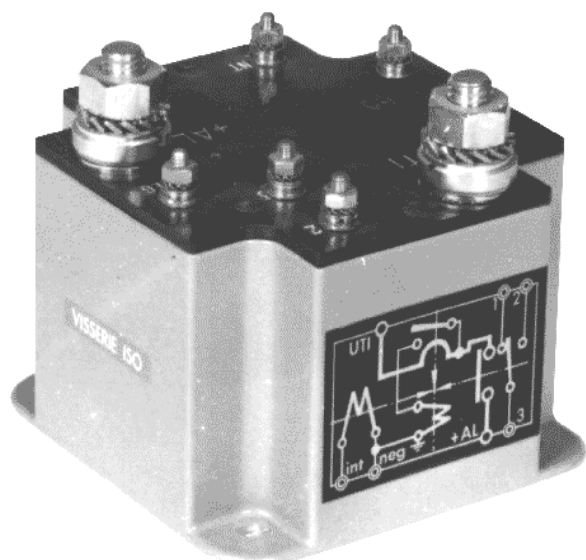


ENGINEERING DATA SHEET

SERIES 52040

CIRCUIT-BREAKER
1PST-DM+AUX, 400 AMP/28 VDC



Certification AIR7304 AIR8456B
Letter 1120 AMX of 10/04/70

Permanent duty
Main contact **1PNO**
Auxiliary contact **1PNO**
Coil supply **Direct current**
Meets the requirements of **AIR 7304**
AIR 8456B
AIR 9456
MIL 6106J

PRINCIPLE TECHNICAL CHARACTERISTICS

Contacts rated at **400 A / 28 Vdc**
Circuit-breaking **See diagram**
Weight **1200 g ±10%**
- Ref. P/N: 52040
Maximum size **102.5mm x 102.5mm x 96mm**
Dust proof metal can.

CONTACT ELECTRICAL CHARACTERISTICS

Contact rating per pole and load type	Load current in Amps	
	@115/200 Vac/400 Hz	
Resistive	400 (In)	
Inductive	240	
Motor	400	
I minimum	In/10	
Auxiliary contact rating	@28Vdc	@115VAC/400 Hz
Resistive	5	5
Inductive (L/R=5ms)	2.5	2.5
Lamp	2	2



Leach International
www.leachintl.com

North America
6900 Orangethorpe Ave.
P.O. Box 5032
Buena Park, CA 90622 USA

Tel: (01) 714-736-7599
Fax: (01) 714-670-1145

Europe, SA
2 Rue Goethe
57430 Sarralbe
France

Tel: (33) 3 87 97 98 97
Fax: (33) 3 87 97 84 04

Asia-Pacific Ltd.
20/F Shing Hing Commercial Bldg.
21-27 Wing Kut Street
Central, Hong Kong

Tel: (852) 2 191 2886
Fax: (852) 2 389 5803

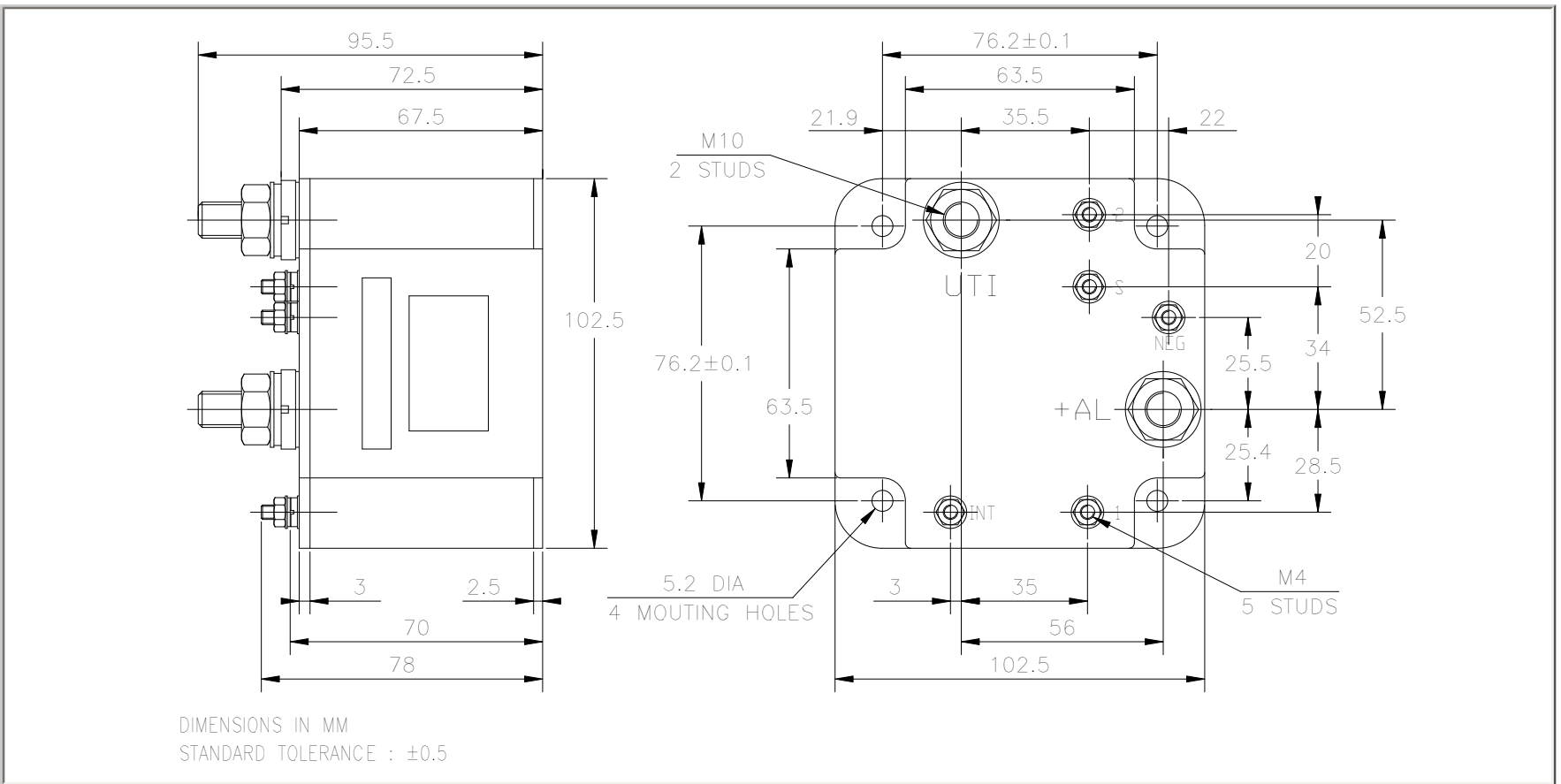
Data sheets are for initial product selection and comparison. Contact Leach International prior to choosing a component.

COIL CHARACTERISTICS AT 20 °C**SERIES 52040**

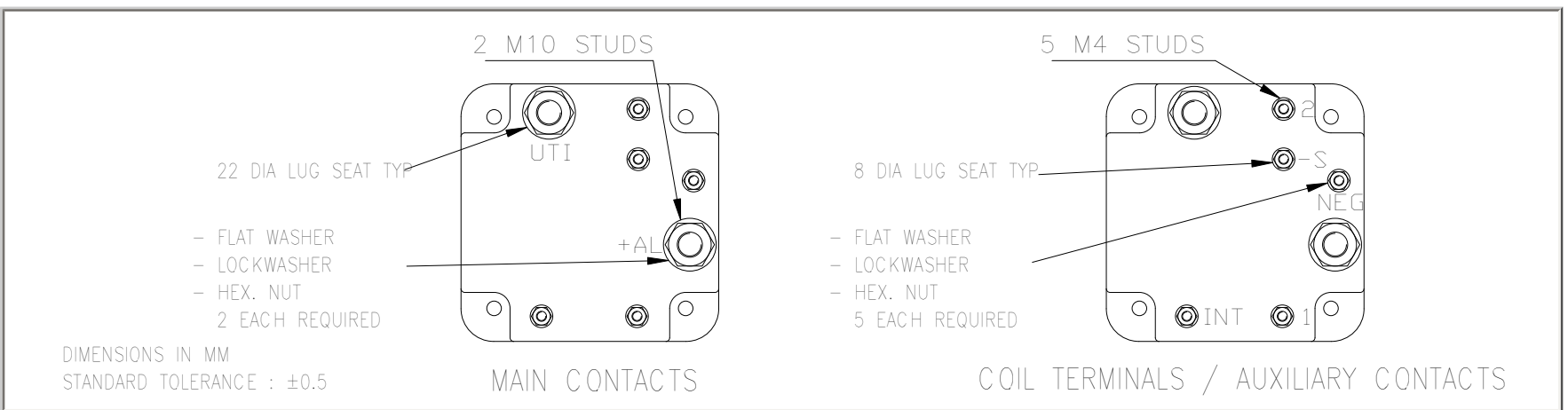
Nominal operating voltage	28 Vdc
Maximum operating voltage	32 Vdc
Maximum pickup voltage	17 Vdc
Drop-out voltage	2 Vdc min. to 8 Vdc max.
Cut-in current	13.8 A at 28 Vdc
Holding current	300 mA at 28 Vdc

GENERAL CHARACTERISTICS

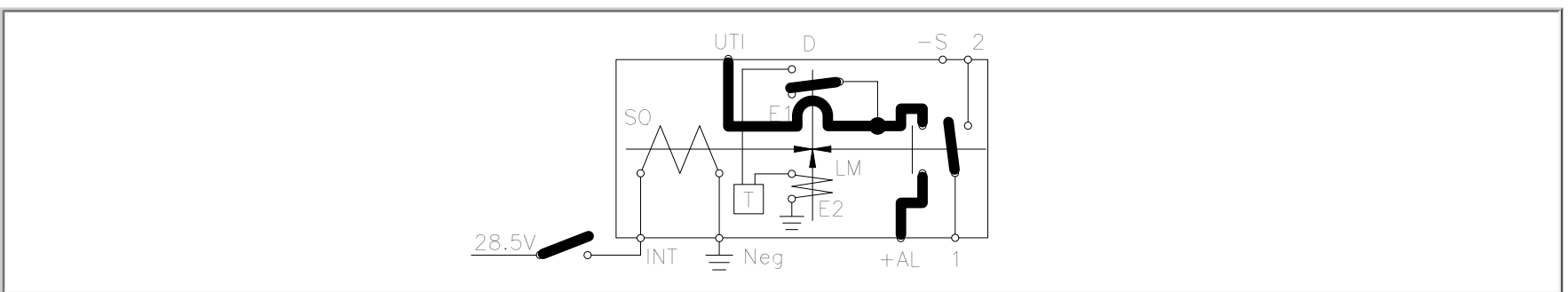
Temperature range	-55°C to +85°C
Minimum operating cycles (life) at rated load	50,000 cycles
Dielectric strength at sea level	500 Vrms
Dielectric strength at altitude 25,000 m	300 Vrms
Insulation resistance at 500 Vdc	100 M Ω
Sinusoidal vibration	10 G / 5 to 2000 Hz
Shock	30 G / 11 ms
Maximum contact opening time under vibration and shock	10 μs
Maximum operate time at 28 Vdc	15 ms
Maximum release time at 28 Vdc	8 ms
Main contact voltage drop	
- Initial value	120 mV
- After endurance test	180 mV
Auxiliary contact voltage drop	
- Initial value	60 mV
- After endurance test	120 mV
Auxiliary contacts	
- Contact resistance (low level)	1 Ω
- I minimum	2 mA
Assembly torque	
- Main contact terminals	14.7 Nm
- Coil and auxiliary contact terminals	1.2 Nm



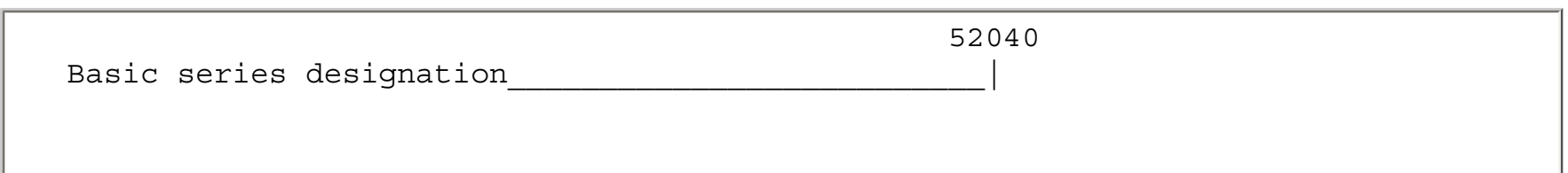
TERMINAL TYPES



SCHEMATIC DIAGRAM



NUMBERING SYSTEM



OPERATING CONDITIONS

The purpose of this contactor is:

1. To operate by remote control a 28.5 VDC power circuit.
2. To protect this circuit:
 - A. By immediate tripping beyond the upper protection level.
 - B. By delayed tripping at lower level to avoid tripping on in rush.
 - C. By memorizing lower level over passing for immediate tripping on the next excess current.

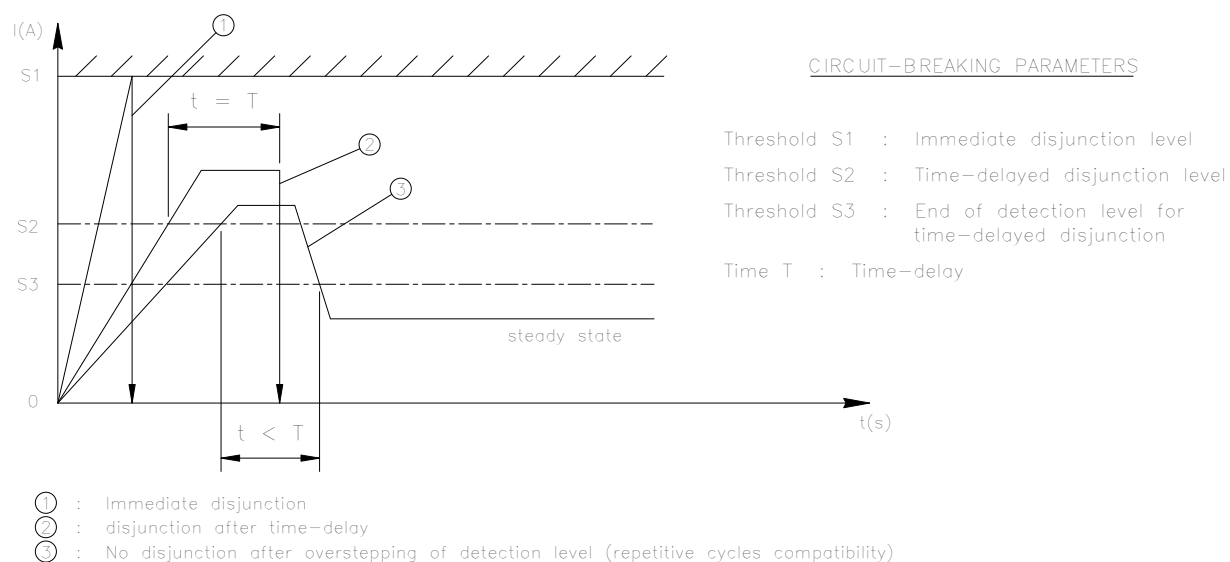
OPERATION

When the coil energizes by INT the contactor closes:

1. Normal load current, steady state.
2. Excess-current load at S1. The contacts and the moving iron are disconnected by this same moving iron when it is energized by the main current supply. To reset, INT must be cut out, the moving iron then falls and the circuit is reconnected to the supply.
3. Excess-current load less than S1 and greater than S2. A pilot relay mounted in the main circuit sends a command to a time delay unit and a memory:
 - A. the excess-current load is longer than T. The time delay sends a pulse to a coil that controls the same moving iron described in 2. Disjunction occurs, the direct current and the voltage coil A/t's being in addition, operation is guaranteed for <15 volts.
 - B. the excess-current load is shorter than t, steady state.

CIRCUIT BREAKING DIAGRAMS

IMMEDIATE AND TIME-DELAYED DISJUNCTION
WITHOUT OVERLOAD MEMORIZATION CIRCUIT-BREAKERS



S1 = 2000A ±50A S2 = 950A ±30A S3 = 700A ±20A T = 2s