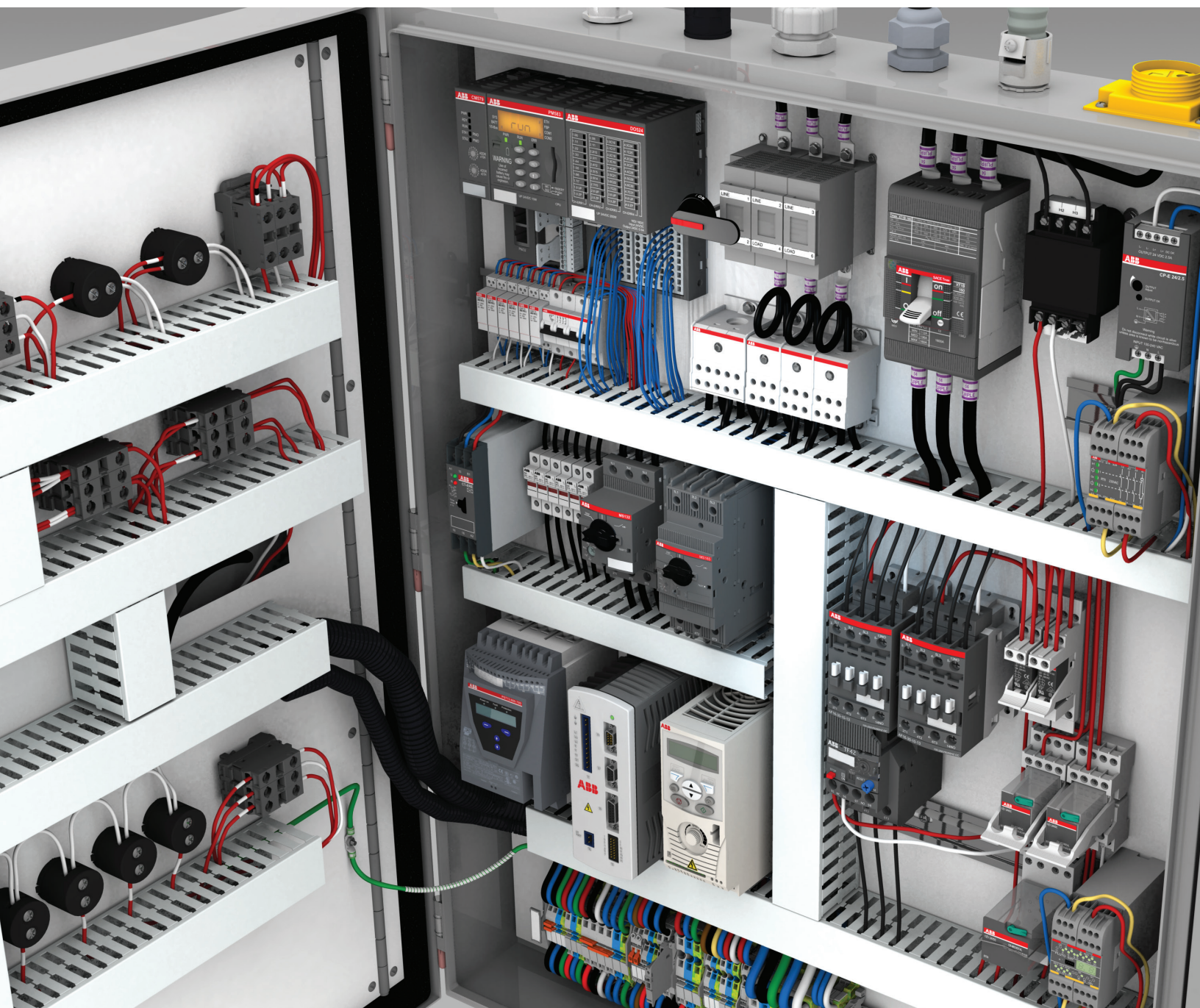


PRODUCT OVERVIEW

ABB solutions for control panels

Capabilities guide (U.K.)



Arc Guard System™

The ABB Arc Guard System protects people, equipment and productivity by quickly detecting an arc fault and tripping the incoming circuit breaker. Using light as the main condition, the unit trips instantaneously, overriding all other protections and delays, which is crucial when reaction times need to be measured in milliseconds. Up to 30 sensors can be connected with fiber optic cable to each monitoring unit.

- Fiber optic detection
- Pre-calibrated sensors
- IP54 protection
- 30 optical detector inputs
- Optional current sensing unit



Limit switches

With the broadest range of solutions on the market, ABB offers all components from position sensors via automation systems to complete control panels.

- IP65 (plastic) and IP66 (metal) protection
- 30mm to 60mm width
- Complete safety line
- Three cable conduits
- Miniature pre-wired line
- Actuators: safety key, plunger, roller, adjustable lever, flexible rod and pull action



Emax 2 Air Circuit Breakers (ACBs)

Providing the latest protection technology such as built in Network Analyser (Ekip Hi-Touch), Power manager Module and Dual Settings. Other features include Embedded Metering and Real Time asset management and maintenance data, with all data capable of being sent back to central BMS/EMS system via many different protocols. This makes them ideal circuit breakers for general protection of plants, end-user complexes and electric lines as well as offering protection for generators, motors and transformers etc, giving full flexibility to Consultants/Designers, Contractors, OEMs and End Users.

- Up to 690V ac
- Available in Fixed and With-drawable versions
- Up to 6300A
- Up to 150kA (Icu) 100kA (Icw) for short circuit protection
- Accessories include: motor operators, auxiliary and signal contacts, shunt trip, under-voltage release, bell alarms and more



Circuit monitoring system (CMS)

The CMS is a compact system used for measuring performance of diverse AC and DC load currents to reduce downtime and detect potential issues before they occur. It is easy to use and has intuitive installation and configuration via integrated touch screen (CMS-600) or web client (CMS-700) in original installations or field retrofits.

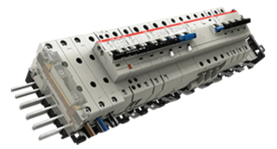
- Open and closed core sensors up to 160A true RMS with up to 0.5% accuracy
- Up to 96 sensors can be monitored by one control unit
- Measured data can be accessed via Ethernet or polled via Ethernet or Modbus TRU protocol interface



SMISSLINE TP flexible power distribution bus system

Modular assembly allows for simple reconfiguration and maintenance, and reduces installation time drilling, taping wire connections, and space. Design changes and future expansion are easily accomplished by connecting additional devices.

- EN 60898-1 and IEC 60947-2 approved
- 200A center-fed bus
- 0.5 to 63A
- Combination motor starters



Human machine interface (HMI)

Versatile visualization for productivity with design — the CP600 range is

dedicated for machines and systems requiring visualization performance or representative design.

- Each range provides seven TFT 65,536 color touch screens from 4.3" to 15"; 16:9 wide screen and 4:3 panels; 16:9 offers large area for HMI pages in compact space
- Dimming, including black screen, to maintain dark operator position
- Aluminum case with IP66 front plate, very robust, appealing design
- High performance 32-bit controller



Automation Builder software

ABB Automation Builder is the integrated software suite for machine builders and system integrators wanting to automate their machines and systems in a productive way. Combining all of the tools required for configuring, programming, debugging and maintaining automation projects from a common intuitive interface, Automation Builder addresses the largest single cost element of most of today's industrial automation projects: software.

- Premium version supports advanced engineering productivity and collaboration
- Standard version enables integrated engineering for PLCs, drives, motion, panels and robots
- Basic version is a free download for engineering simple PLC solutions

IEC 60309 international pin and sleeve devices

IEC 60309 international pin and sleeve devices provide safe, reliable and durable electrical connections for different kinds of industrial applications and work conditions.

- IP67 and IP69K rated watertight connections
- Superior cable strain relief and cable detachment prevention
- Housed in flame safe (per UL 94) UV resistant (per UL 746c) material



Top reasons to choose ABB as your preferred supplier of low voltage control products

1. The most extensive product range, enabling you to source your critical components from one supplier

- Arc Guard System™
- Connection devices
- Contactors and overloads
- DIN rail components
- Drives
- Enclosures
- Grounding systems
- Interface relays
- Limit switches
- Manual motor starters
- Miniature circuit breakers
- Molded case circuit breakers
- Panelboards
- Pilot devices
- PLCs
- Power circuit breakers
- Power distribution bus systems
- Safety locks
- Safety relays and PLCs
- Safety switches
- Sensors
- Starters
- Signal converters
- Softstarters
- Surge protection devices
- Switches and Switch Fuses
- Timers and monitors
- Universal motor controllers

2. Ease of product selection and installation

- Comprehensive selection tools and extensive technical documentation for easy specification and use
- Wide variety of product options — from economical to highly sophisticated — offering maximum value
- Products designed for safety, easy installation, set-up, commissioning and maintenance
- Common style across product line helps you create a cleaner panel design

3. Global support

- ABB products are available in more than 100 countries, giving you the confidence of worldwide sourcing and support — no matter where you build and operate your equipment
- Global certifications to support your business worldwide



4. Ease of doing business

- Source for widest range of best-in-class products
- Product selection tools, including configurators, cross references and application support

5. Business efficiency resources

- Service contracts available for priority support

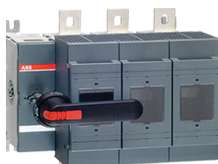
Products

1 Disconnect switches

ABB has a wide portfolio of low voltage switches that includes fusible, non-fusible, change-over, enclosed and cam switches with ratings between 16 and 2000 amps for both AC and DC applications.

These disconnects are suitable for machinery, power distribution, switchboards, motor control centers and photovoltaic applications.

- Tested to IEC60947-3 standards
- Compact size
- High performance
- Safe to use and easy to install
- The most complete offering of disconnects on the market
- IP20 and IP65 protection



2 Programmable logic controllers (PLCs)

ABB scalable PLC ranges provide solutions for small, middle and high-end applications. The platform offers performance levels for high availability, extreme environments or safety solutions, along with interoperability and compatibility in hardware and software.

- AC500 — Flagship PLC with performance, communications and I/O capabilities for industrial use
- AC500-eCo — Compact, flexible and economical PLC
- AC500-S — Safety PLC for factory/machinery automation
- AC500-XC — Extreme-condition PLC for extended temperature range, vibration, hazardous gases, high altitudes and humid conditions



3 Surge protective devices (SPDs)

Our SPDs are designed for long service life, protecting equipment from surges due to lightning strikes, upstream equipment and utility load switching.

- Protection to BS EN 62305 / BS 7671
- Protection in industrial and commercial installations. Comes with replaceable modules and optional safety reserve
- Furse range provides a total solution to protect and ensure continuous operation of critical electronic systems, such as those found in data centres, hospitals, and process automation applications



4 Miniature circuit breakers (MCBs)

ABB, the inventor of miniature circuit breaker technology, offers the largest selection of current-limiting, compact, DIN-rail mounted MCBs, including solutions for the wind and solar PV markets, for AC and DC applications. Thermal and magnetic trips are provided to cover both overcurrent and short-circuit faults.

- IEC/EN 60898-1 and IEC/EN 60947-2 compliant
- 0.2 to 125A, up to 600V AC/DC and 50 kA short circuit protection
- Accessories—bus bars, auxiliary and signal contacts, shunt trip, under-voltage release and lock out/tag out



5 Electronic relays and controls

ABB's assortment includes a wide range of products for switchgear and control gear for electrical equipment and automation of machinery and plants. These versatile products offer maximum security, economic efficiency and capacity. Ongoing development of the product range makes new applications possible.

- Timers
- Measuring and monitoring relays
- Grid-feeding monitors
- Sensor interface relays and signal converters
- Universal motor control



6 Fuse holders

ABB offers a wide range of DIN rail mountable, UL approved IP20 fuse holders. They offer venting grooves and cooling chambers to improve heat dissipation, increasing the durability and reliability of the fuse holders. Our ergonomic flip hinge makes fuse replacement easier in small spaces even while wearing gloves. All models offer blown fuse indication for quick identification of fuse failures.

- Class J — up to 60A at 600V AC/DC
- Class CC — up to 30A at 600V AC/DC
- Midget 10 x 38mm — up to 30A at 600V AC/DC
- Photovoltaic PV — up to 30A at 1000VDC



7 Manual motor starters

Manual motor starters can reduce panel space, installation time and cost. Applications include manual motor control, local motor disconnect, group installation and self-protected combination motor controllers.

- Up to 100A and 100kA short circuit protection
- Accessories include: connection sets, auxiliary contact blocks and shunt trips, power-feed blocks, under-voltage release and short circuit signaling contacts



8 Softstarters

The ABB softstarter portfolio consists of three different ranges to cover almost all possible motor applications from 3 to 1250 amps and main voltages up to 600 VAC.

- PSR — compact, 3 to 105A
- PSE — efficient, 18 to 370A
- PSTX — advanced, 30 to 1250A



9 Low voltage drives and micro drives

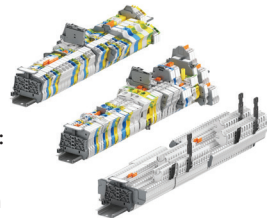
ABB machinery drives are designed to meet the production and performance needs of machine builders, system integrators, panel builders and end users in a broad range of applications. The drives can be flexibly programmed to meet the demands of different machine solutions. A wide range of features and options provides optimal solutions.



10 Connections

ABB offers one of the most comprehensive ranges of terminal blocks on the market to meet a variety of customer requirements: from small panel builders to large OEMs, from standard distribution and control panels to the most specialized applications in key industries such as energy, maritime, explosive atmospheres and traction.

- Distribution, pluggable, railway and IDC blocks
- Screw or push-in spring



11 Pilot devices

ABB offers two ranges of pilot devices for 22mm diameter holes. The modular range includes operators, holders and contact, and LED blocks that can be combined. The compact range offers all functions built into a single unit.

- IP66, IP67 and IP69K
- Wiping contacts
- Integrated LEDs
- Full range of accessories including legend plates, shrouds, enclosures and protective covers



12 Wiring duct

ABBs premium duct is ideal for electrical enclosures, machine building and datacom closets. Two-point flush covers install with less force and greater capacity.

- Upper and lower score lines permit tool-less finger breakout and easy sidewall section removal
- Universal mounting clip serves as a cable tie mounting base or as a snap connector for duct dividers
- Easily removable protective film prevents scratches and allows for temporary labeling



13 Tmax XT & Tmax Moulded Case Circuit Breakers (MCCBs)

Complete range available with very high fault current breaking and superb current limitation within compact dimensions

- Available in 8 frame sizes
- Thermal Magnetic or Electronic Trip Units (L, S, I & G Protection)
- Current ratings up to 3200A with Breaking Capacity (Icu) up to 200kA@415V (100kA@690V)
- 230V, 415V & 690V optimized solutions
- Fixed, Plug In and Withdrawable versions
- Wide range of electrical and mechanical accessories



14 Distribution terminal blocks

The ABB distribution range offers a large choice of variants adapted to all distribution needs. The exclusive and modular design of our distribution blocks allows easy installation combined with great flexibility of use.

- Save installation time with our modular solutions,
- Ease the installation with plate or rail mounting options on our modular blocks,
- Easily increase the number of outputs using our jumpers (2 to 4 poles).
- Connecting capacity up to 185mm² (350 Kcmil)



15 Power supplies

ABB's CP range of innovative primary switch mode power supplies provides compact construction, easy DIN rail mounting and high efficiency, reliability and safety. Accessories include buffer units, redundancy modules and more.

- 5, 12, 24 or 48 VDC output voltage with wide range of AC or DC supply voltages
- High efficiency, up to 94%
- Suitable for use in harsh industrial environments
- Open-circuit, overload and short-circuit proof input fuse



16 Safety products

ABB Jokab Safety provides an extensive range of innovative products and solutions for machine safety systems. These products save labor and components, simplify maintenance and troubleshooting and provide the highest level of safety.

- Safety relays, safety controllers and programmable safety controllers
- Light barriers, sensors, locks and control devices
- Machine fencing systems



17 Contactors and overloads

ABB's AF contactors signify a major advancement in motor control and power switching. They come standard with electronic coils and built-in surge suppression. The AF contactors, along with ABB's short circuit and overload protective devices, provides the user with fully tested motor starting combinations with type 1 or 2 coordination.

- IEC and UL general use and motor switching
- 9 to 2650A
- 4 to 460 kW
- Up to 1000V
- 3P and 4P versions
- Accessories include: connection sets, auxiliary contact blocks, interlocking units, timers, electronic and thermal overload relays



18 Interface relays and optocouplers

ABB's interface relays and optocouplers ensure a reliable voltage conversion between process peripherals and higher level control systems. Our relays ensure reliable signal switching and provide electrical isolation for sensitive electronics such as PLCs. The wide variety of pluggable interface relays with standard or logic sockets can be used for switching AC or DC loads. ABB's interface relays offer a range of different coil voltages and plug-in functional modules. Environmentally friendly thanks to cadmium- and lead-free material selection and production.

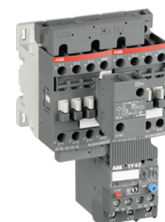
The CR-S and R600 interface relays and optocouplers combine the flexibility of a modular system and the ability of switching high currents on a small footprint thus can be used in applications where space saving is essential.

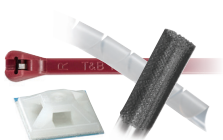


19 Starters

ABB's starters can be used in most motor control applications using mechanical starting means as well as solid state.

- Kits available to reduce installation times
- Coordinated solutions
- Combination tested to 200kA
- Thermal or Electronic Overloads





20 Ty-Fast®
cable ties, wire sleeving,
mounting accessories and
spiral wrap



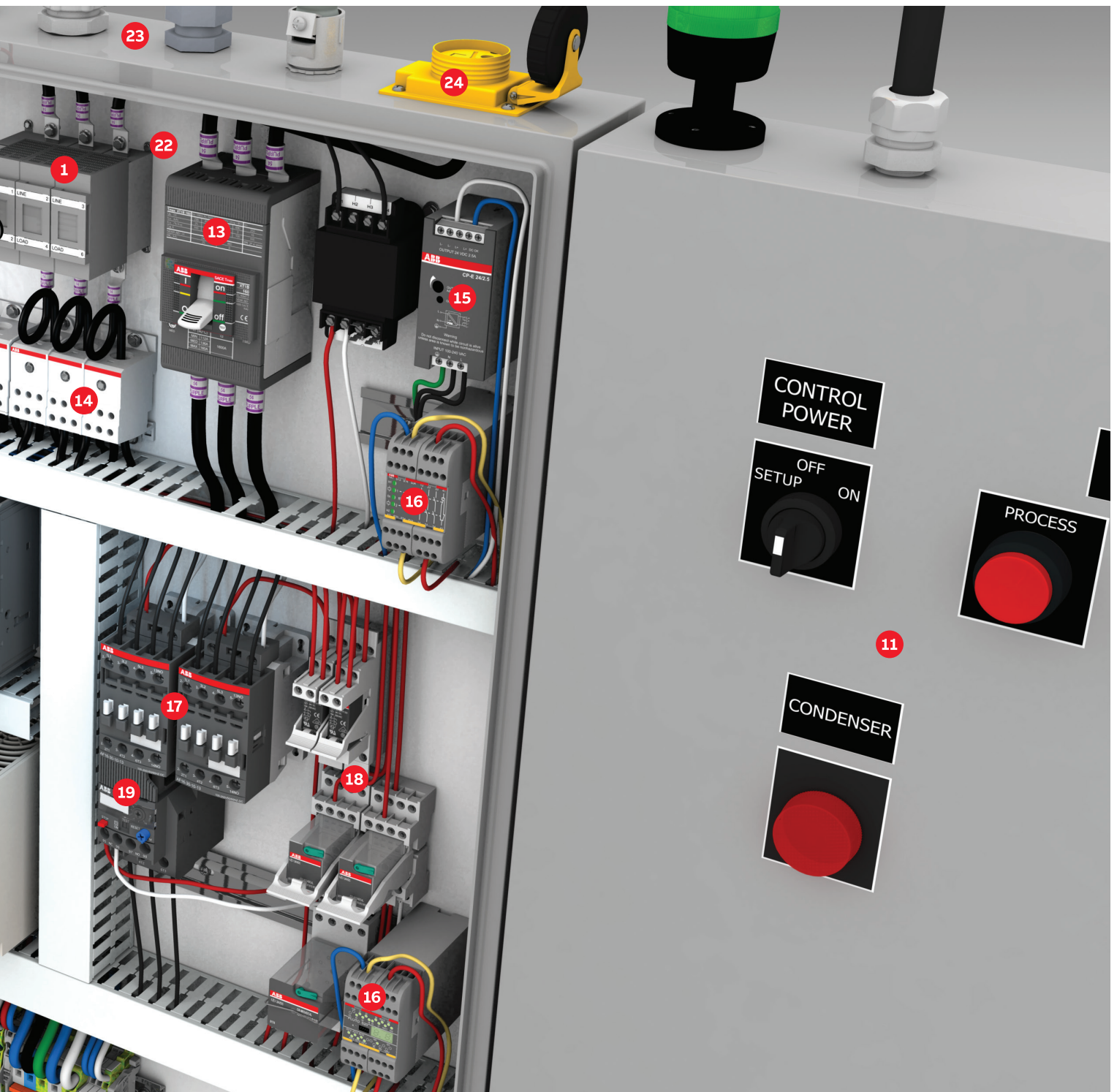
21 SpecKon®
insulated and non-insulated terminals,
splices, wire joints, disconnects, ferrules,
heat-shrinkable terminals, splices and dis-
connects in imperial and true metric sizes



Europa series
IP65, IK10, insulation class
II, non-metallic enclosures
conforming to IEC 60695-2-1
and IEC 60 670 standards.



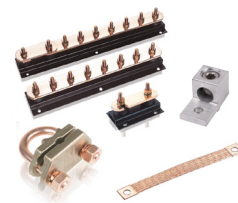
22 Color-Keyed® compression
compression connectors, offering high
conductivity/low resistance, meeting
or exceeding all industry standards.



23 Flexible conduit systems
metallic and non-metallic conduits and fittings including; Liquidtight, overbraided, Nylon, PVC, galvanised and stainless steel options.



24 Industrial plugs and sockets
electrical contacts protected against liquids and dirt, retains its performance over time. High contact performance means reliability, reducing downtime lowering maintenance costs.



Earthing & lightning protection
Our Furse earthing, lightning and electronic systems protection offers earth bars and equipotential bonding, mechanical earth clamps and bonds as well as equipotential bonding and transient overvoltage SPDs.

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