

<FEATURE>

- Large current capacity (81A 1hour at 20°C)
- Two coil latching type
- High heat resistance
- Flux tight housing
- Pb free
- Through-hole reflow soldering available



<APPLICATION>

- Power supply, Motor control such as fan and pumps, Heater control, CR circuit control, Lamp control

<PART NUMBER SYSTEM>

EM1KT	-	7	U	6	S	
Type						Enclosure
						Must operate voltage
						Contact Material
						Coil Resistance
						Nil: Unsealed
						S: Sealed
						6: 7.2V
						U: Silver oxide complex alloy (Standard)
						7: 80Ω

Contact Form	Contact Material	Coil Nominal Voltage	Coil Resistance	Sealed Type	Unsealed Type
1 form U	Standard	12VDC	80Ω	EM1KT-7U6S	EM1KT-7U6

<COIL RATING>

(Ambient temperature: 20°C)

Coil Nominal Voltage	Nominal Operating Power		Coil Resistance (±10%)		Set Voltage ⁽¹⁾	Reset Voltage ⁽¹⁾
	Set	Reset	Set	Reset		
12VDC	1.8W	1.8W	80Ω	80Ω	7.2VDC	7.2VDC

(1) Test by pulse voltage

<SPECIFICATIONS>

(Ambient temperature: 20°C)

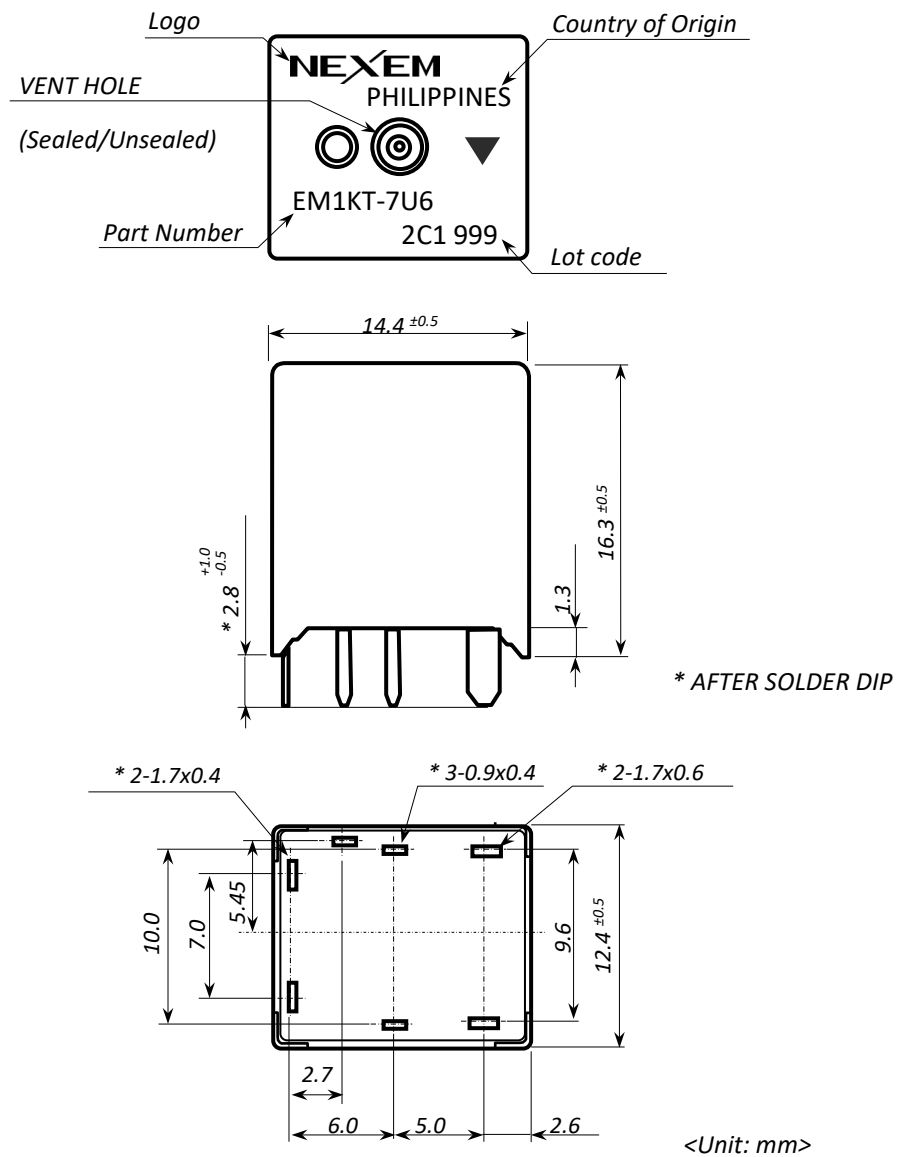
Items		Specifications
Contact form		1 form U
Contact rating	Max. switching voltage ⁽²⁾	16Vdc
	Max. switching current ⁽²⁾	100A ON / 60A OFF at 14Vdc
	Min. switching current	1A at 5Vdc
	Max. carrying current ⁽³⁾	81A at 14Vdc for 1hour
	Contact resistance	2.5mΩ typical, 25mΩ max. (6Vdc-7A voltage drop method, initial)
	Rated load	40A-14Vdc, Resistive load
Contact material		Silver oxide complex alloy
Operate time ⁽⁴⁾		10ms max.
Release time ⁽⁴⁾		10ms max.
Insulation resistance		100MΩ min. at 500Vdc
Breakdown voltage	Between open contacts	500Vac min. for 1minute
	Between coil and contact	500Vac min. for 1minute
Shock resistance	Misoperation	98m/s ²
	Destructive failure	980m/s ²
Vibration resistance	Misoperation	10 to 300Hz, 43m/s ²
	Destructive failure	10 to 500Hz, 43m/s ² for 200hours
Ambient temperature		-40 to +125°C (no freezing and condensation)
Life expectancy	Mechanical	1,000,000 cycles
	Electrical	100,000 cycles (Rated load)
Weight		8g typical

(2) Resistive, 10cycles

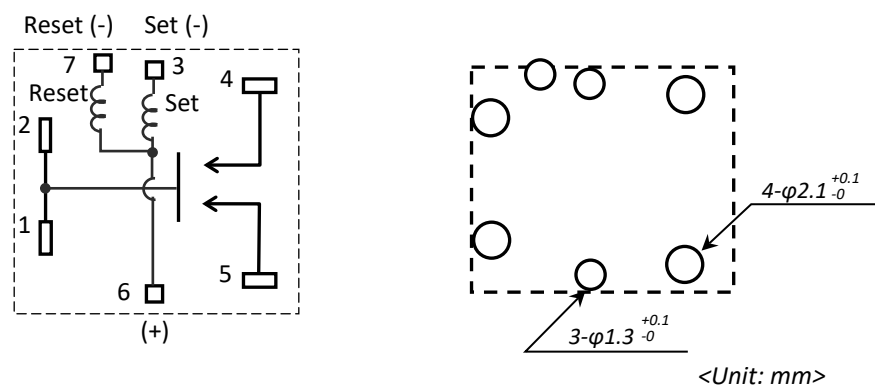
(3) Copper thickness: 105μm, width: 15mm

(4) Excluding contact bounce, nominal voltage applied, without flywheel coil diode

<DIMENSIONS>



<SCHEMATIC AND PCB PAD LAYOUT (BOTTOM VIEW)>



<NOTICE>

- All specifications in this catalog and production status of products are subject to change without notice. Prior to the purchase, please contact EM Devices for updated product data.
- Please request for a specification sheet for detailed product data prior to the purchase.
- Before using the product in this catalog, please read "AUTOMOTIVE POWER RELAY USER'S MANUAL" in web site. (<https://www.em-devices.com/en/>)
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<CAUTION FOR LATCHING RELAYS>

- Apply a voltage to the coil in the polarity specified by the internal connection diagram of the relay. With a double coil latching type relay, do not apply voltage in a manner that both the set and reset coils are energized at the same time.
- A latching relay is driven by a pulsating coil voltage. The pulse width of this drive voltage must be 10 ms to 1000 ms. If the pulse is too short, the relay may not operate.
- A latching relay is factory-set to the reset state for shipment. However, it may be set while being transported due to vibration or shock. Make sure that the relay is reset before reflow mounting on the PCB, and when its application system starts operating. When the relay is employed in a portable system, the circuit must be designed so that the relay is reset at the beginning of operation of the system because the relay may be set by unexpected vibration or shock.