

# Switches

## Contactors

# LTHH/LTE/LTP line

### Applications

Auxiliary converter input

Filter pre-charging

Capacitor discharging

Heating/Air conditioning systems

Line contactor

Train supply line

Resistors based traction systems, for starting and braking of electric motors

The Microelettrica Scientifica LTHH/LTE/LTP Lines for electric traction are supplied to railways and underground systems throughout the world.

Where high voltage ratings are required, the LTHH Series contactors are the right solution.

The creepage and clearance distances are widely dimensioned for safe application in polluted environments. Their narrow outline is especially conceived for applications where space is a critical issue - as more and more often happens on railway vehicles.

To meet all possible applications, they are available both with electric (LTHH/LTE) and pneumatic (LTP) control, and poles can be manufactured in normally open or normally closed configurations.

The direct or indirect blow out circuit makes the LTHH contactors suitable to work both with high and low currents.

The DC control coil operates without economy resistor within a wide working range. More than 10000 LTHH contactors are delivered every year for the most demanding projects and applications worldwide.

### General Characteristics

- The highest voltage single pole heavy duty line
- Designed for on-board applications according to IEC 60077
- Ratings up to 4000 VDC/AC and up to 1350 A/pole application
- Direct or indirect arc blow-out systems available according specific application requirements
- Multi-pole assemblies, NO or NC poles
- Very high level of customization available



### Auxiliary Contact Blocks Type SJ11

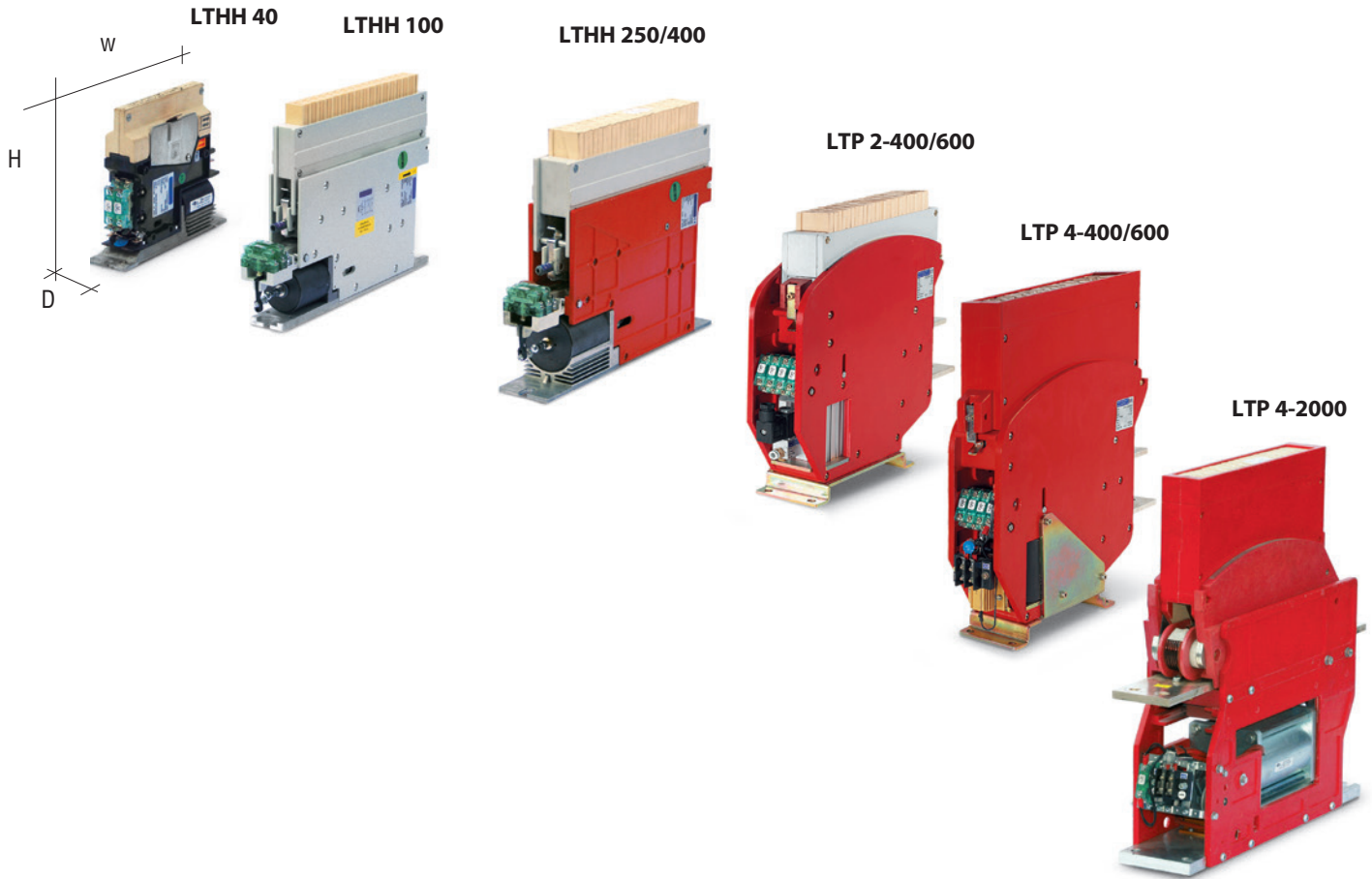
- Normally mounted on LTHH contactors
- 1 NO + 1 NC or 2 NO block versions available
- Execution in Makrolon, self-extinguishing and transparent polycarbonate
- Double interrupting, self-cleaning, solid silver, snap action contacts
- On request special execution with gold plated contacts



*Microelettrica Scientifica*

# Switches

## Contactors: LTHH/LTE/LTP Line



Type	U <sub>max</sub> [V <sub>AC/DC</sub> ]	I <sub>th</sub> [A]	W [mm]	H [mm]	D1/D2 [mm] (1/2 poles)
<b>LTHH 40</b>	2000	60	200(D1)/244(D2)	162.5(D1)/174.5(D2)	48/106
<b>LTHH 100</b>	4000	120	377(D1)/410(D2)	274(D1)/279(D2)	60/130
<b>LTHH 250</b>	4000	300	380.5(D1)/424(D2)	297(D1)/302(P2)	70/160
<b>LTHH 400</b>	4000	400	380.5(D1)/424(D2)	297(D1)/302(P2)	70/160
<b>LTE 2-400</b>	2000	900	428	367	80/-
<b>LTE 2-600</b>	2000	900	430	370(D1)/365(D2)	80/220
<b>LTP 2-400</b>	2000	900	402	367	80/-
<b>LTP 2-600</b>	2000	900	402	370	80/-
<b>LTE 4-400</b>	4000	900	429.4(D1)/379.3(D2)	394	85/175
<b>LTE 4-600</b>	4000	900	429.4	423	85/-
<b>LTP 4-400</b>	4000	900	402	394	85/-
<b>LTP 4-600</b>	4000	900	402	423	85/-
<b>LTE 4-2000</b>	4000	1350	501	473	119/-
<b>LTP 4-2000</b>	4000	1350	501	473	151.5/-



**KNORR-BREMSE**



*Microelettrica Scientifica*

Microelettrica Scientifica S.p.A. Via Lucania, 2 20090 Buccinasco - Italy  
Tel.: +39 02 575731 Fax: +39 02 57510940 - sales.contactors@microelettrica.com - www.microelettrica.com