

L-relay series, 2 contacts, 12 A

Datasheet



Application

Our relays are applied mainly in industrial and power automation systems, in signaling and protection systems and in other control and electric drives systems.

Description

The basic features of the general purpose relays are:

- Number of contacts: 2
- Rated contact switching current 12 A
- Mounting sockets for 35 mm rail (EN 50022)
- Rail sockets equipped with screw terminals

Features

- Compact plug-in design
- Flat insert connectors
- 2 C/O contacts
- Standard LED indicator
- Universal pinning faston 4.8 x 0.5 mm
- Transparent cover
- Cadmium free contacts
- Flexibility by many options
- Flash barriers

Benefits

- Proven reliability
- Light weight construction
- Long term availability
- Compact size
- Competitive pricing

Industry compliancy

- EN 60255 Relay design and environmental conditions
- EN 60947 Low voltage switch gear and control gear
- EN 60947-5-1 Electromechanical control circuit devices and switching elements
- IEC 61810 Electromechanical elementary relays
- The relays meet the requirements of the RoHS directive



L-relays

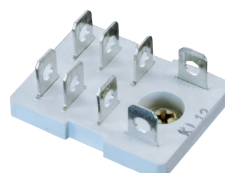
Technical specifications



Standard LED

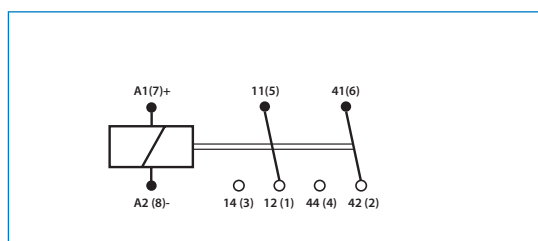


Transparent cover



Faston pinning

Connection diagram



Coil data DC-versions

Operating time at nominal voltage	
Pull-in time	15 ms
Release time	10 ms
Operating voltage range in %	0.8 - 1.1 U_{nom}
Nominal power consumption	0.9 W
Min hold-up voltage	0.1 U_{nom}

Coil code	Rated voltage U_n VDC	Coil resistance $\pm 10\%$ at 20 °C Ω	Coil operating range V DC	
			min. (at 20°C)	max. (at 55°C)
D 012	12	160	9.6	13.2
D 024	24	640	19.2	26.4
D 048	48	2600	38.4	52.8
D 110	110	13600	88	121
D 125	125	16000	176	242

**other voltages on request*



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Coil data AC-versions (50Hz/60 Hz)

Operating time at nominal voltage	
Pull-in time	15 ms
Release time	10 ms
Operating voltage range in %	0.8 - 1.1 Unom
Nominal power consumption	1.6 VA
Min hold-up voltage	0.2 Unom

Coil code	Rated voltage Un VAC	Coil resistance $\pm 15\%$ at 20 °C Ω	Coil operating range VAC	
			min. (at 20°C)	max. (at 55°C)
A 012	12	39.5	9.6	13.2
A 024	24	158	19.2	26.4
A 048	48	640	38.4	52.8
A 110	110	3450	88	121
A 230	230	16100	184	253

**other voltages on request*

Contact data

Maximum make current	20 A
Maximum continuous current	12 A (AC1; IEC 60947)
Maximum switching voltage	250 V, 400 V
Minimum switching voltage/current AgNi	5 V / 5 mA
Material	AgNi
Contact resistance	$\leq 100 \text{ m}\Omega$

Performance characteristics

Electrical life (AC1)	$\geq 10^5$
Mechanical life	$\geq 10^7$ cycles (Unpowered)
Rated switching frequency	360 ops/hour
Dielectric strength	Input output 2500 VAC Contact clearance 1000 VAC Pole - pole 2500 VAC
Isolation class	C250
Max. operating frequency	At rated load 360 cycles/hour (AC1) No load 18000 cycles/hour



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Mechanical data

Dimensions (d x w x h)	27.5 x 21.1 x 34.5 mm
Weight	35 g

Environment conditions

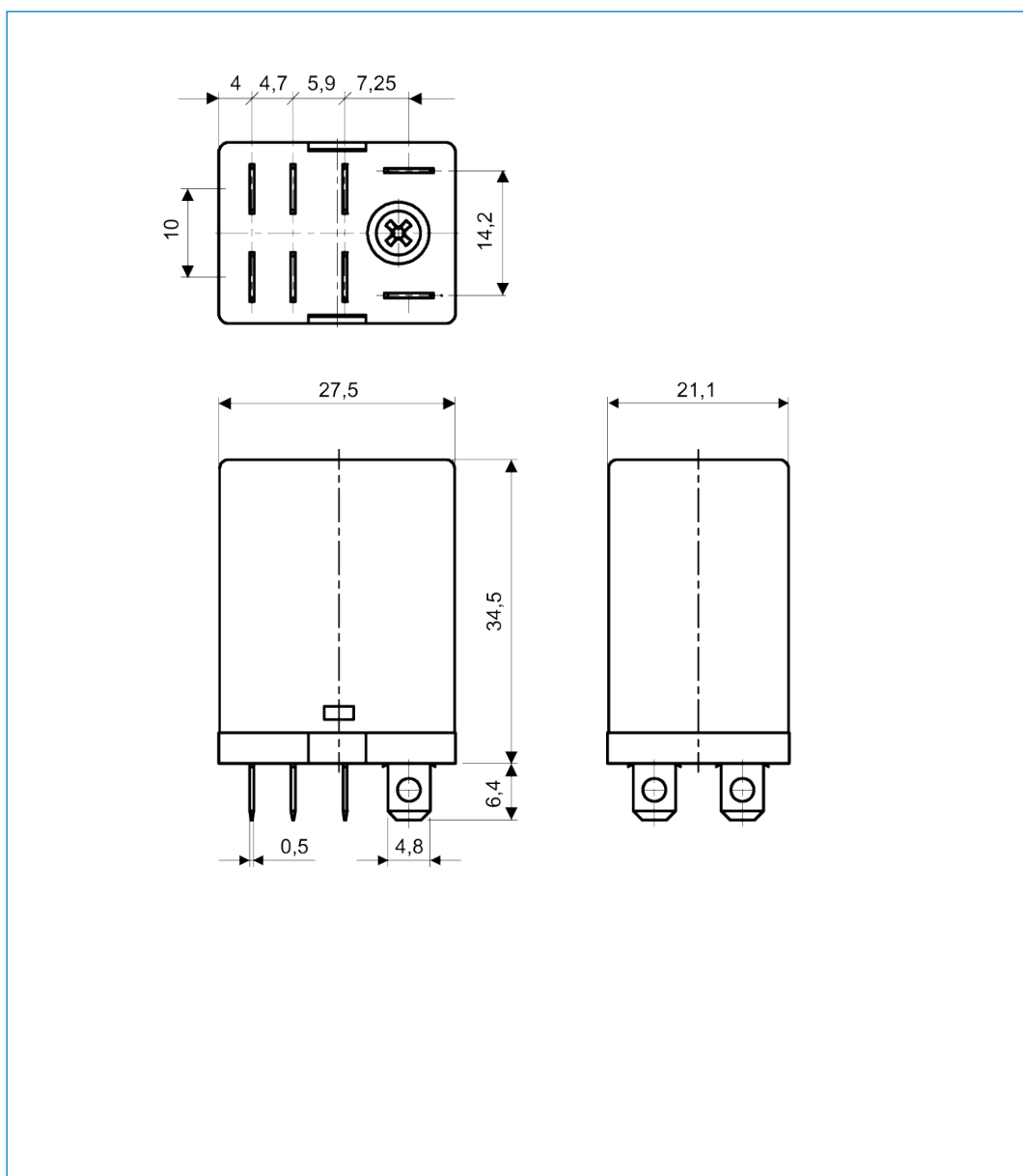
Storage temperature	-40 °C...+70 °C
Operating temperature	AC -40 °C...+55 °C DC -40 °C...+55 °C
Shock & vibrations	Shocks: 10 g Vibrations: 5 g, 10-150 Hz
Environment protection	EN 116000-3 RTI
Degree of protection	EN 60529 IP20



L-relays

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Dimensions

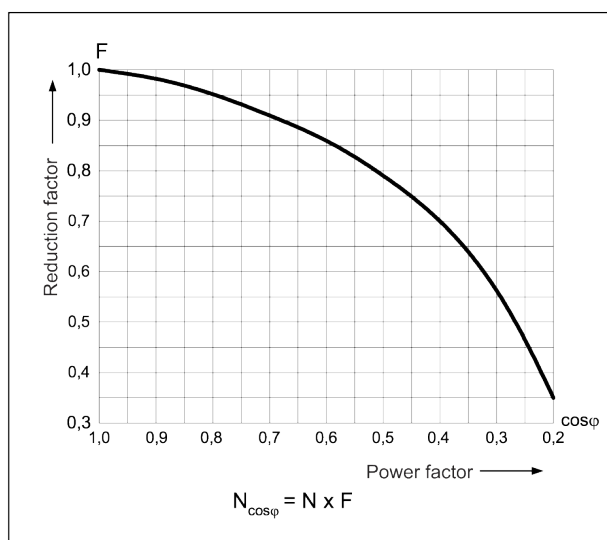
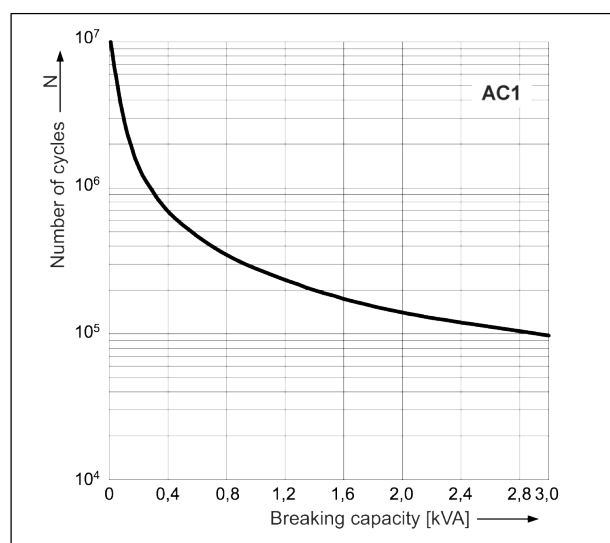


L-relays

Technical specifications

Electrical life expectancy

The life expectancy values shown below are based on factory tests. These values could be different in real life applications as environmental conditions, switching frequencies and duty cycles will influence these values.

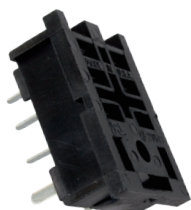


L-relays

Sockets & accessories



VL-2



VL-2PCB



CL-1

Sockets

Art. no.	Type	Applicable for	Connection	Weight (g)	Dimensions (mm)
321000650	VL-2	L2 relays, 35 mm rail or wall	Screw terminals	37	70 x 21 x 27
321000652	VL-2PCB	L2 relays	PCB	5	30 x 22 x 15

Accessories

Art. no.	Type	Applicable for	Weight	Dimensions
321000651	CL-1	Relay retaining clip, metal	-	-



L-relays

Instructions

Installation, operation, maintenance

Installation

- Install the socket and connect wiring according the identification on the terminals, plug the relay into the socket
- Reverse installation of socket is not possible due to mechanical blocking by pinning
- Do not reverse the polarity of the coilconnection when a diode is used
- Relays can be mounted tight next to each other
- Warning! Never use silicon near by relays!

Operation

- Before operate always apply voltage to coil to check correct operation
- Also switching the load a few times is advised
- Long term storage may corrode the silver on the relay pins
- By plugging the relay into the socket, the connector receivers will automatically clean the corrosion on the pins and guarantee a good connection
- Do not use the relay in places with flammable gas as the arc generated from switching could ignite gasses

Maintenance

- Correct operation of relay can easily be checked as transparent cover gives good visibility on the moving contacts
- When the relay does not appear to operate correct, please check presence of coil voltage
- Use a multimeter.
- If LED is used coil presence should be indicated, if coil voltage is present but the relay does not work, a short circuit of suppression diode is possible (The coil connection was reversed)
- If relay does not work after inspection, please replace the relay by a similar model



L-relays

Ordering codes

L2 relays (+LED)

L2-L-D012	12 VDC	321000601
L2-L-D024	24 VDC	321000602
L2-L-D048	48 VDC	321000603
L2-L-D110	110 VDC	321000604
L2-L-D125	125 VDC	321000605
L2-L-A012	12 VAC, 50/60 Hz	321000606
L2-L-A024	24 VAC, 50/60 Hz	321000607
L2-L-A048	48 VAC, 50/60 Hz	321000608
L2-L-A110	110 VAC, 50/60 Hz	321000609
L2-L-A230	230 VAC, 50/60 Hz	321000610

** other voltages on request*





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