



# SWITCHES

## STANDARD FAMILY CODE LTHS03203SA91

Family Type	LTHS 320
Number / Type of Poles	3 / NO
Mounting Position	Vertical
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	Ceramic
Main Contacts Tips Material	S6
Arcing Contacts Tips Material	S6
Electric Diagram	-
Layout Drawing	D45827

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



**MICROELETTRICA**

## Description

Contactors with single interruption in air, electromagnetic control by full power coils. 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]	13.5
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		
Conventional Free Air Thermal Current at 40 °C <sup>2</sup>	[A]	350
Conventional Free Air Thermal Current at 75 °C <sup>2</sup>	[A]	300
DC - Rated Operational Current ( $\tau = 15$ ms)		
1800 V	[A]	-
900 V	[A]	-
440 V	[A]	-
DC - Maximum Breaking Capacity ( $\tau = 5$ ms)		
1800 V	[A]	-
900 V	[A]	-
440 V	[A]	-
AC - Maximum Breaking Capacity ( $\cos\phi = 0,8$ ; 50 Hz)		
1800 V	[A]	600
900 V	[A]	1200
440 V	[A]	1800
Component Category / Operational Frequency Class		A2 / C3
Rated Short Time Withstand Current	[kA]	8 (for 5 ms)
Critical Current Range	[A]	None
Fault Making Capacity	[kA]	4.8
Blow Out Circuit Type		Indirect Coil with Arcing Contact

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

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

**Minimum clearances [mm] from:**

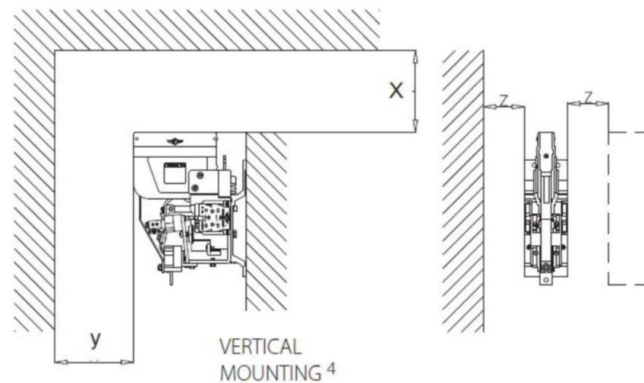
Rated Operational Voltage		X	Y	Z
1800 V	Metal Parts	120	50	50
	Plastic Parts	50	30	20

**Minimum clearances [mm] from:**

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

**Minimum clearances [mm] from:**

Rated Operational Voltage		X	Y	Z
440 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]	11.2

**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]	50 - 50
Mechanical Operation Time ( $U_c$ and $T = 20^\circ\text{C}$ ) when Closing - Opening	[ms]	110 - 30
Time Constant (L/R) at Pick Up - when Holding	[ms]	60 - 80
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 (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

