

# 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. According to the ITI (CBEMA) chart, the transfer time from one source does not impact the operation of the connected equipment as the switching occurs safely between the two input sources regardless of any phase differences. 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.

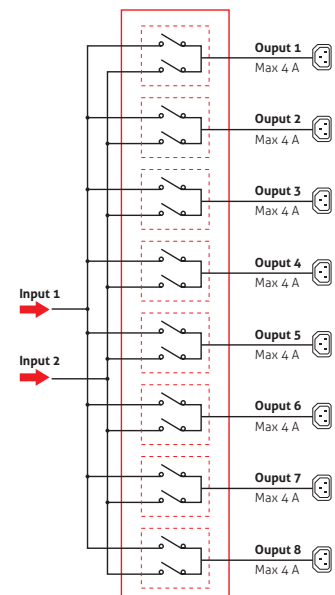
## PROTECTION AGAINST LOAD FAULTS

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 ITI Curve, typical power supplies will

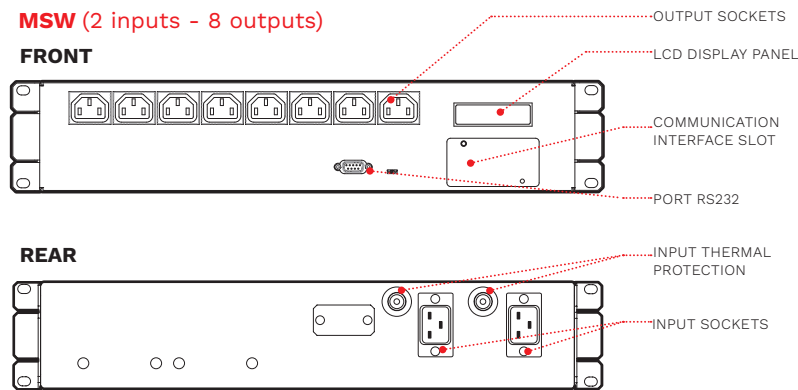
operate 20 msec. after AC voltage drops to zero. The IEEE 1100-1999 standard also references the ITI curve. The SSI (Server System Infrastructure) standard recommends a hold-up time for power supplies to be a minimum of 21 msec. for a voltage range of 100-240 V. Multi Switch units switch sources under 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 circuitry to avoid fault tolerance.



## FEATURES

- Full protection for loads against mains and load failures
- Redundant power supply
- Versatile to use: Multi Switch can be powered with 2 different power supplies (including 2 UPS of different sizes/types)
- 19" cabinet installation
- LCD Display panel
- Can be connected to 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



## OPTIONS

### SOFTWARE

PowerNetGuard

### ACCESSORIES

NETMAN 204

## MODELS

### MSW

NOMINAL CURRENT (A)	16
<b>INPUT</b>	
Rated voltage - sources S1/S2 [V]	230 single-phase + N
Voltage tolerance [V]	180-276 (selectable)
Switched input phases	ph+N (two poles)
Rated Frequency [Hz]	50 / 60
Input sockets	2 IEC 320 (16 A)
<b>OPERATING SPECIFICATIONS</b>	
Transfer type	"Break Before Make" (no overlapping sources)
Transfer time following source failure	<8 msec. (S1/S2 synchronised) - 20 msec. (S1/S2 non synchronised)
<b>OUTPUT</b>	
Rated voltage	choice of one of the two input power sources
Max. load for each output [A]	4
Output sockets	8 IEC 320 10 A
<b>ENVIRONMENTAL SPECIFICATIONS</b>	
Efficiency @ full load	>99%
Noise at 1 m from front (from 0 to full load) [dBA]	<35
Storage temperature	-10 °C up to +50 °C
Ambient temperature for the UPS	0 °C - +40 °C
Range of relative humidity	5-95% non-condensing
Max. installation height	1000 m at nominal power (-1% power for every 100 m above 1000 m) - Max 4000 m
Reference standard	EN 62310-1 (safety) EN 62310-2 (electro-magnetic compatibility)
<b>OVERALL SPECIFICATIONS</b>	
Weight [kg]	10
Dimensions (WxDxH) [mm]	19" x 360 x 2U
Colour	RAL 5004
IP rating	IP20
Communications	RS232 / Slot for communication interface

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