KLT-L SERIES

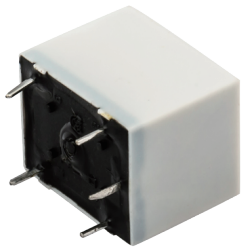
POWER RELAY

c UL us
File No.:E75887

File No.:R 50383370

RoHS Compliant

Patent No.:201120133518.4



FEATURES

- Highly reliable, low cost
- Miniature size & large switch capacity up to 15A
- High dielectric strength type
- Fully Sealed
- Green Energy Saving

CONTACT RATINGS

Contact Arrangement	1A, 1C
Contact Resistance	≤100mΩ（1A 24VDC）
Contact Material	AgSnO
Contact Rating(Resistive)	3A 120VAC/28VDC; 6A 120VAC/28VDC; 12A 120VAC/28VDC; 15A 120VAC/28VDC
Max. Switching Voltage	120VAC/28VDC
Max. Switching Current	15A
Max. Switching Power	1800VA/420W
Mechanical Life	1×10^6 operations
Electrical Life	See more details at "safety approval ratings"

CHARACTERISTICS

Insulation Resistance		100MΩ（at 500VDC）
Dielectric Strength	Between coil & contacts	1500VAC 1min
	Between open contacts	1000VAC 1min
Reacting time (at nomi. volt.)		≤8ms
Resetting time (at nomi. volt.)		≤5ms
Humidity		45% ~ 85% RH
Operation temperature		-40°C~+85°C
UL Class F		Insulation System Class F
Shock Resistance	Functional	29.4m/s^2
	Destructive	980m/s^2
Vibration resistance		10Hz to 55Hz 1.5mm DA
Unit weight		Approx. 12g
Construction		Sealed Type, Flux Tight Type

Notes: The data shown above are initial values.

ORDERING INFORMATION

KLT F 1C 12 DC12 - 2 - L - XXXX

- Model: KLT
- F:Class F
- Contact Arrangement: 1A:1 Form A 1C:1 From C
- Contact Arrangement: 3=3A, 6=6A, 12=12A, 15=15A
- Coil Voltage: 5, 6, 9, 12, 24, 48VDC
- 2:Flux Tight Type Blank:Sealed Type
- L:Latching LR=Reverse Polarity
- Customer Code

Notes:

1. PC board assembled with dust cover type and flux tight type relays can not be washed and/or coated.
2. Dust cover type and flux tight type relays can not be used in the environment with dust, or H_2S, SO_2, NO_2 or similar gaseous environment etc.

COIL DATA at 25°C

Nominal Voltage VDC	Action/Reset Voltage VDC	*Impulse Width ms	Coil Resistance Ω±10%
5	4.0	≥30	31
6	4.8	≥30	45
9	7.2	≥30	100
12	9.6	≥30	180
24	19.2	≥30	720
48	38.4	≥30	2880

* For the Set time/Reset time it is recommended to use a minimum 30 ms pulse duration for the nominal coil voltage to compensate for varying ambient temperature and relay aging.

COIL

Coil Power	800mW

SAFETY APPROVAL RATINGS

UL&CUL	5A 277VAC, Ballast, 75ºC, 6×10^3OPS 5A 120VAC, Ballast, 75ºC, 6×10^3OPS
TüV	3A 120VAC/28VDC, 3×10^4OPS 6A 120VAC/28VDC, 3×10^4OPS 12A 120VAC/28VDC, 3×10^4OPS 15A 120VAC/28VDC, 3×10^4OPS

NOTES:

1. All values without specified temperature are at 25°C.
2. The above lists the typical loads only. Other loads may be available upon request.

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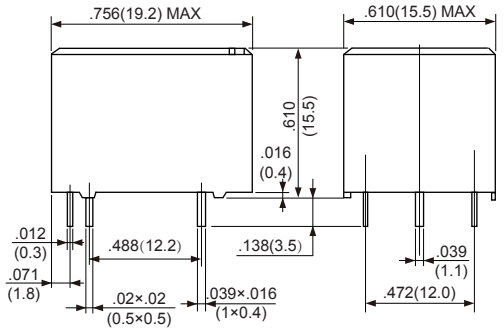
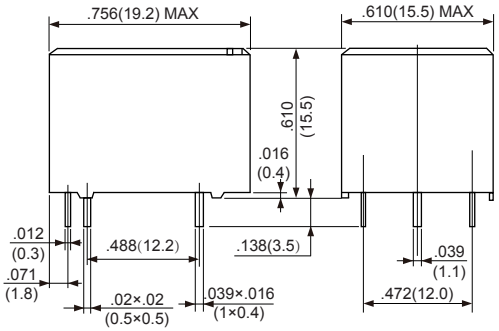
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT.

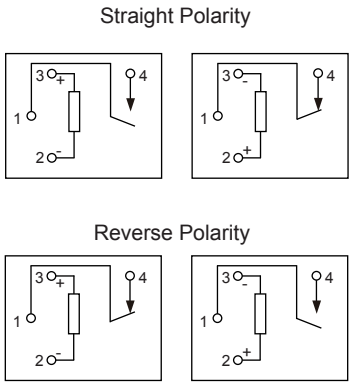
Unit: inch (mm)

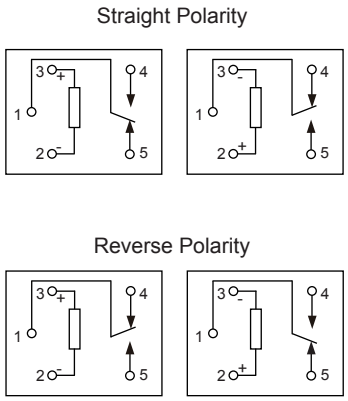
Outline Dimensions



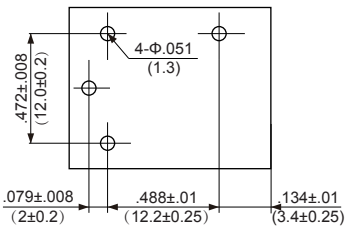


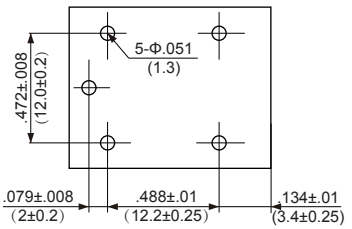
Wiring Diagram (Bottom view)





PCB Layout (Bottom view)





Unless otherwise specified tolerances are:		
≤1mm	＞1mm and ≤5mm	＞5mm
±0.2mm	±0.3mm	±0.4mm

* The tolerance without indicating for PCB layout is always ±0.1mm.

Notice:

1. Relay is on the “reset” or “set” status when being released from stock, with the consideration of shock risen from transit and relay mounting, relay would be changed to “set” or “reset” status, therefore, when application (connecting the power supply), please reset the relay to “set” or “reset”status as required.
2. Do not energize voltage to “set” coil and “reset” coil simultaneously. Long energized time (more than 1 min) should be avoided.

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PACKAGING SPECIFICATION

TUBE	INNER CARTON	OUTER CARTON	OUTER CARTON SIZE
20PCS	1000PCS	2000PCS	L480mm*W245mm*H335mm

APPLICATION GUIDELINES

Automatic Soldering

* Flow solder is the optimum method for soldering.
* Adjust the level of solder so that it does not overflow onto the top of the PC board.
* Unless otherwise specified, solder under the following conditions depending on the type of relay.

Preheat time 20°C-100°C	Rising slope 20°C-120°C	Decreasing slope Peak-150°C	Welding temperature 255°C-265°C
90±5 seconds	＜3°C/s	＜4°C/s	3~5s

Hand Soldering

* Keep the tip of the soldering iron clean.

Solder Iron	30W or 60W
Iron Tip Temperature	Approx. 350°C 662°F
Solder Time	Within approx. 3 seconds

* Immediate air cooling is recommended to prevent deterioration of the relay and surrounding parts due to soldering heat.
* Although the sealed type relay can be cleaned, avoid immersing the relay into cold liquid (such as washing solvent) immediately after soldering. Doing so may deteriorate the sealing performance.

Discard the dropped product