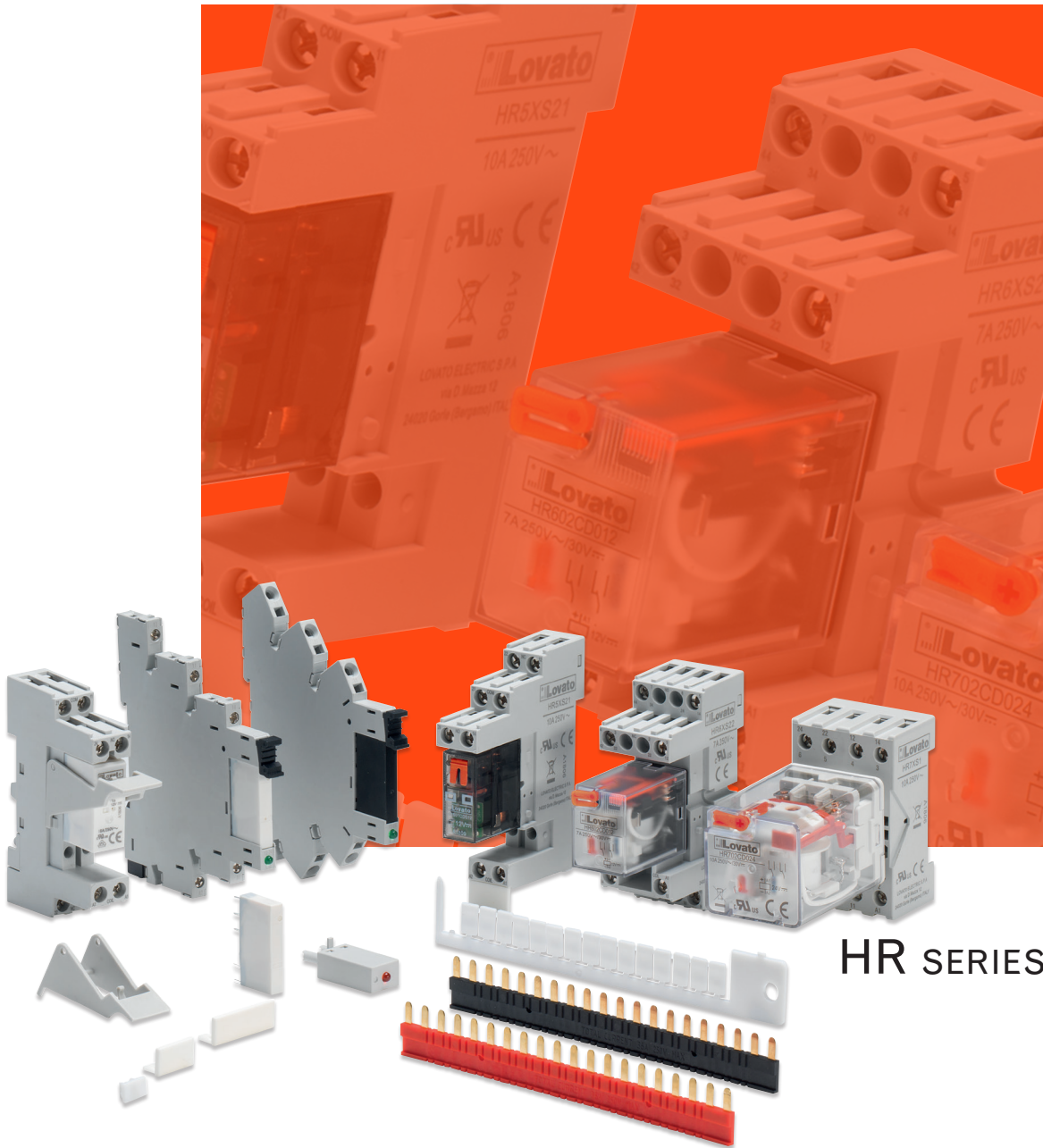


GENERAL PURPOSE RELAYS

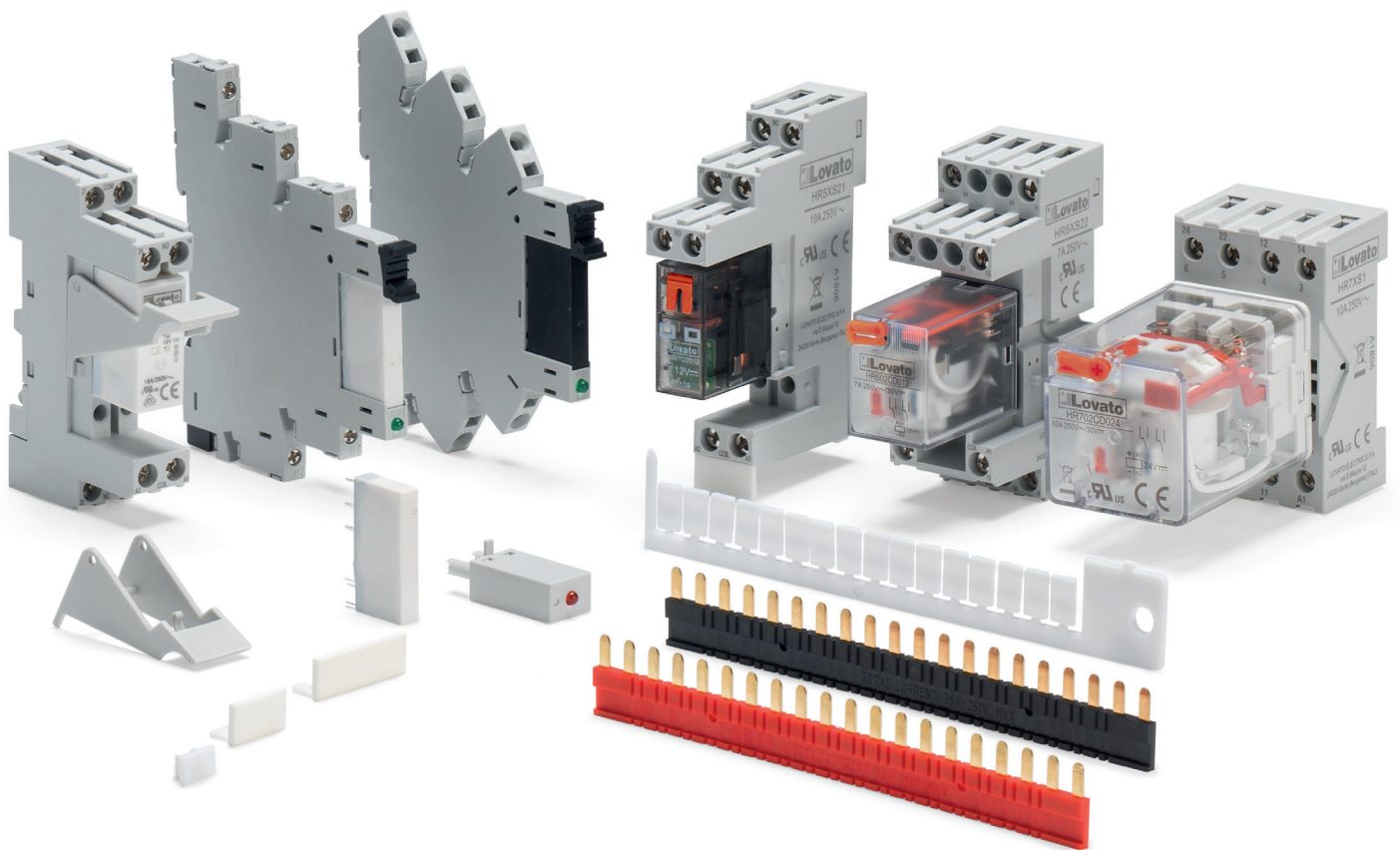


HR SERIES

 **Lovato**
electric

ENERGY AND AUTOMATION

HR series



General purpose relays

General purpose relays are designed to control various types of loads inside machines, simple or very complex systems and plants.

They can command contactors, electrovalves, electric actuators, resistors, indicator lights, etc.

General purpose relays are controlled by PLC or by the electronic control devices of machines and plants. These have contacts with reduced power; the relays have the purpose to increase power and multiply the command.

Another advantage of general purpose relays is PLCs and electronic control devices protection from damage due to possible short circuits on controlled loads. In fact, an industrial relay damaged by short circuit can be replaced in a few seconds at a minimum cost compared to a long machine shutdown at high cost in the case of damage to the internal contacts of a PLC.

HR10

Electromechanical slim relays

- Socket width 6.2mm
- 1 changeover contact
- lth rated current 6A
- Sockets with built-in LED
- Sockets with screw or spring terminals
- Control voltage from 12 to 230VAC/DC
- 20 poles parallel busbars
- Available version with relay factory assembled on the socket.



HR30

Miniature relays

- Socket width 15.8mm
- 1 or 2 changeover contacts
- lth rated current:
 - 1 contact: 10A (16A on PCB)
 - 2 contacts: 8A
- AC or DC control voltage
- Sockets with screw, spring or pins for PCB terminals
- 8 poles parallel busbars
- Small dimensions
- Can be used for direct mounting on PCB
- Snap-on surge suppressor filters.



HR50

Miniature relays

with LED state indicator and mechanical actuator

- Socket width 15.8mm
- 1 or 2 changeover contacts
- lth rated current:
 - 1 contact: 10A (16A on PCB)
 - 2 contacts: 8A
- LED and mechanical state indicator
- Mechanical test actuator with latch option
- AC or DC control voltage
- Sockets with screw, spring or pins for PCB terminals
- 8 poles parallel busbars
- Can be used for direct mounting on PCB.
- Snap-on surge suppressor filters.

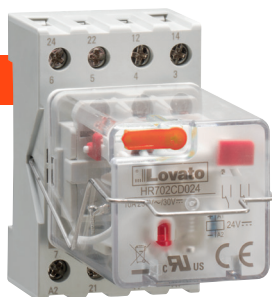


HR70

Industrial relays

with LED state indicator and mechanical actuator

- Socket width 38mm
- 8-pin or 11-pin industrial relay
- 2 or 3 changeover contacts
- lth rated current: 10A
- LED and mechanical state indicator
- Mechanical test actuator with latch option.



HR20

SSR (solid state relay) slim relays

- Socket width 6.2mm
- 1 solid-state (SSR) output
- Output current 2A in AC and 4A in DC
- Sockets with built-in LED
- Sockets with screw or spring terminals
- Control voltage 24VDC
- 20 poles parallel busbars
- High switching speed
- Theoretically infinite electrical life
- Zero crossing.



HR40

Miniature relays

in clear enclosure

- Socket width 15.8mm
- 1 or 2 changeover contacts
- lth rated current:
 - 1 contact: 10A (16A on PCB)
 - 2 contacts: 10A
- DC control voltage
- Sockets with screw, spring or pins for PCB terminals
- 8 poles parallel busbars
- Clear enclosure for contacts visibility
- Can be used for direct mounting on PCB
- Snap-on surge suppressor filters.



HR60

Industrial relays

with LED state indicator and mechanical actuator

- Socket width 27mm
- 2 or 4 changeover contacts
- lth rated current:
 - 2 contacts: 7A
 - 4 contacts: 5A
- LED and mechanical state indicator
- Mechanical test actuator with latch option
- AC or DC control voltage
- Sockets with screw or spring terminals
- Snap-on surge suppressor filters.





MINIATURE RELAYS

Relays

Contacts	1 changeover	2 changeover
Rated current	16A ^④	8A

Control voltage

12VDC	<u>HR301CD012</u>	<u>HR302CD012</u>
24VDC	<u>HR301CD024</u>	<u>HR302CD024</u>
48VDC	<u>HR301CD048</u>	<u>HR302CD048</u>
24VAC	<u>HR301CA024</u>	<u>HR302CA024</u>
110...120VAC	<u>HR301CA110</u>	<u>HR302CA110</u>
230VAC	<u>HR301CA230</u>	<u>HR302CA230</u>



MINIATURE RELAYS IN CLEAR ENCLOSURE

Relays

Contacts	1 changeover	2 changeover
Rated current	16A ^④	10A

Control voltage

12VDC	<u>HR401CD012</u>	<u>HR402CD012</u>
24VDC	<u>HR401CD024</u>	<u>HR402CD024</u>



Sockets

Screw terminals with contact terminals on upper side

[HR5XS21](#)

[HR5XS21](#)

Screw terminals

[HR5XS22](#)

[HR5XS22](#)

Spring terminals

[HR5XS21S](#)

[HR5XS21S](#)

PIN terminals for Printed Circuit Board

[HR5XS21P](#)

[HR5XS21P](#)

Retaining clips

[HR3X88](#)^⑥

[HR3X88](#)^⑥

[HR3X86](#)^⑥

[HR3X86](#)^⑥

Sockets

Screw terminals with contact terminals on upper side

[HR5XS21](#)

[HR5XS21](#)

Screw terminals

[HR5XS22](#)

[HR5XS22](#)

Spring terminals

[HR5XS21S](#)

[HR5XS21S](#)

PIN terminals for Printed Circuit Board

[HR5XS21P](#)

[HR5XS21P](#)

Retaining clips

[HR5X88](#)^⑥

[HR5X88](#)^⑥

[HR5X86](#)^⑥

[HR5X86](#)^⑥

[HR5X87](#)^⑥

[HR5X87](#)^⑥

Marker tags^⑥

Single

[HR5X30](#)

[HR5X30](#)

Marker tags^⑥

Singola

[HR5X30](#)

[HR5X30](#)

Parallel busbars^⑥

8 poles black

[HR5X9008](#)

[HR5X9008](#)

2 poles

[HR5X9002](#)^⑦

[HR5X9002](#)^⑦

Parallel busbars^⑥

8 poles black

[HR5X9008](#)

[HR5X9008](#)

2 poles

[HR5X9002](#)^⑦

[HR5X9002](#)^⑦

Surge suppressor filters^⑥

RC - 6...24VAC/DC

[HR6X77024](#)

[HR6X77024](#)

RC - 110...230VAC/DC

[HR6X77230](#)

[HR6X77230](#)

Diode + LED - 6...24VDC

[HR6X78024](#)

[HR6X78024](#)

Surge suppressor filters^⑥

RC - 6...24VAC/DC

[HR6X77024](#)

[HR6X77024](#)

RC - 110...230VAC/DC

[HR6X77230](#)

[HR6X77230](#)

Diode + LED - 6...24VDC

[HR6X78024](#)

[HR6X78024](#)







MINIATURE RELAYS WITH LED STATE INDICATOR AND MECHANICAL ACTUATOR

Relays

Contacts	1 changeover	2 changeover
Rated current	16A ^④	8A
Control voltage		
12VDC	HR501CD012	HR502CD012
24VDC	HR501CD024	HR502CD024
48VDC	HR501CD048	HR502CD048
110VDC	HR501CD110	HR502CD110
24VAC	HR501CA024	HR502CA024
110...120VAC	HR501CA110	HR502CA110
230VAC	HR501CA230	HR502CA230



Sockets

 Screw terminals with contact terminals on upper side	HR5XS21	HR5XS21
 Screw terminals	HR5XS22	HR5XS22
 Spring terminals	HR5XS21S	HR5XS21S
 PIN terminals for Printed Circuit Board	HR5XS21P	HR5XS21P


Retaining clips

	HR5X88 ⊕	HR5X88 ⊕
	HR5X86 ⊕	HR5X86 ⊕
	HR5X87 ⊕	HR5X87 ⊕


Marker tags ⊕

 Single	HR5X30	HR5X30
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Parallel busbars ⊕

 8 poles black	HR5X9008	HR5X9008
 2 poles	HR5X9002 ⊕	HR5X9002 ⊕

Surge suppressor filters ⊕

 RC - 6...24VAC/DC	HR6X77024	HR6X77024
RC - 110...230VAC/DC	HR6X77230	HR6X77230
Diode + LED - 6...24VDC	HR6X78024	HR6X78024



INDUSTRIAL RELAYS WITH LED STATE INDICATOR AND MECHANICAL ACTUATOR

Relays

Contacts	2 changeover	4 changeover
Rated current	7A	5A
Control voltage		
12VDC	HR602CD012	HR604CD012
24VDC	HR602CD024	HR604CD024
48VDC	HR602CD048	HR604CD048
12VAC	HR602CA012	HR604CA012
24VAC	HR602CA024	HR604CA024
110...120VAC	HR602CA110	HR604CA110
230VAC	HR602CA230	HR604CA230



Sockets

 Screw terminals with contact terminals on upper side	HR6XS21	HR6XS41
 Screw terminals	HR6XS22	HR6XS42
 Spring terminals	HR6XS21S	HR6XS41S


Retaining clips

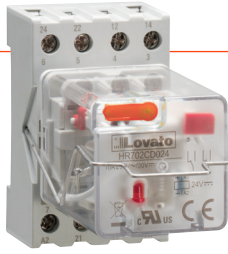
	HR6X88	HR6X88
	Not suitable for sockets with spring terminals	Not suitable for sockets with spring terminals
	HR6X87	HR6X87

Marker tags

 Single	HR6X30	HR6X30
 Single	HR5X30	HR5X30
	Only for sockets with spring terminals	Only for sockets with spring terminals

Surge suppressor filters

 RC - 6...24VAC/DC	HR6X77024	HR6X77024
RC - 110...230VAC/DC	HR6X77230	HR6X77230
Diode + LED - 6...24VDC	HR6X78024	HR6X78024





8-PIN AND 11-PIN INDUSTRIAL RELAYS WITH LED STATE INDICATOR AND MECHANICAL ACTUATOR

Relays

Contacts	2 changeover	3 changeover
Rated current	10A	10A
Pin	8-pin	11-pin
Control voltage		
24VDC	<u>HR702CD024</u>	<u>HR703CD024</u>
48VDC	<u>HR702CD048</u>	<u>HR703CD048</u>
110VDC	<u>HR702CD110</u>	<u>HR703CD110</u>
24VAC	<u>HR702CA024</u>	<u>HR703CA024</u>
110...120VAC	<u>HR702CA110</u>	<u>HR703CA110</u>
230VAC	<u>HR702CA230</u>	<u>HR703CA230</u>



Sockets

 <p>8-pin Screw terminals</p>	<u>HR7XS1</u>	
 <p>11-pin Screw terminals</p>		<u>HR7XS2</u>

Retaining clips

	<u>HR7X87</u>	<u>HR7X87</u>
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- ❶ Final S in code indicates spring terminals.
- ❷ Voltage dependent on selected relay socket. Rated voltage for relay only: 60VDC.
- ❸ AC voltage only if linked to socket.
- ❹ Rated current if the relay is soldered directly onto PCB; with socket the maximum current is 10A.
- ❺ Only mounting on socket HR5XS21P.
- ❻ Not suitable for HR5XS21P socket.
- ❼ Only for spring terminals.

■ GENERAL PURPOSE RELAYS



ENERGY AND AUTOMATION

www.LovatoElectric.com

LOVATO ELECTRIC S.P. A.

Via Don E. Mazza, 12
24020 Gorle (Bergamo), Italy

tel. +39 035 4282111
info@LovatoElectric.com

■ LOVATO ELECTRIC S.P.A.

ITALY

www.LovatoElectric.com

■ LOVATO ELECTRIC LTD

UNITED KINGDOM

www.Lovato.co.uk

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