

# ENGINEERING DATA SHEET

# SERIES 77

CONTACTOR  
1PST-DM, 80 AMP/28 VDC



Letter 30243STPA

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

## PRINCIPLE TECHNICAL CHARACTERISTICS

Contacts rated at **80 A / 28 Vdc**  
Weight  
- Ref. P/N: 77 **148 g ±10%**  
- Ref. P/N: S77 **168 g ±10%**  
- Ref. P/N: M77 **173 g ±10%**  
Maximum size **59.5mm x 48mm x 36mm**  
Dust proof metal can.

## CONTACT ELECTRICAL CHARACTERISTICS

Contact rating per pole and load type	Load Current in Amps @28Vdc
Resistive	80 (In)
Inductive	48
Motor	80
Overload	8 In [1]
Rupture	10 In [2]
I minimum	In/10

### Notes:

- [1] 640 Amps for 50 cycles; duty cycle: .2 sec on, 20 sec off.
- [2] 800 Amps for 50 cycles; duty cycle: .2 sec on, 20 sec off.
- 3. Other models available upon request. Contact factory.
- [4] Additional temperature ratings available.



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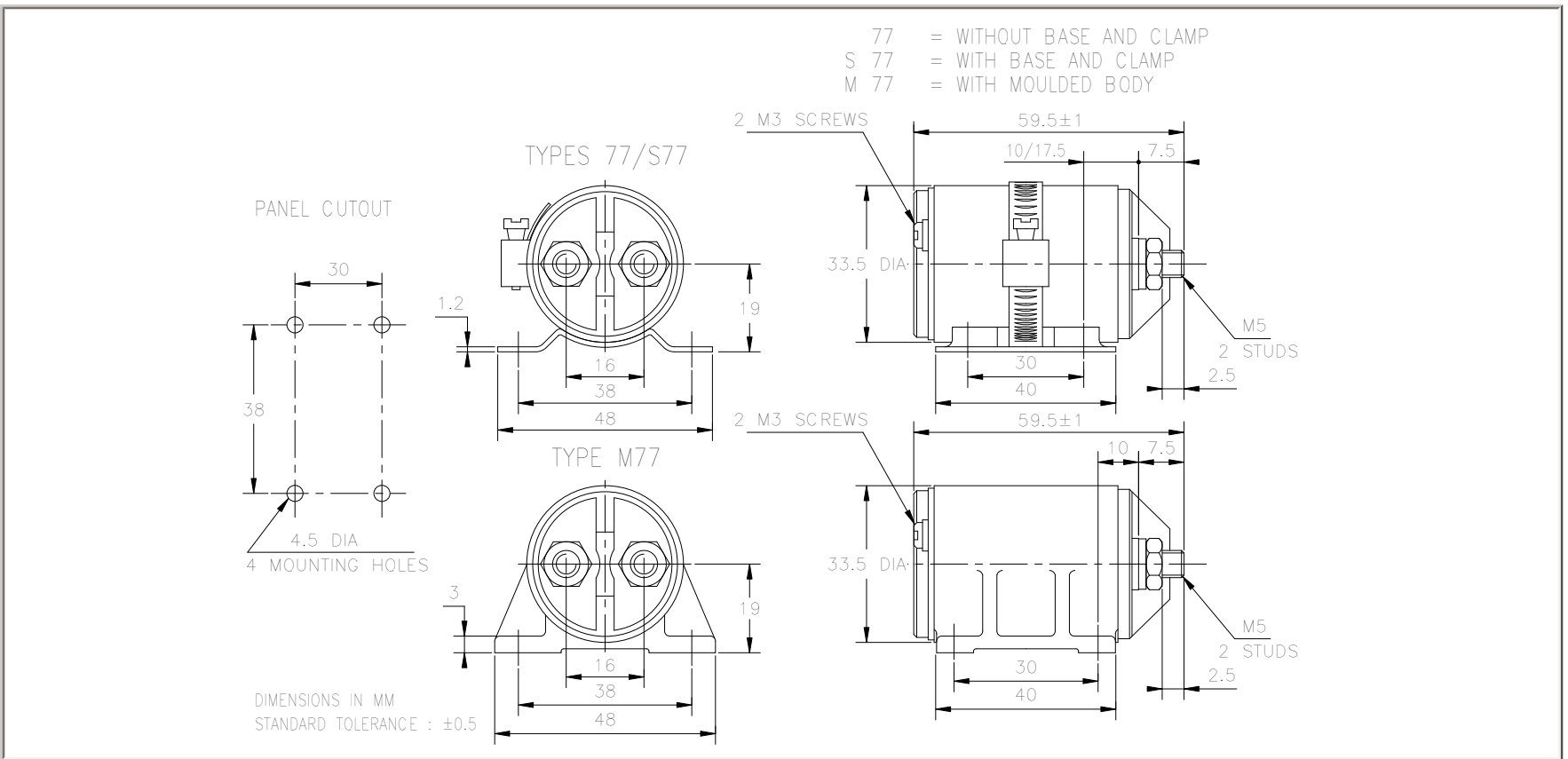
Data sheets are for initial product selection and comparison. Contact Leach International prior to choosing a component.

**COIL CHARACTERISTICS AT 20 °C****SERIES 77**

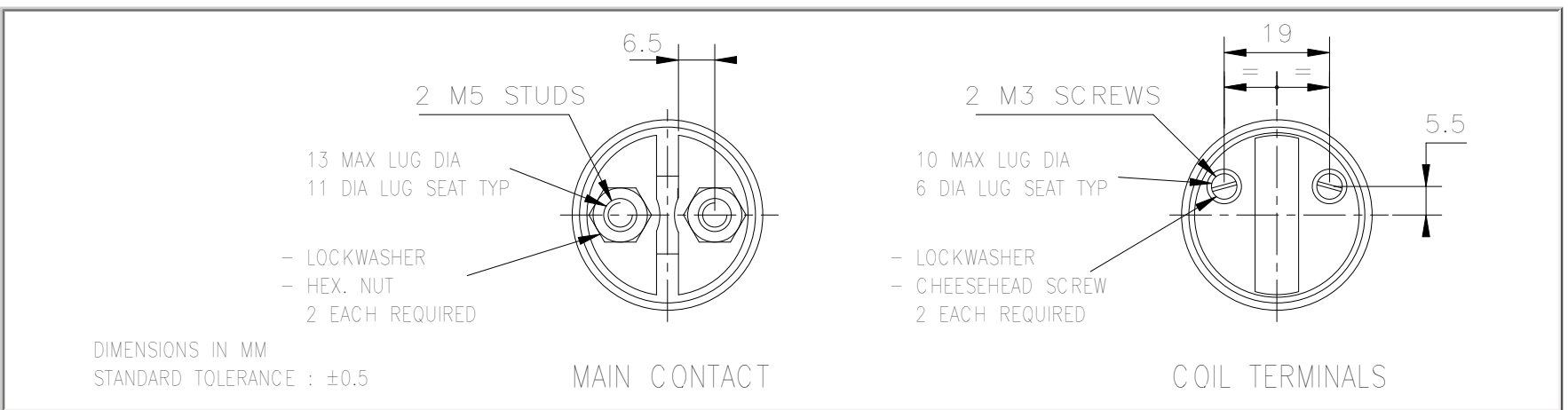
Nominal operating voltage	28 Vdc
Maximum operating voltage	32 Vdc
Maximum pickup voltage	18 Vdc
Drop-out voltage	1.5 Vdc min. 7 Vdc max.
Cut-in current	3.2 A at 28 Vdc
Holding current	100 mA at 28 Vdc

**GENERAL CHARACTERISTICS**

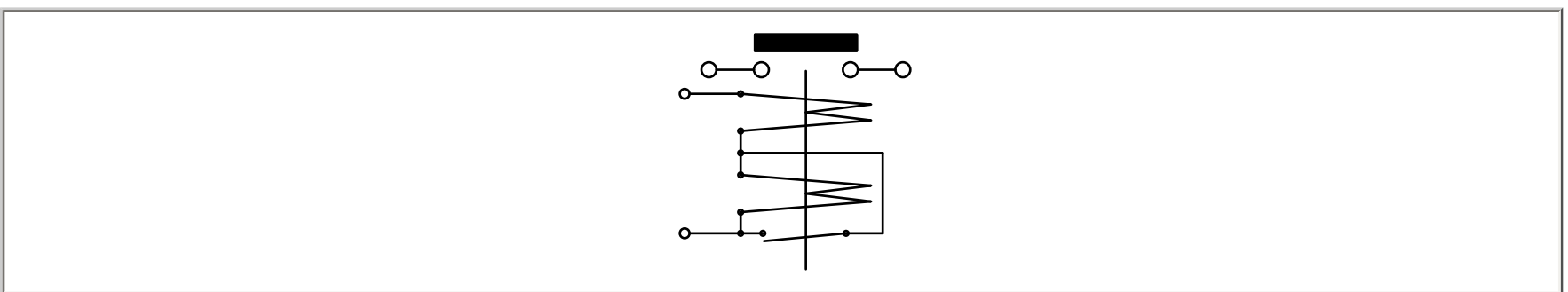
Temperature range	-55°C to +85°C [4]
Minimum operating cycles (life) at rated load	50,000 cycles
Dielectric strength at sea level	1250 Vrms
Dielectric strength at altitude 25,000 m	500 Vrms
Insulation resistance at 500 Vdc	100 M Ω
Sinusoidal vibration	10G / 5 to 2000 Hz
Shock	30G / 11 ms
Maximum contact opening time under vibration and shock	10 μs
Maximum operate time at 28 Vdc	20 ms
Maximum release time at 28 Vdc	15 ms
Main contact voltage drop	
- Initial value	120 mV
- After endurance test	180 mV
Assembly torque	
- Main contact terminals	2.45 Nm
- Coil terminals	0.5 Nm



**TERMINAL TYPES**



**SCHEMATIC DIAGRAM**



**NUMBERING SYSTEM**

