

- Electromechanical and SSR (solid state relay) versions
- AC or DC coils
- Sockets with screw, spring or PIN for Printed Circuit Board terminals
- Relays with LED state indicator and mechanical actuator
- Parallel busbars and surge suppressor filters
- Power relays with Atex certificate.

General purpose relays

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HR10

- Slim electromechanical relay with
- 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.



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HR20

- Slim solid state relay (SSR)
- 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.



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HR30

- Miniature relay
- 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.



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HR40

- Miniature relay in clear enclosure
- Socket width 15.8mm
- 1 or 2 changeover contacts
- lth rated current:
 - 1 contact: 10A (16A on PCB)
 - 2 contacts: 10A
- AC or 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.



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HR50

- Miniature relay with LED status 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 status 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.



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HR60

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



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HR70

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



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HR80

- Power relays with Atex certificate
- In 30A
- 2 normally open or 2 changeover contacts
- Faston terminals
- Screw fixing.



21 General purpose relays



Relays	Code	Contacts	Rated current	Control voltage	Sockets				
SLIM RELAYS		HRA101CE024	1 C/O	6A	24VAC/DC	Version with relay assembled on socket			
		HRA101CE024S	1 C/O	6A	24VAC/DC				
		HR101CE012	1 C/O	6A	12VAC/DC	 			
		HR101CE024	1 C/O	6A	24VAC/DC				
		HR101CE060	1 C/O	6A	110...125VAC/DC 220...240VAC/DC				
		HR201AS024	1 SSR	2A (AC)	24VDC				
		HR201DS024	1 SSR	4A (DC)	24VDC				
	MINIATURE RELAYS		HR301CD012	1 C/O	16A	12VDC	 <p>Max 10A</p>		
			HR301CD024	1 C/O	16A	24VDC			
			HR301CD048	1 C/O	16A	48VAC			
HR301CA024			1 C/O	16A	24VAC				
HR301CA110			1 C/O	16A	110...120VAC				
HR301CA230			1 C/O	16A	230VAC				
HR302CD012			2 C/O	8A	12VDC				
HR302CD024			2 C/O	8A	24VDC				
HR302CD048			2 C/O	8A	48VDC				
HR302CA024			2 C/O	8A	24VAC				
HR302CA110			2 C/O	8A	110...120VAC				
HR302CA230			2 C/O	8A	230VAC				
MINIATURE RELAYS CLEAR ENCLOSURE				HR401CD012	1 C/O	16A		12VDC	 <p>HR5XS21 Screw terminals. Contact terminals all on upper side.</p>
				HR401CD024	1 C/O	16A		24VDC	
	HR402CD012	2 C/O		10A	12VDC				
	HR402CD024	2 C/O		10A	24VDC				
MINIATURE RELAYS WITH LED STATE INDICATOR AND MECHANICAL ACTUATOR		HR501CD012	1 C/O	16A	12VDC	 <p>HR5XS22 Screw terminals.</p>			
		HR501CD024	1 C/O	16A	24VDC				
		HR501CD048	1 C/O	16A	48VDC				
		HR501CD110	1 C/O	16A	110VDC				
		HR501CA024	1 C/O	16A	24VAC				
		HR501CA110	1 C/O	16A	110...120VAC				
		HR501CA230	1 C/O	16A	230VAC				
		HR502CD012	2 C/O	8A	12VDC				
		HR502CD024	2 C/O	8A	24VDC				
		HR502CD048	2 C/O	8A	48VDC				
		HR502CD110	2 C/O	8A	110VDC				
		HR502CA012	2 C/O	8A	12VAC				
		HR502CA024	2 C/O	8A	24VAC				
		HR502CA110	2 C/O	8A	110...120VAC				
HR502CA230	2 C/O	8A	230VAC						
INDUSTRIAL RELAYS WITH LED STATE INDICATOR AND MECHANICAL ACTUATOR		HR602CD012	2 C/O	7A	12VDC	 <p>HR6XS21 Screw terminals. Contact terminals on upper side.</p>  <p>HR6XS22 Screw terminals.</p>  <p>HR6XS41S Spring terminals.</p>			
		HR602CD024	2 C/O	7A	24VDC				
		HR602CD048	2 C/O	7A	48VDC				
		HR602CA012	2 C/O	7A	12VAC				
		HR602CA024	2 C/O	7A	24VAC				
		HR602CA110	2 C/O	7A	110...120VAC				
		HR602CA230	2 C/O	7A	230VAC				
		HR604CD012	4 C/O	5A	12VDC				
		HR604CD024	4 C/O	5A	24VDC				
		HR604CD048	4 C/O	5A	48VDC				
		HR604CA012	4 C/O	5A	12VAC				
		HR604CA024	4 C/O	5A	24VAC				
		HR604CA110	4 C/O	5A	110...120VAC				
		HR604CA230	4 C/O	5A	230VAC				
8-PIN AND 11-PIN INDUSTRIAL RELAYS WITH LED STATE INDICATOR AND MECHANICAL ACTUATOR		HR702CD024	2 C/O	10A	24VDC	 <p>HR7XS1 Screw terminals.</p>			
		HR702CD048	2 C/O	10A	48VDC				
		HR702CD110	2 C/O	10A	110VDC				
		HR702CA024	2 C/O	10A	24VAC				
		HR702CA110	2 C/O	10A	110...120VAC				
		HR702CA230	2 C/O	10A	230VAC				
		HR703CD024	3 C/O	10A	24VDC				
		HR703CD048	3 C/O	10A	48VDC				
		HR703CD110	3 C/O	10A	110VDC				
		HR703CA024	3 C/O	10A	24VAC				
HR703CA110	3 C/O	10A	110...120VAC						
HR703CA230	3 C/O	10A	230VAC						
POWER RELAYS WITH ATEX CERTIFICATE		HR802A024	2 NO	30A	24VAC	 <p>HR7XS2 Screw terminals.</p>			
		HR802A230	2 NO	30A	230VAC				
		HR802CA024	2 C/O	30A	24VAC				
		HR802CA230	2 C/O	30A	230VAC				

21 General purpose relays

Code	Retaining clips	Code	Marker tags	Code	Parallel busbars	Code	Surge suppressor filters
	Included in the socket	HR1X30 		HR1X9020 (black) 	20 poles		
		HR1X3016 (strip with 16 tags) 		HR1X9120 (red) 			
HR3X88 Ⓞ 							
HR3X86 Ⓞ 							
HR5X88 Ⓞ 		HR5X30 Ⓞ 		HR5X9008 (black) ④ 	8 poles	HR6X77024 6...24VAC/DC HR6X77230 110...230VAC/DC	
HR5X86 Ⓞ 				HR5X9002 Ⓞ 	2 poles	HR6X78024 6...24VDC	
HR5X87 Ⓞ 							
HR6X88 Ⓞ 		HR6X30 		HR5X9002 Ⓞ 	2 poles		
HR6X87 							
HR7X87 							

- ① Final S in code indicates spring terminals.
- ② Voltage dependent on selected relay socket; rated insulation voltage only for relay 60VDC.
- ③ Rated current if the relay is soldered directly onto the board; with socket the maximum current is 10A.
- ④ For sockets with screw terminals.
- ⑤ Only mounting on socket HR5XS21P.
- ⑥ Not suitable for HR5XS21P socket.
- ⑦ Bus jumper for A2 terminal; for spring terminals sockets only.
- ⑧ Not suitable for spring terminals sockets.



21 General purpose relays



Slim relays



HRA10...



HR10...



HR20...

Order code	Control voltage	Contacts	Rated current	Description	Qty per pkg
			[A]		no.

Slim electromechanical relays assembled on the socket.

HRA101CE024	24VAC/DC	1 C/O	6	Screw terminals	10
HRA101CE024S	24VAC/DC	1 C/O	6	Spring terminals	10

Slim electromechanical relays.

HR101CE012	12VDC	1 C/O	6	12VAC/DC control when on HR1XS024 or HR1XS024S socket	20
HR101CE024	24VDC	1 C/O	6	24VAC/DC control when on HR1XS024 or HR1XS024S socket	20

HR101CE060	60VDC	1 C/O	6	110...125VAC/DC control when on HR1XS110 or HR1XS110S socket. 220...240VAC/DC control when on HR1XS230 or HR1XS230S socket	20
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Slim SSR (solid state relay) relays.

HR201AS024	24VDC	1 SSR	2	Output 24...280VAC	20
HR201DS024	24VDC	1 SSR	4	Output 3...28VDC	20

Sockets



HR1XS... HR1XS...S

Order code	Control voltage	Terminals	Description	Qty per pkg
	AC/DC			no.

Sockets for relays.

HR1XS024	12...24V	Screw	Use with relay HR101CE012, HR101CE024 and HR20...	10
HR1XS110	110...125V	Screw	Use with relay HR101CE060	10
HR1XS230	220...240V	Screw	Use with relay HR101CE060	10
HR1XS024S	12...24V	Spring	Use with relay HR101CE012, HR101CE024 and HR20...	10
HR1XS110S	110...125V	Spring	Use with relay HR101CE060	10
HR1XS230S	220...240V	Spring	Use with relay HR101CE060	10

General characteristics

Slim-type relays have a reduced width that permits considerable optimisation of space. All sockets are equipped with supply indicator LED and retain/release clips. The availability of electromechanical and solid-state (SSR) versions permits the installation of the most technically suitable solution in accordance with system requirements. The socket terminals can be screw or spring type.

The parallel busbars make for quick wiring.

Operational characteristics

- Rated insulation voltage: 250V
- Rated impulse withstand voltage: 4kV
- Relay control voltage: 12, 24, 60VDC
- Relay control voltage + socket: 12, 24, 110...125, 220...240VAC/DC
- Max controllable power in AC-1: 1500W
- Max controllable power in AC-15: 360VA.

Certifications and compliance

Certifications obtained: cURus, CSA, EAC, VDE for electromechanical relays HR10..., cURus, TÜV for SSR relay HR20....

Compliant with standards: IEC/EN/BS 61810 for electromechanical relays, IEC/EN/BS 62314 for SSR.

General characteristics

HR1X... sockets are equipped with supply indicator LED and retain/release clips. The socket terminals can be screw or spring type. Parallel busbars can be fitted to the sockets, for quick wiring. These busbars plug in, on both the screw and spring sockets, leaving the cable entry terminals free.

Operational characteristics

- Rated insulation voltage: 250V
- Rated impulse withstand voltage: 4kV
- Relay control voltage: 12, 24, 60VDC
- Relay control voltage + socket: 12, 24, 110...125, 220...240VAC/DC
- Green indication LED
- Fitting on DIN rail
- Operating temperature: HR1XS024 -40...+70°C, HR1XS110 and HR1XS230 -40...+55°C.

Certifications and compliance

Certifications obtained: cURus, CSA, EAC, VDE for electromechanical relay HR10..., cURus, TÜV for SSR relay HR20....

Compliant with standards: IEC/EN/BS 61810 for electromechanical relays, IEC/EN/BS 62314 for SSR.

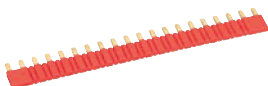
Accessories



HR1X30...



HR1X9020



HR1X9120

Order code	Description	Qty per pkg
		no.
HR1X30	Marker tags	100
HR1X3016	Marker tags - strip with 16 tags	20
HR1X9020	20-pole parallel busbar - black	10
HR1X9120	20-pole parallel busbar - red	10



21 General purpose relays

Miniature relays



HR30...

new

new

Order code	Control voltage	Contacts	Rated current	Description	Qty per pkg
			[A]		no.
Miniature relays.					
HR301CD012	12VDC	1 C/O	16	Fitting on socket HR5XS2... (max 10A)	20
HR301CD024	24VDC	1 C/O	16	Fitting on socket HR5XS2... (max 10A)	20
HR301CD048	48VDC	1 C/O	16	Fitting on socket HR5XS2... (max 10A)	20
HR301CA024	24VAC	1 C/O	16	Fitting on socket HR5XS2... (max 10A)	20
HR301CA110	110/120VAC	1 C/O	16	Fitting on socket HR5XS2... (max 10A)	20
HR301CA230	230VAC	1 C/O	16	Fitting on socket HR5XS2... (max 10A)	20
HR302CD012	12VDC	2 C/O	8	Fitting on socket HR5XS2...	20
HR302CD024	24VDC	2 C/O	8	Fitting on socket HR5XS2...	20
HR302CD048	48VDC	2 C/O	8	Fitting on socket HR5XS2...	20
HR302CA024	24VAC	2 C/O	8	Fitting on socket HR5XS2...	20
HR302CA110	110/120VAC	2 C/O	8	Fitting on socket HR5XS2...	20
HR302CA230	230VAC	2 C/O	8	Fitting on socket HR5XS2...	20

General characteristics

Miniature relays have compact dimensions but high functional performance. It's the ideal device for those looking for a cost-effective solution without compromising performance.

Operational characteristics

- Rated insulation voltage: 250V
- Rated impulse withstand voltage: 4kV
- Relay control voltage: 12, 24 and 48VDC - 24, 110/120 and 230VAC, 50/60Hz
- Max controllable power in AC-1 (1C/2C): 4000/2000W
- Max controllable power in AC-15 (1C/2C): 300/150VA
- Maximum current (1C/2C): 16A/8A.

Certifications and compliance

Certifications obtained: cURus, CSA, EAC, VDE (VDE except for HR301CA...).

Compliant with standards: IEC/EN/BS 61810.

Sockets



HR5XS21

HR5XS22



HR5XS21S



HR5XS21P

Order code	Description	Qty per pkg
		no.
Sockets for relays (supplied without retain/release clip). Terminal layout see page 21-10.		
HR5XS21	Screw terminals, contact terminals all on upper side	10
HR5XS22	Screw terminals. Fitting on DIN rail or with screws	10
HR5XS21S	Spring terminals. Fitting on DIN rail or with screws	10
HR5XS21P	PIN terminals for Printed Circuit Board	40

General characteristics

HR5X... series sockets can have screw terminals or spring terminals for quick wiring. A socket with pins for PCB is also available. Screw terminals are available in 2 versions: with contact terminals separated from the coil terminals or with NC contact terminals near the coil terminals. Surge suppressor filters, parallel busbars and tags for wiring can be snap-fitted to the sockets.

Operational characteristics

- Rated insulation voltage: 250V
- Rated impulse withstand voltage: 4kV
- Maximum current: 10A
- Terminal layout see page 21-10
- Operating temperature: -40...+70°C.

Certifications and compliance

Certifications obtained: cURus, CSA, EAC (PCB socket is cURus only).

Compliant with standards: IEC/EN/BS 61810.

Accessories



HR3X88



HR3X86



HR5X30



HR6X78024



HR5X9008



HR5X9002

new

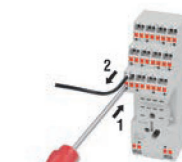
Order code	Description	Qty per pkg
		no.
HR3X88	Retain/release clip. Not suitable for HR5XS21P socket	20
HR3X86	Retaining clip. Only mounting on socket HR5XS21P	10
HR5X30	Marker tags	100
HR6X78024	Plug-in surge suppressor filters. 6...24VDC with LED	10
HR6X77024	Plug-in surge suppressor filters. 6...24VAC/DC (RC)	10
HR6X77230	Plug-in surge suppressor filters. 110...230VAC/DC (RC)	10
HR5X9008	8-pole parallel busbar - black - for sockets with screw terminals	10
HR5X9002	Bus jumper for A2 terminals; for spring terminal sockets only	10

HR5XS21S socket with Push-in technology

Push-in wiring without using a screwdriver for cables with end lugs. They guarantee fast wiring and clamping force maintained over time even in the presence of vibrations and / or shocks. To connect cables without end lug and for cables removal, a screwdriver needs to push the handy buttons.



Push-in wiring without using a screwdriver



Cable removal with screwdriver



21 General purpose relays



Miniature relays clear enclosure



HR40...

new

Order code	Control voltage	Contacts	Rated current	Description	Qty per pkg
			[A]		no.
Miniature relays clear enclosure.					
HR401CD012	12VDC	1 C/O	16	Mounting on HR5XS2... socket (max 10A)	10
HR401CD024	24VDC	1 C/O	16		10
HR402CD012	12VDC	2 C/O	10	Mounting on HR5XS2... socket	10
HR402CD024	24VDC	2 C/O	10		10

Miniature relays with LED state indicator and mechanical actuator



HR50...

new

Order code	Control voltage	Contacts	Rated current	Description	Qty per pkg
			[A]		no.
Miniature relays with LED state indicator and mechanical actuator.					
HR501CD012	12VDC	1 C/O	16	Mounting on HR5XS2... socket (max 10A)	10
HR501CD024	24VDC	1 C/O	16		10
HR501CD048	48VDC	1 C/O	16		10
HR501CD110	110VDC	1 C/O	16		10
HR501CA024	24VAC	1 C/O	16		10
HR501CA110	110/120VAC	1 C/O	16		10
HR501CA230	230VAC	1 C/O	16		10
HR502CD012	12VDC	2 C/O	8	Mounting on HR5XS2... socket	10
HR502CD024	24VDC	2 C/O	8		10
HR502CD048	48VDC	2 C/O	8		10
HR502CD0110	110VDC	2 C/O	8		10
HR502CA012	12VAC	2 C/O	8		10
HR502CA024	24VAC	2 C/O	8		10
HR502CA110	110/120VAC	2 C/O	8		10
HR502CA230	230VAC	2 C/O	8		10

Sockets



HR5XS21

HR5XS22



HR5XS21S

HR5XS21P

Order code	Description	Qty per pkg
		no.
Sockets for relays (supplied without retain/release clip). Terminal layout see page 21-10.		
HR5XS21	Screw terminals, contact terminals all on upper side. Fitting on DIN rail or with screws	10
HR5XS22	Screw terminals. Fitting on DIN rail or with screws	10
HR5XS21S	Spring terminals. Fitting on DIN rail or with screws	10
HR5XS21P	PIN terminals for Printed Circuit Board	40

Accessories



HR5X86

HR5X87



HR5X88



HR5X30



HR5X9008



HR6X78024



HR5X9002

new

Order code	Description	Qty per pkg
		no.
HR5X86	Metal retaining clip. Only mounting on HR5XS21P socket	10
HR5X87	Metal retaining clip. Not suitable for HR5XS21P socket	20
HR5X88	Plastic retaining clip. Not suitable for HR5XS21P socket	10
HR5X30	Marker tags	100
HR6X78024	Plug-in surge suppressor filters. 6...24VDC with LED	10
HR6X77024	Plug-in surge suppressor filters. 6...24VAC/DC (RC)	10
HR6X77230	Plug-in surge suppressor filters. 110...230VAC/DC (RC)	10
HR5X9008	8-pole parallel busbar - black	10
HR5X9002	Bus jumper for A2 terminals; for spring terminal sockets only	10

General characteristics

HR40... and HR50... miniature relays have reduced dimensions and, in addition to the high electrical performance. HR40... has a clear enclosure that allow contacts visibility for wear and tear check. HR50... is equipped with the following functions: LED to indicate voltage on the coil, mechanical contact state indicator and mechanical test actuator. The mechanical actuator is particularly useful for performing functional tests; it can also keep the relay closed continuously.

Operational characteristics

- Rated insulation voltage: 250V (400V with pollution degree 2)
- Relay control voltage:
 - HR40... and HR50...: 12 and 24VDC (48VDC for HR50... only)
 - HR50...: 12, 24, 110/120 and 230VAC 50/60Hz
- Max AC-1 controllable power (1C/2C):
 - HR40...: 3840/2500W
 - HR50...: 4000/2000W
- Max AC-15 controllable power: 150VA
- Maximum current (1C/2C):
 - HR40...: 16/10A
 - HR50...: 16A/8A.

Certifications and compliance

Certifications obtained: HR401C... cURus; HR402C... cURus, TÜV; HR501C... and HR502C... cURus, CSA, EAC, VDE. Note: HR502CA012 has CSA certification only.
Compliant with standards: IEC/EN/BS 61810.

General characteristics

HR5X... series sockets can have screw terminals or spring terminals for quick wiring. A socket with pins for PCB is also available. Screw terminals are available in 2 versions: with contact terminals separated from the coil terminals or with NC contact terminals near the coil terminals. Surge suppressor filters, parallel busbars and tags for wiring can be snap-fitted to the sockets intended for DIN rail mounting.

Operational characteristics

- Rated insulation voltage: 250V
- Rated impulse withstand voltage: 4kV
- Maximum current: 10A
- Terminal layout see page 21-10
- Operating temperature: -40...+70°C.

Certifications and compliance

Certifications obtained: cURus, CSA, EAC (PCB socket is cURus only).
Compliant with standards: IEC/EN/BS 61810.

HR5XS21S socket with Push-in technology

Push-in wiring without using a screwdriver for cables with end lugs. They guarantee fast wiring and clamping force maintained over time even in the presence of vibrations and / or shocks. To connect cables without end lug and for cables removal, a screwdriver needs to push the handy buttons.



Push-in wiring without using a screwdriver



Cable removal with screwdriver



21 General purpose relays

Industrial relays with LED state indicator and mechanical actuator



HR60...

Order code	Control voltage	Contacts	Rated current	Description	Qty per pkg no.
Industrial relays with LED state indicator and mechanical actuator.					
HR602CD012	12VDC	2 C/O	7	Fitting on socket HR6XS2...	10
HR602CD024	24VDC	2 C/O	7	Fitting on socket HR6XS2...	10
HR602CD048	48VDC	2 C/O	7	Fitting on socket HR6XS2...	10
HR602CA012	12VAC	2 C/O	7	Fitting on socket HR6XS2...	10
HR602CA024	24VAC	2 C/O	7	Fitting on socket HR6XS2...	10
HR602CA110	110/120VAC	2 C/O	7	Fitting on socket HR6XS2...	10
HR602CA230	230VAC	2 C/O	7	Fitting on socket HR6XS2...	10
HR604CD012	12VDC	4 C/O	5	Fitting on socket HR6XS4...	10
HR604CD024	24VDC	4 C/O	5	Fitting on socket HR6XS4...	10
HR604CD048	48VDC	4 C/O	5	Fitting on socket HR6XS4...	10
HR604CA012	12VAC	4 C/O	5	Fitting on socket HR6XS4...	10
HR604CA024	24VAC	4 C/O	5	Fitting on socket HR6XS4...	10
HR604CA110	110/120VAC	4 C/O	5	Fitting on socket HR6XS4...	10
HR604CA230	230VAC	4 C/O	5	Fitting on socket HR6XS4...	10

General characteristics

HR60... type industrial relays are available in 2/4-changeover-contact versions. They are equipped with LEDs that indicate control voltage, a mechanical contact state indicator and a mechanical actuator. The actuator is particularly useful for performing functional tests; it can also keep the relay closed continuously.

Operational characteristics

- Rated insulation voltage: 250V
- Rated impulse withstand voltage: 4kV
- Relay control voltage: 12, 24 or 48VDC - 12, 24, 110/120 and 230VAC, 50/60Hz
- Max controllable current in AC-1 (2C/4C): 7/5A
- Maximum current (2C/4C): 7A/5A.

Certifications and compliance

Certifications obtained: cURus, CSA, EAC, VDE.
Compliant with standards: IEC/EN/BS 61810.

Sockets



HR6XS21 **HR6XS41**

new



HR6XS42
HR6XS41S

new

Order code	Description	Qty per pkg no.
Sockets for relays (supplied without retain/release clip) for fitting on DIN rail or with screws. Terminal layout see page 21-10 and 11. For relays with 2 changeover contacts.		
HR6XS21	Screw terminals, contact terminals all on upper side	10
HR6XS22	Screw terminals	10
HR6XS41S	Spring terminals with Push-in technology	10
For relays with 4 changeover contacts.		
HR6XS41	Screw terminals, contact terminals all on upper side	10
HR6XS42	Screw terminals	10
HR6XS41S	Spring terminals with Push-in technology	10

General characteristics

HR6X... series sockets have screw terminals and are supplied in two versions for relays with 2 or 4 contacts. Surge suppressor filters and tags for wiring can be plugged in to the sockets.
They can be fixed on DIN rail or with screws.

Operational characteristics

- Rated insulation voltage: 250V
- Rated impulse withstand voltage: 4kV
- Maximum current: 10A
- Terminal layout see page 21-10 and 11
- Operating temperature: -40...+70°C.

Certifications and compliance

Certifications obtained: cURus, CSA, EAC.
Compliant with standards: IEC/EN/BS 61810.

Accessories



HR6X88

HR6X87

HR5X30

HR5X9002

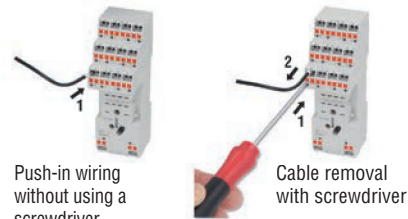
HR6X78024

new

Order code	Description	Qty per pkg no.
HR6X87	Metal retaining clip	20
HR6X88	Plastic retain/release clip	20
HR6X30	Marker tag for sockets with screw terminals	100
HR5X30	Marker tag for sockets with spring terminals	100
HR6X78024	Plug-in surge suppressor filters. 6...24VDC with LED	10
HR6X77024	Plug-in surge suppressor filters. 6...24VAC/DC (RC)	10
HR6X77230	Plug-in surge suppressor filters. 110...230VAC/DC (RC)	10
HR5X9002	Bus jumper for A2 terminals; for spring terminal sockets only	10

HR6XS41S socket with Push-in technology

Push-in wiring without using a screwdriver for cables with end lugs. They guarantee fast wiring and clamping force maintained over time even in the presence of vibrations and / or shocks. To connect cables without end lug and for cables removal, a screwdriver needs to push the handy buttons.



Push-in wiring without using a screwdriver

Cable removal with screwdriver

❶ Not suitable for sockets with spring terminals.



21 General purpose relays

8-pin and 11-pin industrial relays with LED state indicator and mechanical actuator



HR70...

Order code	Control voltage	Contacts	Rated current	Description	Qty per pkg
			[A]		no.

Industrial relays with LED state indicator and mechanical actuator.
8-pin type.

HR702CD024	24VDC	2 C/O	10	Fitting on socket HR7XS1	10
HR702CD048	48VDC	2 C/O	10	Fitting on socket HR7XS1	10
HR702CD110	110VDC	2 C/O	10	Fitting on socket HR7XS1	10
HR702CA024	24VAC	2 C/O	10	Fitting on socket HR7XS1	10
HR702CA110	110/120VAC	2 C/O	10	Fitting on socket HR7XS1	10
HR702CA230	230VAC	2 C/O	10	Fitting on socket HR7XS1	10

Industrial relays with LED state indicator and mechanical actuator.
11-pin type.

HR703CD024	24VDC	3 C/O	10	Fitting on socket HR7XS2	10
HR703CD048	48VDC	3 C/O	10	Fitting on socket HR7XS2	10
HR703CD110	110VDC	3 C/O	10	Fitting on socket HR7XS2	10
HR703CA024	24VAC	3 C/O	10	Fitting on socket HR7XS2	10
HR703CA110	110/120VAC	3 C/O	10	Fitting on socket HR7XS2	10
HR703CA230	230VAC	3 C/O	10	Fitting on socket HR7XS2	10

General characteristics

HR70... type industrial relays are available in 2 or 3 changeover versions. They are equipped with LEDs that indicate control voltage, mechanical contact state indicator and mechanical actuator. The actuator is particularly useful for performing functional tests; it can also keep the relay closed continuously. HR70... has high electrical endurance performance and lends itself to the most heavy-duty applications.

Operational characteristics

- Rated insulation voltage: 250V
- Rated impulse withstand voltage: 4kV
- Relay control voltage: 24 and 48VDC- 24, 110/120 and 230VAC, 50/60Hz
- Maximum current: 10A.

Certifications and compliance

Certifications obtained: cURus, CSA, EAC.
Compliant with standards: IEC/EN/BS 61810.

Sockets



HR7XS1

HR7XS2

Order code	Description	Qty per pkg
		no.

Sockets for relays (supplied without retaining clip), for fitting on DIN rail or with screws.
Terminal layout see page 21-11.

HR7XS1	8-pin for HR702C... Screw terminals	10
HR7XS2	11-pin for HR703C... Screw terminals	10

General characteristics

HR7X... series sockets have screw terminals and are supplied in two versions for relays with 2 or 3 contacts (8-pin – 11-pin). They can be fixed on DIN rail or with screws.

Operational characteristics

- Rated insulation voltage: 250V
- Rated impulse withstand voltage: 4kV
- Maximum current: 10A
- Operating temperature: -40...+70°C.

Certifications and compliance

Certifications obtained: cURus, CSA, EAC.
Compliant with standards: IEC/EN/BS 61810.

Accessories



HR7X87

Order code	Description	Qty per pkg
		no.

HR7X87	Metal retaining clip	20
---------------	----------------------	----

Power relays with Atex certificate



HR80...

new

Order code	Control voltage	Contacts	Rated current	Characteristics	Qty per pkg
			[A]		no.

① 3A for NC contact.

HR8020A024	24VAC	2 NO	30	Faston terminals. Screw fixing	10
HR8020A230	230VAC	2 NO	30	Faston terminals. Screw fixing	10
HR802CA024	24VAC	2 C/O	30①	Faston terminals. Screw fixing	10
HR802CA230	230VAC	2 C/O	30①	Faston terminals. Screw fixing	10

General characteristics

The HR80... power relays, thanks to the Atex certification, are particularly suitable for refrigeration systems that use propane gas. The compact structure and the front Faston terminals make them easy to install even in small spaces and speed up wiring.

Operational characteristics

- Rated insulation voltage: 250V (277V for UL)
- Rated impulse withstand voltage:
 - 4kV between contacts and coil
 - 1.5kV between open contacts
 - 2kV between poles
- Max current 30A for NO contacts; 3A for NC contacts
- Faston terminals 6.3x0.8mm.

Certifications and compliance

Certifications obtained: cURus, Atex.
Compliant with standards: IEC/EN/BS 61810.

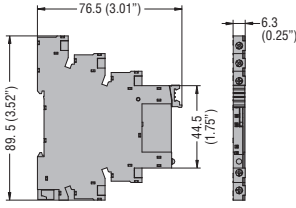


21 General purpose relays

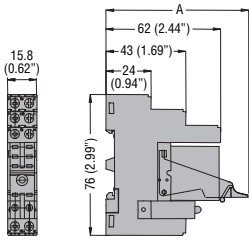
Dimensions [mm(in)]



HRA10... - HR10... - HR20 with socket HR1XS...

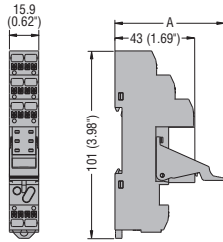


HR30... - HR40... - HR50... with socket HR5XS21



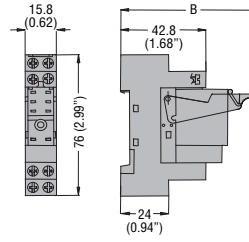
A: 64mm (2.52") with HR3X88
75mm (2.95") with XR5X88

HR30... - HR40... - HR50... with socket HR3XS21S



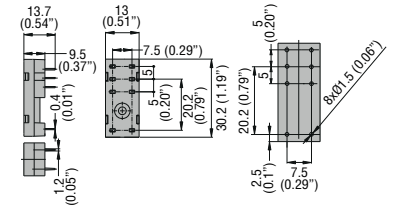
A: 60mm (2.36") with HR3X88
70mm (2.75") with XR5X88

HR30... - HR40... - HR50... with socket HR5XS22

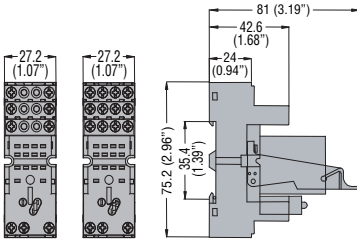


B: 57.5mm (2.26") with HR3X88
68mm (2.68") with XR5X88

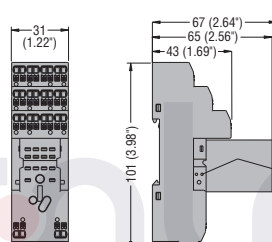
HR5XS21P



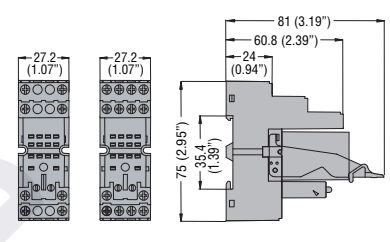
HR60... with socket HR6XS21 - HR6XS41



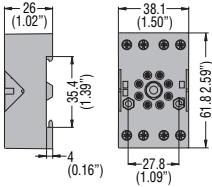
HR602C... - HR604C... with socket HR6XS41S



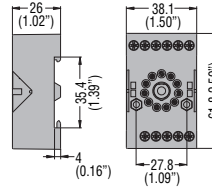
HR60... with socket HR6XS22 - HR6XS42



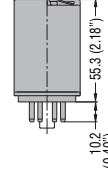
HR7XS1



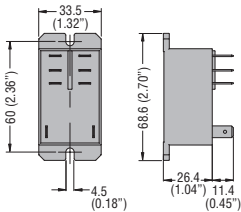
HR7XS2



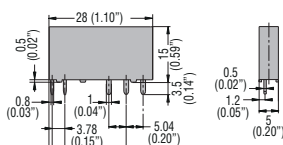
HR702C... - HX703C...



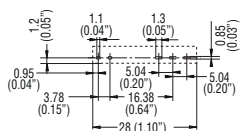
HR8020... - HX802C...



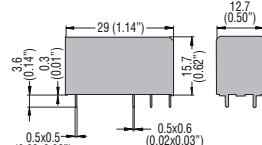
HR10 - HR20



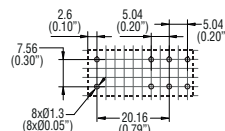
PCB layout



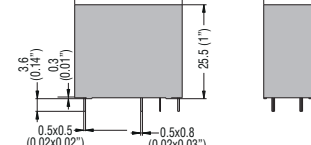
HR30



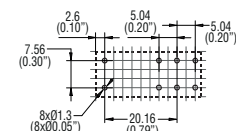
PCB layout



HR40 - HR50



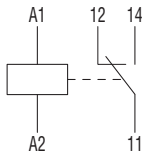
PCB layout



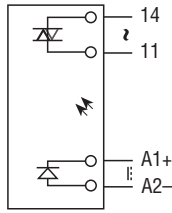
21 General purpose relays

Wiring diagrams

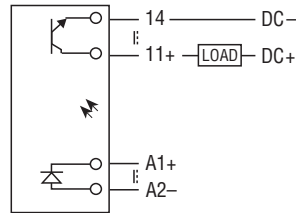
HR101C..., HRA101C...



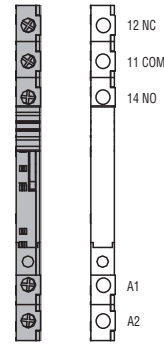
HR201A...



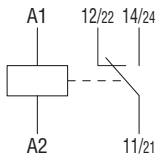
HR201D...



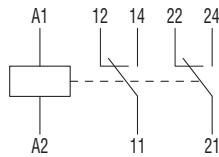
HR1XS...



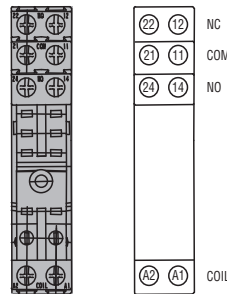
HR301C...



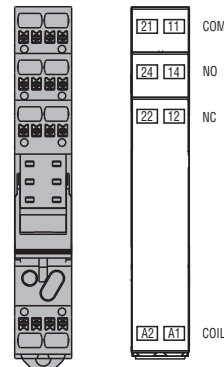
HR302C...



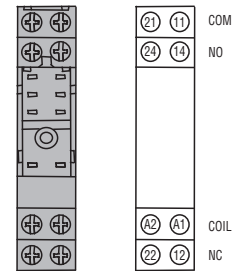
HR5XS21



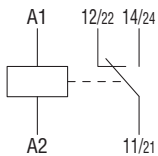
HR5XS21S



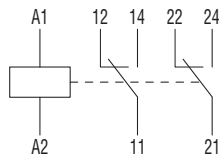
HR5XS22



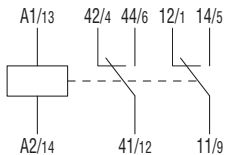
HR401C... - HR501C...



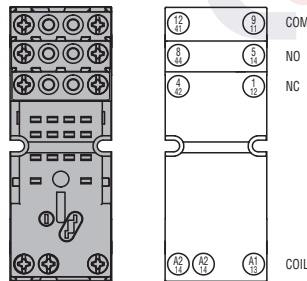
HR402C... - HR502C...



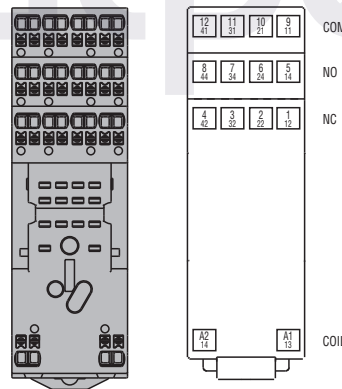
HR602C...



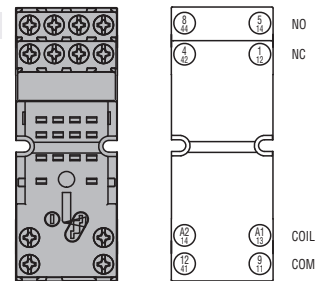
HR6XS21



HR6XS41S



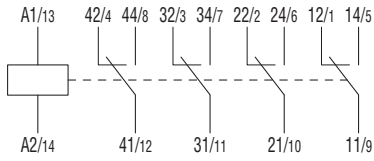
HR6XS22



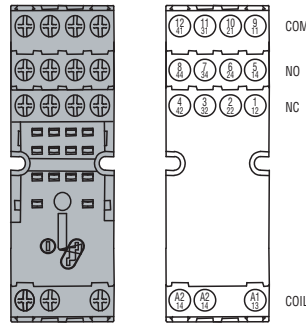
21 General purpose relays

Wiring diagrams

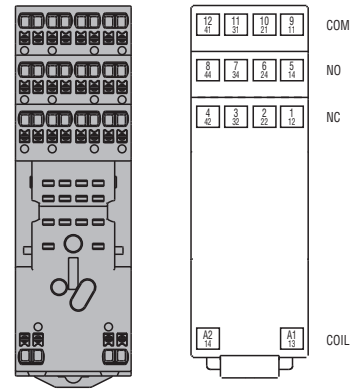
HR604C...



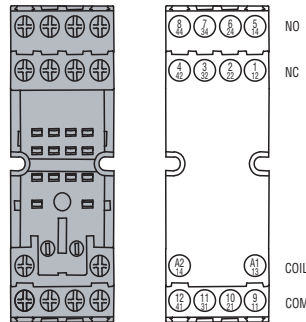
HR6XS41



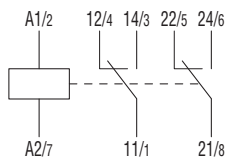
HR6XS41S



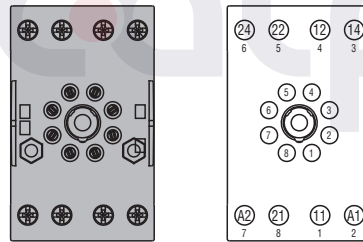
HR6XS42



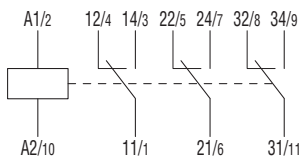
HR702C...



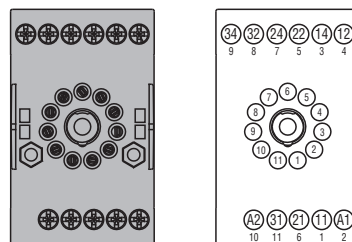
HR7XS1



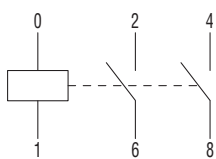
HR703C...



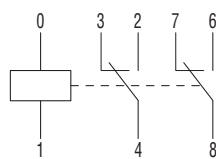
HR7XS2



HR8020...



HR802C...





21 General purpose relays

Technical characteristics



Type		HRA10.. HR10...	HR20 1AS024	HR201DS024	HR301C...	HR302C...	HR401C...	HR402C...	
CHARACTERISTICS OF THE CONTACTS									
Contact configuration		1 C/O	1 static	1 static	1 C/O	2 C/O	1 C/O	2 C/O	
Rated insulation voltage U_i	V	250	2500 (in/out)	2500 (in/out)	250	250	250	250	
Rated impulse withstand voltage U_{imp}	kV	4	–	–	6	6	4	5	
Conventional free air thermal current I_{th}	A	6	2	4	16 ^②	8	16 ^②	10	
Maximum instantaneous current	A	20 (500ms)	80 (10ms)	48 (10ms)	60 ^①	20 ^①	60	26	
Rated operating voltage AC1	VA	1500	④	⑤	4000	2000	4000	2500	
Rated operating voltage AC15 (230VAC)	VA	360	④	⑤	300 ^①	150 ^①	500	400	
Single-phase motor control (230VAC)	kW	0.186	④	⑤	0.4	0.2	0.37	0.3	
Rated operating voltage DC1: 30/110/220V	A	6 / 0.2 / 0.12	④	⑤	12 / 0.3 / 0.1	8 / 0.3 / 0.1	10 / 0.3 / 0.12	8 / 0.3 / 0.12	
Minimum switching load	V / mA	5 / 100	24 / 0.1	3 / 0.02	5 / 100		5 / 100		
Contact impedance	mΩ	100	–	–	100		100		
Contact material		Ag/Ni	–	–	Ag/SnO ₂		Ag/SnO ₂		
Max socket terminal tightening torque	Nm	0.5			0.6		0.6		
Socket screw tightening tool (cross / flat blade)		Phillips 0 / 3.5mm			Phillips 1 / 4.5mm ^⑥		Phillips 1 / 4.5mm ^⑥		
Wire section on sockets with screw terminals (min...max)	mm ²	0.5...1.5 (0.75...2.5)			0.5...2.5		0.5...2.5		
	AWG	20...16 (20...14)			20...14		20...14		
OPERATING TIMES									
Closing	ms	≤8	10	0.3	< 10		< 15		
Opening	ms	≤4	10	0.3	< 5		< 5		
ENDURANCE									
Mechanical	Cycles	10,000,000	Theoretically infinite		10,000,000		10,000,000		
Electrical with load AC1	Cycles	30,000 ^①	Theoretically infinite		50,000 ^①		100,000 ^①		
COIL CHARACTERISTICS									
Average coil consumption AC (50/60Hz) at 20°C	VA	0.2	–	–	0.9		–	–	
Average coil consumption DC at 20°C	W	0.2	–	–	0.45		0.7	0.5	
Operating range	closing (% U_n)	≥75	80...120	80...120	70...110AC / 75...110DC		75...110	75...110	
	opening (% U_n)	≥5				20...55AC / 10...30DC		10...30	10...30
Maximum cycle frequency	cycles/h	10,000	>100,000	>100,000	3,600		3,600	3,600	
AMBIENT CONDITIONS									
Operating temperature	°C	-40...+70	-30...+80		-40...+85		-40...+85		
Storage temperature	°C	-40...+80	-30...+100		-40...+85		-40...+85		
Fitting position		Any							
OTHER CHARACTERISTICS									
Indicator LED		Yes (on the socket)			No		No		
Mechanical contact position indicator		No			No		No		
Mechanical test actuator		No			No		No		
Socket fixing		On 35mm DIN rail			On 35mm DIN rail and with screws				

- ① NO contact.
- ② Maximum socket current of 10A.
- ③ 2.5mm flat blade for versions with spring terminals.
- ④ 2A output 24...280VAC.
- ⑤ 4A output 3...28VDC.



21 General purpose relays

Technical characteristics



HR501C...	HR502C...	HR602C...	HR604C...	HR702C...	HR703C...	HR8020...	HR802C...
1 C/O	2 C/O	2 C/O	4 C/O	2 C/O	3 C/O	2 NO	2 C/O
250		500		250		250	
6		4		6		4	
16 ^⓪	8	7	5	10	10	30	30 NO (3 NC)
20 ^⓪	10 ^⓪	-	-	-	-	-	-
4000	2000	1750	1250	2500	2500	-	-
150 ^⓪	150 ^⓪	150 ^⓪	150 ^⓪	500	500	-	-
0.1	-	0.37	0.37	1.2	1.2	2.2	2.2
12 / 0.3 / 0.1	8 / 0.3 / 0.1	12 / 0.3 / 0.1	8 / 0.3 / 0.1	10 / - / -	10 / - / -	-	-
5 / 100		5 / 100		5 / 100		-	-
100		100		100		50	
Ag/Ni		Ag/Ni		Ag/Ni		Ag/SnO ₂	
0.6		0.6		0.6		-	
Phillips 1 / 4.5mm ^⓪		Phillips 1 / 4.5mm		Phillips 1 / 4.5mm		-	
0.5...2.5		0.5...2.5		0.5...2.5		-	
20...14		20...14		20...14		-	
< 15		< 25		< 30		25	
< 15		< 25		< 30		25	
10,000,000		20,000,000		5,000,000		5,000,000	
50,000 ^⓪		20,000 ^⓪	100,000	100,000		100,000	
1		1.7		3		4	
0.4		1.1		1.5		1	
70...110AC / 75...110DC		70...110AC / 75...110DC		70...110AC / 75...110DC		80...120	
20...55AC / 10...30DC		20...55AC / 10...30DC		20...55AC / 10...30DC		20...55	
3,600		3,600		3,600		10,000	
-40...+70		-40...+70		-40...+55		-40...+65	
-40...+85		-40...+80		-40...+70		-40...+80	
Any							
Yes		Yes		Yes		No	
Yes		Yes		Yes		No	
Yes		Yes		Yes		No	
On 35mm DIN rail and with screws		On 35mm DIN rail and with screws		On 35mm DIN rail and with screws		Screw fixing	