SOLID STATE RELAYS
HS SERIES

Lovato electric

ENERGY AND AUTOMATION

SOLID STATE RELAYS HS SERIES

Solid state relays (SSRs) are electronic devices for the control of electrical loads. Compared with conventional electromechanical relays, switching is done by semiconductor devices, which have no moving mechanical parts and are less subject to wear and tear, providing a significantly longer service life. Load insertion is achieved by **zero crossing** technology, which allows load insertion at the zero voltage crossing, a solution that enables a reduction in inrush currents and prevents the generation of arcing.

Their high reliability, robustness, and high switching speed make HS relays particularly suitable for controlling loads that require **very frequent operation**. They find use primarily for controlling **resistive loads**, such as heating elements, but can also be used for inductive loads such as small motors. They are available in single-phase, two-phase and three-phase versions with different enclosure variants: mini, field hockey puck and complete with heatsink.

Complete with heatsink single-phase

- built-in heat sink for optimal operation for extended and continuous use
- usage voltage up to 600VAC
- variants with control voltage 4...32VDC o 90...280VAC
- varistor output protection
- command of both resistive and inductive loads
- mounting syde-by-syde
- optional modules for monitoring of load current
- screw terminals
- screw or rail mounting 35mm DIN rail
- cULus certified.

Mini

- ultra compact housing
- rated current 25A
- operating voltage up to 280VAC
- control voltage 4...30VDC
- command of resistive loads
- faston terminals
- panel mount with screw fixing
- cURus and VDE certified.

LONG ELECTRICAL **LIFE** | HIGH SWITCHING **FREQUENCY** | **SILENT** OPERATION | IN COMPLIANCE WITH **EN60335** FOR DOMESTIC AND COMMERCIAL USE | ZERO CROSSING SWITCHING | NO ELECTRIC ARC | **STRENGTH** AND **DURABILITY** | **EASY** TO INSTALL | LESS **MAINTENANCE**

Complete with **heatsink** three-phase

- integrated heat sink for optimal operation under long and continuous use
- two-phase controlled version up to 60A and three-phase controlled version up to 48A
- usage voltage up to 600VAC
- variants with control voltage 4...32VDC o 90...280VAC
- varistor output protection
- control of both resistive and inductive loads, ideal for controlling three-phase motors
- screw terminals
- mounting on 35mm DIN rail
- cULus certified.

Hockey puck

- hockey puck housing
- single-phase up to 130A and two-phase up to 50A
- operating voltage up to 600VAC
- variants with control voltage 3,5...32VDC o 20...265VAC/DC
- versions with integrated output protection varistor or TVS
- control of resistive loads
- screw and Faston terminals (only for two-phase version)
- panel mount with screw fixing
- optional heat sink for optimal operation under long and continuous use
- cURus, CSA and VDE certified.

ORDER CODE AND ACCESSORIES

Mini and hockey puck, single-phase

Hockey puck, two-phase

Complete with heatsink, single-phase

Complete with heatsink, three-phase (2 controlled)

Complete with heatsink, three-phase (3 controlled)

Type	Load operating voltage	Ie AC-51 at ≤40°C ❶	Control voltage	Type of load	Heatsink 2,2K/W
Order code	[VAC]	[A]	[V]		Order code
Mini, Faston terminals. Faston: load 6.3x0.8mm - control 4.8x0.8mm.					
HS1A2NN025D024	12...280	25	4...30VDC	Resistive	-
Hockey puck, screw terminals.					
HS1B2NT025D024	12...280	25	3...32VDC	Resistive	**HSBXH1**
HS1B2NT025E230	12...280	25	3...32VDC		
HS1B5NV040D024	24...510	40	3,5...32VDC	Resistive or inductive	
HS1B5NV040E230	24...510	40	20...265VAC/DC		
HS1B6NT040D024	24...600	40	3,5...32VDC	Resistive	
HS1B6NT040E230	24...600	40	18...280VAC/DC		
HS1B6NN050D024	24...600	50	3,5...32VDC		
HS1B5NV060D024	24...510	60	3,5...32VDC	Resistive or inductive	
HS1B5NV060E230	24...510	60	20...265VAC/DC		
HS1B6NT060D024	24...600	60	3,5...32VDC	Resistive	
HS1B6NT060E230	24...600	60	18...280VAC/DC		
HS1B6NT090D024	24...600	90	3,5...32VDC		
HS1B6NT090E230	24...600	90	18...280VAC/DC		
HS1B5NV130D024	24...510	130	3,5...32VDC	Resistive or inductive	
HS1B5NV130E230	24...510	130	20...265VAC/DC		
Hockey puck, Faston terminals.					
HS2B2NN025D024	12...280	25	3...32VDC	Resistive	**HSBXH1**
Hockey puck, screw terminals.					
HS2B6NN050D024	24...600	50 ❷	10...30VDC	Resistive	**HSBXH1**
HS2B6NN051D024	24...600	50 ❸	10...30VDC		
Complete with heatsink, ready to use, screw terminals.					
HS1C2HV020D024	12...275	20	3...32VDC	Resistive or inductive	-
HS1C6HV020D024	48...600	20	4...32VDC		
HS1C6HV020A230	48...600	20	90...280VAC		
HS1C2HV025D024	12...275	25	3...32VDC		
HS1C6HV025D024	48...600	25	4...32VDC		
HS1C6HV025A230	48...600	25	90...280VAC		
HS1C2HV030D024	12...275	30	3...32VDC		
HS1C6HV030D024	48...600	30	4...32VDC		
HS1C6HV030A230	48...600	30	90...280VAC		
HS1C6HV040D024	48...600	40	4...32VDC		
HS1C6HV040A230	48...600	40	90...280VAC		
HS1C6HV060D024	48...600	60	4...32VDC		
HS1C6HV060A230	48...600	60	90...280VAC		
Complete with heatsink, ready to use, screw terminals.					
HS2C6HV015D024	48...600	15	4...32VDC	Resistive or inductive	-
HS2C6HV015A230	48...600	15	90...280VAC		
HS2C6HV030D024	48...600	30	4...32VDC		
HS2C6HV030A230	48...600	30	90...280VAC		
HS2C6HV060D024	48...600	60	4...32VDC		
HS2C6HV060A230	48...600	60	90...280VAC		
Complete with heatsink, ready to use, screw terminals.					
HS3C6HV020D024	48...600	20	4...32VDC	Resistive or inductive	-
HS3C6HV020A230	48...600	20	90...280VAC		
HS3C6HV025D024	48...600	25	4...32VDC		
HS3C6HV025A230	48...600	25	90...280VAC		
HS3C6HV040D024	48...600	40	4...32VDC		
HS3C6HV040A230	48...600	40	90...280VAC		
Complete with heatsink, ready to use, screw terminals, high I^2t.					
HS3D5HV024E230	24...520	24	24...255VACDC	Resistive or inductive	-
HS3D5HV048E230	24...520	48	24...255VACDC		

❶ Ratings valid with correct heatsink. ❷ I^2t 2800A2s. ❸ I^2t 7200A2s.









Heatsink 1,2K/W	Heatsink 0,9K/W	Heatsink 0,3K/W	Heatsink 0,3K/W	Adesive thermal pad	Fixing element	Current monitoring modules	Current monitoring modules	Current monitoring modules
Order code	Order code	Order code	Order code	Order code	Order code	Order code	Order code	Order code
-	-	-	-	-	-	-	-	-
HSBXH2	**HSBXH3**	**HSBXH4D024**	**HSBXH5A230**	**HSBXP0050** 50 pcs **HSBXP0100** 100 pcs **HSBXP01000** 1000 pcs	**HSBX80**	-	-	-
HSBXH2	**HSBXH3**	**HSBXH4D024**	**HSBXH5A230**					
HSBXH2	**HSBXH3**	**HSBXH4D024**	**HSBXH5A230**		-	-	-	-
-	-	-	-	-	-	**HSCXM1** Load current monitoring. Supply 24VDC	**HSCXM2** Load current monitoring with ModbusRTU over RS485 comunication. Supply 24VDC	**HSCXM3** Temperature controller and load current monitoring with Modbus-RTU over RS485 comunication. Supply 24VDC
-								
-								
-								

APPLICATION AREA

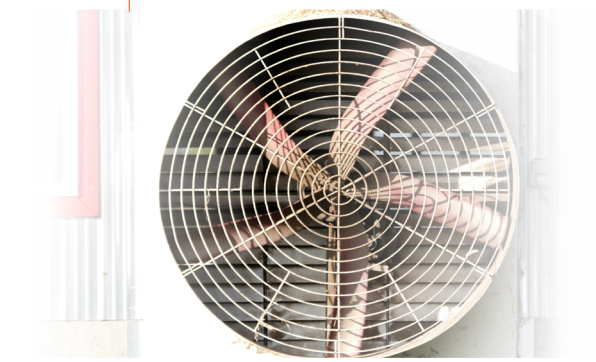
Handling
Conveyor belts, trackers, valves and actuators.

Food & beverage
Coffee machines fryers, ovens, automatic dispensers washers and dishwashers.

Lighting
Warehouses, commercial buildings, roads, theaters and cinemas, airports.

Plastic industry
Injection molding, plastic extrusion, thermoforming, blow molding machines.

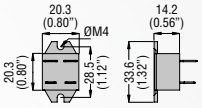
HVAC
Electric boilers, thermostats, resistance heaters. Fans, pumps, control of compressors and cooling circuits.



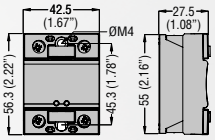
Packaging industry
Sealing machines, wrapping machines.

DIMENSIONS [mm (in)]

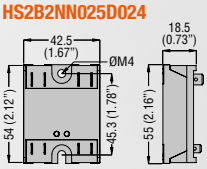
HS1A2NN025D024



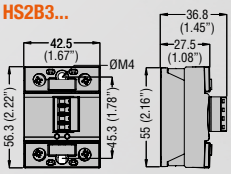
HS1B...



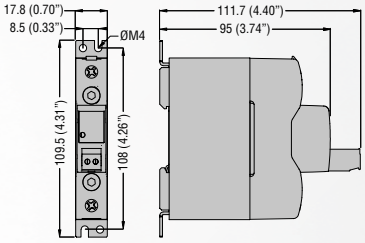
HS2B2NN025D024



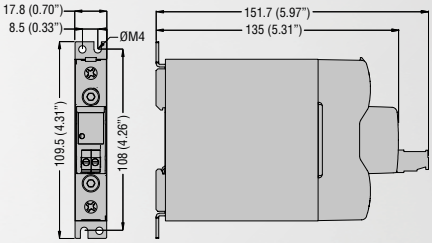
HS2B3...



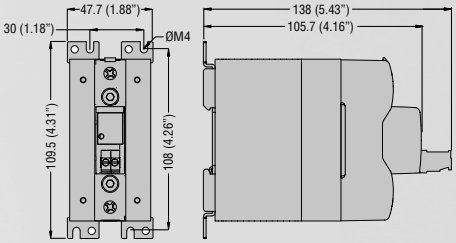
HS1C...020... - HS1C...025...



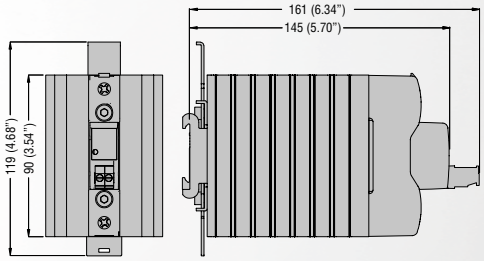
HS1C...030...



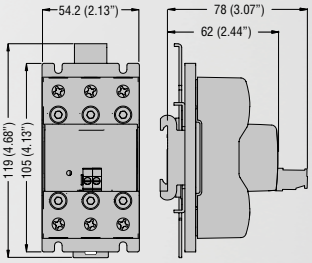
HS1C...040...



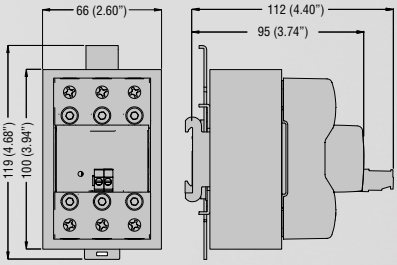
HS1C...060...



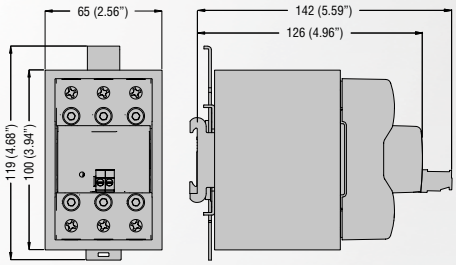
HS2C...015...



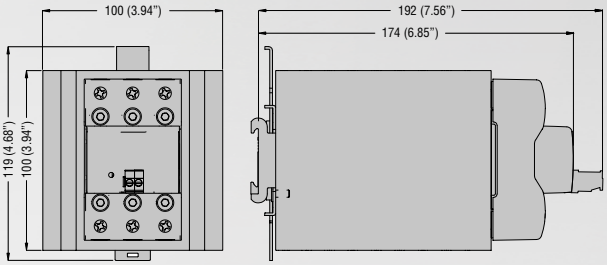
HS2C...030... - HS3C...020...



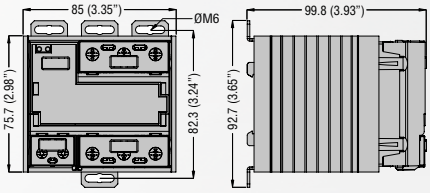
HS3C...025...



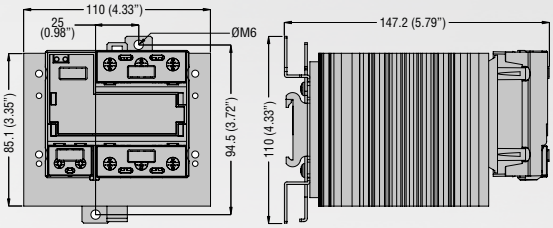
HS2C...060... - HS3C...040...



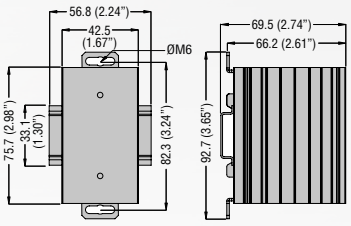
HS3D...024



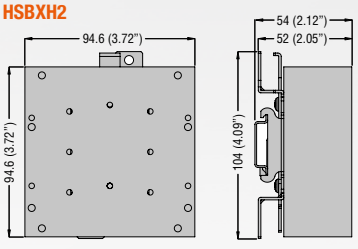
HS3D...048



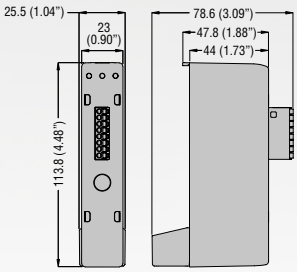
HSBXH1



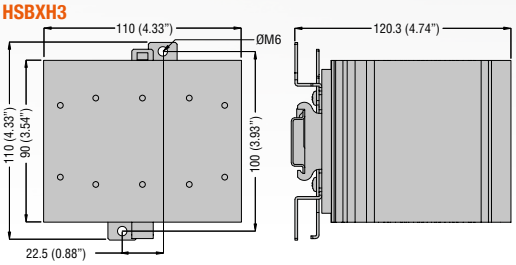
HSBXH2



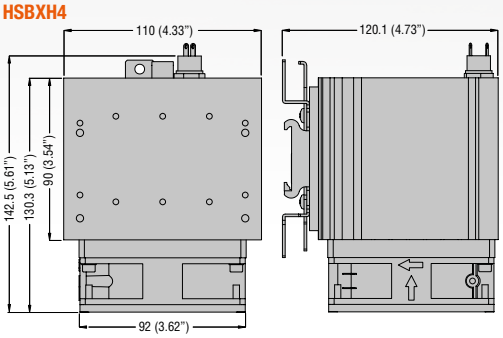
HSCXM...



HSBXH3



HSBXH4



PD192 GB 08 24

SOLID STATE RELAYS
HS SERIES

Lovato electric
ENERGY AND AUTOMATION

LOVATO ELECTRIC S.P. A.
via Don E. Mazza, 12
24020 Gorle (Bergamo), Italy
tel +39 035 4282111
info@LovatoElectric.com
www.LovatoElectric.com