiding external devices, cables and extra space

Benefits
- Reduce equipment footprint
- Reduced busbar length, saving copper

Less system cost and more usable space for end user
Configurations

- Bolted construction - no welding
- Seismic qualified - CBC-2019, IBC-2018, ASCE7-16, and IEEE 693-2018
- Pending renewal OSP-0043-10
- Standard depth is 54-inch (22.31-inch-deep front compartment plus 31.69-inch-deep rear compartment)
- Rear compartment depth can be extended 6, 13 or 20 inches (applies to all sections in line-up)
- Intermix sections allow 22-inch-wide breakers to be mounted in 30-inch or 38-inch-wide sections. Ideal for mixing feeders in main/tie sections
- Both frame options provide additional conduit space
Commercialization package
ReliaGear LV SG
Low voltage switchgear support team

Global Product Manager: Rodrigo Morales
Product Marketing Manager: Javier Lopez
Product Specialist: Joseph Vetter
Proposals Manager: Randy Crow
Contract Manager: Dan Jones (Project Management)
Expedites and changes: Emily Hill
Aftermarket parts: Ermilo Neira
Services: Matt Daly
Order entry: empower

Special instructions:
• All quote requests to be submitted in SFDC (ABB1 or ABB2)
• Typical quote turn-around requested by Sales is 1-2 weeks
• Post-Sales Service/Warranty: 1-888-GE-RESOLVE (1-888-437-3765) Option #2

Lead times

<table>
<thead>
<tr>
<th>Product</th>
<th>Drawings Approval Cycle</th>
<th>Straight Release or After Approval Drawings</th>
<th>Total LT</th>
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</thead>
<tbody>
<tr>
<td>AKD-20 (Entellisys, PowerBreaker/AV 3, AR)</td>
<td>3-5 weeks</td>
<td>20-22weeks*</td>
<td>23-27 weeks *</td>
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</tbody>
</table>

*Lead time begins after order entered by sales/distribution
empower Burlington quotation

Sample breaker detail screen
empower Burlington quotation
Sample breaker trip unit detail screen

![Sample breaker trip unit detail screen](image-url)
ReliaGear LV SG
empower front view example
ReliaGear LV SG

Publications

Document
- ReliaGear LV SG Release Note: 1VAL106901-RN
- ReliaGear LV SG Release Note: 1VAL106902-RN
- ReliaGear LV SG Fact Sheet: 1VAL106901-FL
- ReliaGear LV SG Descriptive Bulletin: 1VAL106901-DB
- ReliaGear LV SG Competitive Comparison: 1VAL106901-CC
- ReliaGear LV SG Technical Application Guide: 1VAL106901-TG
- ReliaGear LV SG IOMM: 1VAL106901-MB
- Microsite for all of the above content
- CSI Master Guideform spec
Leveraging CX 2021 marketing plan
Roadshow and CXC

Industrial segment marketing plan

<table>
<thead>
<tr>
<th>Activities</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tradeshows/Events</td>
<td>Tech Tuesday webinar series – live and on demand</td>
<td>Houston CXC re-design</td>
<td>Melbourne CXC / manufacturing launch</td>
<td>registration attendees NPS leads</td>
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<tr>
<td></td>
<td>Industrial Solutions Showcase (Jan 15 - Feb 15)</td>
<td>Roadshow: TSMC (ship makers), Workday, Parson, John Deere, Rivian</td>
<td>Roadshow: TSO – pharma and GSC</td>
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</tr>
</tbody>
</table>

Digital Campaigns

- Expand Tech Tuesday platform: newsletter, podcast, case study (T)
- TSO campaigns for target end users aligned with sales resources / industry partners (Microsoft, HRO (T))

# delivered
% open
% clicks

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Electrification websites
External, services and sales support portal

Global website: www.abb.com
US website: https://electrification.us.abb.com/
Electrification Sales Authority (ELSA): https://myrevbase.com/1608/v/866960?

- empower
- Salesforce/SFDC
- Branding
- Lead times
- Lifecycle management
- Events
- Roadshow
- Training