LEACH

INTERNATIONAL CORP

CA450 Contactor, Busbar Mounting

3PST+AUX, 450 AMP

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High-Voltage AC Family

HIGHLIGHTS

- Reliable switching at 450 A, 115 / 230 VAC
- Tested overload at 1,800 A
- Lightweight busbar mounted design
- Auxiliaries include 8PDT

APPLICATIONS

- Main line contactor

PRINCIPAL TECHNICAL CHARACTERISTICS

Main Contacts Rated	115 VAC 360 Hz to 800 Hz, 450 A
Coil Supply	28 VDC
Weight (lb)	3 Max
Dimensions (inch)	4.460 x 4.020 x 3.655 Max
Contact Rating*	450 A Resistive & 360 A
Electrical Life	50,000 cycles
Mechanical Life	100,000 cycles

*Amperage rating with inductive loads assuming a power factor of 0.7

CONTACT ELECTRICAL CHARACTERISTICS

MAIN PERFORMANCE (MEASURED IAW MIL-PRF-6106P)		
VOLTAGE (nominal)	115 VAC	
FREQUENCY	360-800 HZ	
CONTACT RATING	RESISTIVE	450 A
	INDUCTIVE (PF = 0.75 LAGGING TO UNITY)	360 A
	MECHANICAL	113 A
OVERLOAD	50 CYCLES	1,800 A
RUPTURE	50 CYCLES	2,700 A
MINIMUM CURRENT	RESISTIVE LOAD	15 A
SECONDARY PERFORMANCE (MEASURED IAW MIL-PRF-6106P)		
OVERLOAD RESISTIVE (generator overload) (carry-break)	300 SECONDS, 5 CYCLES	675 A
	6 SECONDS, 5 CYCLES	950 A
	6 SECONDS, 5 CYCLES	1,250 A
OVERLOAD INDUCTIVE (generator overload) (carry-break) 0.7 PF	360 SECONDS, 5 CYCLES	500 A
	300 SECONDS, 5 CYCLES	675 A
	6 SECONDS, 5 CYCLES	950 A
	5 SECONDS, 5 CYCLES	1,250 A
RUPTURE (generator short circuit)	5 SECONDS, 10 CYCLES	1,500 A
	MAKE AT 2,900 A, CARRY 950 A FOR 5 SECONDS THEN BREAK, 3 CYCLES	2,900 A

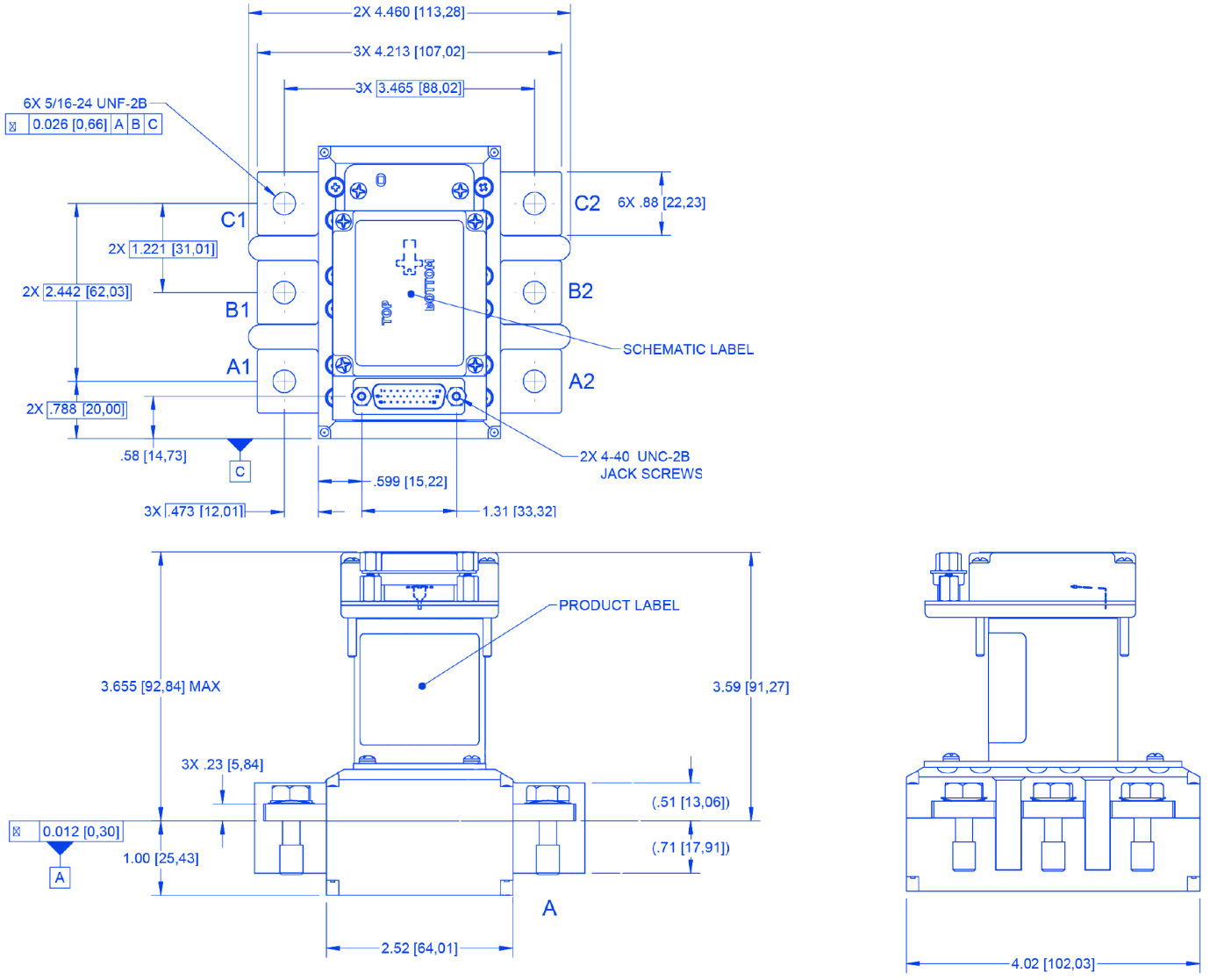
COIL CHARACTERISTICS

Nominal Voltage	28 VDC
Operating Voltage	15 to 32 VDC
Coil Transient Voltage	60 VDC Max
Dielectric Strength	500 VDC (Sea Level)
Insulation Resistance	100 MOhm Min (500 VDC, Sea Level)

GENERAL CHARACTERISTICS

Temperature range	-54°C to 85°C
Min operating cycles at rated load	50,000
Min operating cycles at 25% rated load	100,000
Circuit to ground & circuit to circuit	1,500 VRMS
Coil to ground and aux contacts	500 VRMS
Insulation resistance (500 VDC)	100 M Ω Min
Configuration (Form C Mechanically Linked to Main Contacts)	8PDT
Voltage	28 VDC
Contact Rating	5 A
Temperature	RTCA DO-160G, SECTION 4.5, CATEGORY C4
Altitude	RTCA DO-160G, SECTION 4.6, CATEGORY C1
Decompression / over pressure RTCA	DO-160G, SECTION 4.6, CATEGORY A3
Temperature Variation	RTCA DO-160G, SECTION 5, CATEGORY B
Temperature Shock	MIL-STD-202G, METHOD 107, CONDITION A
Humidity	RTCA DO-160G, SECTION 6, CATEGORY A
Operational Shock	RTCA DO-160G, SECTION 7.2, CATEGORY B, 15g/11ms
Crash Safety Impulse	RTCA DO-160G, SECTION 7.3, CATEGORY B, 20g/11ms
Crash Safety Sustained Acceleration	RTCA DO-160G, Section 7.3.3 (9g)
Vibration (sine)	RTCA DO-160G, SECTION 8.5, CATEGORY Z
Vibration (random, performance)	RTCA DO-160G, SECTION 8.5, CATEGORY R, LEVEL C
Vibration (random, robust)	RTCA DO-160G, SECTION 8.5, CATEGORY R, LEVEL C1
Explosion Proofness	RTCA DO-160G, SECTION 9, CATEGORY E
Waterproofness	RTCA DO-160G, SECTION 10, CATEGORY R
Fluid Susceptibility	RTCA DO-160G, SECTION 11, CATEGORY F
Sand & Dust	RTCA DO-160G, SECTION 12, CATEGORY D
Fungus Resistance	RTCA DO-160G, SECTION 13, CATEGORY F
Salt Spray	RTCA DO-160G, SECTION 14, CATEGORY S
Magnetic Effect	RTCA DO-160G, SECTION 15, CATEGORY A
Power Input	RTCA DO-160G, SECTION 16, CATEGORY Z
Voltage Spike	RTCA DO-160G, SECTION 17, CATEGORY A
Lightning Protection	RTCA DO-160G, SECTION 22, ALL WAVEFORMS LEVEL A4
Fire, Flammability	RTCA DO-160G, SECTION 26, CATEGORY C

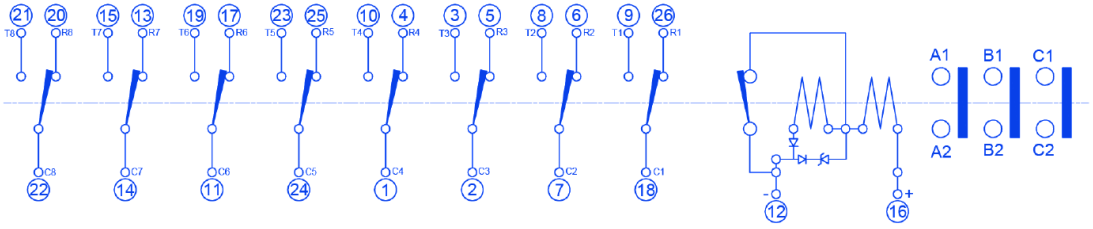
CONFIGURATION STYLE



NOTES

1. Terminals:
   A. Captive screws: Hex head captive screws, 5 / 16-24 UNF-2A
   B. Busbar plating: Silver
2. Connector:
   - Connector compatibility: M24308 / 24-62P or commercial equivalent
   - Shell plating: Cadmium
   - Contact plating: Gold
   - Recommended torque for mounting screws: 3.5 in-lbs [40 cN.m] ±10%
3. Contacts: Main contacts are cadmium free
4. Mechanical-electrical interface requirements: The mechanical-electrical connection between each contactor mounting busbar (tab) and its mounting terminal must be designed to sink (conduct) a minimum of 29 W at 450 V RMS, 85°C ambient temperature in still air (natural convection cooling only).
5. Maximum resistance at the connection joint: ≤ 10 μΩ
6. Minimum contact area between each busbar (tab) and mounting connection: 0.445 in²
7. Captive screw torque = 130 +/- 10 in-lb, 2080 to 2272 lbf clamping force

TERMINAL CONFIGURATION



PART NUMBER CONFIGURATION

CA450-A19YN-XXX

1. Product
2. Mounting Style
3. Terminal & Circuit
4. Coil Voltage
5. Variant Identifier*

* -XXX denotes customer or application-specific requirements.
Part number example: CA450-A19YN-015, with -015 indicating a COTS product.

LEACH

INTERNATIONAL CORP

Leach International Corporation designs and manufactures relays, electronic control devices, and power systems primarily for the aerospace and defense industries. Since 1919, Leach has been known for design excellence and commitment to quality and reliability.

Our 100-year legacy includes the invention of the electrical relay for aircraft systems. Worldwide, our equipment and components are used in the most severe conditions where reliability and high performance are critical, in thousands of aerospace, military, rail and high-end industrial applications.

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