

REL120E Load Switch for Smart Meters

Technical Data Sheet



- Fully UC3 Rated at 120A / 276V
- Exceeds the requirements of IEC62052-31 in:
 - LINKY (French Smart Meter standard)
 - SMETS2 (UK Smart Meter Standard)
 - 7KA short circuit requirement (Australian Standards)
- 4KV Dielectric Strength
- RoHS Compliant
- Low self heating
- Long electrical Lifetime reliability
- Fully Customisable



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Cambridge UK

Product Overview

- **IEC 62052-31/IEC 62055-31 UC3:**
 - Meets FULL UC3 Short circuit and Electrical Endurance test requirements at 120A/276V
- **Design security:**
 - A unique Patent Protected Design
- **Minimized inventory and cost**
 - Manufactured in India

Key Features

- **Reduced Heat Rise:**
 - Superior low-heating performance
- **Long lifetime reliability:**
 - Industry leading 'contact settling' time
- **Allows Optimisation of the Meter Power Supply:**
 - Fast Operation



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Performance Data

IEC 62052-31 Capability	UC3 at 120A/276V
Rated UC3 Load	120A
Nominal Voltage	230V
Frequency	50Hz
Contact Materials	AgSnO2
Contact Form	Normally Closed
Electrical Endurance	5000 Cycles (Resistive PF1), then 5000 Cycles (Inductive PF0.5) 100 Amps, 276 Volts
Pulse width Requirement	Min. 50ms

Insulation Information

AC Dielectric Strength	
Coil to Contact on new switch	4KV
New switch – open contacts	2KV
After UC3 electrical Endurance	1KV
DC Impulse Dielectric	
Coil to Contact on new switch	8KV
New switch – open contacts	4KV
After UC3 electrical Endurance	2KV
Distance Between terminals	8.75mm



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Technical Information	
Switch Circuit Resistance	<250 micro Ohms
Product Weight	52g
Product Dimensions	37mm x 43mm x 22mm
Mechanical Endurance	100K cycles (360 cycles per min.)
Shock test	50g
Vibration Test	10-150Hz, 20m/s ² acceleration
Accelerated Life Test	85°C, 85%RH, 600 Hours
Flammability Rating	V0
Customisation	Fully customisable for efficient integration into Smart Meters

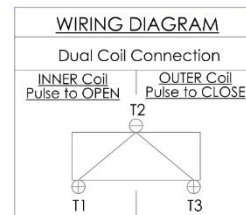
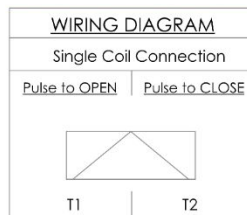
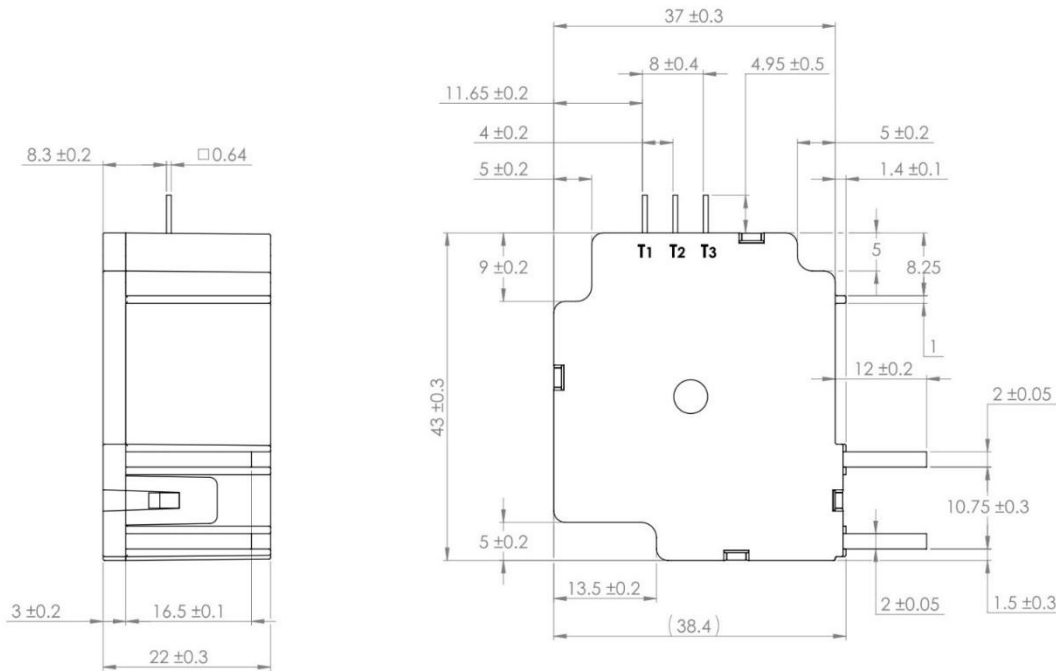


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Nominal Voltage (V)	coil type	Resistance (+/-10%) (Ohm)	
6	Single	11.00	
	Twin	Inner	4.50
		Outer	4.50
12	Single	36.00	
	Twin	Inner	18.00
		Outer	18.00
24	Single	130.00	
	Twin	Inner	80.00
		Outer	80.00

Minimum Pulse Duration for all REL coils: 0.050 Seconds. The above data is a representative example. Specific parameters will be confirmed for custom applications

1. There is a possibility that during the shipping /and or fitment process the state of relay could change. We recommend all relays are switched before use
2. Moving or bending bus bars of relays supplied can damage the internal structure of the relay
3. Relays should be used within 6 months of receipt. Keep contacts in the closed state

