



Master Break LIS Load Interrupter Switch

Load Interrupter Switches, manufactured by Spike Electric Controls with ABB technology, are state-of-the-art electrical solutions engineered for superior safety and performance in electrical power distribution. These switches are expertly designed to conform to the most rigorous electrical industry standards, ensuring dependable functionality and safeguarding across diverse industrial environments. Emphasizing excellence and technological advancement, Spike Electric Controls Load Interrupter Switches play a crucial role in powering electrical infrastructures, boosting efficiency, and elevating safety standards.



—
**VALUE
PROVIDER**

Valued Partner Acknowledgment Statement: Spike Electric Controls has partnered with ABB as a Value Add Partner, blending ABB's cutting-edge technology with our expertise in electrical solutions to elevate industry standards. This partnership aims to globally enhance system efficiency, reliability, and sustainability, delivering sophisticated electrification solutions to our customers. Additionally, this alliance includes dual branding of our Switchgear products and extends ABB's warranties through Spike's comprehensive Switchgear solutions, ensuring quality and reliability.



Master Break LIS

Load Interrupter
Switch



Primarily utilized either as a primary or secondary disconnect switch for transformers, the Master Break LIS's array of configurations renders it suitable for tailored distribution requirements. For instance, it can serve as either a main or feeder switch within PowerVac switchgear or LimitAmp motor controller setups or facilitate the automatic transfer of the incoming power source to an emergency generator. Additionally, it supports fault current protection through an extensive selection of either current limiting or expulsion fuses.

Master Break LIS components are produced following stringent quality protocols, ensuring they adhere to or surpass the relevant ANSI, NEMA, and IEEE standards (refer to the "Standards" table, including IEC 60265 for switches with limited purposes). Switches that are UL Listed are offered for most standard setups and features. Additionally, if needed, Master Break LIS switches comply with the seismic criteria set by the UBC and CBC Zone 4 building regulations. Before being coated with an ANSI 61 finish, all steel surfaces undergo a chemical cleaning process, rendering them resistant to 1000-hour salt spray conditions.

Standard Features:

- Copper silver-plated bus
- Full length ground bus
- Polyester coat paint
- ANSI 61 paint color (gray)
- Oversized viewing window
- Full height inter-phase barriers
- 11 gauge doors, barriers and covers
- Generous cable termination area
- Permanent non-corrosive nameplate
- Individual doors over switch and fuses
- Concealed door hinges
- Switch padlock provisions
- Key interlock provisions
- Split rear and side covers
- Tungsten-tipped arc interrupting blade
- Mechanical switch and door interlocking
- Louvered ventilation at top and bottom
- Safety horizontal barrier

Standard Outdoor Features:

- Removable filters for louvers
- Long life space heaters
- 3.5" channel base
- Sloped roof
- Bottom closure plates
- Rodent barriers

Applications:

Master Break LIS: Robust, High-Performance, and Multi-Functional Switching & Protection

Master Break LIS load interrupter switches offer reliable and cost-effective load switching and protection for medium voltage circuits, ranging from 2.4kV to 15kV, with load interrupting capacities of either 600 or 1200 amperes.

About:

The Master Break LIS switch is designed with a 2-position (open, closed) configuration, operates across 3 poles, and is a gang-operated air interrupter switch. It utilizes a spring-charged mechanism for both opening and closing operations. Engineered for external operation from the cubicle's front, it comes equipped with a quick make/quick break mechanism, allowing the switch to open and close regardless of the operating handle's movement speed.





Master Break LIS

Load Interrupter
Switch



Optional Accessories and Features:

- UL / cUL listing
- Copper tin-plated bus
- Insulated bus and bus boots over joints
- 80kA momentary bus rating
- Automatic transfer switch
- Weather resistant
- Dust resistant
- NEMA 2 drip-proof enclosure
- Rear doors (full height or double)
- Vertical barriers
- Rodent barriers
- Bottom closure plates
- Seismic Zone 4 bracing
- Tamper resistant hardware
- Auxiliary switches (2NO-2NC)
- Thermostat
- Space heater (standard on outdoor, optional on indoor)
- Porcelain insulators
- Customer metering
- Surge arresters
- Mimic bus
- Space heater switch
- Ground studs
- Convenience light
- Duplex receptacle
- Top hat
- Run back bus
- And more!



Green Energy Efficient: Spike Electric Controls' Load Interrupter Switches stand at the forefront of energy-efficient solutions, emphasizing their pivotal role in minimizing energy consumption. Engineered with cutting-edge technology, these switches are specifically designed to curtail energy wastage, ensuring seamless compatibility with renewable energy systems and adherence to stringent energy efficiency protocols. With state-of-the-art insulation, sophisticated circuit optimization, and user-centric interfaces, these Load Interrupter Switches are crucial in driving forward a sustainable and environmentally responsible approach to energy utilization, spotlighting their exceptional energy efficiency.



An array of optional multi-function meters measure volts, amps, frequency, power factor, watts and VARs, and can communicate via RS-232, RS-485, Commnet and Modbus. An enclosed, low voltage panel completely isolates metering components, further ensuring safety.



While accessing fuses, split doors prevent access to the live side of the switch. Oversized viewing window and switch position markers allow visual verification of switch position.



Full height inter-phase barriers are standard on all switches. Both current limiting and expulsion fuses are available.



Standard 48" section depth provides substantial space for incoming or outgoing cables. 60" depth is also available when customer preference and/or specific options require additional space.



Horizontal barriers between the switch mechanism and fuse compartment are a standard safety feature.

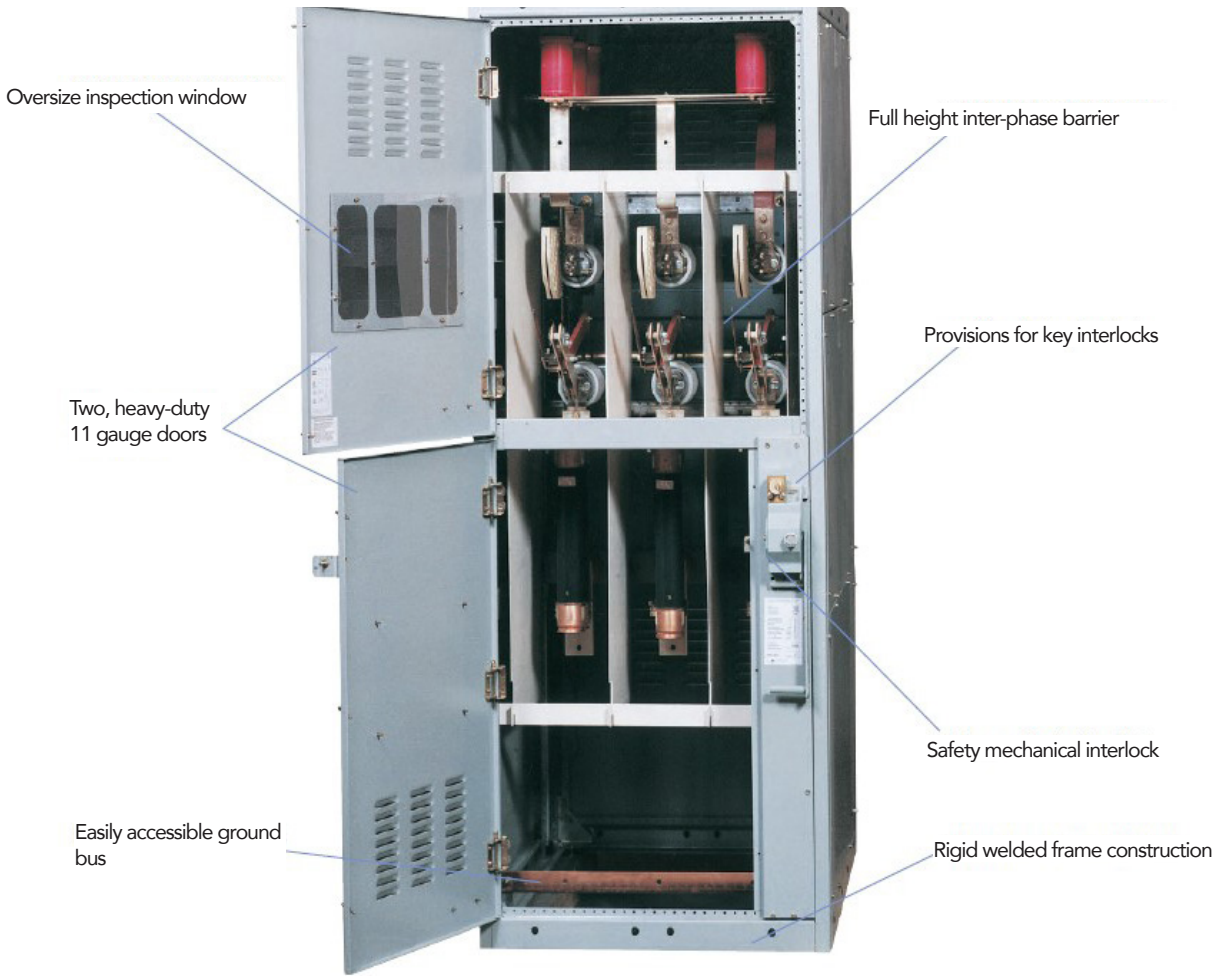


Convenient split rear covers provide easy access to cable terminations or devices located in the rear of the section.



Master Break LIS

Load Interrupter
Switch





Master Break LIS

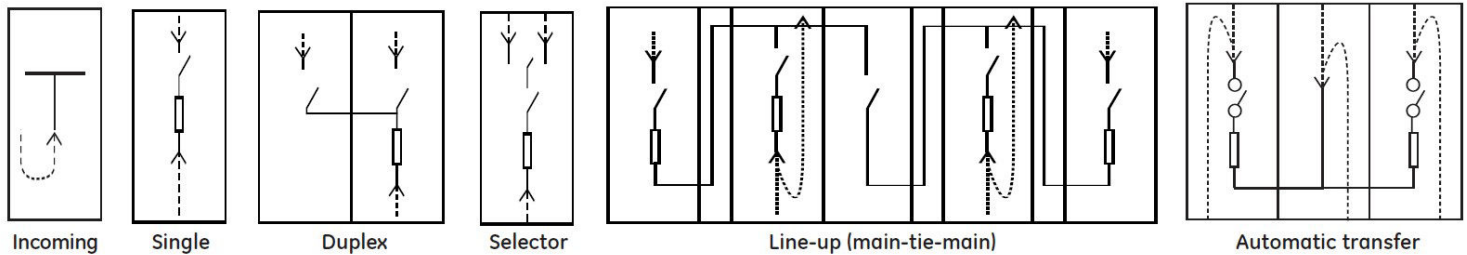
Load Interrupter
Switch



Typical User Configurations

The complete line of Master Break LIS load interrupter switches can satisfy most distribution system requirements. They are available in a variety of configurations to meet specific distribution needs, including: single switches, two-position no-load selector switches, duplex switches, and line-ups. Motor operators, customer metering and outdoor construction are also available.

Standard Configuration Features	Single	Duplex	Selector	Line-up	ATS
42" width	+		+		
84" width		+			
84" width					+
90" indoor height, 99" outdoor height	+	+	+	+	
48" depth standard (includes arrester if required), 60" depth	+	+		+	
48" depth standard					+
60" depth (requires rear access to equipment)			+		
Available section widths: 55" mains/tie; 35" branches; 20" / 35" incoming terminal compartments; 20" / 35" / 40" auxiliary sections				+	
Extension required for oil-filled transformers only (18" wide)	+	+	+	+	
Dry type and cast coil transformers require 3" in throat for	+	+	+	+	



Switch Ratings (In accordance with Standards in table at bottom right)

Max kv	Impulse Withstand kv (BIL)	Amperes Continuous and Interrupting	Momentary Switch Closed Asym	Fault Close Asym
5.0	60	600	40,000	40,000
		600	61,000	61,000
		1,200	40,000	40,000
		1,200	61,000	61,000
	95	600	40,000	40,000
		600	61,000	61,000
		1,200	40,000	40,000
		1,200	61,000	61,000
15.0	95	600	40,000	40,000
		600	61,000	61,000
		1,200	40,000	40,000
		1,200	61,000	61,000

Fuse Ratings

Fuse	Fuse Type	Voltage Class	Ampere Range
Current Limiting Fuses	EJO-1	5 kV	25A - 900A
		15 kV	20A - 300A
Expulsion Fused	RBA200	5 kV - 15 kV	40E -200E
	RBA400	5 kV - 15 kV	20E - 300E
	RBA800	5 kV - 15 kV	450E-720E

For a complete list of available fuses, contact factory or refer to publication DET-266.

Typical Weights

Configuration	Weight (lbs.)	
	NEMA 1	NEMA 3R
Single	1200	1550
Selector	2500	3200
Duplex	2500	3200
Mains/Ties	1800	2400
Branch	1200	1550
ATS	3500	4200
20" wide incoming cable	600	850
35: wide income cable	1050	1400

STANDARDS

AISI / IEES	C37.20.3
	C37.20.4
	C37.22
NEMA	SG - 6
IEC	60265
UL	See ANSI