

# SWITCHES

## STANDARD FAMILY CODE LTHS06502\*A02

Family Type	LTHS 650
Number / Type of Poles	2 / NO
Connection between Poles	Single - Series - Parallel <sup>1</sup>
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	Ceramic
Main Contacts Tips Material	S6
Arcing Contacts Tips Material	-
Electric Diagram	-
Layout Drawing	D52466

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



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## Description

Contactor with double 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		
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]	16		
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				
Connection Type		Single	Series <sup>2</sup>	Parallel <sup>2</sup>
Conventional Free Air Thermal Current at 40 °C <sup>3</sup>	[A]	700	700	1400
Conventional Free Air Thermal Current at 75 °C <sup>3</sup>	[A]	650	650	1300
DC - Rated Operational Current ( $\tau = 15$ ms)				
1800 V	[A]	750	1500	750
900 V	[A]	1540	3000	1540
DC - Maximum Breaking Capacity ( $\tau = 5$ ms)				
1800 V	[A]	800	1750	800
900 V	[A]	1750	3500	1750
AC - Maximum Breaking Capacity ( $\cos\phi = 0,8$ ; 50 Hz)				
1800 V	[A]	1150	2300	1150
900 V	[A]	2300	4600	2300
Component Category / Operational Frequency Class		A2 / C3	A2 / C3	A2 / C3
Rated Short Time Withstand Current	[kA]	12 (for 5 ms)	12 (for 5 ms)	20 (for 5 ms)
Critical Current Range at 1800 Vdc	[A]	< 50 A	< 25 A	<50 A
Fault Making Capacity	[kA]	7.2	7.2	12
Blow Out Circuit Type		Indirect Coil with Arcing Contact	Indirect Coil with Arcing Contact	Indirect Coil with Arcing Contact

<sup>2</sup> Series or parallel bar connections are available under request

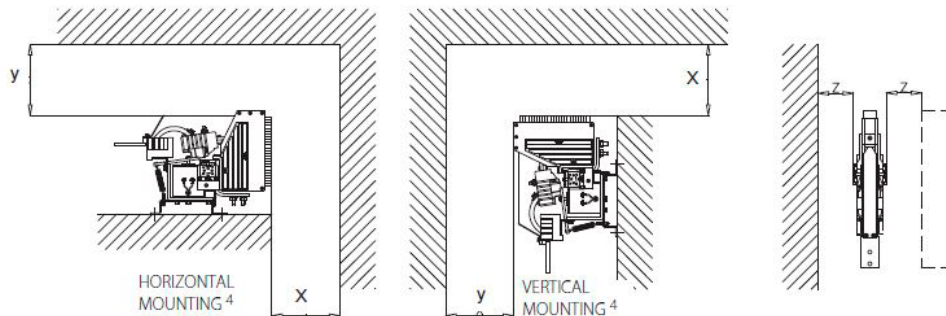
<sup>3</sup> Device cabled according IEC 60947

### 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]	28

### 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]	230 - 45
Time Constant (L/R) at Pick Up - when Holding	[ms]	190 - 215
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>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>4</sup> Other mounting positions not allowed, reduced distances should be approved by Microelettrica

<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 IEC 50125-1

