

# SWITCHES

## STANDARD FAMILY CODE LTHS05001\_A00

	STD	MP	HP
Family Type	LTHS 500 STD	LTHS 500 MP	LTHS 500 HP
Number / Type of Poles	1 / NO		
Mounting Position	Vertical / Horizontal <sup>1</sup>		
Control Voltage Rating U <sub>c</sub> (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	D56453	D56452	D56354



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## Description

Contactor 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]	900/1800		
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]	-		
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		STD	MP	HP
Conventional Free Air Thermal Current at 40 °C <sup>2</sup>	[A]	550		
Conventional Free Air Thermal Current at 75 °C <sup>2</sup>	[A]	500		
DC - Rated Operational Current ( $\tau = 15$ ms)				
1800 V	[A]	150	175	200
900 V	[A]	300	350	400
DC - Maximum Breaking Capacity ( $\tau = 5$ ms)				
1800 V	[A]	275	1000	1500
900 V	[A]	750	1900	2700
AC - Maximum Breaking Capacity ( $\cos\phi = 0,8$ ; 50 Hz)				
1800 V	[A]	275	1000	1500
900 V	[A]	750	1900	2700
Component Category / Operational Frequency Class		A2 / C3		
Rated Short Time Withstand Current	[kA]	5 (for 100 ms)		
Critical Current Range	[A]	None at 900 Vdc < 5A at 1800 Vdc		
Fault Making Capacity	[kA]	5		
Blow Out Circuit Type		Indirect coil with arcing contact		
Mechanical Characteristics		STD	MP	HP
Mechanical Endurance	[cycles]	$2 \times 10^6$		
Shock and Vibrations (IEC 61373)		Cat.1 - Class B		
Weight	[kg]	5.3	5.4	5.7
Control Circuit				
Control Voltage Range	[V]	$0.7U_c \div 1.25U_c$		
Power Consumption ( $U_c$ and $T = 20$ °C) at Pick Up - when Holding	[W]	25 – 25		
Mechanical Operation Time ( $U_c$ and $T = 20$ °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 °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 ÷ +85
Operational Temperature Range	[°C]	Tx (-40 ÷ +75) <sup>5</sup>
Pollution Degree - Overvoltage Category (EN 50124-1)		PD3 - OV3
Max Altitude without Performance Derating	[m]	2000

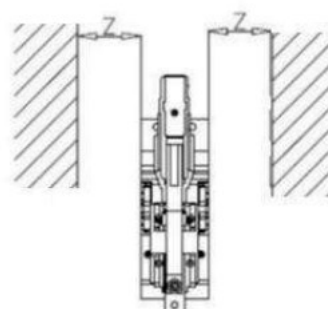
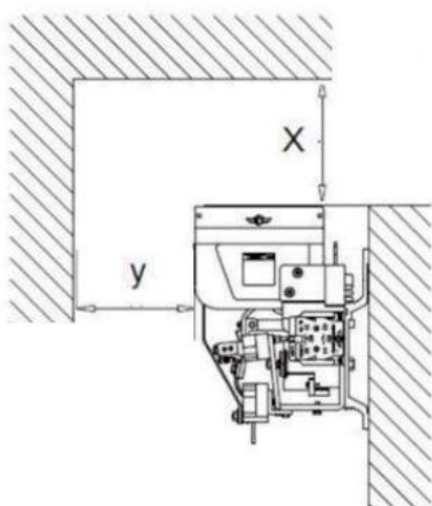
<sup>1</sup> To be specified in order phase.

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

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

<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 EN 50125-1



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

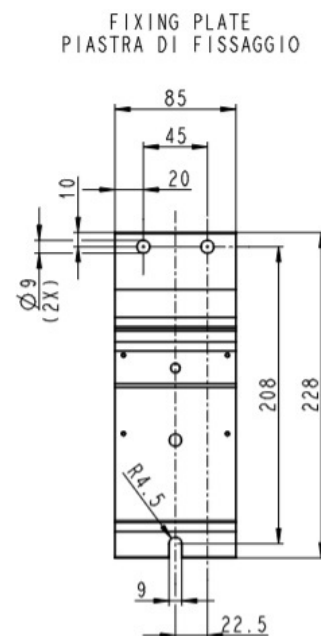
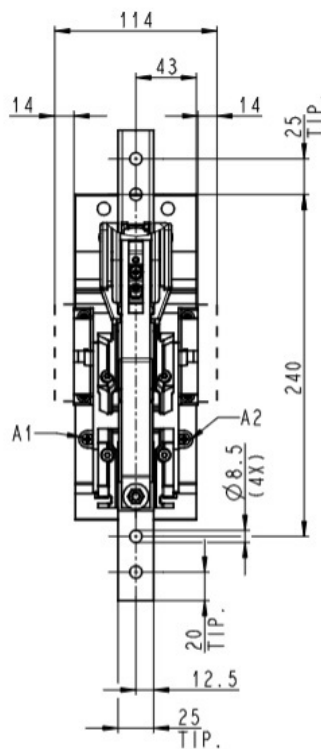
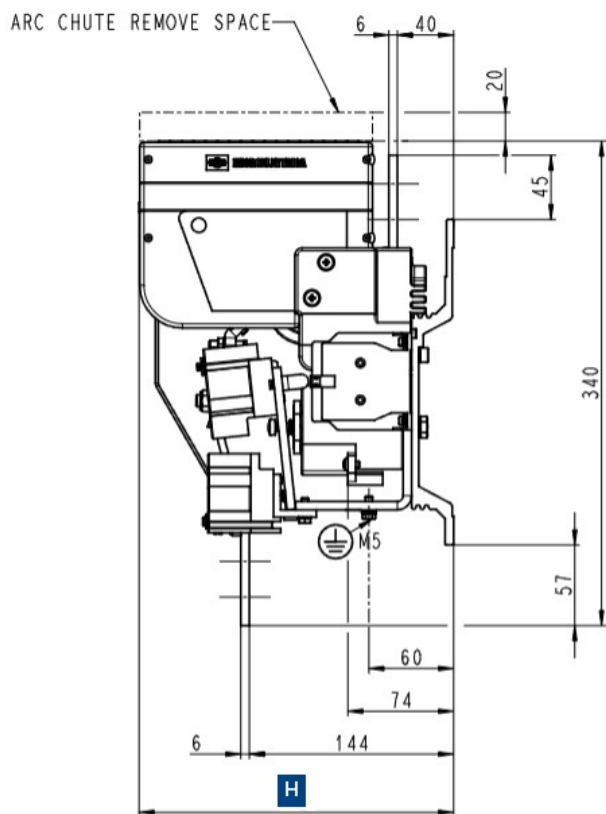
Minimum clearances [mm] from:				
Rated Operational Voltage		X	Y	Z
900 V	Metal Parts	100	50	30
	Plastic Parts	50	30	20

Insulation distances prescribed in the table "minimum clearances from" should be guaranteed between the arc chute, the HV active parts and the surroundings (metal or plastic parts).

From low voltage components, the clearances should be according to low voltage standards.

# Height H [mm]

EF6	MP	HP
\$\$\$	\$46	\$) #



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)**

**Microelettrica Scientifica S.p.A.**

20090 Buccinasco (MI) , Via Lucania 2, Italy

Tel.: +39 02 575731

E-mail: [info@microelettrica.com](mailto:info@microelettrica.com)

[www.microelettrica.com](http://www.microelettrica.com)



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