



# SWITCHES

## STANDARD FAMILY CODE LTC003004\* A00

|                                    |  |
|------------------------------------|--|
| Family Type                        | LTC 300                                |
| Number / Type of Poles             | 4 / NO                                 |
| Mounting Position                  | Horizontal - Vertical <sup>1</sup>     |
| Control Voltage Rating Uc (DC) [V] | 24 - 36 - 48 - 72 - 110 <sup>1</sup>   |
| Auxiliary Contact Blocks           | 2 x (1 NO + 1 NC)                      |
| Block Type                         | SL                                     |
| Arc-chute Material                 | Polyester Resin - Ceramic <sup>1</sup> |
| Main Contacts Tips Material        | S6                                     |
| Arcing Contacts Tips Material      | -                                      |
| Electric Diagram                   | -                                      |
| Polyester Resin Layout Drawing     | D51928                                 |
| Ceramic Layout Drawing             | -                                      |

<sup>1</sup> To be specified in order phase.



**MICROELETTRICA**

## Description

Contactors with single interruption in air, electromagnetic control by full power coil. Single state functioning. Reference Standards IEC 60077, IEC 61992 and IEC 60947.

| Insulation Characteristics                                      |      |                    |                    |
|---|------|--------------------|--------------------|
| Rated Operational Voltage (AC / DC)                             |      | [V]                | 1800 / 900 / 440   |
| Max Operational Voltage (AC / DC)                               |      | [V]                | 2000               |
| Rated Insulation Voltage  |      | [V]                | 2000               |
| Rated Impulse Voltage   |      | [kV]               | 12                 |
| Rated Power Frequency Withstand Voltage (50 Hz for 60 s)        |      |                    |                    |
| Between HV to LV Circuit + Earth                                |      | [V]                | 6000               |
| Between Open Contacts   |      | [V]                | 4700               |
| Between Each Pole (if more than 1)                              |      | [V]                | 6000               |
| Between LV Circuit and Earth                                    |      | [V]                | 1500               |
| Minimum Clearance Distance between Open Contacts                |      | [mm]               | 10                 |
| Minimum Clearance Distance between Power Circuit to Earth       |      | [mm]               | 14                 |
| Minimum Creepage Distance between Power Circuit to Earth        |      | [mm]               | 25                 |
| Comparative Tracking Index (CTI) (IEC 60112)                    |      | [V]                | 600                |
| Electrical Characteristics                                      |      |                    |                    |
| Arc-chute   |      | Polyester Resin    | Ceramic            |
| Conventional Free Air Thermal Current at 40 °C <sup>2</sup>     | [A]  | 300                | 300                |
| Conventional Free Air Thermal Current at 75 °C <sup>2</sup>     | [A]  | 270                | 270                |
| DC - Rated Operational Current (τ = 15 ms)                      |      |                    |                    |
| 1800 V  | [A]  | -                  | -                  |
| 900 V   | [A]  | -                  | -                  |
| 440 V   | [A]  | -                  | -                  |
| DC - Maximum Breaking Capacity (τ = 5 ms)                       |      |                    |                    |
| 1800 V  | [A]  | -                  | -                  |
| 900 V   | [A]  | -                  | -                  |
| 440 V   | [A]  | -                  | -                  |
| AC - Maximum Breaking Capacity (cosφ = 0,8; 50 Hz) <sup>3</sup> |      |                    |                    |
| 1800 V  | [A]  | 80                 | 100                |
| 900 V   | [A]  | 160                | 200                |
| 440 V   | [A]  | 320                | 400                |
| Component Category / Operational Frequency Class                |      | A2 / C3            | A2 / C3            |
| Rated Short Time Withstand Current                              | [kA] | 5 (for 100 ms)     | 5 (for 100 ms)     |
| Critical Current Range  | [A]  | DC Reverse current | DC Reverse current |
| Fault Making Capacity   | [kA] | 2.4                | 2.4                |
| Blow Out Circuit Type   |      | Permanent Magnet   | Permanent Magnet   |

<sup>2</sup> Device cabled according IEC 60947    <sup>3</sup> Line current, voltage between lines

<sup>4</sup> Other mounting positions not allowed, reduced distances should be approved by Microelettrica

**Minimum clearances [mm] from:**

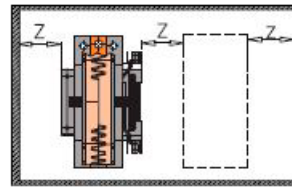
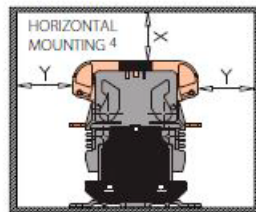
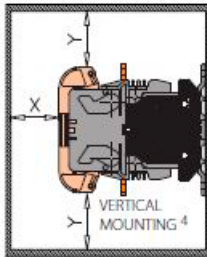
| Rated Operational Voltage |               | X   | Y   | Z  |
|---------------------------|---------------|-----|-----|----|
| 1800 V                    | Metal Parts   | 120 | 120 | 50 |
|                           | Plastic Parts | 50  | 50  | 20 |

**Minimum clearances [mm] from:**

| Rated Operational Voltage |               | X   | Y   | Z  |
|---------------------------|---------------|-----|-----|----|
| 900 V                     | Metal Parts   | 100 | 100 | 30 |
|                           | Plastic Parts | 50  | 50  | 20 |

**Minimum clearances [mm] from:**

| Rated Operational Voltage |               | X   | Y   | Z  |
|---------------------------|---------------|-----|-----|----|
| 440 V                     | Metal Parts   | 100 | 100 | 30 |
|                           | Plastic Parts | 50  | 50  | 20 |


**Mechanical Characteristics**

|                                  |          |                 |
|----------------------------------|----------|-----------------|
| Mechanical Endurance             | [cycles] | $2 \times 10^6$ |
| Shock and Vibrations (IEC 61373) |          | Cat.1 - Class B |
| Weight                           | [kg]     | 6.5             |

**Control Circuit**

|   |      |                       |
|---|------|-----------------------|
| Control Voltage Range   | [V]  | $0.7U_c \div 1.25U_c$ |
| Power Consumption ( $U_c$ and $T = 20^\circ\text{C}$ ) at Pick Up - when Holding      | [W]  | 60 - 60               |
| Mechanical Operation Time ( $U_c$ and $T = 20^\circ\text{C}$ ) when Closing - Opening | [ms] | 55 - 25               |
| Time Constant (L/R) at Pick Up - when Holding   | [ms] | 50 - 160              |
| Electrical Connections  |      | Fast-on 6.35 x 0.8 mm |

**Auxiliary Contact**

|   |      |   |
|---|------|---|
| Rated Operational Voltage (AC / DC)                           | [V]  | 250                                       |
| Conventional Free Air Thermal Current at $40^\circ\text{C}$   | [A]  | 10  |
| Tips Material   |      | Silver Alloy<br>(Optional: Golden Plated) |
| Minimum Let-through Current at 24 - 72 - 110 VDC <sup>5</sup> | [mA] | 20(10) - 15(7.5) - 10(5) <sup>5</sup>     |
| Electrical Connections  |      | Fast-on 6.35 x 0.8 mm                     |

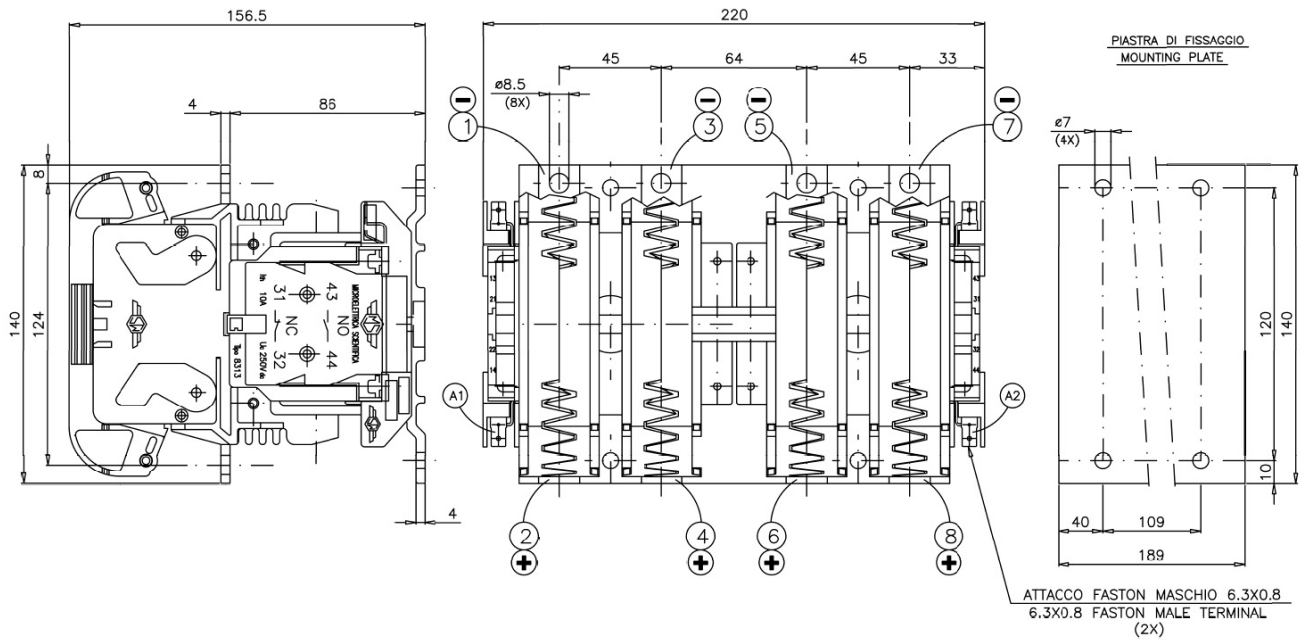
**Environmental Conditions**

|  |      |                        |
|--|------|------------------------|
| Stock Temperature Range                              | [°C] | $-50 \div +85$         |
| Operational Temperature Range                        | [°C] | $T_x (-40 \div +75)^6$ |
| Pollution Degree - Overvoltage Category (EN 50124-1) |      | PD3 - OV3              |
| Max Altitude without Performance Derating            | [m]  | 2000                   |

<sup>5</sup> Reference Standard IEC 60947-5-4. Tested in a DRY and CLEAN condition with an LR load. The values with golden plated tips are indicated between brackets. For different working conditions, please contact Microelettrica

<sup>6</sup> According to EN 50125-1

# Polyester Resin Layout Drawing



The technical specifications reported are not binding and they should be agreed in the contract.

**For further technical information on our products visit [www.microelettrica.com](http://www.microelettrica.com)**

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