

General purpose relays



- 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.

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.



Page 20-5

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.

| Relays | Code | Contacts | Rated current | Control voltage | Sockets | | | |
|---|---|---|--|-----------------|--|--|--|-------|
| SLIM RELAYS |  HRA10 1C E024 | 1 C/O | 6A | 24VAC/DC | Version with relay assembled on socket | | | |
| | HRA10 1C E024S | 1 C/O | 6A | 24VAC/DC | | | | |
| |  | HR10 1C E012 | 1 C/O | 6A | 12VAC/DC |   | | |
| | | HR10 1C E024 | 1 C/O | 6A | 24VAC/DC | | | |
| | | HR10 1C E060 | 1 C/O | 6A | 110...125VAC/DC | | | |
| | | HR20 1A S024 | 1 SSR | 2A (AC) | 24VDC | | | |
| | | HR20 1D S024 | 1 SSR | 4A (DC) | 24VDC | | | |
| | MINIATURE RELAYS |  | HR30 1C D012 | 1 C/O | 16A | 12VDC | Max 10A  <p>HR5X S21 Screw terminals. Contact terminals all on upper side.</p>  <p>HR5X S22 Screw terminals.</p>  <p>HR5X S21S Spring terminals.</p>  <p>HR5X S21P PIN terminals. For Printed Circuit Board.</p> | |
| | | | HR30 1C D024 | 1 C/O | 16A | 24VDC | | |
| | | | HR30 1C D048 | 1 C/O | 16A | 48VAC | | |
| HR30 1C A024 | | | 1 C/O | 16A | 24VAC | | | |
| HR30 1C A110 | | | 1 C/O | 16A | 110...120VAC | | | |
| HR30 1C A230 | | | 1 C/O | 16A | 230VAC | | | |
| HR30 2C D012 | | | 2 C/O | 8A | 12VDC | | | |
| HR30 2C D024 | | | 2 C/O | 8A | 24VDC | | | |
| HR30 2C D048 | | | 2 C/O | 8A | 48VDC | | | |
| HR30 2C A024 | | | 2 C/O | 8A | 24VAC | | | |
| HR30 2C A110 | | | 2 C/O | 8A | 110...120VAC | | | |
| HR30 2C A230 | | | 2 C/O | 8A | 230VAC | | | |
| MINIATURE RELAYS CLEAR ENCLOSURE | | |  | HR40 1C D012 | 1 C/O | 16A | | 12VDC |
| | | | | HR40 1C D024 | 1 C/O | 16A | | 24VDC |
| | HR40 2C D012 | 2 C/O | | 10A | 12VDC | | | |
| | HR40 2C D024 | 2 C/O | | 10A | 24VDC | | | |
| | MINIATURE RELAYS WITH LED STATE INDICATOR AND MECHANICAL ACTUATOR |  | HR50 1C D012 | 1 C/O | 16A | 12VDC | | |
| | | | HR50 1C D024 | 1 C/O | 16A | 24VDC | | |
| | | | HR50 1C D048 | 1 C/O | 16A | 48VDC | | |
| | | | HR50 1C D110 | 1 C/O | 16A | 110VDC | | |
| | | | HR50 1C A024 | 1 C/O | 16A | 24VAC | | |
| | | | HR50 1C A110 | 1 C/O | 16A | 110...120VAC | | |
| HR50 1C A230 | | | 1 C/O | 16A | 230VAC | | | |
| HR50 2C D012 | | | 2 C/O | 8A | 12VDC | | | |
| HR50 2C D024 | | | 2 C/O | 8A | 24VDC | | | |
| HR50 2C D048 | | | 2 C/O | 8A | 48VDC | | | |
| INDUSTRIAL RELAYS WITH LED STATE INDICATOR AND MECHANICAL ACTUATOR |  | HR60 2C D012 | 2 C/O | 7A | 12VDC |  <p>HR6X S21 Screw terminals. Contact terminals on upper side.</p>  <p>HR6X S22 Screw terminals.</p>  <p>HR6X S21S Spring terminals.</p> | | |
| | | HR60 2C D024 | 2 C/O | 7A | 24VDC | | | |
| | | HR60 2C D048 | 2 C/O | 7A | 48VDC | | | |
| | | HR60 2C A012 | 2 C/O | 7A | 12VAC | | | |
| | | HR60 2C A024 | 2 C/O | 7A | 24VAC | | | |
| | | HR60 2C A110 | 2 C/O | 7A | 110...120VAC | | | |
| | | HR60 2C A230 | 2 C/O | 7A | 230VAC |  <p>HR6X S41 Screw terminals. Contact terminals on upper side.</p>  <p>HR6X S42 Screw terminals.</p>  <p>HR6X S41S Spring terminals.</p> | | |
| | | HR60 4C D012 | 4 C/O | 5A | 12VDC | | | |
| | | HR60 4C D024 | 4 C/O | 5A | 24VDC | | | |
| | | HR60 4C D048 | 4 C/O | 5A | 48VDC | | | |
| HR60 4C A012 | 4 C/O | 5A | 12VAC | | | | | |
| 8-PIN AND 11-PIN INDUSTRIAL RELAYS WITH LED STATE INDICATOR AND MECHANICAL ACTUATOR |  | HR70 2C D024 | 2 C/O | 10A | 24VDC | 8-pin  <p>HR7X S1 Screw terminals.</p> | | |
| | | HR70 2C D048 | 2 C/O | 10A | 48VDC | | | |
| | | HR70 2C D110 | 2 C/O | 10A | 110VDC | | | |
| | | HR70 2C A024 | 2 C/O | 10A | 24VAC | | | |
| | | HR70 2C A110 | 2 C/O | 10A | 110...120VAC | | | |
| | | HR70 2C A230 | 2 C/O | 10A | 230VAC | 11-pin  <p>HR7X S2 Screw terminals.</p> | | |
| | | HR70 3C D024 | 3 C/O | 10A | 24VDC | | | |
| | | HR70 3C D048 | 3 C/O | 10A | 48VDC | | | |
| | | HR70 3C D110 | 3 C/O | 10A | 110VDC | | | |
| | | HR70 3C A024 | 3 C/O | 10A | 24VAC | | | |
| HR70 3C A110 | 3 C/O | 10A | 110...120VAC | | | | | |
| HR70 3C A230 | 3 C/O | 10A | 230VAC | | | | | |

| Code | Retaining clips | Code | Marker tags | Code | Parallel busbars | Code | Surge suppressor filters |
|----------------------|------------------------|--|-------------|-------------------------------|------------------|---|--------------------------|
| | Included in the socket | HR1X 30 | | HR1X 9020 (black) | | | |
| | | HR1X 3016 (strip with 16 plates) | | HR1X 9120 (red) | | | |
| HR3X 88 Ⓞ | HR3X 86 Ⓞ | | | | | | |
| HR5X 88 Ⓞ | HR5X 86 Ⓞ | HR5X 30 Ⓞ | | HR5X 9008 (black) ④ | | Resistor - Capacitor HR6X 77024 6...24VAC/DC HR6X 77230 110...230VAC/DC | |
| HR5X 87 Ⓞ | | | | | | Diode + LED HR6X 78024 6...24VDC | |
| HR6X 88 | | HR6X 30 | | | | | |
| | | HR5X 30 (only for sockets with spring terminals) | | | | | |
| HR7X 87 | | | | | | | |

- 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 HR5X S21P.
- ⑥ Not suitable for HR5X S21P socket.

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. | | | | | |
| HRA10 1C E024 | 24VAC/DC | 1 C/O | 6 | Screw terminals | 10 |
| HRA10 1C E024S | 24VAC/DC | 1 C/O | 6 | Spring terminals | 10 |
| Slim electromechanical relays. | | | | | |
| HR10 1C E012 | 12VDC | 1 C/O | 6 | 12VAC/DC control when on HR1XS024 or HR1XS024S socket | 20 |
| HR10 1C E024 | 24VDC | 1 C/O | 6 | 24VAC/DC control when on HR1XS024 or HR1XS024S socket | 20 |
| HR10 1C E060 | 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 |
| Slim SSR (solid state relay) relays. | | | | | |
| HR20 1A S024 | 24VDC | 1 SSR | 2 | Output 24...280VAC | 10 |
| HR20 1D S024 | 24VDC | 1 SSR | 4 | Output 3...28VDC | 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 61810 for electromechanical relays, IEC/EN 62314 for SSR.

Sockets



HR1X S...



| Order code | Control voltage | Terminals | Description | Qty per pkg |
|---------------------|-----------------|-----------|---|-------------|
| | AC/DC | | | no. |
| Sockets for relays. | | | | |
| HR1X S024 | 12...24V | Screw | Use with relay HR101CE012, HR101CE024 and HR20... | 10 |
| HR1X S110 | 110...125V | Screw | Use with relay HR101CE060 | 10 |
| HR1X S230 | 220...240V | Screw | Use with relay HR101CE060 | 10 |
| HR1X S024S | 12...24V | Spring | Use with relay HR101CE012, HR101CE024 and HR20... | 10 |
| HR1X S110S | 110...125V | Spring | Use with relay HR101CE060 | 10 |
| HR1X S230S | 220...240V | Spring | Use with relay HR101CE060 | 10 |

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.

Certifications and compliance

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

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

Accessories



HR1X 30...



HR1X 9020



HR1X 9120

| Order code | Description | Qty per pkg |
|------------------|------------------------------------|-------------|
| | | no. |
| HR1X 30 | Marker tags | 100 |
| HR1X 3016 | Marker tags - strip with 16 plates | 20 |
| HR1X 9020 | 20-pole parallel busbar - black | 10 |
| HR1X 9120 | 20-pole parallel busbar - red | 10 |

Miniature relays



HR30...

new

new

| Order code | Control voltage | Contacts | Rated current | Description | Qty per pkg |
|-------------------|-----------------|----------|---------------|---------------------------------------|-------------|
| | | | [A] | | no. |
| Miniature relays. | | | | | |
| HR30 1C D012 | 12VDC | 1 C/O | 16 | Fitting on socket HR5XS2... (max 10A) | 20 |
| HR30 1C D024 | 24VDC | 1 C/O | 16 | Fitting on socket HR5XS2... (max 10A) | 20 |
| HR30 1C D048 | 48VDC | 1 C/O | 16 | Fitting on socket HR5XS2... (max 10A) | 20 |
| HR30 1C A024 | 24VAC | 1 C/O | 16 | Fitting on socket HR5XS2... (max 10A) | 20 |
| HR30 1C A110 | 110/120VAC | 1 C/O | 16 | Fitting on socket HR5XS2... (max 10A) | 20 |
| HR30 1C A230 | 230VAC | 1 C/O | 16 | Fitting on socket HR5XS2... (max 10A) | 20 |
| HR30 2C D012 | 12VDC | 2 C/O | 8 | Fitting on socket HR5XS2... | 20 |
| HR30 2C D024 | 24VDC | 2 C/O | 8 | Fitting on socket HR5XS2... | 20 |
| HR30 2C D048 | 48VDC | 2 C/O | 8 | Fitting on socket HR5XS2... | 20 |
| HR30 2C A024 | 24VAC | 2 C/O | 8 | Fitting on socket HR5XS2... | 20 |
| HR30 2C A110 | 110/120VAC | 2 C/O | 8 | Fitting on socket HR5XS2... | 20 |
| HR30 2C A230 | 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/10A.

Certifications and compliance

Certifications obtained: cURus, CSA, EAC, VDE (VDE except for HR30 1C A...).

Compliant with standards: IEC/EN 61810.

Sockets



HR5X S21



HR5X S22



HR5X S21S



HR5X S21P

| Order code | Description | Qty per pkg |
|--|--|-------------|
| | | no. |
| Sockets for relays (supplied without retain/release clip). Terminal layout see page 20-10. | | |
| HR5X S21 | Screw terminals, contact terminals all on upper side | 10 |
| HR5X S22 | Screw terminals. Fitting on DIN rail or with screws | 10 |
| HR5X S21S | Spring terminals. Fitting on DIN rail or with screws | 10 |
| HR5X S21P | PIN terminals for Printed Circuit Board | 40 |

General characteristics

HR5X... series sockets can have screw terminals or spring terminals for quick wiring. 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 plates 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 20-10.

Certifications and compliance

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

Compliant with standards: IEC/EN 61810.

Accessories



HR3X 88



HR3X 86



HR5X 30



HR6X 78 024



HR5X 9008

| Order code | Description | Qty per pkg |
|-------------|---|-------------|
| | | no. |
| HR3X 88 | Retain/release clip. Not suitable for HR5XS21P socket | 20 |
| HR3X 86 | Retaining clip. Only mounting on socket HR5XS21P | 10 |
| HR5X 30 | Marker tags | 100 |
| HR6X 78 024 | Plug-in surge suppressor filters. 6...24VDC with LED | 10 |
| HR6X 77 024 | Plug-in surge suppressor filters. 6...24VAC/DC (RC) | 10 |
| HR6X 77 230 | Plug-in surge suppressor filters. 110...230VAC/DC (RC) | 10 |
| HR5X 9008 | 8-pole parallel busbar - black - for sockets with screw terminals | 10 |

Miniature relays clear enclosure



HR40...

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

Miniature relays clear enclosure.

new

| | | | | | |
|--------------|-------|-------|----|--|----|
| HR40 1C D012 | 12VDC | 1 C/O | 16 | Mounting on HR5XS2... socket (max 10A) | 10 |
| HR40 1C D024 | 24VDC | 1 C/O | 16 | | 10 |
| HR40 2C D012 | 12VDC | 2 C/O | 10 | Mounting on HR5XS2... socket | 10 |
| HR40 2C D024 | 24VDC | 2 C/O | 10 | | 10 |

Miniature relays with LED state indicator and mechanical actuator



HR50...

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

Miniature relays with LED state indicator and mechanical actuator.

| | | | | | |
|---------------|------------|-------|----|--|----|
| HR50 1C D012 | 12VDC | 1 C/O | 16 | Mounting on HR5XS2... socket (max 10A) | 10 |
| HR50 1C D024 | 24VDC | 1 C/O | 16 | | 10 |
| HR50 1C D048 | 48VDC | 1 C/O | 16 | | 10 |
| HR50 1C D110 | 110VDC | 1 C/O | 16 | | 10 |
| HR50 1C A024 | 24VAC | 1 C/O | 16 | | 10 |
| HR50 1C A110 | 110/120VAC | 1 C/O | 16 | | 10 |
| HR50 1C A230 | 230VAC | 1 C/O | 16 | | 10 |
| HR50 2C D012 | 12VDC | 2 C/O | 8 | Mounting on HR5XS2... socket | 10 |
| HR50 2C D024 | 24VDC | 2 C/O | 8 | | 10 |
| HR50 2C D048 | 48VDC | 2 C/O | 8 | | 10 |
| HR50 2C D0110 | 110VDC | 2 C/O | 8 | | 10 |
| HR50 2C A024 | 24VAC | 2 C/O | 8 | | 10 |
| HR50 2C A110 | 110/120VAC | 2 C/O | 8 | | 10 |
| HR50 2C A230 | 230VAC | 2 C/O | 8 | | 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...: 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: HR40 1C... cURus, VDE; HR40 2C... cURus; HR50 1C... and HR50 2C... cURus, CSA, EAC, VDE.
Compliant with standards: IEC/EN 61810.

Sockets



HR5X S21



HR5X S22



HR5X S21S



HR5X S21P

| Order code | Description | Qty per pkg |
|------------|-------------|-------------|
| | | no. |

Sockets for relays (supplied without retain/release clip).
Terminal layout see page 20-10.

| | | |
|-----------|--|----|
| HR5X S21 | Screw terminals, contact terminals all on upper side. Fitting on DIN rail or with screws | 10 |
| HR5X S22 | Screw terminals. Fitting on DIN rail or with screws | 10 |
| HR5X S21S | Spring terminals. Fitting on DIN rail or with screws | 10 |
| HR5X S21P | 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 plates for writing 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 20-10.

Certifications and compliance

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

Accessories



HR5X 86



HR5X 87

new



HR5X 88



HR5X 30

new



HR6X 78 024



HR5X 9008

| Order code | Description | Qty per pkg |
|-------------|--|-------------|
| | | no. |
| HR5X 86 | Metal retaining clip. Only mounting on HR5XS21P socket | 10 |
| HR5X 87 | Metal retaining clip. Not suitable for HR5XS21P socket | 20 |
| HR5X 88 | Plastic retaining clip. Not suitable for HR5XS21P socket | 10 |
| HR5X 30 | Marker tags | 100 |
| HR6X 78 024 | Plug-in surge suppressor filters. 6...24VDC with LED | 10 |
| HR6X 77 024 | Plug-in surge suppressor filters. 6...24VAC/DC (RC) | 10 |
| HR6X 77 230 | Plug-in surge suppressor filters. 110...230VAC/DC (RC) | 10 |
| HR5X 9008 | 8-pole parallel busbar - black | 10 |

Industrial relays with LED state indicator and mechanical actuator



HR60...

new

new

| Order code | Control voltage | Contacts | Rated current | Description | Qty per pkg |
|---|-----------------|----------|---------------|-----------------------------|-------------|
| | | | [A] | | no. |
| Industrial relays with LED state indicator and mechanical actuator. | | | | | |
| HR60 2C D012 | 12VDC | 2 C/O | 7 | Fitting on socket HR6XS2... | 10 |
| HR60 2C D024 | 24VDC | 2 C/O | 7 | Fitting on socket HR6XS2... | 10 |
| HR60 2C D048 | 48VDC | 2 C/O | 7 | Fitting on socket HR6XS2... | 10 |
| HR60 2C A012 | 12VAC | 2 C/O | 7 | Fitting on socket HR6XS2... | 10 |
| HR60 2C A024 | 24VAC | 2 C/O | 7 | Fitting on socket HR6XS2... | 10 |
| HR60 2C A110 | 110/120VAC | 2 C/O | 7 | Fitting on socket HR6XS2... | 10 |
| HR60 2C A230 | 230VAC | 2 C/O | 7 | Fitting on socket HR6XS2... | 10 |
| HR60 4C D012 | 12VDC | 4 C/O | 5 | Fitting on socket HR6XS4... | 10 |
| HR60 4C D024 | 24VDC | 4 C/O | 5 | Fitting on socket HR6XS4... | 10 |
| HR60 4C D048 | 48VDC | 4 C/O | 5 | Fitting on socket HR6XS4... | 10 |
| HR60 4C A012 | 12VAC | 4 C/O | 5 | Fitting on socket HR6XS4... | 10 |
| HR60 4C A024 | 24VAC | 4 C/O | 5 | Fitting on socket HR6XS4... | 10 |
| HR60 4C A110 | 110/120VAC | 4 C/O | 5 | Fitting on socket HR6XS4... | 10 |
| HR60 4C A230 | 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 61810.

Sockets



HR6X S21 HR6X S41



HR6X S42 HR6X S41S

| 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 20-10 and 11. For relays with 2 changeover contacts. | | |
| HR6X S21 | Screw terminals, contact terminals all on upper side | 10 |
| HR6X S22 | Screw terminals | 10 |
| HR6X S21S | Spring terminals | 10 |
| For relays with 4 changeover contacts. | | |
| HR6X S41 | Screw terminals, contact terminals all on upper side | 10 |
| HR6X S42 | Screw terminals | 10 |
| HR6X S41S | Spring terminals | 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 plates for writing can be plugged in to the sockets. They can be fixed on DIN rails or with screws.

Operational characteristics

- Rated insulation voltage: 250V
- Rated impulse withstand voltage: 4kV
- Maximum current: 10A
- Terminal layout see page 20-10 and 11.

Certifications and compliance

Certifications obtained: cURus, CSA, EAC.
Compliant with standards: IEC/EN61810.

Accessories



HR6X 88



HR5X 30



HR6X 78 024

| Order code | Description | Qty per pkg |
|-------------|--|-------------|
| | | no. |
| HR6X 88 | Retain/release clip | 20 |
| HR6X 30 | Marker tag for sockets with screw terminals | 100 |
| HR5X 30 | Marker tag for sockets with spring terminals | 100 |
| HR6X 78 024 | Plug-in surge suppressor filters. 6...24VDC with LED | 10 |
| HR6X 77 024 | Plug-in surge suppressor filters. 6...24VAC/DC (RC) | 10 |
| HR6X 77 230 | Plug-in surge suppressor filters. 110...230VAC/DC (RC) | 10 |

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



HR70...

new

| 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.

| | | | | | |
|--------------|------------|-------|----|--------------------------|----|
| HR70 2C D024 | 24VDC | 2 C/O | 10 | Fitting on socket HR7XS1 | 10 |
| HR70 2C D048 | 48VDC | 2 C/O | 10 | Fitting on socket HR7XS1 | 10 |
| HR70 2C D110 | 110VDC | 2 C/O | 10 | Fitting on socket HR7XS1 | 10 |
| HR70 2C A024 | 24VAC | 2 C/O | 10 | Fitting on socket HR7XS1 | 10 |
| HR70 2C A110 | 110/120VAC | 2 C/O | 10 | Fitting on socket HR7XS1 | 10 |
| HR70 2C A230 | 230VAC | 2 C/O | 10 | Fitting on socket HR7XS1 | 10 |

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

new

| | | | | | |
|--------------|------------|-------|----|--------------------------|----|
| HR70 3C D024 | 24VDC | 3 C/O | 10 | Fitting on socket HR7XS2 | 10 |
| HR70 3C D048 | 48VDC | 3 C/O | 10 | Fitting on socket HR7XS2 | 10 |
| HR70 3C D110 | 110VDC | 3 C/O | 10 | Fitting on socket HR7XS2 | 10 |
| HR70 3C A024 | 24VAC | 3 C/O | 10 | Fitting on socket HR7XS2 | 10 |
| HR70 3C A110 | 110/120VAC | 3 C/O | 10 | Fitting on socket HR7XS2 | 10 |
| HR70 3C A230 | 230VAC | 3 C/O | 10 | Fitting on socket HR7XS2 | 10 |

General characteristics

HR70... type industrial relays are available in 2/3-changeover-contact 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 61810.

Sockets



HR7X S1



HR7X S2

| 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 20-11.

| | | |
|---------|---------------------------------------|----|
| HR7X S1 | 8-pin for HR70 2C... Screw terminals | 10 |
| HR7X S2 | 11-pin for HR70 3C... 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 rails or with screws.

Operational characteristics

- Rated insulation voltage: 250V
- Rated impulse withstand voltage: 4kV
- Maximum current: 10A.

Certifications and compliance

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

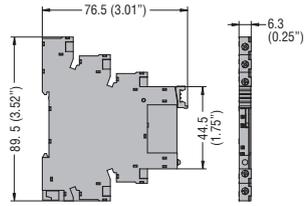
Accessories



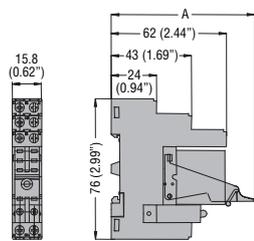
HR7X 87

| Order code | Description | Qty per pkg |
|------------|----------------------|-------------|
| | | no. |
| HR7X 87 | Metal retaining clip | 20 |

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

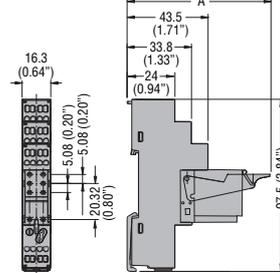


HR30... - HR40... - HR50... with socket HR5XS21



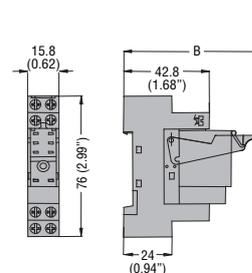
A: 64mm (2.52") with HR3X88
75mm (2.95") with XR5X88

HR30... - HR40... - HR50... with socket HR5XS21S



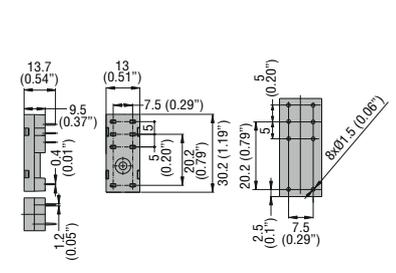
A: 64mm (2.52") with HR3X88
75mm (2.95") with XR5X88

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

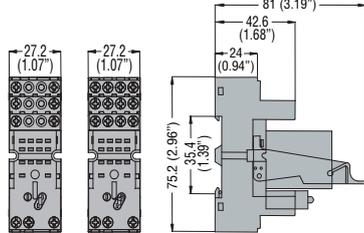


B: 57.5mm (2.26") with HR3X88
68mm (2.68") with XR5X88

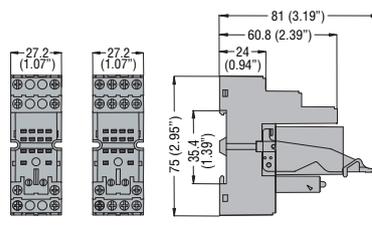
HR5X S21P



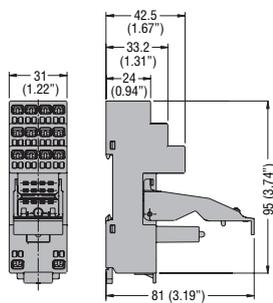
HR60... with socket HR6XS21 - HR6XS41



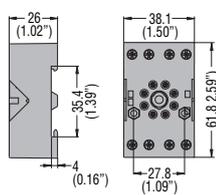
HR60... with socket HR6XS22 - HR6XS42



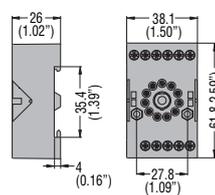
HR60 2C... - HR60 4C... with socket HR6XS21S - HR6XS41S



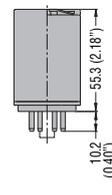
HR7XS1



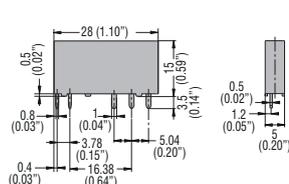
HR7XS2



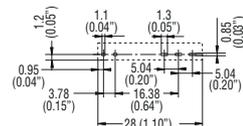
HR70 2C... - HR70 3C...



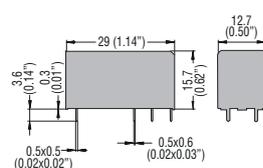
HR10 - HR20



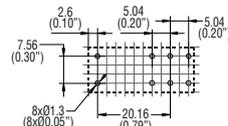
PCB layout



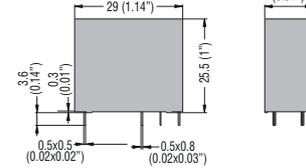
HR30



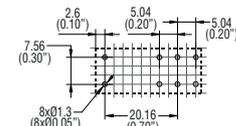
PCB layout



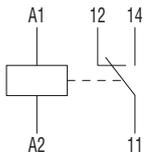
HR40 - HR50



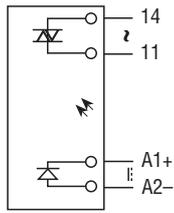
PCB layout



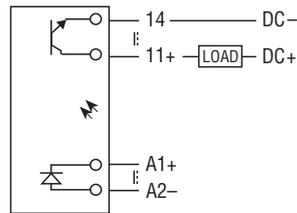
HR101C..., HRA101C...



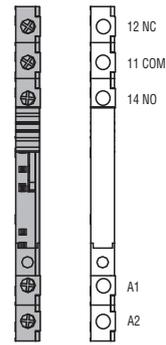
HRA201A...



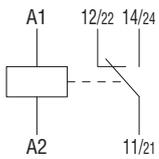
HRA201D...



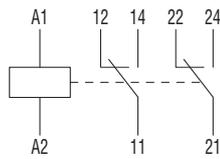
HR1XS...



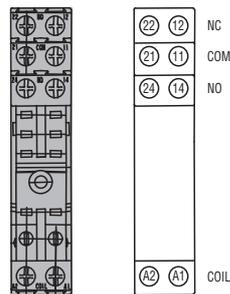
HR301C...



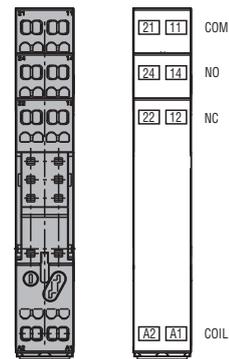
HR302C...



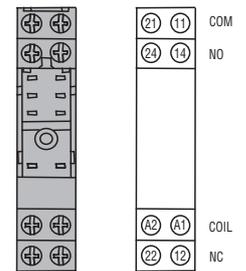
HR5XS21



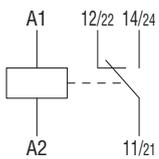
HR5XS21S



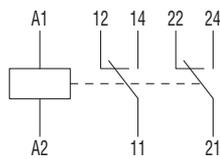
HR5XS22



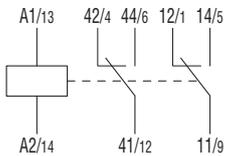
HR401C... - HR501C...



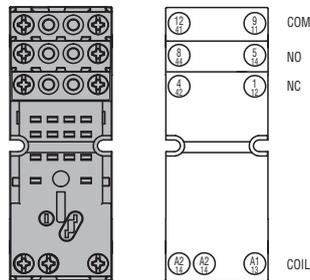
HR402C... - HR502C...



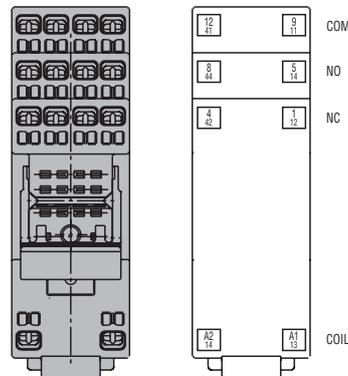
HR602C...



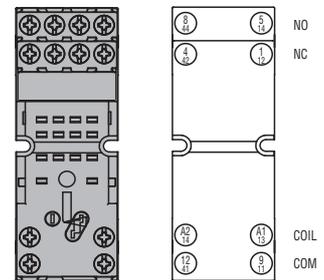
HR6XS21



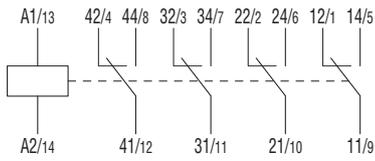
HR6XS21S



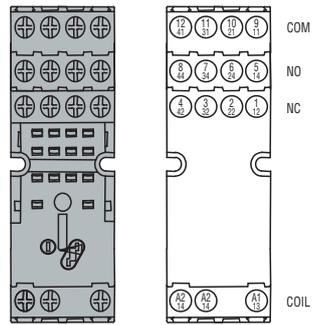
HR6XS22



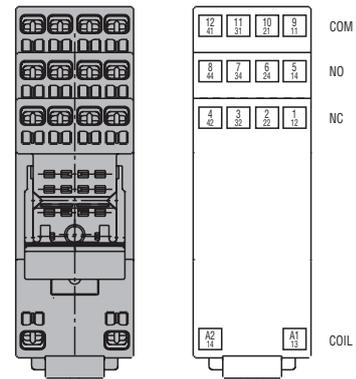
HR604C...



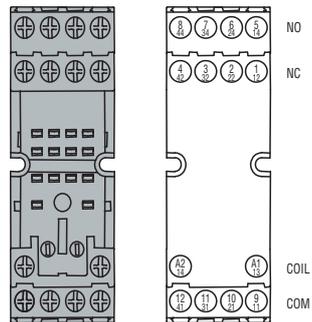
HR6XS41



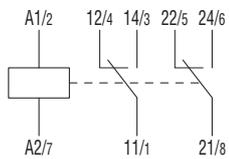
HR6XS41S



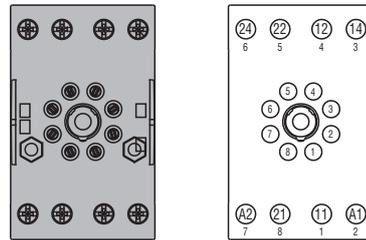
HR6XS42



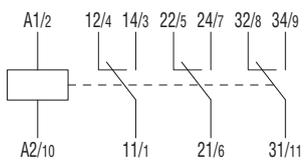
HR702C...



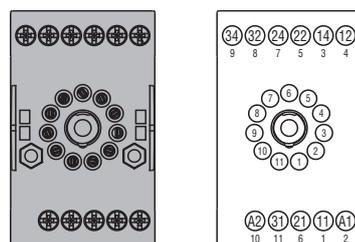
HR7XS1



HR703C...



HR7XS2



| Type | | HRA10... HR10... | HR20 1AS024 | HR20 1DS024 | HR30 1C.. | HR30 2C.. |
|--|-----------------|---------------------|------------------------|---------------------|----------------------------------|------------------|
| CHARACTERISTICS OF THE CONTACTS | | | | | | |
| Contact configuration | | 1 C/O | 1 static | 1 static | 1 C/O | 2 C/O |
| Rated insulation voltage U_i | VAC/DC | 250 | 2500 (input/output) | 2500 (input/output) | 250 | 250 |
| Rated impulse withstand voltage U_{imp} | kV | 4 | - | - | 6 | 6 |
| Conventional free air thermal current I_{th} | A | 6 | 2 | 4 | 16 ^② | 8 |
| Maximum instantaneous current | A | 20 (500ms) | 80 (10ms) | 48 (10ms) | 60 ^① | 20 ^① |
| Rated operating voltage AC1 | VA | 1500 | ④ | ⑤ | 4000 | 2000 |
| Rated operating voltage AC15 (230VAC) | VA | 360 | ④ | ⑤ | 300 ^① | 150 ^① |
| Single-phase motor control (230VAC) | kW | 0.186 | ④ | ⑤ | 0.4 | 0.2 |
| 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 |
| Minimum switching load | V / mA | 5 / 100 | 24 / 0.1 | 3 / 0.02 | 5 / 100 | |
| Contact impedance | mΩ | 100 | - | - | 100 | |
| Contact material | | Ag/Ni | - | - | AgSnO2 | |
| Max socket terminal tightening torque | Nm | 0.5 | | | 0.6 | |
| Socket screw tightening tool (cross / flat blade) | | Phillips 0 / 3.5mm | | | Phillips 1 / 4.5mm ^③ | |
| Wire section on sockets with screw terminals (min...max) | mm ² | 0.5...1.5 | | | 0.5...2.5 | |
| | AWG | 20...16 | | | 20...14 | |
| OPERATING TIMES | | | | | | |
| Closing | ms | ≤8 | 10 | 0.3 | 10 | |
| Opening | ms | ≤4 | 10 | 0.3 | 5 | |
| ENDURANCE | | | | | | |
| Mechanical | Cycles | 10,000,000 | Theoretically infinite | | 10,000,000 | |
| Electrical with load AC1 | Cycles | 30,000 ^① | Theoretically infinite | | 50,000 ^① | |
| COIL CHARACTERISTICS | | | | | | |
| Average coil consumption AC (50/60Hz) at 20°C | VA | - | - | - | 0.9 | |
| Average coil consumption DC at 20°C | W | 0.2 | - | - | 0.45 | |
| Operating range | closing | (% U_n) | ≥75 | 80...120 | 70...110 AC / 75...110 DC | |
| | opening | (% U_n) | ≥5 | | 20...55 AC / 10...30 DC | |
| Maximum cycle frequency | cycles/h | 10,000 | >100,000 | >100,000 | 3,600 | |
| AMBIENT CONDITIONS | | | | | | |
| Operating temperature | °C | -40...+70 | -30...+80 | | -40...+85 | |
| Storage temperature | °C | -40...+80 | -30...+100 | | -40...+85 | |
| Fitting position | | Any | | | | |
| OTHER CHARACTERISTICS | | | | | | |
| Indicator LED | | Yes (on the socket) | | | No | |
| Mechanical contact position indicator | | No | | | No | |
| Mechanical test actuator | | 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.

20 General purpose relays

Technical characteristics

| | HR40 1C.. | HR40 2C.. | HR50 1C.. | HR50 2C.. | HR60 2C.. | HR60 4C.. | HR70 2C.. | HR70 3C.. |
|--|----------------------------------|----------------|----------------------------------|-------------------|----------------------------------|----------------|----------------------------------|------------|
| | 1 C/O | 2 C/O | 1 C/O | 2 C/O | 2 C/O | 4 C/O | 2 C/O | 3 C/O |
| | 250 | | 250 | | 500 | | 250 | |
| | 4 | 5 | 6 | | 4 | | 6 | |
| | 16 ⓪ | 10 | 16 ⓪ | 8 | 7 | 5 | 10 | 10 |
| | 60 | 26 | 20 ⓪ | 10 ⓪ | - | - | - | - |
| | 4000 | 2500 | 4000 | 2000 | 1750 | 1250 | 2500 | 2500 |
| | 500 | 400 | 150 ⓪ | 150 ⓪ | 150 ⓪ | 150 ⓪ | 500 | 500 |
| | 0.37 | 0.3 | 0.1 | - | 0.37 | 0.37 | 1.2 | 1.2 |
| | 10 / 0.3 / 0.12 | 8 / 0.3 / 0.12 | 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 | | 5 / 100 | |
| | 100 | | 100 | | 100 | | 100 | |
| | AgSnO2 | | Ag/Ni | | Ag/Ni | | Ag/Ni | |
| | 0.6 | | 0.6 | | 0.6 | | 0.6 | |
| | Phillips 1 / 4.5mm ⓪ | | 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 | | 0.5...2.5 | |
| | 20...14 | | 20...14 | | 20...14 | | 20...14 | |
| | < 15 | | < 15 | | < 25 | | < 30 | |
| | < 5 | | < 15 | | < 25 | | < 30 | |
| | 10,000,000 | | 10,000,000 | | 20,000,000 | | 5,000,000 | |
| | 100,000 ⓪ | | 50,000 ⓪ | 20,000 ⓪ | 100,000 | | 100,000 | |
| | - | - | 1 | | 1.7 | | 3 | |
| | 0.7 | 0.5 | 0.4 | | 1.1 | | 1.5 | |
| | 75...110 | 75...110 | 70...110 AC / 75...110 DC | | 70...110 AC / 75...110 DC | | 70...110 AC / 75...110 DC | |
| | 10...30 | 10...30 | 20...55 AC / 10...30 DC | | 20...55 AC / 10...30 DC | | 20...55 AC / 10...30 DC | |
| | 3,600 | 3,600 | 3,600 | | 3,600 | | 3,600 | |
| | -40...+85 | | -40...+85 | | -40...+70 | | -40...+55 | |
| | -40...+85 | | -40...+85 | | -40...+80 | | -40...+70 | |
| | Any | | | | | | | |
| | No | | Yes | | Yes | | Yes | |
| | No | | Yes | | Yes | | Yes | |
| | No | | Yes | | Yes | | Yes | |
| | On 35mm DIN rail and with screws | | On 35mm DIN rail and with screws | | On 35mm DIN rail and with screws | | On 35mm DIN rail and with screws | |