

Essen introduces the EPS series of Switch mode power supplies for the process control and automation needs of industry. These are rugged power supplies having over voltage, over current and short circuit protections. The metallic housing is rugged yet attractive and corrosion resistant. The input voltage can be switched from 110V to 230V. Output Voltage is at 24V DC, 12V DC & 5V DC. Load and Line regulation are less than 1% and efficiency is also very high. The supplies are intended for high reliability applications of industry.



- Characteristics
- Voltage and Load regulation better than 1 %
 - PWM technology
 - 150mV output voltage ripple @20MHz
 - Either universal input voltage (85-270 VAC) OR switch selectable from 85-130V AC to 190-270V AC
 - Inbuilt EMI filter complying with EN55022- class B emissions
 - Overload protection and short circuit protected
 - Robust construction using latest high reliability solid state electronic components
 - Mounting using M3 or M4 screws
 - High Reliability using high temperature electrolytic capacitors



TECHNICAL DATA

Input voltage	85-130V AC /190- 270V AC (selectable by inbuilt switch).
Output Voltage	24V DC or 12V DC or 5V DC, Adjustable up to +/- 10% with inbuilt Potentiometer
Line regulation	Better than 1% from low line to high line
Load regulation	Within 1% of output from 0% to 100% rated load.
Efficiency	About 82% at full load
Protection	Over-Load protection 125-135%. Short circuit protected, automatic recovery when short circuit removed.
Leakage current	Less than 3.5 mA at 230V AC input for all models
Inrush Current	25A at 110V, 50A at 230V
Isolation	1500VAC for 1 minute between Input and output 1500VAC for 1 minute between Input and Safety Earth 500VAC for 1 minute between output and Safety Earth
Insulation Resistance	Tested for 100 Mohm at 500 VDC
Wire Connections	12-22 AWG cable connections on 9.5 mm pitch Terminal Block
EMI /EMC	Tested according to EN 55022 Class B
Enclosure Material	Chassis -Aluminium. Cover - Steel with corrosion resistant plating
Hold Time	At least 20 msec at rated load.
Mounting	3 M3 screws (Side Mounting), 4 M3 screws (Bottom Mounting)
Temperature	Storage temperature : -20 to 95 °C. Working temperature 10 to 65°C
Warranty	18 months from date of purchase.

All dimensions are in mm.
Due to continuous improvement in products, we reserve the right to alter specifications without prior notice

Product Specifications					
Parameter	EPS - 60-24	EPS - 50-24	EPS - 100-24	EPS - 200-24	EPS - 240-24
Switching Frequency	50 KHz.	25 KHz.	25 KHz.	25 KHz.	25 KHz.
Input Voltage Range	Universal (85-270 V AC)	85-130V AC or 190V - 270V AC (Selectable by inbuilt Switch)			
Inrush current	25A at 115V input, 50A at 230V input				
Output voltage and adjustable range	24V DC (+/- 10%)				
Output Voltage Ripple	150 mV pk-pk				
Leakage current	Less than 3.5 mA at 230V AC				
Output Current range	0-2.5A	0-2.1A	0-4.5A	0-8.3A	0-10A
Efficiency	79%	78%	83%	83%	82%
Over Load Protection	135-150%	135-150%	135-150%	115-135%	115-135%
Dimensions (L x W x H) mm.	159 x 97 x 38	159 x 97 x 38	199 x 98 x 38	215 x 115 x 50	215 x 115 x 50
Mounting Screws	3 - M3	3 - M3	3 - M3	4 - M4	4 - M4
Cooling	Free Air convection cooling				Forced Air cooling with inbuilt Fan
Weight	510 g.	510 g.	620 g.	930 g.	1150 g.

Product Specifications						
Parameter	EPS-15-5	EPS-100-5	EPS-40-12	EPS-100-12	EPS-145-12	EPS-145-24
Switching Frequency	36 KHz.	25 KHz.	36 KHz.	25 KHz.	25 KHz.	25 KHz.
Input Voltage Range	85-130V AC or 190V - 270V AC (Selectable by inbuilt Switch)		Universal (85-270 V AC)	85-130V AC or 190V - 270V AC (Selectable by inbuilt Switch)		
Inrush current	25A at 115V input, 50A at 230V input					
Output voltage and adjustable range	5V DC (-5 to +10%)	5V DC (-5 to +10%)	12V DC (+/- 10%)	12V DC (+/- 10%)	12V DC (+/- 10%)	24V DC (+/-10%)
Output Voltage Ripple	150 mV pk-pk (Maximum)					
Leakage current	3.5 mA at 230V AC (Maximum)					
Output Current range	0-3A	0-20A	0-3.5A	0-8.5A	0-12A	0-6A
Efficiency	65%	78%	76%	81%	83%	80%
Over Load Protection	115-150%	135-150%	115-150%	135-150%	135-150%	135-150%
Dimensions (L x W x H) mm.	99 x 97 x 36	199 x 98 x 38	129 x 98 x 38	199 x 98 x 38	199 x 98 x 38	199 x 98 x 38
Mounting Screws	2 - M3	3 - M3	2 - M3	3 - M3	3 - M3	3 - M3
Cooling	Free Air convection cooling					
Weight	310 g.	620 g.	440 g.	620 g.	710 g.	710 g.

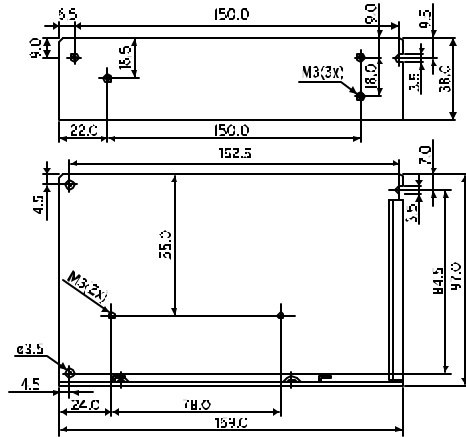
NOTE : (A) For proper cooling of the power supply ensure a clearance of at least 2.0 cm on the top and at least one side of the power supply. This also increases reliability of the equipment.

(B) Load regulation and line regulation are +/-2% for +5V DC output SMPS (instead of 1%)

(C) Overload protection for 145W SMPS is shutdown type and recovery is not automatic when overload is removed. Input power has to be cycled off then on to get power again for SMPS.

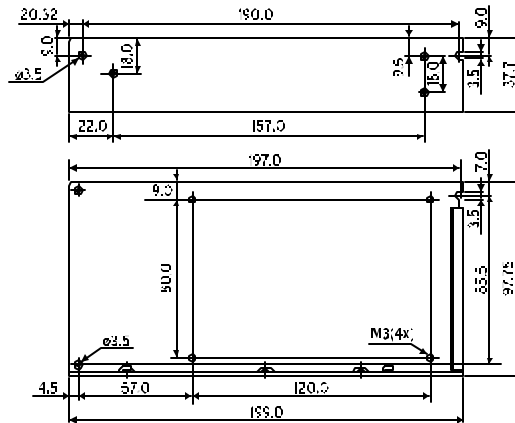
Ordering code

EPS-50-24
EPS-60-24



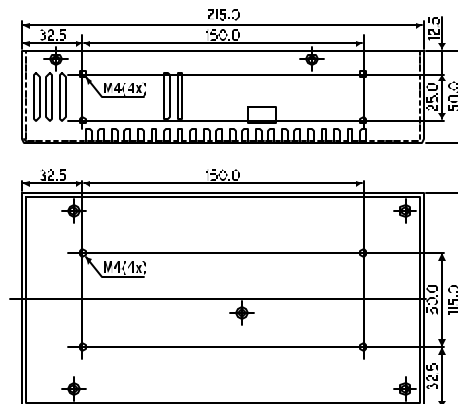
Ordering code

EPS-100-5
EPS-100-12
EPS-100-24
EPS-145-12
EPS-145-24



Ordering code

EPS-200-24



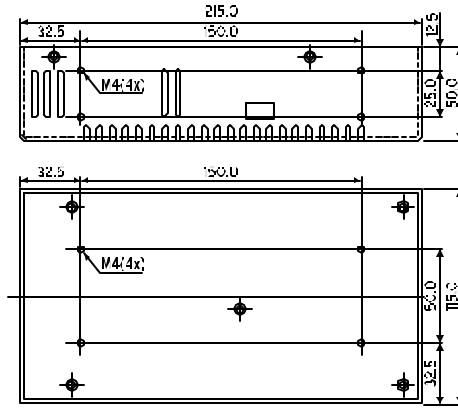


SWITCH MODE POWER SUPPLY

EPS - SERIES

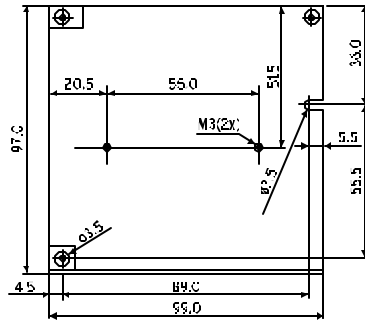
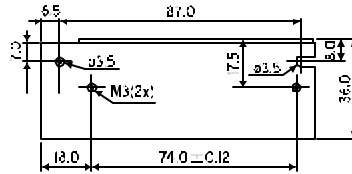
Ordering code

EPS-240-24



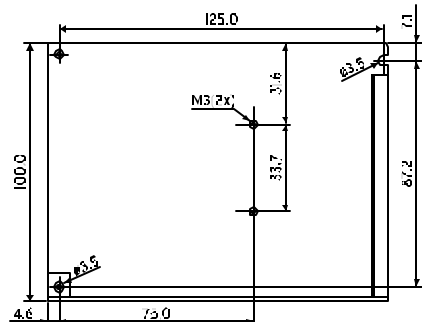
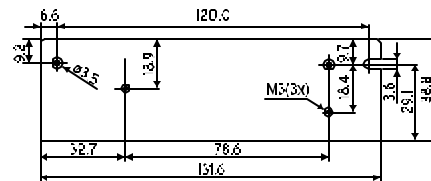
Ordering code

EPS-15-5



Ordering code

EPS-40-12



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Essen Deinki
Essential for Connection

22, Industrial Area, Phase - II, Chandigarh - 160002 (INDIA)
Tel. : +91 172 - 4600600 (10 Lines) Fax : +91 172 - 4600666
E mail : info@essendeinki.com Website : www.essendeinki.com