

# ENGINEERING DATA SHEET

# SERIES 219

CONTACTOR

1PST-DB+AUX, 200 AMP/28 VDC



Certification AIR7304 AIR8456B  
Letter 30243STPA of 09/01/84

Permanent duty  
Main contact **1PNC - DB**  
Auxiliary contact **1NO + 1NC**  
Coil supply **Direct current**  
- Polarized and protected coil **See schematic diagram**  
Meets the requirements of **AIR 7304 AIR 8456B  
AIR 9456 MIL 6106J**

### PRINCIPLE TECHNICAL CHARACTERISTICS

Contacts rated at **200 A / 28 Vdc**  
Weight  
- Ref. P/N: 219 **340 g ±10%**  
- Ref. P/N: S219 **360 g ±10%**  
- Ref. P/N: M219 **370 g ±10%**  
Maximum size **95mm x 65mm x 42.5mm**  
Dust proof metal can.

### CONTACT ELECTRICAL CHARACTERISTICS

| Contact rating per pole and load type | Load Current in Amps @28Vdc |                      |
|---------------------------------------|-----------------------------|----------------------|
|                                       | @28Vdc                      | @115Vac/400Hz        |
| Resistive                             | 200 (In)                    |                      |
| Inductive                             | 120                         |                      |
| Motor                                 | 200                         |                      |
| Overload                              | 8 In [1]                    |                      |
| Rupture                               | 10 In [2]                   |                      |
| I minimum                             | In/10                       |                      |
| <b>Auxiliary contact rating</b>       | <b>@28Vdc</b>               | <b>@115Vac/400Hz</b> |
| Resistive                             | 5                           | 5                    |
| Inductive (L/R=5ms)                   | 2.5                         | 2.5                  |
| Lamp                                  | 2                           | 2                    |

#### Notes:

[1] 1600 Amps for 50 cycles; duty cycle: .2 sec on, 20 sec off.

[2] 2000 Amps for 50 cycles; duty cycle: .2 sec on, 20 sec off.

3. Additional models:

**207** (1PST DM)

**209** (1PST DM+Aux)

**206** (1PST DM+Aux)

[4] Additional temperature ratings available.



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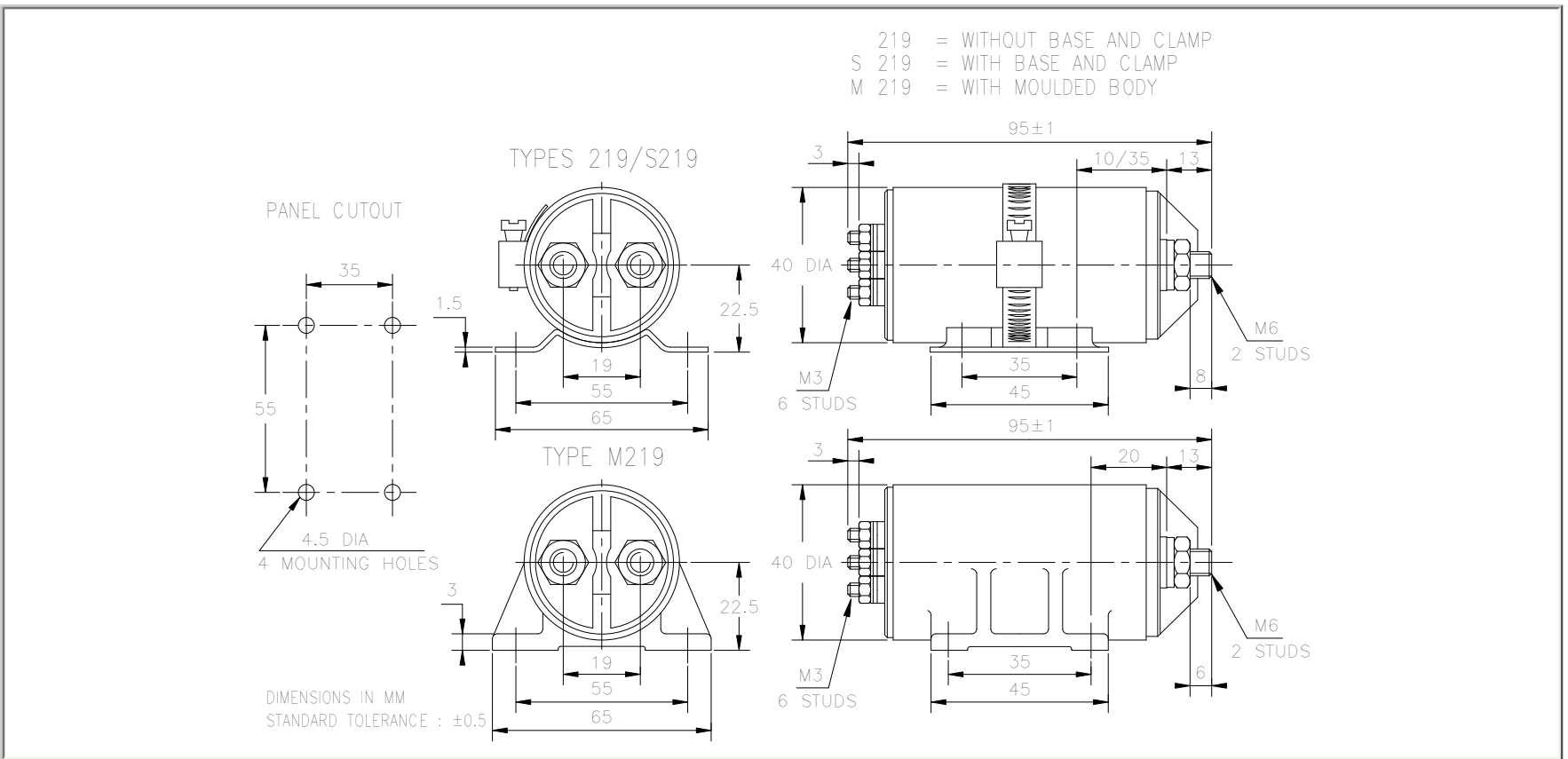
Data sheets are for initial product selection and comparison. Contact Leach International prior to choosing a component.

**COIL CHARACTERISTICS AT 20 °C****SERIES 219**

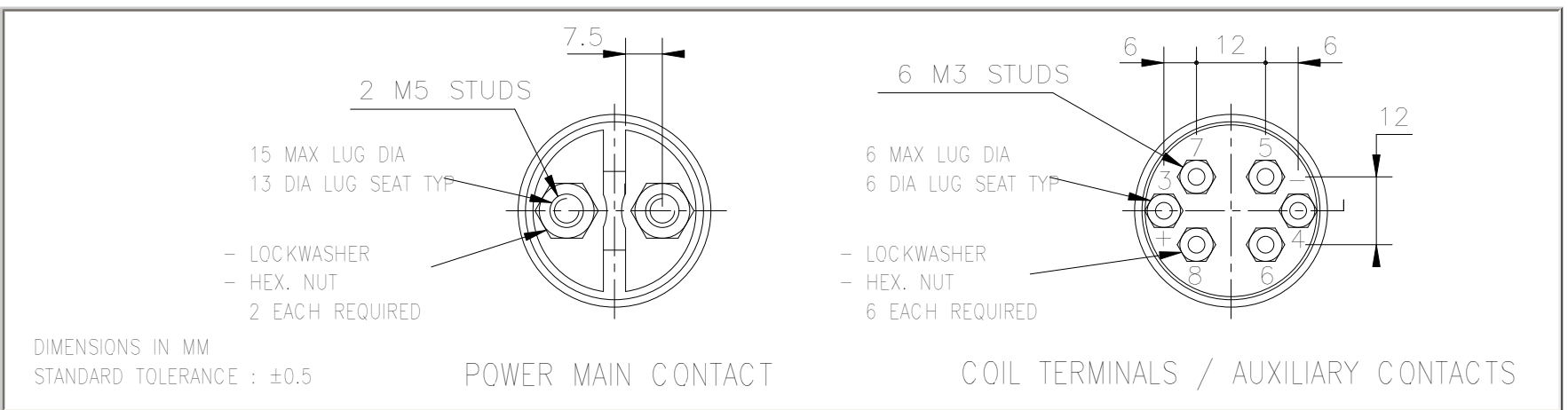
|                           |                          |
|---------------------------|--------------------------|
| Nominal operating voltage | 28 Vdc                   |
| Maximum operating voltage | 32 Vdc                   |
| Maximum pickup voltage    | 18 Vdc                   |
| Drop-out voltage          | 2 Vdc min. to 8 Vdc max. |
| Cut-in current            | 6 A at 28 Vdc            |
| Holding current           | 175 mA at 28 Vdc         |

**GENERAL CHARACTERISTICS**

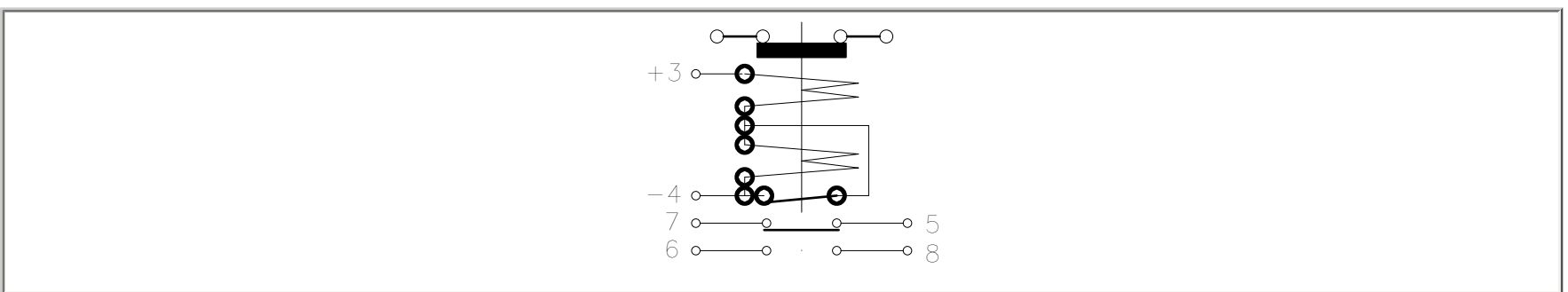
|  |                     |
|--|---------------------|
| Temperature range                                      | -55°C to +85°C [4]  |
| Minimum operating cycles (life) at rated load          | 50,000 cycles       |
| Dielectric strength at sea level                       | 500 Vrms            |
| Dielectric 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                         | 20 ms               |
| Maximum release time at 28 Vdc                         | 15 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                               | 3.8 Nm              |
| Coil and auxiliary contact terminals                   | 0.5 Nm              |



**TERMINAL TYPES**



**SCHEMATIC DIAGRAM**



**NUMBERING SYSTEM**

