NEW
Model Inside

IDEC

Think Automation and beyond...

IDEC Power Supplies

The Best Power Supplies in the World!

Do you need to conserve panel space? Would you like to save money while you're doing it? IDEC has the answer. With the introduction of the new 10W and 15W models to the PS5R Slim Line power supplies, not only do you get lower wattage at a lower cost, but you also benefit from a compact design. Lightweight and slim, the 15W model is just 90mm x 22.5mm x 95mm and has a wide variety of mounting directions to give you added flexibility within your panel. 10W models are 5VDC, while 15W models have the option of 12 or 24VDC.

30W, 60W, 90W, 120W and 240W models are also available. The 120W model is only 50mm wide and even the 240W is only 80mm wide (50% smaller in size compared to standard DIN rail power supplies). With an adjustable output voltage and monitoring features such as a DC On and DC Low indicators, this series gives the power of control back to you.

IDEC Slim Line power supplies are a great alternative to linear power supplies. They are compact and offer high performance with an efficiency rating over 80%, output ripple of less than 1% peak-to-peak, and universal AC/DC inputs that give you the flexibility of worldwide usage. In contrast, Linear power supplies usually have low efficiency ratings of 40-50%, inputs that are not always universal, and are typically twice the size and weight of standard switching power supplies.

When the semiconductor industry created the requirement for SEMI F47-approved equipment to be used in semiconductor fabrication machinery, IDEC became the first company to feature the "SEMI F47 certified" mark on its power supplies. The 120W and 240W models are designed to ensure protection and immunity from interruptions due to voltage sags, saving production time and cost.

IDEC also offers a broad selection of standard PS5R DIN rail power supplies that range from 7.5W to 240W and PS3L metal frame power supplies ranging from 10W to 300W. All are DIN rail or direct surface mountable, equipped with overload protection, universal inputs, and approved for industrial applications worldwide.

Worldwide Approvals

IDEC power supplies are designed for superior operation and performance, providing flexibility and versatility. The universal inputs and the organizational approvals certify that IDEC power supplies can provide service worldwide.

Quality

All IDEC power supplies are UL508 listed, which allow 100% full load operation. There's no need to oversize and derate the power supply. The spring-up screw terminals and easy installation combined with this rating, mean significant savings in money and time for the end user.

Safety

PS5R Slim Line power supplies are approved for use in Class 1, Div. 2 hazardous locations. Listed to the UL1604 standard, these models can be used in environments where harmful vapors, gases or explosive materials are found.

New

Actual Size

Only 22.5mm

Easy-to-use, Convenient and Reliable

- **Universal (AC/DC) Input**
  All power supplies have a wide input range, which can easily integrate into industrial applications all over the world. Use the auto adjustments to set the power supply to the correct input power.
- **Fast and Easy Installation**
  IDEC power supplies can quickly snap onto a DIN rail with built-in DIN rail clips that require no additional brackets. They can also be directly mounted on a panel, which means installation is a snap.

  The PS5R Standard and Slim series power supplies are spring-up terminal types that allow easy installation of ring lugs.
- **Overload Protection**
  All IDEC power supplies are designed with overcurrent and overvoltage protection to eliminate power supply or equipment damage. With overcurrent protection, the output voltage automatically drops to zero due to excessive current. When the load returns to a normal level, normal output voltage is restored. With overvoltage protection, the power shuts down when an overvoltage occurs. Only a manual reset can turn the power back on.
- **IP Protection**
  All terminals on the IDEC power supplies are IP20 (Fingersafe).
- **SEMI F47** (for 120W & 240W Slim Line only)
  The semiconductor industry requires SEMI F47 approved equipment to be used in semiconductor fabrication machinery. The EIAC Corp. is a third party agency and a global leader in conducting voltage sag testing on semiconductor equipment. They certified the 120W and 240W to the SEMI F47 standard.
- **Class I, Div. 2 (UL 1604)**

  All PS5R Slim Line power supplies are approved for use in Class I, Div. 2 environments. They can be used in hazardous locations where flammable liquids, gases, and vapors exist or are normally confined within closed containers.
- **NEC Class 2 (UL 1310)**

  The 10W, 15W, 30W and 60W PS5R Slim Line power supplies are listed according to UL1310, making them compliant to the NEC (National Electric Code) Class 2 rating. For UL1310, the output of the power supplies must be less than 100V AC (under all conditions), have electric shock protection and meet the National Fire Protection Association standards.
- **SELV**

  All IDEC power supplies are SELV (Safety Extra Low Voltage) compliant. For safety purposes, regulatory agencies defined the highest voltage a person can sustain, without causing any injury, at approximately 30V AC or 42.4V DC.

IDEC

Designed with Accessibility and Convenience in Mind

DC Low Indicator (15W, 120W & 240W Slim Line Only)

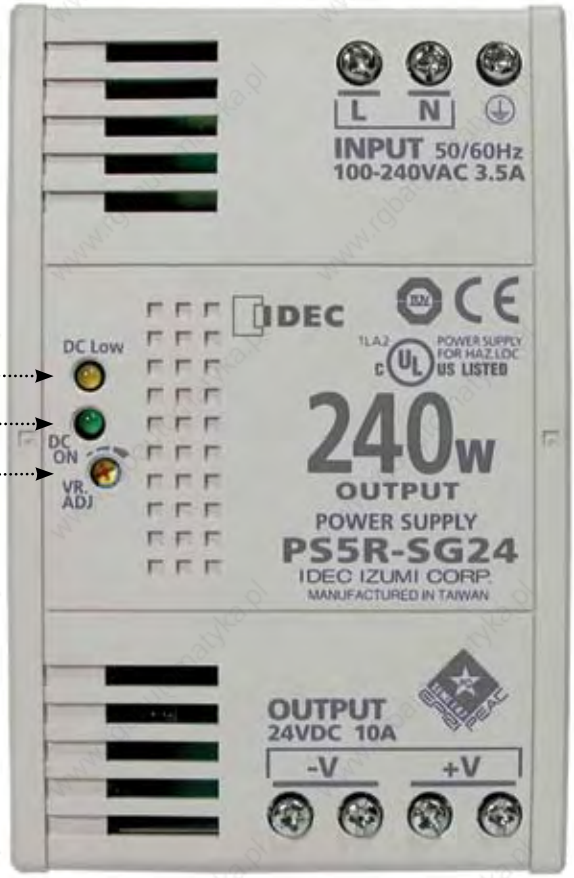
The indicator turns on when the output voltage drops below 80% of the rated value. This assists in troubleshooting power supply problems.

DC ON Indicator

The indicator turns on when the unit is powered up. This is a convenient way to know when the power supply is receiving power.

Output Voltage Adjustment

The output voltage can be easily adjusted within ± 10% of the rated voltage.



Universal Inputs

The power inputs have a range of 85-264V AC to 100-350V DC, and automatically adjust to the correct input power. This makes IDEC power supplies suitable for use anywhere in the world. Power factor correction has also been included to minimize harmonic distortion, resulting in a longer operating life and increased reliability. The power supplies come with spring-up, fingersafe screw terminals.

Long Life Expectancy

IDEC power supplies are very reliable, with a life expectancy of 70,000 hrs. (minimum) or longer, depending on usage.

Output Channel

With very low output ripples of less than 1% peak to peak, the 120W and 240W power supplies are some of the best in the industry. The output comes with overload protection that avoids damaging the power supply and the spring-up, fingersafe, screw terminals add a level of safety and ease for the user. The 240W power supply also has the convenience of two output terminals.

Fingersafe, Spring-up Screw Terminals

Don't worry about losing screws or getting an inadvertent shock from a terminal. The terminals are Captive spring-up screws, which makes using them as easy as pushing a screw down and tightening it. They are shock and vibration resistant, and work with ring lugs, fork connectors or stripped wire connections. The terminals are rated IP20 (when tightened) meaning they are recessed to keep fingers and objects from touching the input contacts.

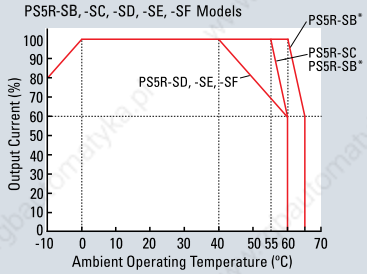
Top View

Ventilation Grill

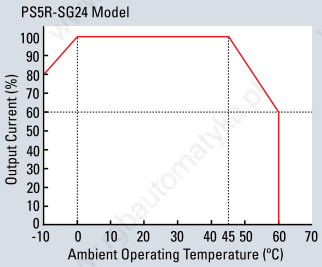
Provides cooling for the power supply and prevents small objects from falling into the power supply circuitry.

Safety Charts

Derating Curves



Output Derating
PS5R-SB, -SC, -SD, -SE, -SF



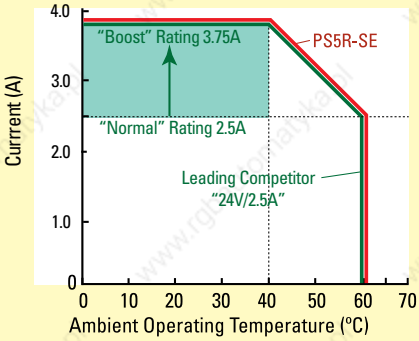
Output Derating
PS5R-SG

All IDEC Slim Line power supplies are listed to UL508, which allows operation at 100% capacity inside a panel. This eliminates the need to use oversize power supplies or utilize two power supplies derated at 50% of their rated output.

The charts above show that the PS5R Slim 10W and 15W (at 60°C), 30W/60W/90W (at 55°C), 120W (at 40°C), and 240W (at 45°C) meet the ambient temperature required by UL508 and EN60950 standards to operate at an output current of 100%. The output current starts to derate beyond the required temperature.

*Derating curve for -SB model varies depending on mounting method.

PS5R-SE 90W/3.75A/24V DC versus the Leading Competitor
Standard derating curve (operating temperature vs. output current)

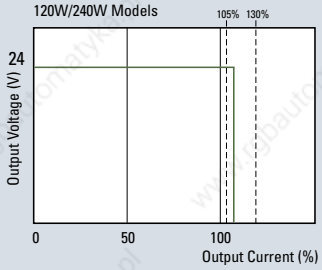


Don't Believe the Hype

Other companies use slick marketing to sell you 60W power supplies with a "BOOST," but what they don't tell you is that these are merely 90W power supplies that have been renamed to fool you into thinking they have a unique feature. IDEC 90W power supplies are just what they claim, 90W power supplies. The truth is IDEC led the market by incorporating UL508 DIN rail mount power supplies as a standard product. Don't let the other guys pull a fast one on you by claiming to provide features that just aren't true, or even possible. See what IDEC has to offer, no strings attached.

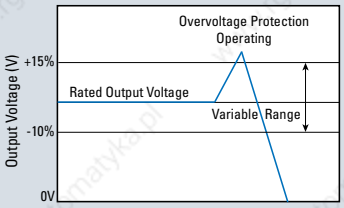
Overload Protection

Overload protection prevents the power supply from being damaged when an overload occurs. There are two kinds of protection.



Overcurrent Protection
PS5R-SF, -SG

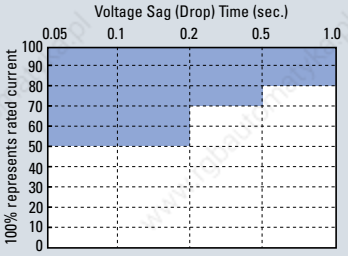
Overcurrent Protection- When the output current exceeds 105% of the rated current, overload protection is triggered, and the output voltage starts decreasing. When the output current returns within the rated range, the overload protection function is automatically cleared.



Overvoltage Protection

Overvoltage Protection- When the output voltage of the power supply rises to 120% or more of the rated value, the output will shut off. To restore power, only manual reset is available which is an advantage in troubleshooting.

SEMI-F47 Approved



Voltage Sag Sliding Scale
PS5R-SF, -SG

The SEMI F47 (Semiconductor Processing Equipment Voltage Sag Immunity) defines the minimum voltage sag ride-through requirements for semiconductor processing, automated test equipment, and other equipment. It requires that the equipment be able to tolerate voltage sags on an AC power line without interrupting operations. This avoids the loss of production and money.

The graph shows how the equipment must tolerate sags to 50% for 200ms, sags to 70% for up to 0.5 seconds, and sags to 80% for up to 1 second.

Slim Line Key Features

- Lightweight and compact in size
- Wide power range: 10W-240W
- Universal input:
  10W to 90W: 85-264V AC/100-370V DC
  120W and 240W: 85-264V AC/100-350V DC
- Power Factor Correction for 60W to 240W (EN61000-3-2)
- Meets SEMI F47 Sag Immunity (120W & 240W only)
- Approved for Class 1, Div. 2 Hazardous Locations
- Overcurrent protection, auto-reset
- Overvoltage protection, shut down
- Spring-up Screw Terminal type, IP20
- DIN rail or panel surface mount
- Approvals:
  CE Marked
  TÜV
  c-UL, UL508
  UL1310 (PS5R-SB, -SC, -SD)
  UL1604
  EN 50178:1997
  LVD: EN60950:2000
  EMC: Directive EN61204-3:2000
  (EMI: Class B, EMS: Industrial)

PS5R Slim Line

New

10-Watt/15-Watt Power Supply

Part Number	Rated Voltage	Rated Current
*PS5R-SB05	5V DC	2.0A
PS5R-SB12	12V DC	1.2A
PS5R-SB24	24V DC	0.65A

*Total output: 10W

30-Watt Power Supply

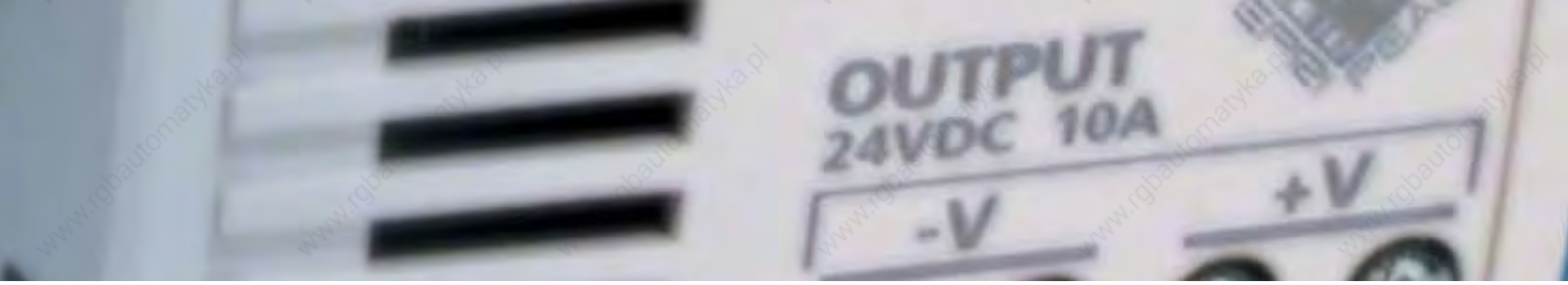
Part Number	Rated Voltage	Rated Current
PS5R-SC12	12V DC	2.5A
PS5R-SC24	24V DC	1.3A

60-Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-SD24	24V DC	2.5A

90-Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-SE24	24V DC	3.75A



120-Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-SF24	24V DC	5A

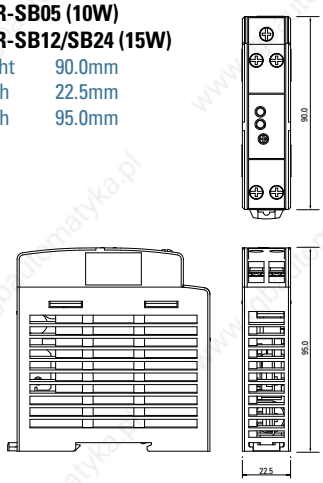
240-Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-SG24	24V DC	10A

Slim Line Dimensions

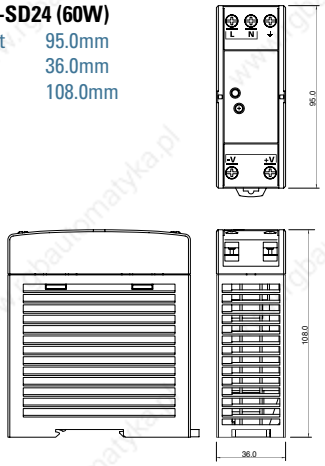
PS5R-SB05 (10W)
PS5R-SB12/SB24 (15W)

Height	90.0mm
Width	22.5mm
Depth	95.0mm



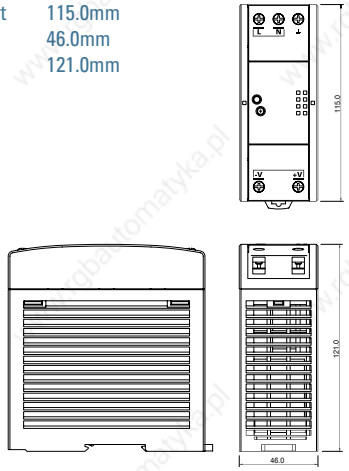
PS5R-SC12/SC24 (30W)
PS5R-SD24 (60W)

Height	95.0mm
Width	36.0mm
Depth	108.0mm



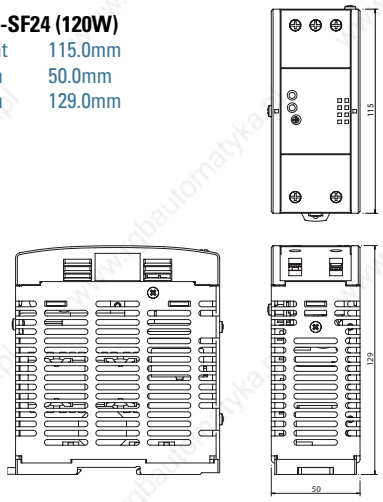
PS5R-SE24 (90W)

Height	115.0mm
Width	46.0mm
Depth	121.0mm



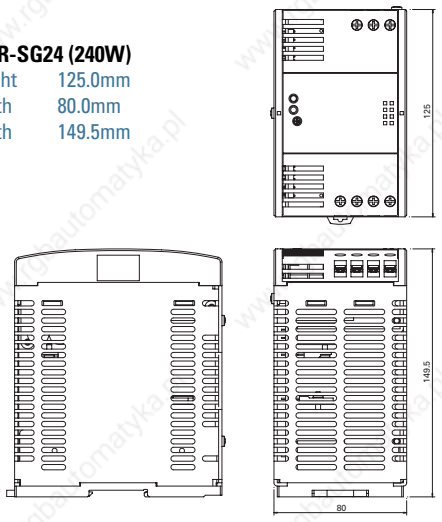
PS5R-SF24 (120W)

Height	115.0mm
Width	50.0mm
Depth	129.0mm



PS5R-SG24 (240W)

Height	125.0mm
Width	80.0mm
Depth	149.5mm



Standard Model Key Features

- Wide Power Range: 7.5W-240W
- Universal input :
  7.5W-50W: 85-264V AC/105-370V DC
  100W: 85-132V AC/170-264V AC
  240-370V DC (selectable)
  75W, 120W, 240W: 85-264V AC/110-350V AC
- Overcurrent/Overvoltage Protection
- Power Factor Correction (75W, 120W, 240W models)
  EN61000-3-3
  EN61000-3-2
- Voltage adjustment ±10%
- Spring-up Screw Terminal, IP20 (finger-safe)
- DIN rail or panel surface mount
- Approvals:
  CE marked
  UL 508 Listed
  UL, c-UL
  TÜV approved
  EMC Directives:
  EN50081-2
  EN50082-2
  EN61000-6-2
  LVD EN60950:2000

Standard Power Supplies

7.5-Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-A05	5V DC	1.5A
PS5R-A12	12V DC	0.6A
PS5R-A24	24V DC	0.3A

15-Watt Power Supply

Part Number	Rated Voltage	Rated Current
*PS5R-B05	5V DC	2.5A
PS5R-B12	12V DC	1.2A
PS5R-B24	24V DC	0.6A

*Total output: 12.5W

30-Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-C12	12V DC	2.5A
PS5R-C24	24V DC	1.3A

50-Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-D24	24V DC	2.1A

75-Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-Q24	24V DC	3.1A

100-Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-E24	24V DC	4.2A

120-Watt Power Supply

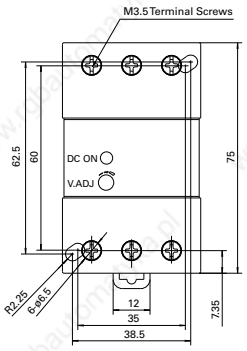
Part Number	Rated Voltage	Rated Current
PS5R-F24	24V DC	5A

240-Watt Power Supply

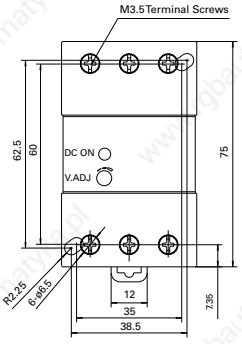
Part Number	Rated Voltage	Rated Current
PS5R-G24	24V DC	10A

Standard Power Supply Dimensions

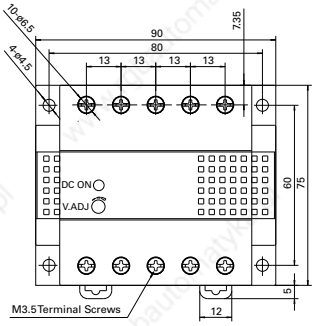
PS5R-A (7.5W)
Height 75.0 mm
Width 45.0 mm
Depth 70.0 mm



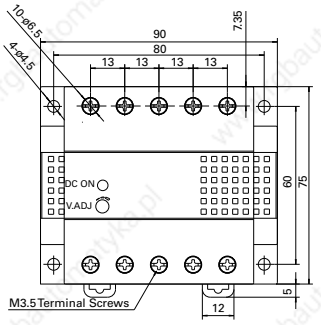
PS5R-B (15W)
Height 75.0 mm
Width 45.0 mm
Depth 95.0 mm



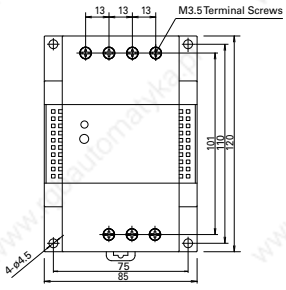
PS5R-C (30W)
Height 75.0 mm
Width 90.0 mm
Depth 95.0 mm



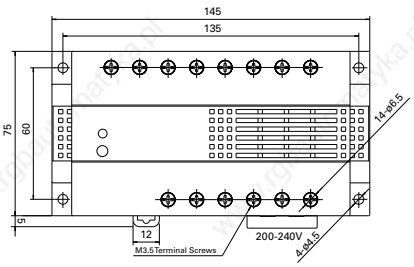
PS5R-D (50W)
Height 75.0mm
Width 90.0mm
Depth 95.0mm



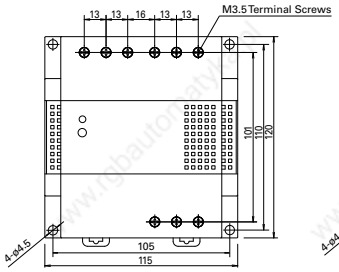
PS5R-Q (75W)
Height 120.0mm
Width 85.0mm
Depth 140.0mm



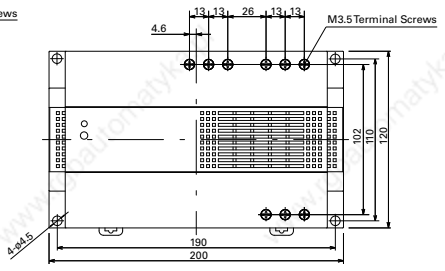
PS5R-E (100W)
Height 75.0mm
Width 145.0mm
Depth 95.0mm



PS5R-F (120W)
Height 120.0mm
Width 115.0mm
Depth 140.0mm



PS5R-G (240W)
Height 120.0mm
Width 200.0mm
Depth 140.0mm



Metal Series Key Features

- Slim Style
- Wide Power Range: 10W-300W
- Universal input:
  10W-30W: 85-264V AC/105-370V DC
  50W-300W: 85-264V AC/105-350V DC
- Screw Terminals, IP20 (fingersafe)
- Power Factor Protection
  - EN61000-3-2
  - EN61000-3-3 (50W to 300W models)
- Overcurrent/Overvoltage protection
- Voltage ±10% adjustment
- DIN rail or panel surface mount
- Approvals:
  - CE marked
  - UL508 listed
  - EN50178 compliant
  - EMC Directives
    - EN50081-2
    - EN61000-6-2
  - LVD EN60950:2000

PS3L Metal Power Supplies

10-Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS3L-A05AFF	5V DC	2A
PS3L-A12AFF	12V DC	0.9A
PS3L-A24AFF	24V DC	0.5A

15-Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS3L-B05AFF	5V DC	3A
PS3L-B12AFF	12V DC	1.4A
PS3L-B24AFF	24V DC	0.7A

30-Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS3L-C05AFF	5V DC	6A
PS3L-C12AFF	12V DC	2.5A
PS3L-C24AFF	24V DC	1.3A

50-Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS3L-D12AFF	12V DC	4.3A
PS3L-D24AFF	24V DC	2.2A

100-Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS3L-E12AFF	12V DC	8.5A
PS3L-E24AFF	24V DC	4.5A

150-Watt Power Supply

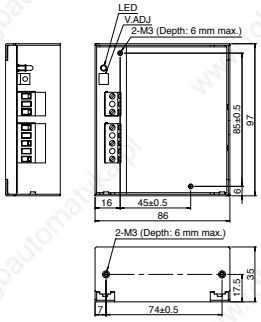
Part Number	Rated Voltage	Rated Current
PS3L-F12AFF	12V DC	13A
PS3L-F24AFF	24V DC	6.5A

300-Watt Power Supply

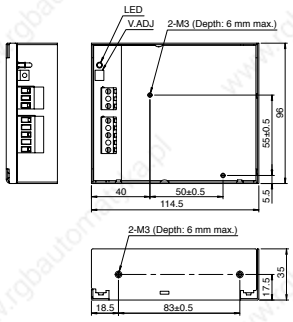
Part Number	Rated Voltage	Rated Current
PS3L-G24AFF	24V DC	12.5A

Metal Power Supply Dimensions

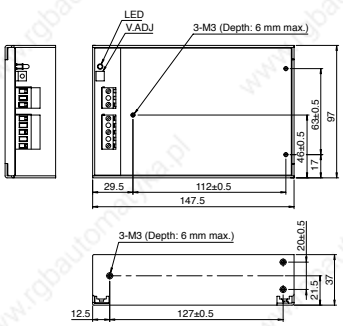
PS3L-A (10W)/PS3L-B (15W)
Height 97.0mm
Width 35.0mm
Depth 86.0mm

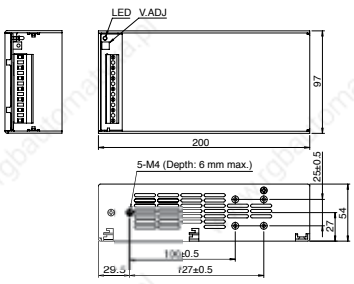


PS3L-C (30W)
Height 96.0mm
Width 35.0mm
Depth 114.5mm

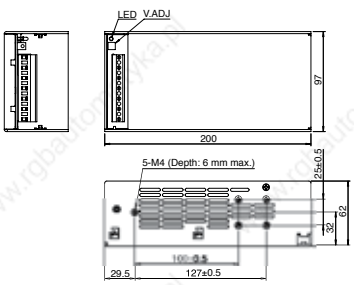


PS3L-D (50W)
Height 97.0mm
Width 37.0mm
Depth 147.5mm

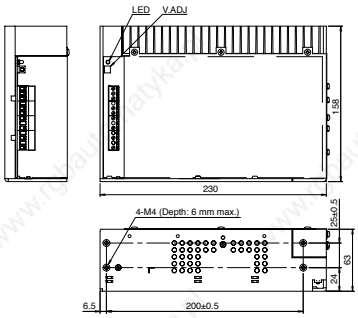




PS3L-E (100W)
Height 97.0mm
Width 54.0mm
Depth 200.0mm



PS3L-F (150W)
Height 97.0mm
Width 62.0mm
Depth 200.0mm



PS3L-G24 (300W)
Height 158.0mm
Width 63.0mm
Depth 230.0mm

PS9Z mounting brackets

BNL6 and BNL5 end stops

PS9Z bracket attached to power supply

PS9Z-3E4D mounting bracket

Product Support

Technical support:

support@idec.com

Sales support:

sales@idec.com

800.262.IDEC

www.idec.com

Optional Accessories

PS5R-S Panel Mounting Brackets Part Numbers

Power Supply	Bracket
PS5R-SB	PS9Z-5R1B PS9Z-5R2B
PS5R-SC PS5R-SD	PS9Z-5R1C
PS5R-SE	PS9Z-5R1E
PS5R-SF PS5R-SG	PS9Z-5R1G

Used to mount PS5R-Slim Series to panel surface

PS3L DIN Rail Mounting Brackets Part Numbers

Power Supply	Bracket
PS3L-A PS3L-B PS3L-C	PS9Z-3E4C
PS3L-D	PS9Z-3E4D
PS3L-E PS3L-F	PS9Z-3E4F

Used to mount PS3L series power supplies to 35mm DIN rail

PS5R-S, PS5R, PS3L 35mm DIN Rail

Description	Part Number
DIN Rail (1000mm)	BNDN1000 (10.5mm high)
DIN Rail End Stop	BNL5 (small) BNL6 (medium)

IDEC *Think Automation and beyond...*

www.idec.com

USA
IDEC Corporation
Tel: (408) 747-0550
opencontact@idec.com

Canada
IDEC Canada Ltd.
Tel: (905) 890-8561
sales@ca.idec.com

Australia
IDEC Australia Pty. Ltd.
Tel: +61-3-9763-3244
sales@au.idec.com

Japan
IDEC Corporation
Tel: +81-6-6398-2571
products@idec.co.jp

United Kingdom
IDEC Electronics Ltd.
Tel: +44-1256-321000
sales@uk.idec.com

Germany
IDEC Elektrotechnik GmbH
Tel: +49-40-253054-10
service@idec.de

Hong Kong
IDEC (H.K.) Co., Ltd.
Tel: +852-2803-8989
info@hk.idec.com

China/Beijing
IDEC (Beijing) Corporation
Tel: +86-10-6581-6131
idec@cn.idec.com

China/Shanghai
IDEC (Shanghai) Corporation
Tel: +86-21-5353-1000
idec@cn.idec.com

China/Shenzhen
IDEC (Shenzhen) Corporation
Tel: +86-755-8356-2977

Singapore
IDEC Asia Pte. Ltd.
Tel: +65-6746-1155
info@sg.idec.com

Taiwan
IDEC Taiwan Corporation
Tel: +886-2-2698-3929
service@tw.idec.com

©2007 IDEC Corporation. All Rights Reserved.

Catalog No. PS9Y-B100-2 *3/07 12K*

Specifications and other descriptions in this catalog are subject to change without notice.