

# RISH FLEX- e 15XXA

Primary Switched Power Supply

## Technical Datasheet

Economical Solution for your Power Requirement



UNIVERSAL AC INPUT RANGE 85-264 V

UNIVERSAL DC INPUT RANGE 120-370 V

HIGH EFFICIENCY UPTO 87%

ISOLATION CLASS-II

SUITABLE FOR INDOOR USE

DIN RAIL MOUNTING

EXTREMELY COMPACT PLASTIC ENCLOSURE

COOLING BY FREE AIR CONVECTION



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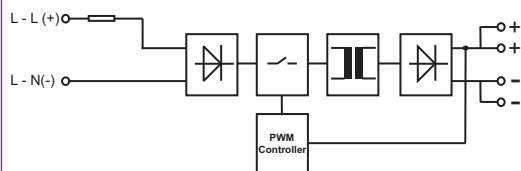
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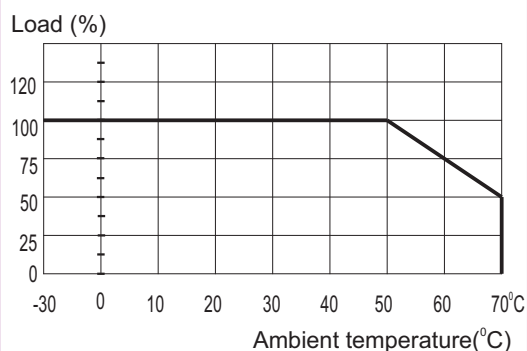
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## Primary Switched Power Supply

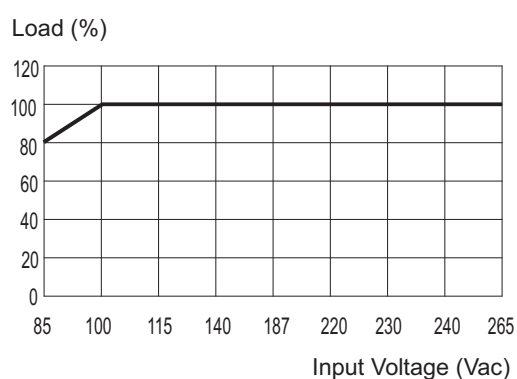
### Block diagram:



### Temperature derating curve:



### Input Voltage derating curve:



### Technical Specifications:

#### INPUT DATA :

AC input voltage range	85 VAC...264 VAC (Refer Derating Curve)
DC input voltage range	120 VDC ... 370 VDC
Nominal input voltage	115 VAC / 230 VAC (165 VDC / 325 VDC)
Inrush current	≤ 18 A typical
AC frequency range	45 Hz ... 65 Hz
Input current	0.4 A (115 VAC) , 0.3 A (230 VAC)
Internal fuse	T2 A
External fuse (recommended)	10A (MCB curve B)

#### OUTPUT DATA :

Nominal output voltage	See Table 1
Rated current	See Table 1
Power boost current @ 60 °C	See Table 1
Holdup time	≥ 50 msec (230 VAC), 15 msec (115 VAC)
Line regulation	< ± 0.5 %
Load regulation	< ± 0.5 % (change in load, static 10% ... 90%)
Overload	105 ... 180 % rated output power
Dissipation power load max	2.24 W
Efficiency	> 87 %
Residual ripple <sup>Note 2</sup>	≤ 120 mVpp
Short circuit protection	Yes
Overload protection	Yes (Hiccup mode)
Overvoltage output protection	Yes (See Table 1)
Parallel connection	No
Series connection	Yes
Turn on Delay	1 Seconds
Rise time	100 msec
Resistance to reverse feed	See Table 1



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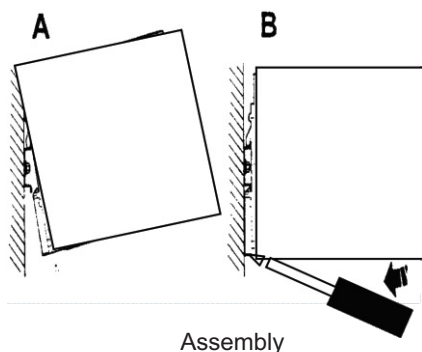
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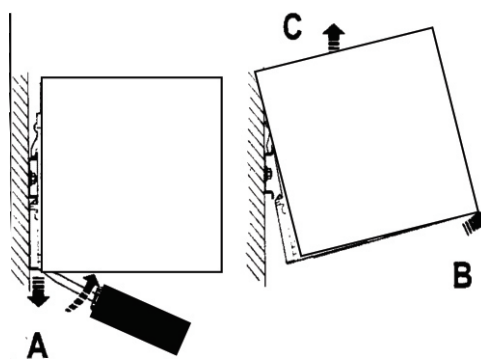
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## Primary Switched Power Supply

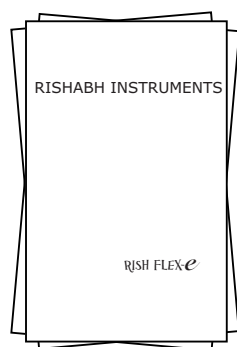
### Installation:



Assembly



Disassembly



-5°/+5° max

Maximum angle of Asslembly

### Technical Specifications: (cont.)

#### GENERAL DATA :

Isolation voltage input/output	3000V AC
Degree of protection	IP20 (EN/IEC 60529)
Protection class	II
MTBF	> 5,00,000 Hrs in acc. with IEC 61709 (SN29500)
Type of housing	Plastic enclosure
Housing material	PC Lexan 940
Dimensions W / H / D	18 mm / 90 mm / 62 mm
Weight	0.2 kg approx.
Connection terminal blocks	Screw type 2.5 mm <sup>2</sup>

#### CLIMATIC DATA :

Ambient temperature (operation)	-30 °C ... +70 °C
Ambient temperature (storage)	-40 °C ... +85 °C
Humidity at 25 °C	95 % (no condensation)
Pollution degree environment	2 (in acc. with EN 50178)
Climatic class	3K3 (in acc. with EN 60721)



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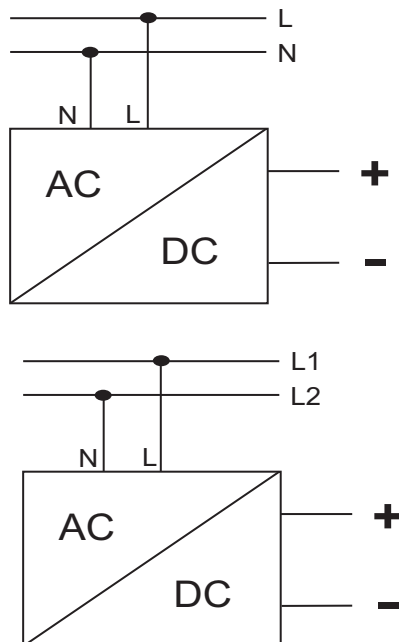
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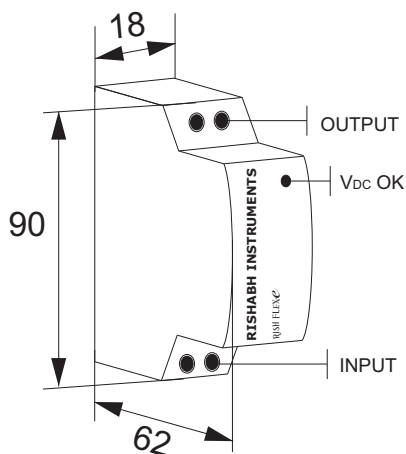
# RISH FLEX- e 15XXA

## Primary Switched Power Supply

### Electrical Connection:



### Layout & Dimensional Details:



w x h x d

18 x 90 x 62

all dimensions are in mm

### Technical Specifications: (cont.)

#### STANDARDS :

Electrical safety:

Assembling device	IEC/EN 60950 (VDE 0805) EN 50178 (VDE 0160)
Installation according	IEC/EN 60950
Input/output separation	EN 60950-1(SELV) , EN 60204-1(PELV) Double or reinforced insulation
EMC standards immunity	EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5
EMC standards emission	EN 61000-6-4 EN 61000-3-2
Safety of electrical equipment for machines	EN 60204-1

Note:

- 1) All parameters not specifically mentioned are measured at 230VAC input, Rated load and 25°C of ambient temperature.
- 2) Ripple and noise are measured at 20MHz of bandwidth short length lead terminated with a 0.1uF & 47uF parallel capacitor.

Table 1:

Parameter	RISH FLEX - e 1512A	RISH FLEX - e 1515A	RISH FLEX - e 1524A
Nominal Output Data	12 VDC $\pm$ 3%	15 VDC $\pm$ 3%	24 VDC $\pm$ 3%
Rated Current	1.25 A @ 50°C 0.94 A @ 60°C 0.625 A @ 70°C	1.0 A @ 50°C 0.75 A @ 60°C 0.5 A @ 70°C	0.63 A @ 50°C 0.48 A @ 60°C 0.32 A @ 70°C
Power Boost current @ 60°C	1.25 A (For $\leq$ 3 Minutes)	1.0 A (For $\leq$ 3 Minutes)	0.63 A (For $\leq$ 3 Minutes)
Output Over Voltage Protection	24 VDC Typ.	24 VDC Typ.	35 VDC Typ.
Resistance to reverse feed	Max 16 VDC	Max 16 VDC	Max 35 VDC



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