



# Multi Switch



Plug & Play  
Installation

**1:1** 16 A  
Automatic Transfer Switch



## HIGHLIGHTS

- **Redundant power supply**
- **Load protection**
- **Versatile to use**

The Riello UPS Multi Switch is a high availability and versatile intelligent switch that provides redundant power to connected equipment with two AC input sources. The Riello UPS Multi Switch supplies power to the connected loads from a primary mains source. If that primary source becomes unavailable, the Riello UPS Multi Switch automatically transfers loads to the secondary source. The transfer from one source to the other is performed according to the ITIC (CBEMA) times chart and so it does not impact the operation of the connected equipment. The Riello UPS Multi Switch monitors the current and provides warnings when power consumption draws near the maximum rating which helps prevent downtime to the equipment. Riello UPS Multi Switch has 8 independent IEC 10 A outlets allowing several devices can be plugged directly into the Rack without the need for an additional Rack PDU. The units have a connectivity slot which allows for LAN connection and remote management through PowerShield<sup>3</sup> software, Web interface, SNMP, or SSH which makes the Riello UPS Multi Switch an ideal device for the IT manager who needs flexibility and

protection for their IT equipment. Multi Switch provides installations with power supply continuity. Its operating principle ensures higher reliability than a single UPS, (with or without its own internal bypass).

### OPERATING PRINCIPLE

Multi Switch provides direct distribution of eight 10 A IEC outlets in a system with two input power lines (two mains inputs, or two UPS). Multi Switch is able to connect to either of the two input power lines, whilst simultaneously monitoring the power uptake.

### PROTECTION AGAINST LOAD FAULTS

If one of the loads fails (e.g. short circuit), Multi Switch disconnects the group of sockets where the load is connected, thus preventing other loads from being switched off (i.e. in the event of poor discrimination of the protection devices).

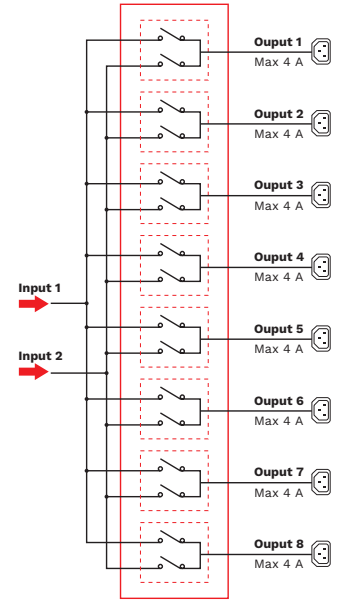
### PROTECTION AGAINST POWER SUPPLY FAULTS

If one of the two power sources falls outside tolerance levels, Multi Switch will transfer the load to the second power source (switching is instantaneous

if the two sources are in phase). Multi Switch units switch power with no impact to IT equipment. Depending on the ITIC curve, typical power supplies will operate 20 ms after AC voltage drops to zero. The IEEE 1100-1999 standard also references the ITIC curve. The SSI (Server System Infrastructure) standard recommends a hold-up time for power supplies to be a minimum of 21 ms for a voltage range of 100-240 V. Multi Switch units switch sources under these industry standard times. The switching time includes the time for the built-in intelligence to determine whether the voltage and frequency are in range. Any point of failure in the electronics does not cause a drop out of the output voltage because the unit incorporates redundancy of its electronic components.

**FEATURES**

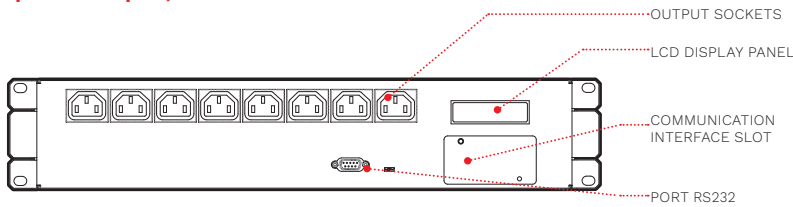
- Full protection for loads against mains and load failures;
- Redundant power supply;
- Flexible: Multi Switch can be powered with 2 different power supplies (including 2 UPS of different sizes/types);
- 19" cabinet installation;
- LCD Display panel;
- Compatible with PowerNetGuard supervision software;
- No signal connection between the Multi Switch and the power sources or loads is necessary;
- Slot for communications boards: the optional network card allows for remote in network connectivity and management through HTTP, SNMP and SSH protocol.



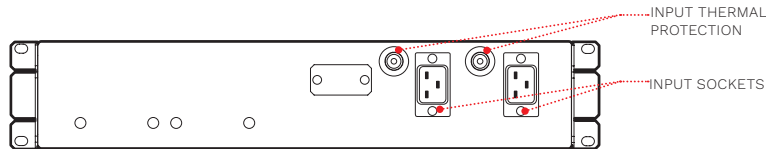
**DETAILS**

**MSW (2 inputs - 8 outputs)**

**Front**



**Rear**



**OPTIONS**

**SOFTWARE**

PowerNetGuard

**ACCESSORIES**

NETMAN 208

**MODELS****MSW****OPERATING SPECIFICATIONS**

Nominal Current [A]	16
Transfer type	“Break Before Make” (no overlapping sources)
Transfer time [ms]	< 8 (S1/S2 synchronised) - < 20 (S1/S2 non synchronised)

**INPUT**

Rated voltage - sources S1/S2 [V]	220 / 230 / 240 single-phase + N
Voltage tolerance [V]	180-276 (selectable)
Switched input phases	ph+N (two poles)
Rated Frequency [Hz]	50 / 60
Input sockets	2x IEC 320 C20 (16 A)

**OUTPUT**

Rated voltage	220 / 230 / 240 single-phase + N
Output sockets	8x IEC 320 C13 (10 A)
Max. load for each output [A]	4

**OVERALL SPECIFICATIONS**

Weight [kg]	10
Dimensions (WxDxH) [mm]	19”x360x2U
Communications	RS232 / Slot for communication interface
Ambient temperature	0 °C - +40 °C
Range of relative humidity	5-95% non-condensing
Colour	RAL 5004
Noise level at 1 m [dBA ±2]	<35
IP rating	IP20
Efficiency @ full load	> 99%
Standards	EN 62310-1 (safety) EN 62310-2 (electro-magnetic compatibility)