

# RISH FLEX 9012A



Input: single-phase: 115 - 230 Vac

Output: 12 Vdc 60 °C

Flexible Power continuity :from 95 to 120 W  
Efficiency up to 91%

Strong overload without switch-off, up to 50%  
“Power Good” Relay

Three mode of output protections:

- 1) Hiccup mode
- 2) Continuous Out Mode
- 3) Manual Reset

DIN Rail Mountable

Extremely small size

3 Year warranty

## Input Data

Nominal Input Voltage (2 x Vac) Manual select Input from 115 to 230	<b>115 – 230 Vac</b>
Input Voltage range (Vac)	<b>90 – 135 (115) 180 – 280 (230)</b>
Inrush Current (Vn and In Load) I <sup>2</sup> t	<b>≤ 16 A ≤ 5 msec.</b>
Frequency	<b>47 – 63 Hz ±6%</b>
Input Current (115 – 230 Vac)	<b>1.8 – 0.9 A</b>
Internal Fuse	<b>T 4 A</b>
External Fuse (recommended)	<b>10 A (MCB curve B)</b>

## Output Data

Output Voltage (Vn) Factory Setting ±3%	<b>12 Vdc</b>
Adjustment range (Vadj)	<b>10 – 14 Vdc</b>
Start up with Strong Load (capacitive load)	<b>≤ 50,000µF</b>
Turn-On delay after applying mains voltage	<b>1 sec. (max)</b>
Rated Current at 12 V 40°C (In)	<b>10 A (permanent )</b>
Rated Current at 12 V 50°C (In)	<b>9 A (permanent )</b>
Rated Current at 12 V 60°C (In)	<b>8 A (permanent )</b>
Power Boost Current at 12 Vdc 60°C(In)	<b>10 A ≤ 3 min.</b>
Current max. Overload ≅ 4Vdc (permanent)	<b>I<sub>max</sub>=I<sub>n</sub>60°Cx(1.8 - 2.2)</b>
Current Short Circuit I <sub>cc</sub>	
Max 2 sec.: Hiccup mode	<b>20 A</b>
Permanent : Continuous Mode	
Hold-up Time ( min. Vac)	<b>Typ. 20 msec</b>
Residual Ripple	<b>≤ 80 mV<sub>pp</sub></b>
Efficiency	<b>≥ 91 %</b>
Over temperature Protection	<b>Yes. Shut-down output and automatic restart.</b>
Short-circuit protection	<b>1° Hiccup Mode 2° Continuous mode 3° Manual Reset</b>
Dissipation power load max (W)	<b>11</b>
Over Load protection	<b>Yes</b>
Over Voltage Output protection	<b>Yes (typ. 35 Vdc)</b>
Parallel connection	<b>Yes</b>
Power Good Contact rating (EN60947.4.1): Max. DC1: 30 Vdc 1 A; AC1: 60 Vac 1A Min.1mA at 5 Vdc	<b>Resistive load Min permissive load</b>

## Climatic Data

Ambient Temperature operation	<b>-25°C up to +70 °C (&gt;60°C Derating 2.5% °C)</b>
Ambient Temperature Storage	<b>-40°C up to +85 °C</b>
Humidity at 25 °C, no condensation	<b>95 % to 25 °C</b>

## General Data

Isolation Voltage (In / Out)	<b>3000 Vac</b>
Isolation Voltage (In / PE)	<b>1605 Vac</b>
Isolation Voltage (Out / PE)	<b>500 Vac</b>
Protection Class (EN/IEC 60529)	<b>IP 20</b>
Reliability: MTBF IEC 61709	<b>&gt; 5,00,000 h</b>
Pollution Degree Environment	<b>2</b>
Connection Terminal Blocks Screw Type	<b>2.5 mm<sup>2</sup> (24 – 14 AWG)</b>
Protection class	<b>I with PE connected</b>
Dimension (w-h-d)	<b>55x110x105 mm</b>
Weight	<b>0.60 kg approx.</b>

## Norms and certifications

The CE mark in According to EMC 2004/108/EC and Low voltage directive 2006/95/EC.

## Electrical Safety

According to IEC/EN 60950 (VDE 0805) e EN 50178 (VDE 0160) for assembling device. The unit must be installed according to IEC/EN 60950. Input / Output separation: SELV EN60950-1 and PELV EN 60204-1. Double or reinforced insulation.

## EMC Immunity

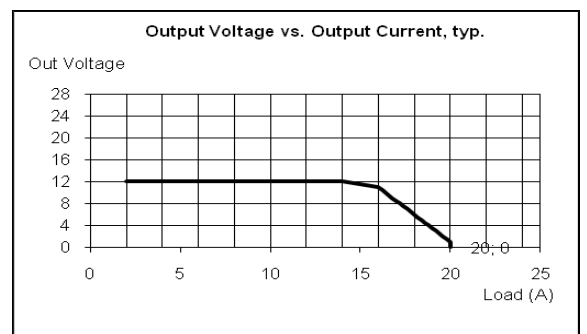
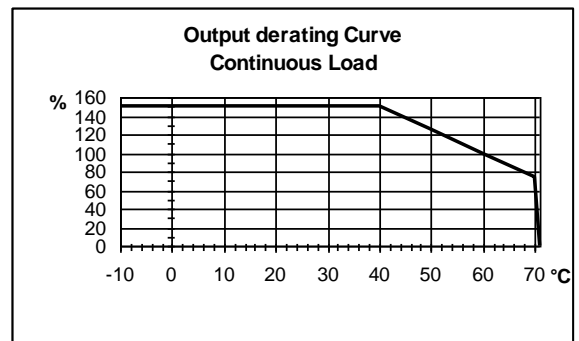
EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN61000-6-2

## EMC Emission:

EN61000-6-4, EN61000-3-2

## Standards Conformity

EN 60204-1 Safety of Electrical Equipment Machines



Measure



Control



Record



Analyze



Optimize