

# SWITCHES

## STANDARD FAMILY CODE LTHH01001\*A01

| Family Type                        | LTHH 100                             |
|------------------------------------|--------------------------------------|
| Number / Type of Poles             | 1 / 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                         | PBX                                  |
| Arc-chute Material                 | Ceramic                              |
| Main Contacts Tips Material        | S6                                   |
| Arcing Contacts Tips Material      | -                                    |
| Electric Diagram                   | -                                    |
| Layout Drawing                     | D45661                               |

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



**MICROELETTRICA**

## Description

Contactors 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]  | 3600 / 1800 / 900 |
| Max Operational Voltage (AC / DC)                           | [V]  | 4000              |
| Rated Insulation Voltage                                    | [V]  | 4000              |
| Rated Impulse Voltage                                       | [kV] | 30                |
| Rated Power Frequency Withstand Voltage (50 Hz for 60 s)    |      |                   |
| Between HV to LV Circuit + Earth                            | [V]  | 10000             |
| Between Open Contacts                                       | [V]  | 7900              |
| Between Each Pole (if more than 1)                          | [V]  | -                 |
| Between LV Circuit and Earth                                | [V]  | 1500              |
| Minimum Clearance Distance between Open Contacts            | [mm] | 27                |
| Minimum Clearance Distance between Power Circuit to Earth   | [mm] | 40                |
| Minimum Creepage Distance between Power Circuit to Earth    | [mm] | 50                |
| Comparative Tracking Index (CTI) (IEC 60112)                | [V]  | 600               |
| Electrical Characteristics                                  |      |                   |
| Conventional Free Air Thermal Current at 40 °C <sup>2</sup> | [A]  | 120               |
| Conventional Free Air Thermal Current at 75 °C <sup>2</sup> | [A]  | 100               |
| DC - Rated Operational Current (τ = 15 ms)                  |      |                   |
| 3600 V  | [A]  | 110               |
| 1800 V  | [A]  | 230               |
| 900 V   | [A]  | 460               |
| DC - Maximum Breaking Capacity (τ = 5 ms)                   |      |                   |
| 3600 V  | [A]  | 125               |
| 1800 V  | [A]  | 250               |
| 900 V   | [A]  | 500               |
| AC - Maximum Breaking Capacity (cosφ = 0,8; 50 Hz)          |      |                   |
| 3600 V  | [A]  | 180               |
| 1800 V  | [A]  | 360               |
| 900 V   | [A]  | 660               |
| Component Category / Operational Frequency Class            |      | A2 / C3           |
| Rated Short Time Withstand Current                          | [kA] | 4 (for 5 ms)      |
| Critical Current Range                                      | [A]  | None              |
| Fault Making Capacity                                       | [kA] | 2.4               |
| Blow Out Circuit Type                                       |      | Indirect Coil     |

<sup>2</sup> Device cabled according IEC 60947

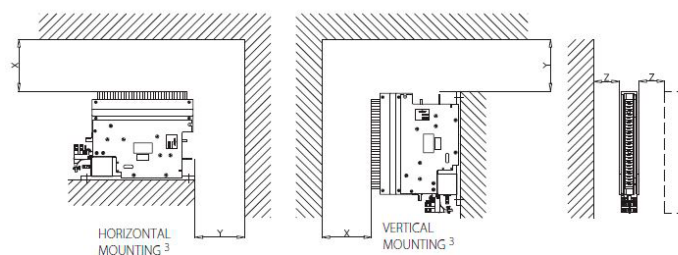
<sup>3</sup> Other mounting positions not allowed, reduced distances should be approved by Microelettrica

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

| Minimum clearances [mm] from: |               |     |    |    |
|-------------------------------|---------------|-----|----|----|
| Rated Operational Voltage     |               | X   | Y  | Z  |
| 3600 V                        | Metal Parts   | 200 | 80 | 50 |
|                               | Plastic Parts | 100 | 50 | 30 |

| Minimum clearances [mm] from: |               |     |    |    |
|-------------------------------|---------------|-----|----|----|
| Rated Operational Voltage     |               | X   | Y  | Z  |
| 1800 V                        | Metal Parts   | 120 | 50 | 50 |
|                               | Plastic Parts | 50  | 30 | 20 |

| Minimum clearances [mm] from: |               |     |    |    |
|-------------------------------|---------------|-----|----|----|
| Rated Operational Voltage     |               | X   | Y  | Z  |
| 900 V                         | Metal Parts   | 100 | 50 | 30 |
|                               | Plastic Parts | 50  | 30 | 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]      | 20 - 20                                   |
| Mechanical Operation Time ( $U_c$ and $T = 20^\circ\text{C}$ ) when Closing - Opening | [ms]     | 90 - 25                                   |
| Time Constant (L/R) at Pick Up - when Holding   | [ms]     | 25 - 75                                   |
| 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>4</sup>                         | [mA]     | 20(10) - 15(7.5) - 10(5) <sup>4</sup>     |
| Electrical Connections  |          | Fast-on 6.35 x 0.8 mm                     |
| Environmental Conditions  |          |   |
| Stock Temperature Range   | [°C]     | $-50 \div +85$                            |
| Operational Temperature Range   | [°C]     | $T_x (-40 \div +75)^5$                    |
| Pollution Degree - Overvoltage Category (EN 50124-1)                                  |          | PD3 - OV3                                 |
| Max Altitude without Performance Derating   | [m]      | 2000                                      |

<sup>4</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>5</sup> According to IEC 50125-1

