

KILOVAC CAP120R HIGH VOLTAGE LATCHING CONTACTOR

HIGH VOLTAGE LATCHING CONTACTOR IN A SMALL, LIGHTWEIGHT AND AFFORDABLE PACKAGE

KILOVAC CAP120R High Voltage Latching Contactor

High voltage latching contactor in a small, lightweight and affordable package



RUGGED

- Hermetically-sealed, designed to withstand harsh environments

CAPABLE

- Does not require continuous application of coil power
- Relatively low power consumption makes it ideal for aerospace applications

MARKETS SERVED

- Military Aerospace
- Commercial Aerospace
- Defense
- Naval/Marine

Description

In responding to key industry needs for higher voltage isolation, small size and weight, and reduced power consumption, TE Connectivity's (TE) KILOVAC CAP120R Latching Contactor is extremely small in size and lightweight relative to its voltage and current ratings. The latching configuration also makes it ideally suited to airborne and other applications requiring low power consumption. It is designed for harsh environments and load applications. This latching version of our popular CAP120 high voltage contactor offers extremely high performance in terms of its size and weight. The contactor also allows versatile installation through bidirectional load switching, and the main contacts are not polarity sensitive.

MECHANICAL/ENVIRONMENTAL

- **Temperature Range:** -40°C to +85°C
- **Contact Arrangements, Main Contacts:** SPST-NO, Form P
- **Weight, Nominal:** 0.14 Kg
- **Shock 11 ms ½ Sine (Operating):** 15 G (Open), 30 G (Latched)
- **Sine Vibration, 20 G:** 55-2000 Hz
- **Random Vibration**

13.3 Grms (Closed):	15	100	450	900	2000	(Hz)
9.1 Grms (Open):	.002	.002	.12	.12	.083	(G^2/Hz)

ELECTRICAL

- **Voltage Rating, Main Contacts, Max:** 600 Vdc
- **Current Rating, Continuous, Main Contacts, (1):** 150 A
- **Aux Contact (A/Vdc - Max):** 100 mA/6 Vdc
- **Aux Contact (A/Vdc - Min):** 5 mA/5 Vdc
- **Contact Resistance, Main Contacts:** 0.6 mΩ Max
- **Main Contact Voltage Drop @ 150 A:** 80 mV Max
- **Aux Contact Voltage Drop @ 1 A:** 150 mV Max
- **Hot Switching Performance, Resistive Load**
  100 A Make/ Break @ 600 Vdc: 1,000 Cycles
  150 A Make/ Break @ 400 Vdc: 3,250 Cycles
  Make/Break 1000 A @ 400 Vdc: 5 Cycles
  600 A Make/Break @ 600 Vdc: 5 Cycles
  Pulse Through Closed Contacts, Maximum: 1250 A
  600 A Make: 25 Cycles
- **Mechanical Life (Min):** 100,000 Cycles
- **Dielectric Withstand Voltage**
  Terminal to Terminal: 1 mA max @ 2800 V_{rms}
  Terminals to Coil: 1 mA max @ 1500 V_{rms}
- **Insulation Resistance**
  Terminal to Terminal: 100 MΩ min @ 500 Vdc (new)
  Terminal to Coil: 50 MΩ min @ 500 Vdc (end of life)

APPLICATIONS

- UAM/UAV power systems

Power systems needing latching coils for reduced power consumption and lighter weight

General use in DC power systems for ground, air and marine applications

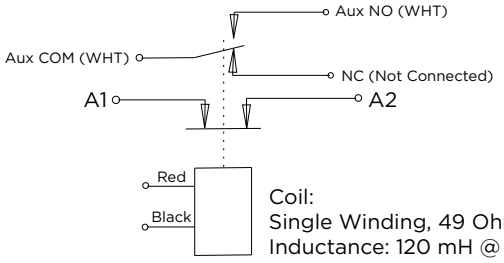
(1) +85°C ambient with #4 AWG conductor. Keep relay terminals below 150°C max continuous, 175°C max for two hours, and 200°C for one minute.

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COIL DATA

	CAP120RBXNG 4-1618415-5	
Nominal Operating Voltage	Vdc	28
Latch/Reset (Typical) @ 20° C	Vdc	Latch 10-18 Reset 10-18
Coil Resistance @ 20°C +/-10%	Ω	49
Coil Inductance (Typical)	mH	120
Coil Current (Typical @ 28 Vdc, 20°C)	A	0.57
Latch/Reset Pulse Time	ms	50-100
Operate Specs @ 20°C Latch Time (typ.) Latch Bounce (typ.) Reset time (typ.) Aux Contact Simultaneity with Main	 ms ms ms ms	 8 3 7 ± 3

CAP120RBXNG (SINGLE COIL LATCHING CONTACTOR)

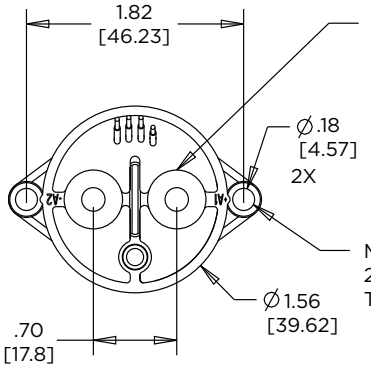


Coil:
Single Winding, 49 Ohms ± 10% at 20°C
Inductance: 120 mH @ 100 Hz

Coil Drive
1. To Close: Connect red lead to source +
2. Connect black lead to return for 50-100 ms to close (latch)
3. To Open: Connect black lead to source +
4. Connect red lead to return for 50-100 ms to open

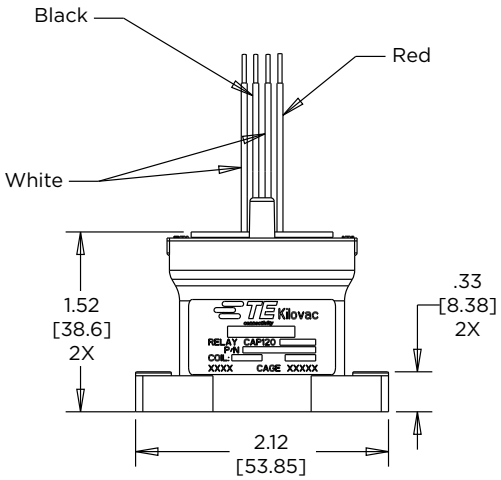
Minimum Latch/Reset Voltage: 10 Vdc

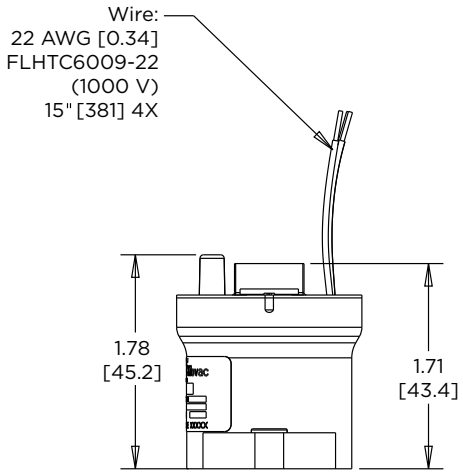
Coil/Aux Wire
FLHTC6009-22 AWG, 19x34 stranded, silver plated copper, 1000 V DC rated



Load Terminals-2PLCS Hardware (Not Supplied)
2 x M5 Bolts, Lockwasher and Washer
Torque: 30-40 In-Lbs [3.4 to 4.5 NM]
Depth: 6 Threads Min

Mounting Hardware (Not Supplied)
2 x M4 Bolt, Lockwasher and Washer
Torque: 20 In-Lbs [2.3 NM] Max





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Global Electronic Components Distributor

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