



CONTACTORS & FUSES SELECTION GUIDE

GIGAVAC

About Sensata Gigavac

The best brands deliver devices that operate at their best every single day in the toughest conditions; Sensata Technologies does exactly that. Our Gigavac brand specializes in high-power switching solutions for the most demanding applications. We provide hermetically sealed, gas-filled products that support the demands of various electrification industries, emphasizing safety, reliability, and efficiency. Sensata | Gigavac is committed to delivering switching solutions that meet our customers' needs and drive maximum system performance.

What is a Contactor

A contactor is an electrical relay used to control the flow of power in a circuit. It is typically controlled by a circuit with a much lower power level than the switched circuit. Contactors are essential for safely managing high-voltage circuits, providing arc suppression, remote control, and overload protection. They enable fast, remote switching of high currents, ensuring the systems operate efficiently.

Contactor Applications

Sensata's contactors are built to withstand the toughest conditions, performing at the highest level across the electrification industry. They are specially designed to fit a variety of demanding applications such as:

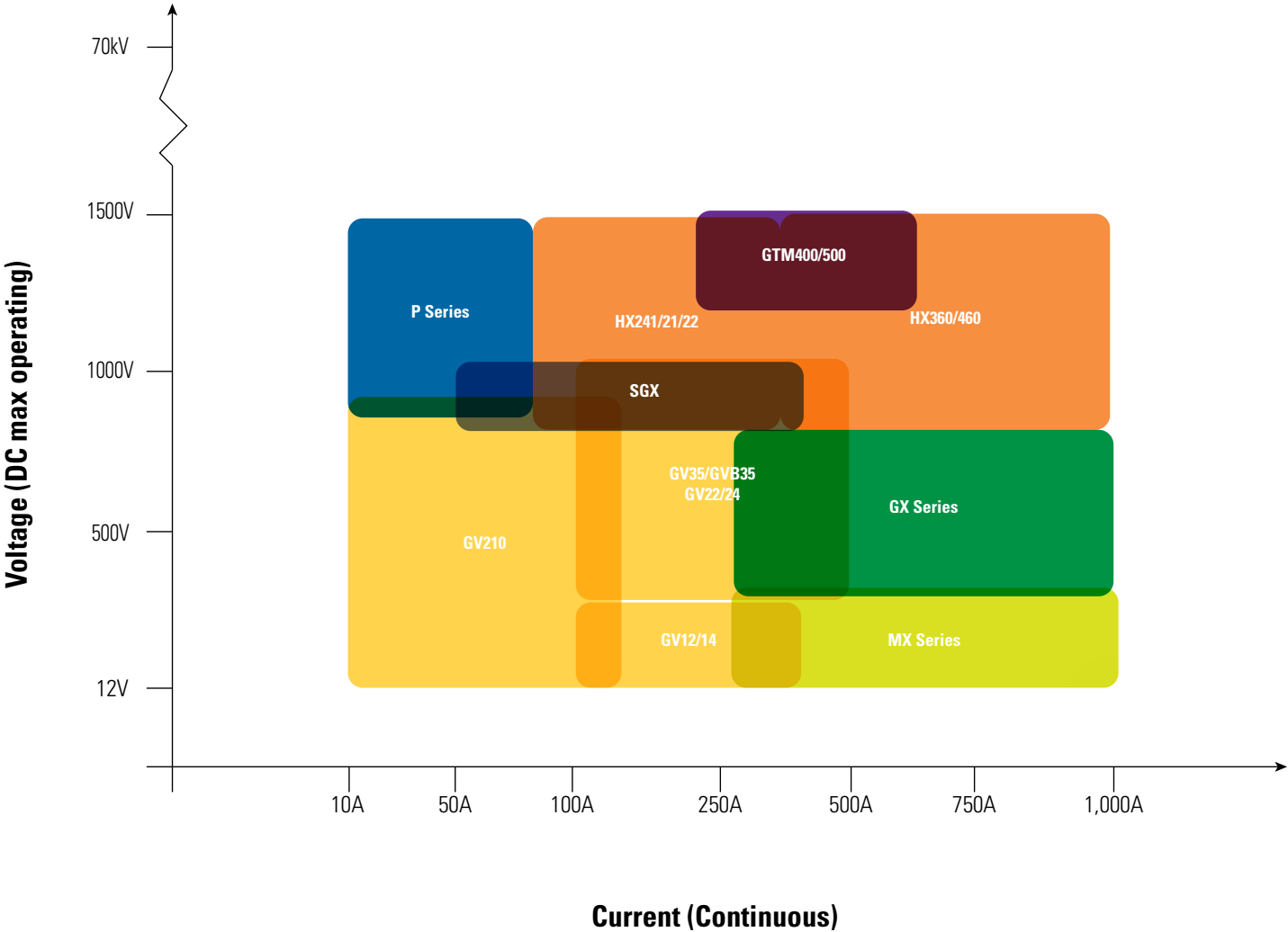
- Pre-charge circuits
- High voltage Switching
- Energy storage systems (ESS)
- DC fast charging
- Trucks and buses
- Megawatt charging
- Material handling
- Military

We strive to engineer contactors that ensure consistent performance in the harshest conditions. Sensata's broad portfolio can be tailored to fit your electrification needs.



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Contactor Application Chart







P SERIES

LIGHTWEIGHT & HIGH VOLTAGE

This line of patented P Series MiniTACTOR power contactors is small and cost-effective, perfect for limited-space applications. At less than 140 grams, they can be easily installed in any orientation on a panel or PCB in just a matter of seconds. The Gigavac MiniTACTOR is the perfect choice for precharge circuits, battery chargers, and solar applications where size and weight are critical.

Features:

- Up to 1500 VDC
- Up to 80A continuous current
- Hermetically sealed, and vacuum or gas-filled
- Bottom mount or PCB threaded

Series Grouping	Contactor Type	Operating Voltage	Max. Current	Coil Voltage	Contact Arrangement	Mount	
	PNC113	Normally closed	1500 VDC	30A	12VDC, 24VDC, 48VDC	SPST-NC	Bottom mount
	P105	Normally open	1200 VDC	50A	12VDC, 24VDC, 48VDC	SPST-NO	Bottom mount
	P115	Normally open	1500 VDC	50A	12VDC, 24VDC, 48VDC	SPST-NO	Bottom mount
	P125	Normally open	1200 VDC	30A	12VDC, 24VDC, 48VDC	SPST-NO	PCB - threaded
	P195	Normally open	1500 VDC	80A	12VDC, 24VDC, 48VDC	SPST-NO	Bottom mount
















GX SERIES

RELIABLE & LONG-TERM

The GX series from our Gigavac brand is best known for its long-term switching performance. These small RoHS-compliant contactors can be mounted in any position and can be used in nearly any harsh environment, including underwater and at temperatures from –55°C to 85°C. They are best fit in EVs, ESS, and power management systems.

Features:

- Up to 800 VDC
- Up to 1000A continuous duty
- Intermittent (overload) ratings up to 5000A
- Hermetically sealed and ceramic-to-metal design

Series Grouping	Contactors Type	Voltage	Current	Coil Options	AUX	Mount
 GX11	Normally open	800V	150A	12/24/48/72/120/120AC, 240AC	SPST-NC or SPST-NO	Bottom mount
 GX21	Normally open	800V	150A	12/24/48/72/120/120AC, 240AC	SPST-NC or SPST-NO	Bottom mount
 GX12	Normally open	800V	225A	12/24/48/72/120/120AC, 240AC	SPST-NC or SPST-NO	Bottom mount
 GX14	Normally open	800V	350A	12/24/48	SPST-NC or SPST-NO	Bottom mount
 GX23	Normally open	800V	350A	12/24/48	SPST-NC or SPST-NO	Bottom mount
 GX34	Normally open	800V	350A	12/24/48	SPST-NC or SPST-NO	Side mount
 GX16	Normally open	800V	600A	12/24/48	SPST-NC or SPST-NO	Bottom mount
 GX26	Normally open	800V	600A	12/24/48	SPST-NC or SPST-NO	Bottom mount
 GX66	Normally open	800V	600A	12/24/48	SPST-NC or SPST-NO	Busbar mount
 GXV600	Normally open	900V	600A	Internal PWM, External PWM	Not Available	Bottom mount
 GXV611	Normally open	900V	600A	Internal PWM, External PWM	Not Available	Bottom mount
 GX110	Normally open	800V	1000A	12/24	SPST-NC or SPST-NO	Bottom mount
 GXL14	Latching	800V	350A	12/24	SPST-NC or SPST-NO	Bottom mount
 GXNC14	Normally closed	800V	350A	12/24/48	Not Available	Bottom mount
 GXSA16	Sensing	800V	600A	12/24	SPST-NC or SPST-NO	Bottom mount

MX SERIES

HEAVY-DUTY

The hermetically sealed chamber in Gigavac's MX Series of contactors ensures that coil, contacts, and electronics are shielded from all outside environmental factors. The ceramic-to-metal weld allows for operation at extreme temperatures up to 200 °C. Best fit in military vehicles and low-voltage switch applications.

Features:

- 12V to 800V
- Up to 1000A Continuous Duty
- Intermittent (overload) ratings up to 6000A
- Shock and vibration resistant

Series Grouping		Contactors Type	Voltage	Current	Coil Options	AUX	Mount
	MX11	Normally open	48V	150A	12/24/48/72/120/120VAC/240VAC	SPST-NC or SPST-NO	Chassis Mount
	MX12	Normally open	48V	200A	12/24/48/72/120/120VAC/240VAC	SPST-NC or SPST-NO	Chassis Mount
	MX23	Normally open	48V	300A	12VDC, 24VDC, 48VDC	SPST-NC or SPST-NO	Standup
	MX14	Normally open	48V	400A	12VDC, 24VDC, 48VDC	SPST-NC or SPST-NO	Chassis Mount
	MX15	Normally open	48V	500A	12VDC, 24VDC, 48VDC	SPST-NC or SPST-NO	Chassis Mount
	MX16	Normally open	48V	600A	12VDC, 24VDC, 48VDC	SPST-NC or SPST-NO	Chassis Mount
	MX110	Normally open	48V	1000A	12VDC, 24VDC	SPST-NC or SPST-NO	Chassis Mount
	MXL14	Latching	48V	400A	12VDC, 24VDC	SPST-NC or SPST-NO	Chassis Mount
	MXNC14	Normally closed	48V	400A	12VDC, 24VDC, 48VDC	SPST-NC or SPST-NO	Chassis Mount
	MXSA	Current sensing with over current trip	48V	600A	12VDC, 24VDC	SPST-NC or SPST-NO	Chassis Mount
	MXST15	Normally open	48V	350A	12VDC, 24VDC	SPST-NC or SPST-NO	Chassis Mount










GV SERIES

RELIABLE & COST-EFFICIENT

The GV Series from Gigavac is the right fit for harsh environments that need high-voltage, high-current switching power. With options for flexible mounting and bidirectionality, these commercial contactors are ideal for high-volume, demanding applications like electric vehicles and charging stations.

Features:

- Up to 1000 VDC
- Ratings from 100A to 500A continuous duty
- Overload ratings up to 3000A
- Hermetically sealed and gas-filled

Series Grouping	Contactor Type	Voltage	Current	Coil Options	AUX	Mount	
	GV200	Normally open	800V	500A	12/24/48	SPST-NO	Bottom mount
	GV21	Normally open	900V	150A	12VDC, 24VDC, 48VDC	SPST-NO	Bottom mount
	GV22	Normally open	800V	200A	12VDC, 24VDC, 48VDC	SPST-NC or SPST-NO	Bottom, Side, PCB
	GV24	Normally open	800V	400A	12VDC, 24VDC, 48VDC, Internal PWM, External PWM	SPST-NC or SPST-NO	Bottom, Side, PCB
	GV35	Normally open	1000V	500A	External PWM	Not Available	Bottom, Side
	GVB35	Normally open, bi-directional	1000V	500A	12VDC, 24VDC, 48VDC	SPST-NC or SPST-NO	Bottom, Side
	GV12	Normally open	100V	200A	12VDC, 24VDC, 48VDC	SPST-NC or SPST-NO	Bottom, Side, PCB
	GV14	Normally open	100V	400A	12VDC, 24VDC, 48VDC, Internal PWM, External PWM	SPST-NC or SPST-NO	Bottom, Side, PCB
	GVL14	Latching	100V	400A	12VDC, 24VDC	SPST-NC or SPST-NO	PCB - threaded








HX SERIES

HIGH VOLTAGE & COMPACT

The HX Series of Gigavac contactors are the world's smallest UL508-approved contactors for 1000V high voltage switching. Since first introducing the ceramic seal in 2006, our sealed contactors have become the preferred choice for any application requiring sealed switching, often exceeding the sealed requirements of IP67 and IP69. These hermetically sealed contactors are particularly suited for inverter systems, battery packs, and combiner boxes in solar or wind power systems.

Features:

- UL Recognized up to 1500V
- Up to 1000A Continuous Duty
- Intermittent (overload) ratings up to 6000A
- Up to 10kV withstand between open contacts

Series Grouping	Contactor Type	Voltage	Current	Coil Options	AUX	Mount	
	HX200	Normally open ceramic	1.5kV	350A	12VDC, 24VDC, 48VDC	SPST-NC or SPST-NO	Bottom mount
	HX21	Normally open ceramic	1.5kV	350A	12VDC, 24VDC, 48VDC	SPST-NC or SPST-NO	Bottom mount
	HX22	Normally open ceramic	1.5kV	400A	12VDC, 24VDC, 48VDC	SPST-NC or SPST-NO	Bottom mount
	HX24	Normally open epoxy	1.5kV	400A	12VDC, 24VDC, 48VDC	SPST-NC or SPST-NO	Bottom. Side
	HX360	Normally open epoxy	1.5kV	800A	12VDC, 24VDC, 48VDC	SPDT	Bottom mount
	HX460	Normally open epoxy	1.5kV	1000A	12VDC, 24VDC, 48VDC	SPDT	Bottom mount
	HXNC241	Normally closed epoxy	1.5kV	200A	12VDC, 24VDC, 48VDC	SPST-NC or SPST-NO	Bottom mount

HIGH VOLTAGE FUSES/DISCONNECTS

GIGAFUSE

GigaFuse is the world's only hermetically sealed electromechanical fuse designed for high-voltage and high-power fuse application requirements. This bi-directional device features both passive and active triggering options. It significantly reduces system resistance, eliminates thermal aging, installation time, system complexity, and cost. It is fit for applications such as EVs, ESS, and other renewable energy systems.

Features:




- Up to 10MW interrupt capability
- 400A continuous current carry
- Maximum trip current of 2500A
- Interrupt/clear time of 3 ms

PYROFUSE

PyroFuse is a cutting-edge pyrotechnic circuit breaker designed for protection in high-voltage applications, with a rapid disconnect time of less than 1 millisecond. The ideal for automotive, charging, aerospace, and industrial systems, PyroFuse ensures enhanced safety and reliability with its high breaking capacity and excellent post-isolation resistance.

Features:

- Up to 1000 VDC
- Up to 500A continuous current
- Active safety with external trigger
- High post IR >50MΩ @ 1000V

Series Grouping		Voltage	Current	Max Trip Current	Interrupt/Clear Time	Maximum Interrupt
	Gigafuse GFP Series	1000V	400A	2500A	3 ms	10000A
	Gigafuse GFPA Series	1000V	400A	2500A	3 ms	10000A
	Pyrofuse STPS500 Series	1000V	500A	500V/20kA/15uH (10MW, 3000J) 1000V/16kA/16uH (16MW, 2048J)	<1 ms	>50A




SGX SERIES

COMPACT & POWERFUL

Gigavac's SGX Series contactors are designed with a small, square shape for easy drop-in and our ceramic-to-metal weld technology. They offer high thermal tolerance with low contact resistance, perfect for applications such as residential ESS, DC fast charging, electric forklifts, AGVs, and more.

Features:

- Up to 1000V
- 150, 250, 400A continuous current ratings
- Hermetically sealed & rated up to 175° C
- Fully bi-directional versions
- Standard rectangular hermetic ceramic design

Series Grouping	Contactor Type	Voltage	Current	Coil Options	AUX	Mount
 SGX150	Normally open	750V	150A	12 VDC, 24 VDC	SPST-NO	Upright
 SGX250	Normally open	750V	250A	13 VDC, 24 VDC	SPST-NO	Upright, side
 SGX400	Normally open	750V	400A	14 VDC, 24 VDC	In development	Upright, side



GTM SERIES

HIGH-POWER SEALED SWITCHING

The GTM contactor series features glass-to-metal seals (GTMS), an industry first in contactor design, creating effective, electrically insulating hermetic seal technology. They are ideal for high-power applications that require reliable switching and DC circuit protection, like energy storage systems, DC fast charging stations, and heavy-duty vehicles.

Features:

- Up to 1500 VDC
- Up to 500A current rating
- Hermetic seal exceeds IP67-69, no exposed arcing
- Bidirectional power handling

Series Grouping	Contactor Type	Voltage	Current	Coil Options	AUX	Mount
 GTM400	Normally open	1500V	400A	Dual coil	SPST-NO or SPST-NC	Upright, side
 GTM500	Normally open	1500V	500A	Dual coil	SPDT	Upright, side





ABOUT US

Sensata Technologies is one of the world's leading suppliers of sensing, electrical protection, control and power management solutions with operations and business centers in twelve countries. Sensata's products improve safety, efficiency and comfort for millions of people every day in automotive, appliance, aircraft, industrial, military, heavy vehicle, heating, air-conditioning and ventilation, data, telecommunications, recreational vehicles and marine applications. For more information, please visit the Sensata website.

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9/2025

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