

LINE CARD

## Power products, systems, software and services

## Enabling a stronger, smarter and greener grid

_	Category	Offering	Description
	ABB Ability™ digital offerings	Connected asset lifecycle management	Increase asset life by 3 years, save up to 15% in operation & maintenance and reduce overtime costs by 2%.
		Distributed energy resource management	Improve power reliability and ensue safe, secure and efficient operation of the electric distribution network.
		Digital substations	Digitalization and ABB's deep knowledge of power transmission are coming together to improve the integrity of the electrical grid.
	Grid Automation	Communication networks	ABB broadband wireless network solutions enable a wide range of smart grid applications for electric grids, as well as significant cost savings.
		Enterprise Software	Across solutions for asset optimization and management, workforce and plant operations management, real-time operations and control and energy portfolio planning and management, ABB helps utilities increase reliability, ensure safety, security and sustainability, and improve operational performance and efficiency.
		Microgrids & distributed generation	Our portfolio encompasses the full range of enabling technologies including conventional and renewable power generation, automation, grid stabilization, grid connection, energy storage and intelligent control technology, as well as consulting and services to enable microgrids globally.
		Substation automation products & systems	ABB's world-class protection and control solutions ensure reliable power transmission and distribution. To ensure interoperable and future-proof solutions, our products have been designed to implement the core values of the IEC 61850 standard.
	Grid Integration	Energy storage	EssPro PCS and EssPro Grid solutions provide customers with the ability to solve power quality, stability and availability issues.
		FACTS	FACTS (Flexible Alternating Current Transmission Systems) offering includes Static Var Compensators (SVC), static compensators, series compensators, and a combined SVC energy storage device.
		HVDC	ABB offers High Voltage Direct Current (HVDC) products, systems and solutions as well as engineering and consulting services.
		Substations	ABB's substation offering includes electrical systems consulting, conceptual design, detailed electrical, civil and protection and control engineering, civil and electrical construction management, commissioning and start-up, project management, post-installation service, and asset management.
	Renewable energy	Wind & solar power	ABB offers inverters, low voltage products, grid connections, power plant solutions, power products and expertise for both the solar and wind industries. Additionally for the solar industry, ABB offers tracking products and solutions, photovoltaic solar power plants and Power-One's portfolio of products.
	High Voltage products (HV)	Breakers & modules	ABB's offering includes dead tank circuit breakers, live tank circuit breakers, disconnecting circuit breakers, Pass hybrid switchgear modules
		Components	HV components include surge arrestors, optical sensors and systems, instrument transformers, coupling capacitors, harmonic filters, capacitor
		GIS & GCBs	Gas Insulated Switchgear (GIS) ranges from 72.5 to 1,100 kV. Generator Circuit Breakers (GCBs) range from 80 to 1800 MW and are capable of interrupting up to 825 kA.

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	Transformers	Distribution	Offer includes single and three phase pole-top (up to 315 kVA) and padmounted transformers (25 kVA – 3 MVA; up to 38 kV).
		Dry type	ABB offers vacuum pressure encapsulated or impregnated (VPE and VPI), vacuum cast and RESIBLOC (500 kVA – 10 MVA; up to 38 kV) dry transformers.
		Insulation & components	Insulation and components include bushings, load tap changers, de-energized tap changers, switching, voltage control termination, replacement components, replacement bushings and bushing refurbishment programs.
		Large, medium and small power	ABB manufactures small (3 – 70 MVA; up to 170 kV), medium (63 – 200 MVA; up to 345 kV) and large (200 – 1200 MVA; up to 800 kV) transformers and can be indoor or outdoor and with or without tap changers.
::: 	Medium Voltage products (MV)	Apparatus	ABB offers cutouts, overhead switches, instrument transformers, sensors, indoor breakers, outdoor distribution breakers, reclosers and padmounted switches.
		Distribution automation	ABB's offering includes Relion distribution protection and control relays, electromechanical relays, solid state relays and FT test switches.
		Modular systems	ABB modular systems are prefabricated, walk-in or nonwalk-in, outdoor enclosures or buildings designed to house MV switchgear, distribution transformers, LV switchboards, connections and ancillaries, such as battery banks.
		Switchgear	The switchgear offering includes standard and arc resistant switchgear 5 kV - 40 kV.
	Cable apparatus & accessories	Capacitors, switches & reclosers	Joslyn Hi-Voltage® overhead products improve the efficiency and reliability of electrical power systems and reduce the frequency and duration of outages.
		Indicators, sensors & controls	Fisher Pierce® Faulted Circuit Indicators (FCIs) for both overhead and underground applications are cost-effective tools to more quickly locate faults, thereby reducing outage duration and customer complaints.
		Connectivity & grounding	Homac® is a complete line of underground and substation connectors and is recognized as an industry leader for its Flood-Seal™ technologies and custom solutions.
		Underground cable accessories	Elastimold® is the most complete package for managing underground cable connections in the industry and is available from 5 kV to 138 kV to connect, ground, splice, terminate and protect underground cable.
	Service & consulting	Consulting	Power Consulting offers a wide range of consulting services in the areas of transmission systems, system controls, energy efficiency, power market analysis, asset evaluation, industrial systems, and more.
		Service	Our service spectrum covers the entire energy supply path from the power plant through the substation up to the meter including: design, installation and commissioning, performance, optimization and routine maintenance, repairs, extensions, upgrades, retrofits, replacements, spare parts, training, asset management and consulting.
		Training	ABB offers an extensive training program for our power products, services, solutions and systems in a variety of formats, including

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classroom trainings, webinars, seminars and hands-on opportunities.