



KUL series

10 Amp Magnetic Latching Relay

File E22575

File 15734

Users should thoroughly review the technical data before selecting a product part number. It is recommended that users also seek out the pertinent approvals files of the agencies/laboratories and review them to ensure the product meets the requirements for a given application.

Features

- Single or dual-wound DC coils or single-wound AC coils.
- Contact arrangements to 3PDT.
- Reset occurs by reversing polarity in a single coil relay or by energizing the reset winding in dual coil relays.
- Uses same sockets as other KU relays.
- Well suited for applications such as alarm systems, machine tools, battery chargers and process controls.

Contact Data @ 25°C

Arrangements:

DC Single Coil: 1 Form C (SPDT), 2 Form C (DPDT) and 3 Form C (3PDT).

DC Dual Coil: 1 Form C (SPDT) and 2 Form C (DPDT).

AC Single Coil: 1 Form C (SPDT), 2 Form C (DPDT) and 3 Form C (3PDT).

Materials: Silver-cadmium oxide.

Expected Life:

Mechanical: 10 million operations.

Electrical: 100,000 operations minimum at rated load.

Contact Ratings

Contact Code	Arrangement	Ratings
5	1,2,3 poles	10A @ 28VDC or 240VAC, 80% PF; 1/4 HP @ 120VAC, 1/3 HP @ 240VAC

Initial Dielectric Strength

Between Open Contacts: 500V rms.

Between Adjacent Contacts: 1,500V rms.

Between Contacts and Coil: 1,500V rms.

Coil Data @ 25°C

Duty Cycle: Continuous. (Latch and reset not to be energized simultaneously).

Initial Insulation Resistance: 100 megohms, minimum.

Initial Breakdown Voltage: 1500V rms, 60 Hz. between all elements.

Note: On single coil AC models one terminal is common. Latch/Reset function is accomplished by input in series with a diode to provide the correct polarity to the coil. To perform either function, the terminal not being used (Latch or Reset) must be open or isolated with no other path to common or ground.

Coil Data

	Nominal Voltage	DC Resistance in Ohms ± 10%†	Must Operate Voltage	0.5 W Resistor
DC Coils	Single Coil			
	12	120	9.0	—
	24	472	18.0	—
	48	1,800	36.0	—
	Dual Coil*			
	12	90	9.0	—
24	350	18.0	—	
48	1400	36.0	—	
AC Coils 50/60 Hz.	Single Coil with Diodes**			
	24	176	20.4	680Ω
	120	3,700	102.0	15,000Ω
	240	17,900	204.0	68,000Ω
	Dual Coil			
	24	Latch 100 Reset 250	20.4	—
120	Latch 2525 Reset 7800	102.0	—	

* Dual coil available only with 1 or 2 Form C contacts. On standard dual coil relays, the latch and unlatch voltage must be the same. For unlike voltages, please contact your sales representative.

** Diodes and resistors included inside relay with 1 and 2 Form C contacts. For 3 Form C relays, the customer must furnish and wire diodes and resistors externally.

† ±15% for AC coils.

Operate Data @ 25°C

Must Operate Voltage:

DC Coils: 75% of nominal voltage.

AC Coils: 85% of nominal voltage.

Operate Time : 25 milliseconds maximum at nominal voltage.

Release or Reset Time: 25 milliseconds maximum at nominal voltage.

Environmental Data

Temperature Range:

Storage: -45°C to +105°C.

Operating:

Single Coil AC & DC: -45°C to +70°C.

Dual Coil DC: -45°C to +50°C.

Mechanical Data

Termination: .187" (4.75mm) quick connect/solder terminals. Sockets are available.

Enclosure: Clear plastic polycarbonate heat and shock resistant case.

Weight: 3.4 oz. (96g) approximately.

Ordering Information

Typical Part No. ▶ **KUL -11 D 1 1 D -12**

- 1. Basic Series:**
KUL magnetic latching relay
- 2. Contact Arrangement:**
5 = 1 Form C (SPDT) 11 = 2 Form C (DPDT) 14 = 3 Form C (3PDT)
- 3. Coil Input:**
A = AC D = DC
- 4. Mounting:**
1 = Plain case 5 = Bracket mount case
- 5. Terminal & Contact Materials:**
5 = .187" (4.75mm) quick connect/solder; silver-cadmium oxide, 10 amps.
- 6. Number of Coils:**
S = Single coil D = Dual coil (1 & 2 pole models only)
- 7. Coil Voltages:**
Single coil—24-240VAC
 12-48VDC
Dual coil—12-48VDC, 24 or 120VAC (to 2 Form C)

Our authorized distributors are more likely to maintain the following items in stock for immediate delivery.

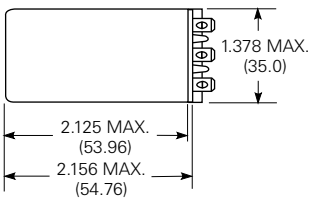
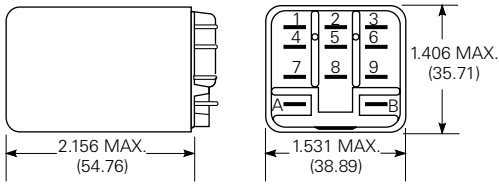
KUL-5A15S-120
KUL-11A15S-24

KUL-11A15S-120
KUL-11D15D-12

KUL-11D15D-24
KUL-11D15S-12

KUL-11D15S-24

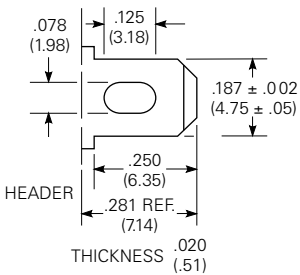
Outline Dimensions



See KU series drawings for bracket mount case.

Terminal Dimensions

.187" (4.75mm) Standard



Dimensions are shown for reference purposes only.

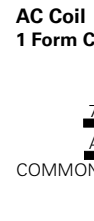
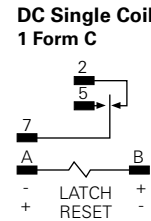
Dimensions are in inches or millimeters unless otherwise specified.

Specifications and availability subject to change.

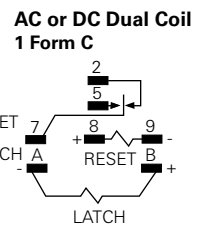
www.tycoelectronics.com
Technical support:
Refer to inside back cover.

Wiring Diagrams (Bottom Views)

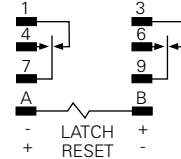
Single Coil Type S



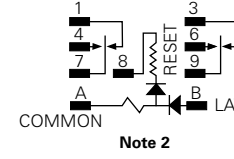
Dual Coil Type D



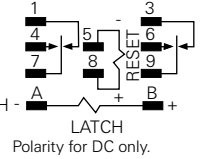
2 Form C



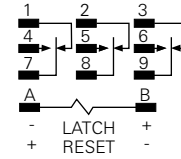
2 Form C



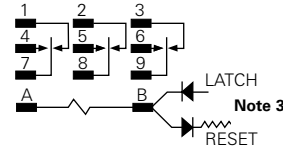
2 Form C



3 Form C



3 Form C



Note 1 Contact positions shown in diagrams is with the "RESET" input having been energized last.

Note 2 Do not connect any low impedance loads from terminal B to A.

Note 3 Resistor and diodes connected by customer. See Coil Data Chart on KUL Series engineering data page for resistor value. Recommended using 1N4007 diode.