



Save on energy, starts from me



LEADING THE INNOVATIVE ENERGY-SAVING RECYCLING ECONOMY, EMISSION REDUCTION!



Factory



Hospital



Building



Community



School



Household



Low Carbon



Wireless



Energy Saving

## LR1731-120

Magnetic Latching Relay  
Load Control Switch

Three-Phase

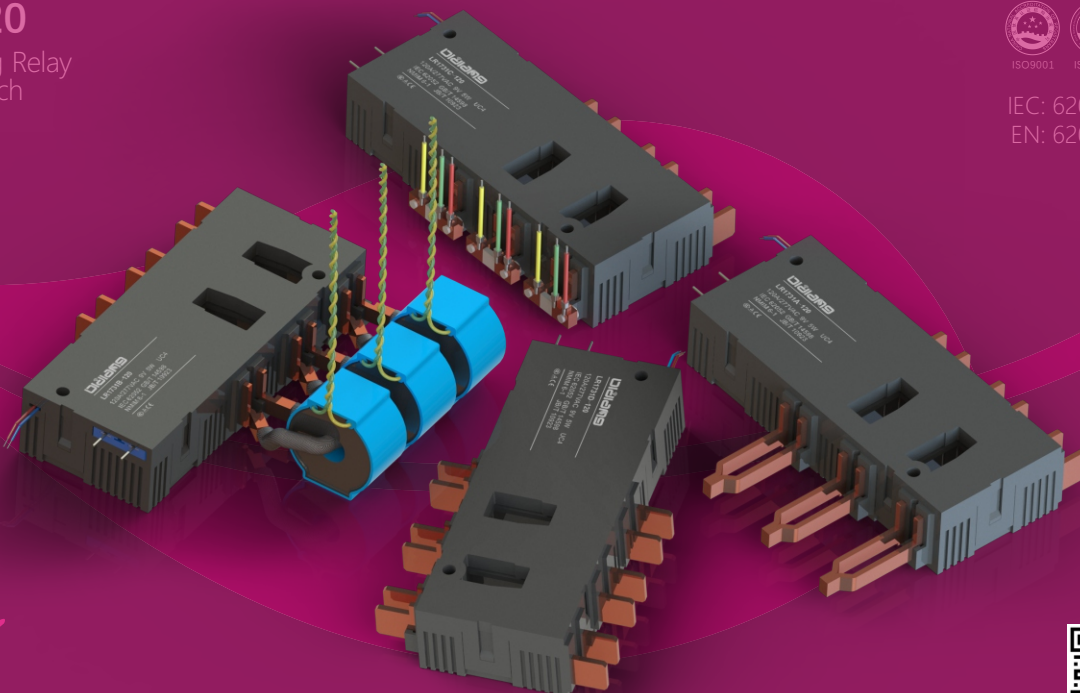
120A

277VAC

9V

5W

Uc4



IEC: 62052-31:2015  
EN: 62052-31:2016  
NMIM 6-1



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Three-Phase  
120A 277VAC  
9V 5W



## FEATURES

- With UC4 standard certification;
- Applicable environmental temperature:  $-40^{\circ}\text{C} \sim +90^{\circ}\text{C}$ ;
- Highly reliable under overheat and overload conditions, functions in  $120^{\circ}\text{C}$  after passing 120A current for a long period;
- Widely used in energy meter and compound switch;
- Fast response time: 7ms AC half wave drive;
- Conform to the IEC 62052-31 2015 and NMIM 6-1 standard;
- Meet the requirements of temperature rise test;
- Comply with the RoHS environmental protection requirements.

## CONTACT LOAD

Rated load (resistive) : 120A 277VAC  
Contact material : AgSnO<sub>2</sub>  
Max switching current : 120A  
Max switching voltage : 440VAC  
Max switching power : 52800VA

## COIL PARAMETER

	Resistance ( $\Omega$ ) 20 $^{\circ}\text{C}$	Rated voltage (VDC)	Releasing voltage (VDC)	Rated current (ADC)	Pulse width (ms)
Single coil	16.2 $\pm$ 10%	9.0	3.6~6.3	MIN 0.56	100

Note: considering the temperature effect, use and reliable working voltage is recommended for 10 ~ 12 VDC.

## PERFORMANCE PARAMETER

Loop resistance :  $\leq 0.50\text{m}\Omega$   
Closing time :  $\leq 20$  ms  
Releasing time :  $\leq 20$  ms

### Life

- Electrical life : 120A/277VAC 10,000 time (5000 time PF=1, and 5000 time PF=0.5);
- Mechanical life : 1,000,000 time.

### Impact resistance current :

- Safe short-time current patience :
  - Meet: 10kA/288VAC/10ms (Three times);
  - Meet: 10kA/318VAC/60ms (One time).

Vibration resistance: 10~55Hz, double 1.5mm.

### Impact resistance:

- Durable :  $\geq 10\text{g}$ ;
- Destructive :  $\geq 100\text{g}$ .

### Medium withstand voltage : (leak current : 1mA)

- Among contacts :  $> 2000$  VAC(50/60 Hz 1min 60s);
- Among poles :  $> 4000$  VAC(50/60 Hz 1min 60s);
- Between contacts and coil :  $> 4000$  VAC(50/60 Hz 1min 60s).

### Resistance to impact pulse compression :

- Among contacts :  $> 4\text{kV}(1.2/50\text{us})$ ;
- Between contacts and coil :  $> 20\text{kV}(1.2/50\text{us})$ .

### Insulation resistance :

- Among contacts : 1000  $\text{m}\Omega$ (500 V DC);
- Between contacts and coil : 1000  $\text{m}\Omega$ (500 V DC).

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## WELDING TEMPERATURE RESISTANT

The normal temperature of the welding:  $260 \pm 5^\circ\text{C}$   $10 \pm 1\text{s}$ , Relay is no abnormal;  
Soldering resistance :  $250 \pm 5^\circ\text{C}$   $3 \pm 1\text{s}$  Terminal feet are immersion tin parts should be more than 90% covered a layer of coke in a row.

Temperature resistance

- Heat-resisting: In the  $95 \pm 2^\circ\text{C}$  temperature, place 10 H ; Room temperature recovery after 2 h relay structure and the performance without exception ;
- Cold-resistant: In the  $-40 \pm 2^\circ\text{C}$  temperature, place 2H, Room temperature recovery after 2 h relay structure and the performance without exception ;

Moisture-proof :

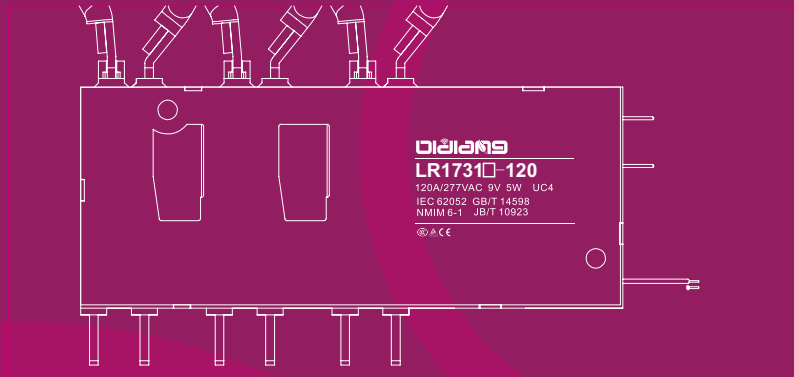
- At the  $40 \pm 2^\circ\text{C}$ , relative humidity: 90%-95%, place the 48H, normal temperature after 2h, relay structure, performance, without exception, and the insulation resistance is not less than  $10\text{M}\Omega(500\text{VDC})$ .

## APPEARANCE

Color: black

Printing position: According to the installation requirements literally up.

Reference diagram:



## STORAGE CONDITIONS

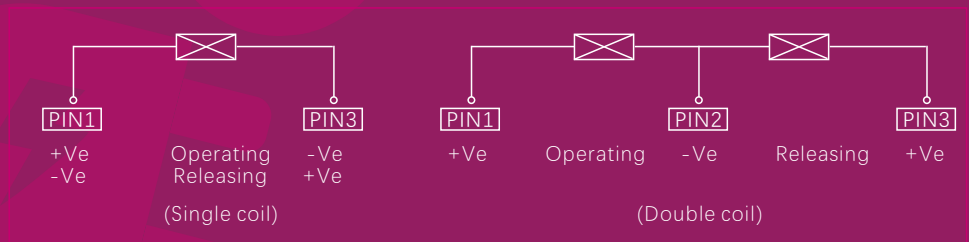
Temperature :  $0^\circ\text{C} \sim 40^\circ\text{C}$   
Humidity : 20%~80% RH

Environment :

- Product storage environment there can be no corrosive gas,
- Storage of products should avoid direct sunlight.

## WIRING DIAGRAM

Coil control



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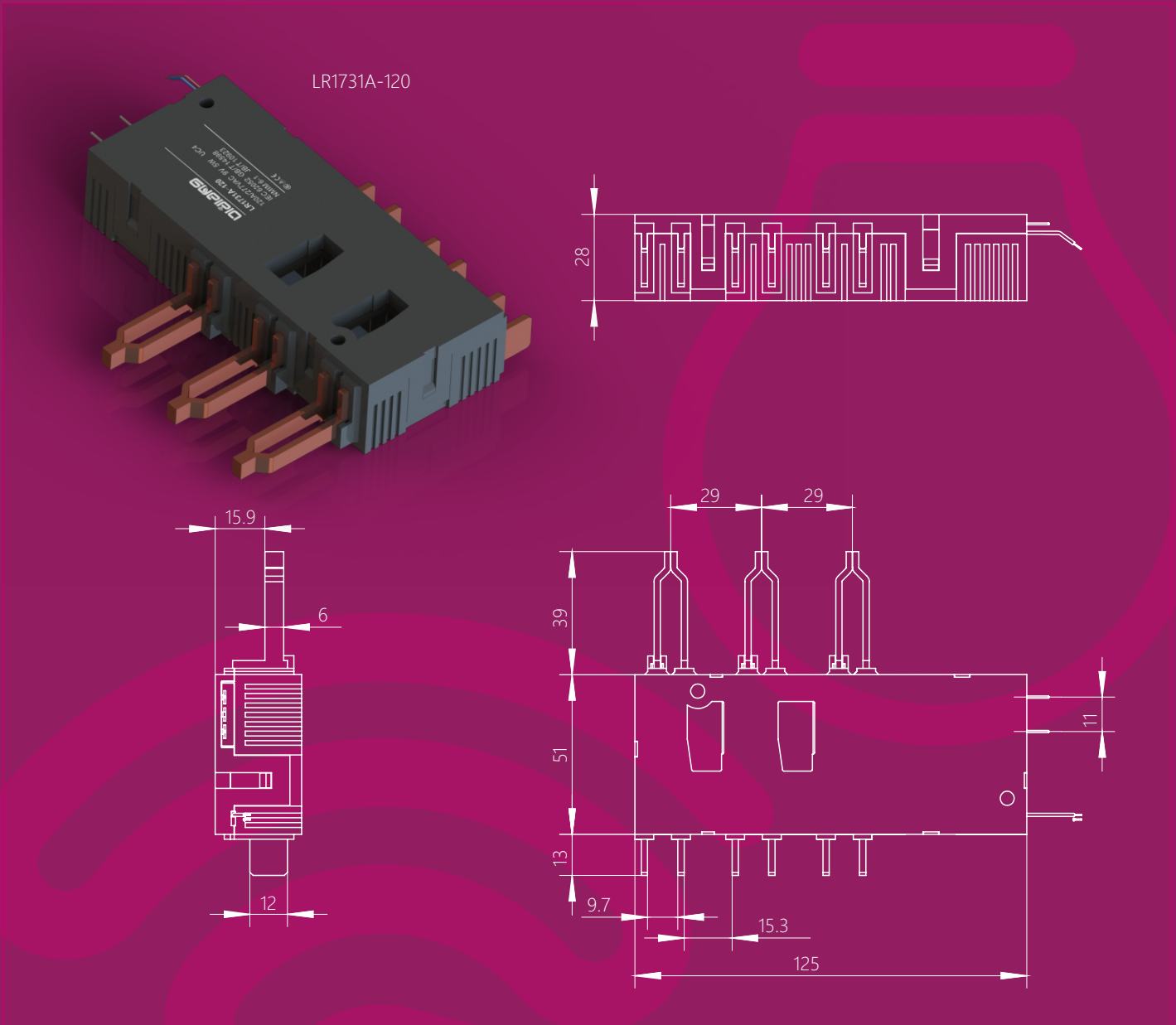
Three-Phase  
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## OUTLINE SIZE AND CONNECTION DIAGRAM (mm)

Undimensioned tolerance  
< 1mm: ±0.2mm  
1~5mm: ±0.3mm  
> 5mm: ±0.5mm

Mounting hole size tolerance  
±0.4mm



Note: The contact status to closed.

## MATTERS NEEDING ATTENTION

Special told that matters :

Special requirements (such as: in strong magnetic, explosive and extreme high and low temperature more harsh environments, such as using, ultrasensitive actions, ultra low power, low resistance, high pressure, low temperature rise and other requirements, etc.) shall be negotiated in advance, communication before placing an order, otherwise in accordance with the requirements of regular supply.



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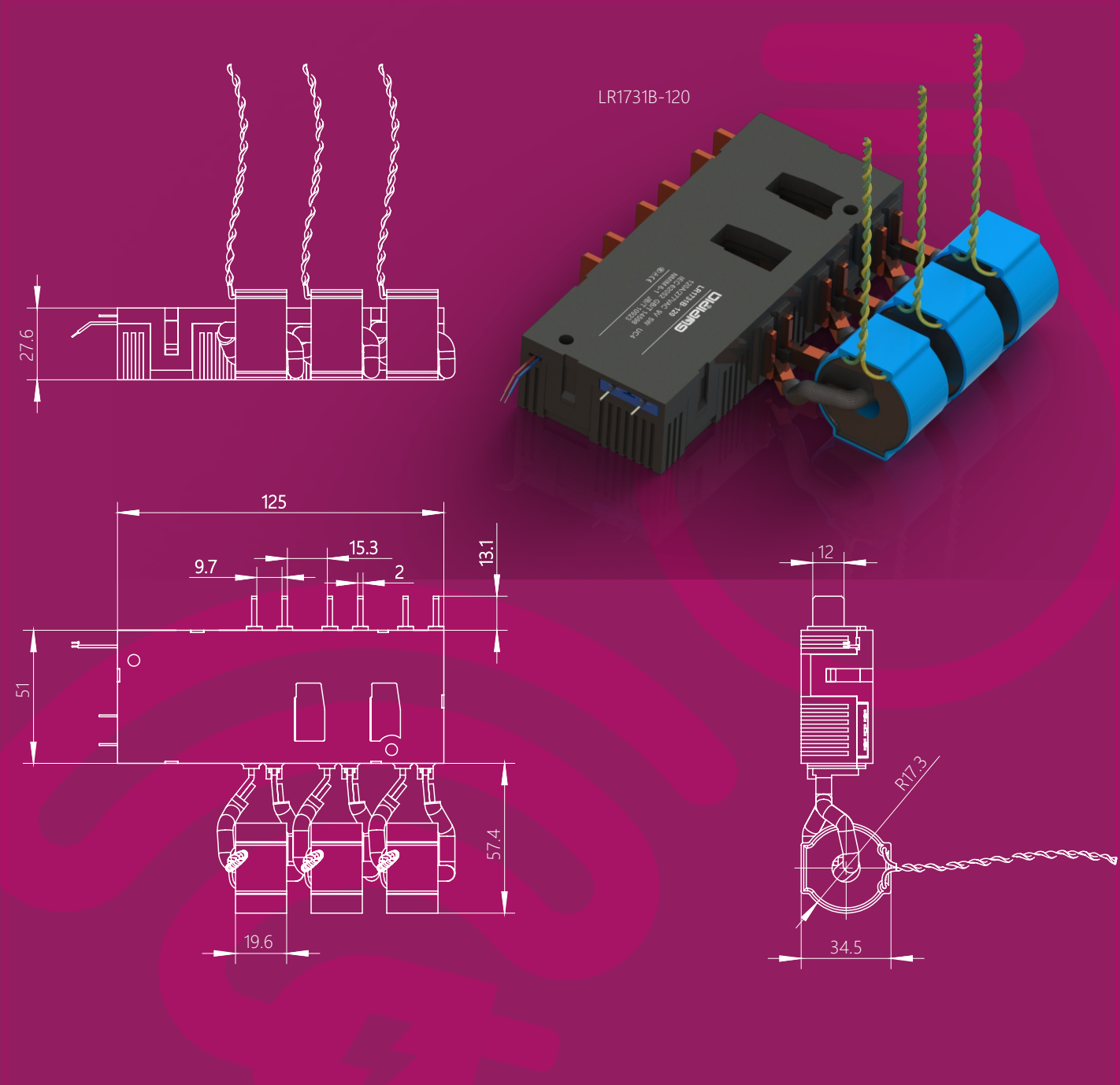
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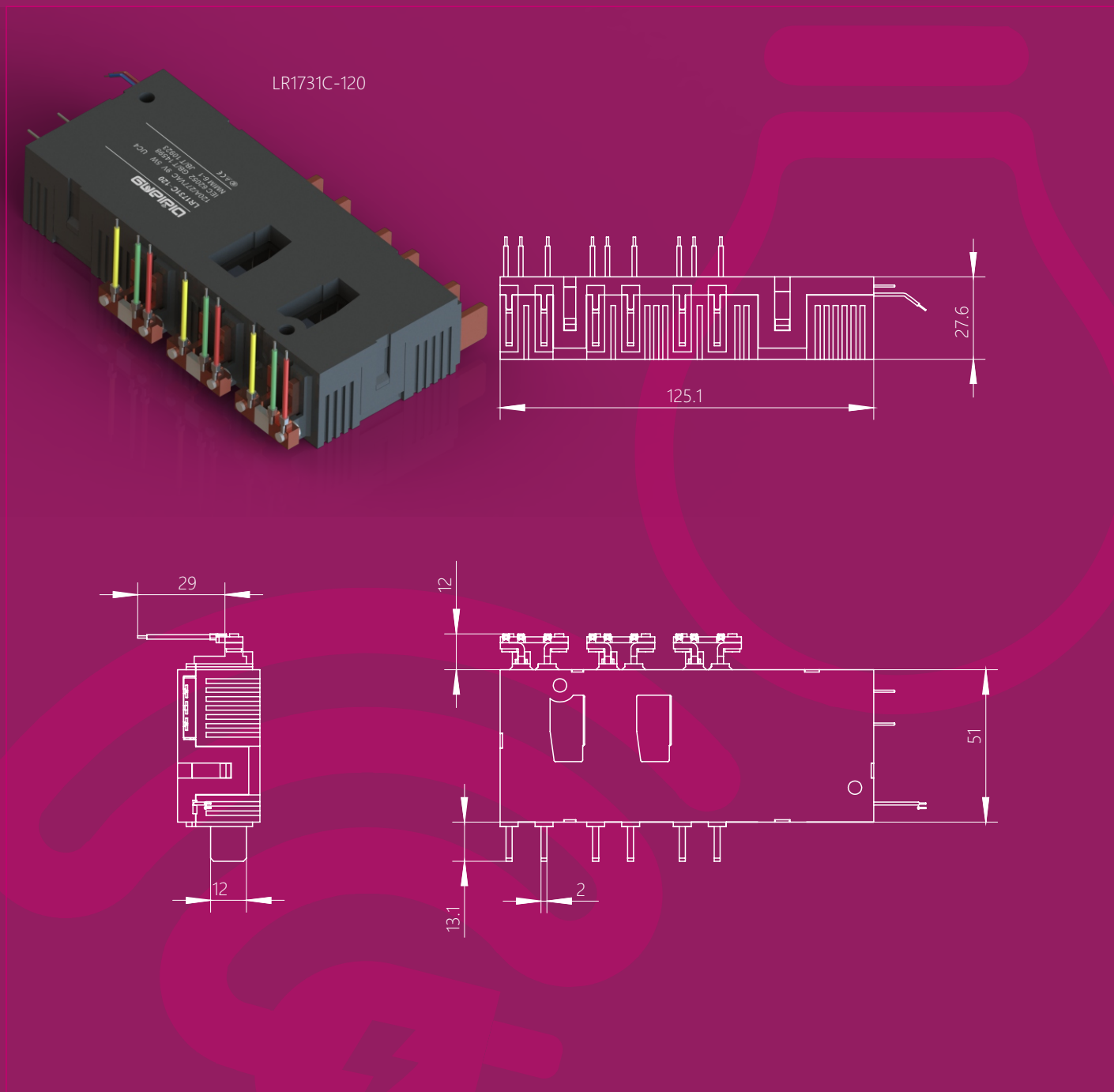
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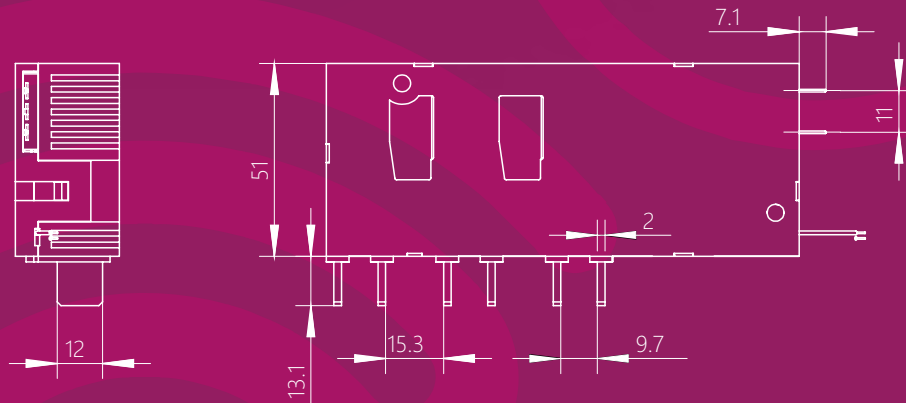
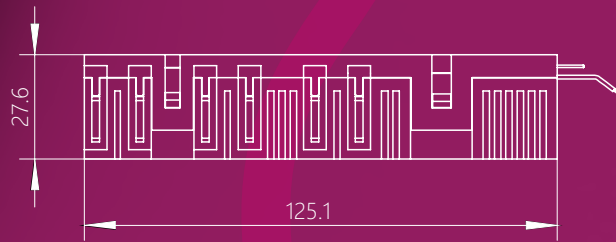
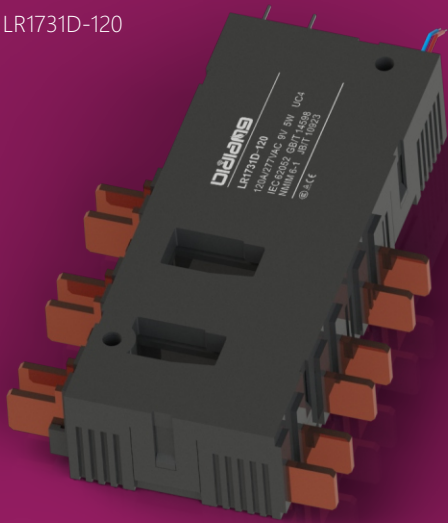


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Undimensioned tolerance  
< 1mm: ±0.2mm  
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> 5mm: ±0.5mm

Mounting hole size tolerance  
±0.4mm

LR1731D-120



Note: The contact status to closed.

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Magnetic Latching Relay  
Load Control Switch

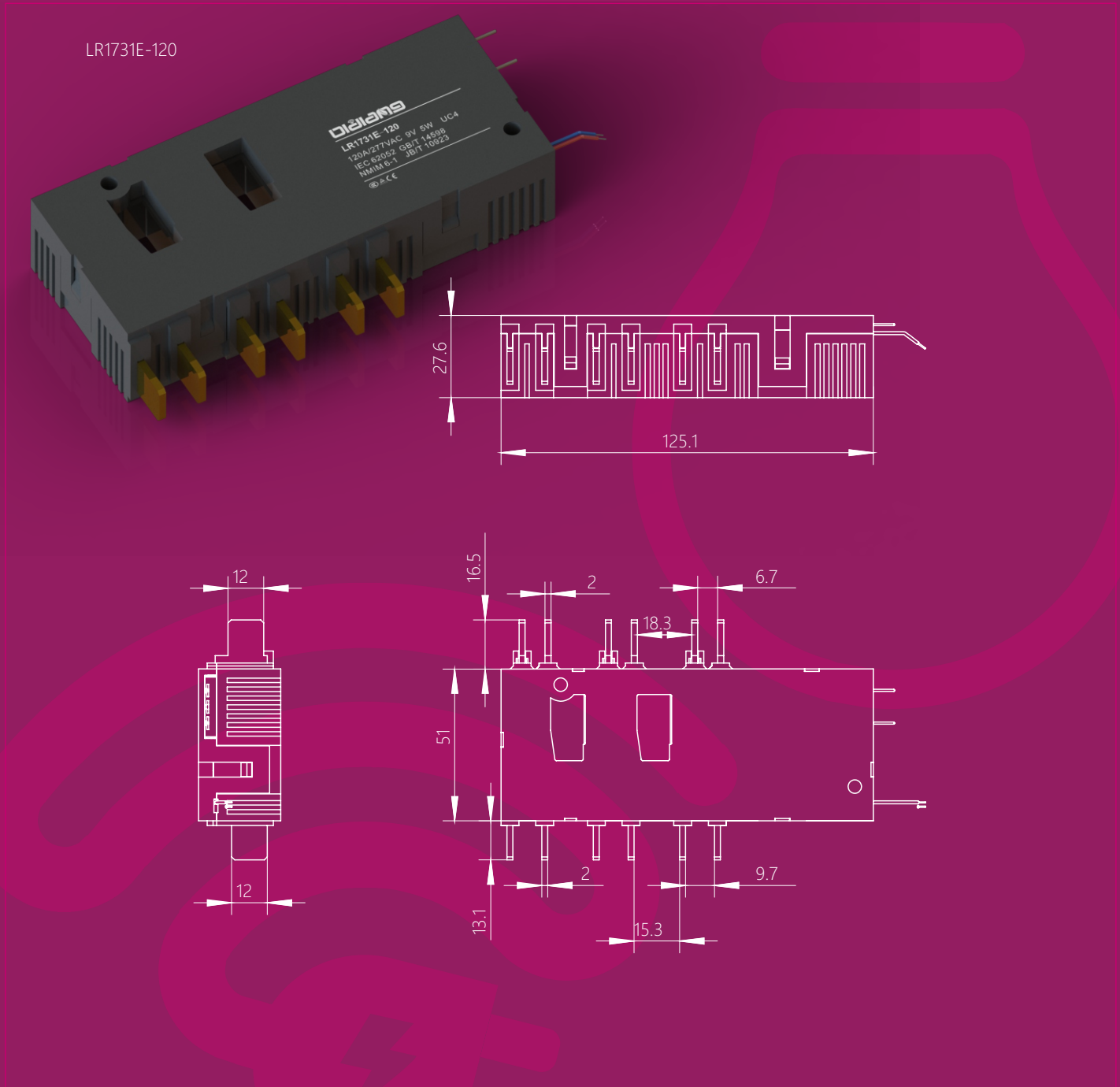
Three-Phase  
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## OUTLINE SIZE AND CONNECTION DIAGRAM (mm)

Undimensioned tolerance  
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1~5mm: ±0.3mm  
> 5mm: ±0.5mm

Mounting hole size tolerance  
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Note: The contact status to closed.



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