

## STANDARD FAMILY CODE LTES

Family Type	LTES
Number/Type of Poles	Up to 6 modules combined with: <ul style="list-style-type: none"> <li>• 2 poles earthing module</li> <li>• 2 poles changeover module</li> </ul>
Mounting Position	Horizontal
Control type	Manual or Motorised
Interlocking system (option)	Mechanical by Keys and electromechanical by solenoid
HV presence indicator (option)	With redundant light
Auxiliary Contact Blocks	2 x (1NO + 1NC)
Block type	SL
Electric Diagram	TbD
Layout Drawing	TbD



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## Description

The Isolating Earthing Switch (IES) is a device that allows the connection to ground of many nodes in order to be sure that no dangerous energy or voltage potential are present into the HV circuit. The same IES can guarantee the isolation of the selected nodes when connection to ground is not needed.

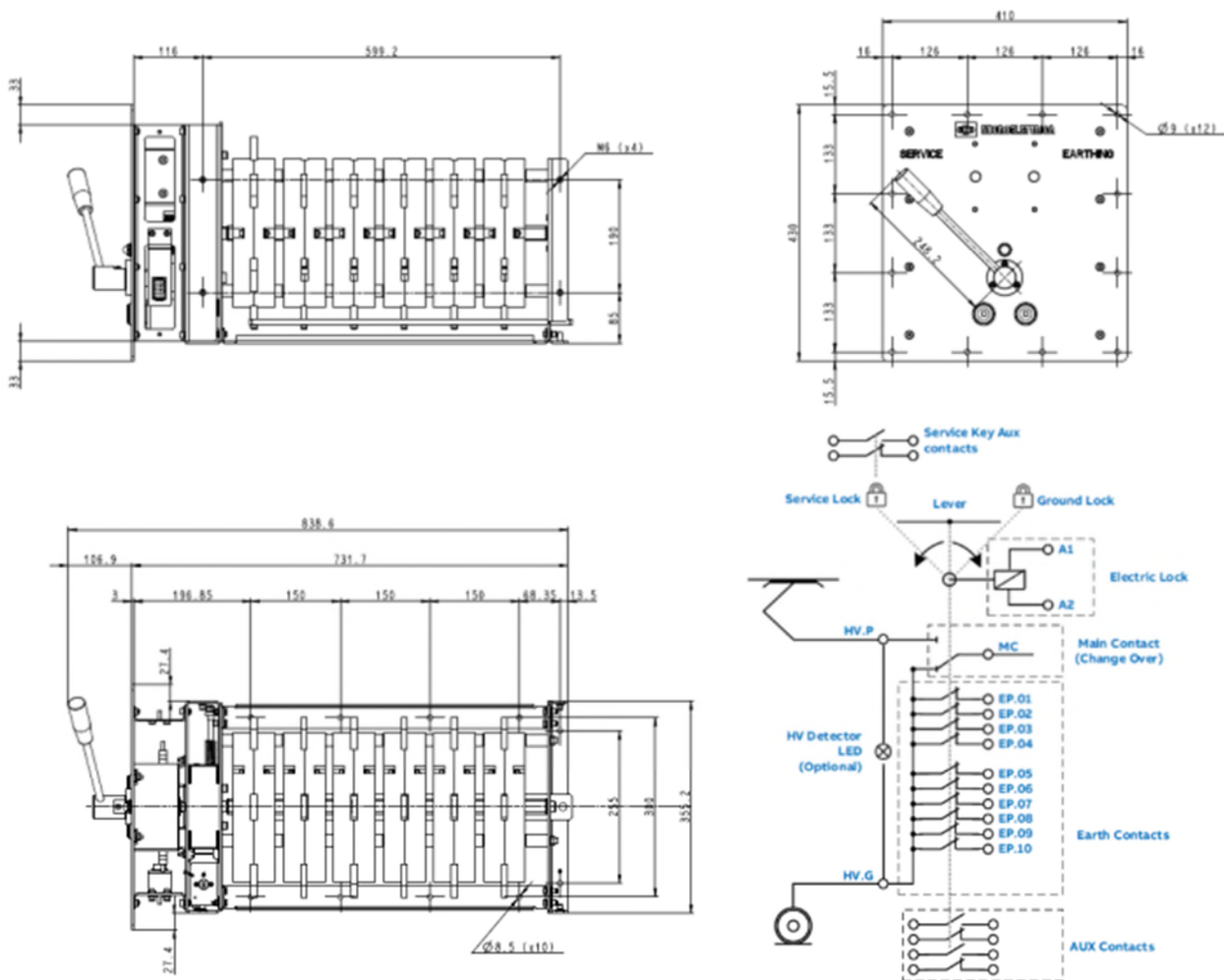
The off-load safety Isolating Earthing Switch (IES) is configured to satisfy the UIC550 requirements and standard IEC 60077-2. The IES has two states, "Service" and "Earthing". In the Service state the APCS is connected to the HV input and insulated from the ground. In the "Earthing" state the APCS is connected to the ground.

The IES is a combination of poles module that are simultaneously manually switched. The IES is installed inside a cabinet, except the front panel where earthing switch lever and locks are placed outside the APCS and protected by cover. The front panel is part of the APCS cabinet (gasket can be placed on the front panel of cabinet).

High Voltage Circuit		
Rated Operational Voltage (AC / DC)	[V]	3000
Max Operational Voltage (AC / DC)	[V]	3600
Rated Insulation Voltage	[V]	4800
Rated Impulse Voltage	[kV]	30
Rated Power Frequency Withstand Voltage (50 Hz for 60 s)		
Between HV to LV Circuit + Earth	[V]	18500
Conventional Free Air Thermal Current at 40 °C	[A]	500
Conventional Free Air Thermal Current at 75 °C	[A]	600
Short time withstand current: $\hat{I}_{cw}$ (peak) / $I_{cw}$ (steady state) / $t_{cw}$	[kA/kA/ms]	70/50/100
High Voltage Interface		
Ground Cable Connections cable glands hole (mm)	1 x $\varnothing$ 12	
HV Line Cable Connections cable glands hole (mm)	1 x $\varnothing$ 12	
Low Voltage Auxiliary Circuit		
Nominal voltage $U_n$	Up to 220 Vdc/Vac	
Auxiliary Contacts Connection	By screw M3	
Operating conditions		
Installation	Inside box	
Protection index	IP20 / front panel with lever IP44	
Altitude above sea level	1500 m	
Working ambient temperature	- 40 °C - + 75 °C	
Pollution degree (inside)	PD3	
Mechanical Characteristics		
Mechanical Endurance	[cycles]	$2 \times 10^5$
Shock and Vibrations (IEC 61373)		Cat.1 - Class B
Weight	[kg]	According to configuration
Control System		
Control Type	Manual control by lever or motorised	
Nominal voltage $U_n$	Up to 220 Vdc/Vac	
Voltage range	0.7 – 1.25 $U_c$	
Manual lever control	Integrated or remoted	
Actuation type	Bi-stable with a safety spring mechanism	
Lever length (mm)	246	
Lever stroke	90°	
Tangential force at lever extremity in both directions	<200N	

Mechanical Locking type	By keys (square, CISA, KABA or DOM)
Number of keys (Master / Slave)	Up to 6 keys configurable in input/output
Key's color	TBD
Electrical locking type	By electrical coil
Electrical Locked Position	"Service Lock" or "Earthing Lock"

**Layout drawing of 6 modules LTES with integrated manual lever control**



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)**

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