

Miniature Power Relay LN / LNH

- 1 pole 10 A / 16 A, 1 CO or 1 NO contact
- High performance 10 A version (LN1)
- 16 A High capacity version available (LN3)
- Version for H^{OT}-applications (LNH)
- Flux proof
- Plastic materials according to IEC60335-1 (domestic appliances)





F0278-B

Applications

Domestic appliances

Approvals

 REG.-Nr. 40004596,  E214025
 Technical data of approved types on request

Contact data	LN1	LN3	LNH
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Contact configuration	1 CO or 1 NO		
Contact set	single contact		
Type of interruption	micro disconnection		
Rated voltage / max. switching voltage AC	250 / 400 VAC		
Rated current	10 A	16 A ¹⁾	10 A
Maximum breaking capacity AC	2500 VA	4000 VA	2500 VA
Limiting making capacity, max 4 s, df 10%	35 A		
Contact material	AgSnO ₂	AgSnO ₂ (AgCdO)	AgSnO ₂
Rated frequency of operation with / without load	30/300 min ⁻¹		
Operate- / release time DC coil	max 12 / 6 ms		
Bounce time DC coil, NO / NC contact	max 3 / 20 ms		

Contact ratings

Type	Contact	Load	Ambient temp. [°C]	Cycles
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IEC 61810				
LN133	NO	10 A, 250 VAC, cosφ=1	85°C	250x10 ³
LN333	NO	16 A, 250 VAC, cosφ=1	85°C	50x10 ³
LNH33	NO	10 A, 250 VAC, cosφ=1	105°C	200x10 ³
LNH33	NO	8 A, 250 VAC, cosφ=1	105°C	250x10 ³
UL 508				
LN1	NO	10 A, 250 VAC, general purpose	85°C	200x10 ³
LN3	NO	16 A, 250 VAC, general purpose	85°C	50x10 ³
LNH	NO	10 A, 250 VAC, resistive	85°C	200x10 ³

¹⁾ For 16 A at 85°C: coil power reduction to 50% necessary
 For 16 A with 100% coil power: max. ambient temperature 75°C
 For 100% coil power at 85°C: max. contact current 15 A

Coil data	LN1	LN3	LNH
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Rated coil voltage range DC coil	5...48 VDC	5...48 VDC	5...48 VDC
Operative range to IEC 61810	2	2	
Operative voltage range, % of rated coil voltage	90 - 110%		
Coil insulation system according UL1446	class F	class F	class F

Miniature Power Relay LN / LNH (Continued)

Coil versions, DC-coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power mW
005	5	3.5	0.5	62 ± 10%	400
006	6	4.2	0.6	90 ± 10%	400
009	9	6.3	0.9	202 ± 10%	401
012	12	8.4	1.2	360 ± 10%	400
024	24	16.8	2.4	1440 ± 10%	400
036	36	25.2	3.6	3240 ± 10%	400
048	48	33.6	4.8	5760 ± 10%	400

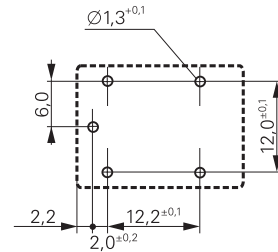
All figures are given for coil without preenergization, at ambient temperature +23°C
Other coil voltages on request

Insulation	LN1	LN3	LNH
Dielectric strength coil-contact circuit		2000 V _{rms}	
open contact circuit		1000 V _{rms}	
Clearance / creepage coil-contact circuit		≥ 2.5/2.5 mm	
Material group of insulation parts		IIIa	
Tracking index of relay base		PTI 325	
Insulation to IEC 61810-1			
Type of insulation coil-contact circuit		basic	
open contact circuit		micro disconnection	
Rated insulation voltage		250 V	
Pollution degree		2	
Rated voltage system		240 V	
Overvoltage category		II	

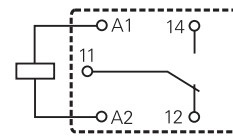
Other data	LN1	LN3	LNH
Mechanical endurance		10x10 ⁶ cycles	
Material			
RoHS - Directive 2002/95/EC		compliant per product date code 0424	
Resistance to heat and fire		according EN60335, par.30	
Environment			
Ambient temperature range	-40...85°C	-40...75 (85)°C	-40...105°C
Vibration resistance (function), NO / NC contact	>14 / 8 g, 30...400 Hz		
Shock resistance (destruction)	100 g		
Category of protection	RTII - flux proof		
Processing			
Mounting		PCB	
Resistance to soldering heat flux proof		270°C / 10 s	
Relay weight		12 g	
Packaging unit		25 / 1000 pcs	

PCB layout / terminal assignment

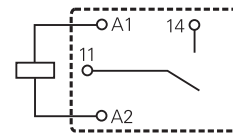
Bottom view on solder pins



S0260-AN

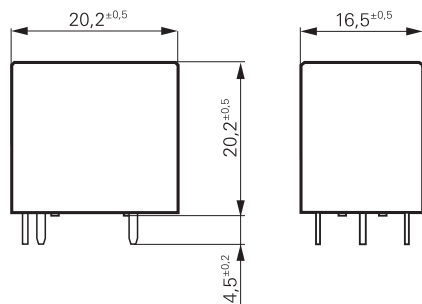


S0260-AB



S0260-AC

Dimensions



S0486-A

Miniature Power Relay LN / LNH (Continued)

Product key	Typical product key				LN	1	3	3	012
Type	LN Miniature Power Relay LN / LNH								
Version	1 10 A, 85°C		3 16 A, 85°C						
	H 10 A, 105°C								
Contact configuration	1 1 CO contact (1 form C)		3 1 NO contact (1 form A)						
Contact material	0 AgCdO		3 AgSnO ₂						
Coil	005 5 VDC		012 12 VDC						
	006 6 VDC		024 24 VDC						
	009 9 VDC		036 36 VDC						

Product key	Version	Cont. material	Cont. configuration	Coil	Part number
LN133005	LN1	AgSnO ₂	1 NO contact	5 VDC	1-1721249-4
LN133006	10 A			6 VDC	1721249-1
LN133009	85°C			9 VDC	1721249-2
LN133012				12 VDC	1721249-3
LN133024				24 VDC	1721249-4
LN133036				36 VDC	1721249-5
LN133048				48 VDC	1721249-6
LN113006			1 CO contact	6 VDC	1721249-7
LN113009				9 VDC	1721249-8
LN113012				12 VDC	1721249-9
LN113024				24 VDC	1-1721249-0
LN113036				36 VDC	1-1721249-2
LN113048				48 VDC	1-1721249-3
LNH33005	LNH		1 NO contact	5 VDC	1721253-1
LNH33006	10 A			6 VDC	1721253-2
LNH33009	105°C			9 VDC	1721253-3
LNH33012				12 VDC	1721253-4
LNH33024				24 VDC	1721253-5
LNH33036				36 VDC	1721253-6
LNH33048				48 VDC	1721253-7
LNH13005			1 CO contact	5 VDC	1721253-8
LNH13006				6 VDC	1721253-9
LNH13009				9 VDC	1-1721253-0
LNH13012				12 VDC	1-1721253-1
LNH13024				24 VDC	1-1721253-2
LNH13036				36 VDC	1-1721253-3
LNH13048				48 VDC	1-1721253-4
LN333005	LN3		1 NO contact	5 VDC	1721743-6
LN333006	16 A			6 VDC	1721743-1
LN333009	85°C			9 VDC	1721743-4
LN333012				12 VDC	1721743-2
LN333024				24 VDC	1721743-3
LN313005			1 CO contact	5 VDC	1721548-5
LN313006				6 VDC	1721548-1
LN313009				9 VDC	1721548-2
LN313012				12 VDC	1721548-3
LN313024				24 VDC	1721548-4