



IDEC Power Supplies

Simply Powerful

Smart Products. Simple Solutions.



The Best Power Supplies in the World!

Today's market demands a switching power supply that not only saves space but also cuts installation cost and time. IDEC meets this demand with its introduction of the PS5R 30W, 60W, 90W, 120W, and 240W Slim Line power supplies.

Lightweight and compact, the 120W model is only 50mm wide, while 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 indicator and DC Low indicator, the Slim Line series give the power of control back to you.

IDEC Slim Line switching power supplies are an excellent alternative to Linear power supplies. They are more compact in size and offer high performance with an efficiency rating of over 80%, output ripple of less than 1% peak-to-peak, and universal AC/DC inputs. In contrast, Linear power supplies usually have open cases due to low efficiency ratings of 40-50%, their inputs are not always universal, and they 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 model's design ensures protection and immunity from interruptions due to voltage sags, saving the loss of production time and cost to manufacturers.

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 to provide flexibility and versatility. The universal inputs and the organizational approvals certify that IDEC power supplies can provide service worldwide.



Quality

All of IDEC power supplies are UL 508 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 together with this rating means 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, gasses or explosive materials are found.



Ease of Use, Convenience and Reliability

- Universal (AC/DC) Input**
 All power supplies have a wide input range which can easily integrate into industrial applications all over the world. In addition, the inputs have auto adjustments which avoid any error in supplying input power.
- Fast and Easy Installation**
 IDEC power supplies can quickly snap onto a DIN rail with built-in DIN rail clips which require no additional brackets or directly mountable 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 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 PEAC 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 30W and 60W PS5R Slim Line power supplies have passed the UL1310 test, making them compliant to NEC (National Electric Code) Class 2 rating. For UL1310 approval, the output of the power supplies must be less than 100V AC (under all conditions), have electric shock protection, and meet 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.



Designed with Accessibility and Convenience in Mind

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

The indicator turns on when the output voltage drops below 20V DC. This assists 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 $\pm 10\%$ 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 channels.



Fingersafe, Spring-up Screw Terminals

Never 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 which means when tightened, they are recessed to keep finger and objects from touching the input contacts.

Top View

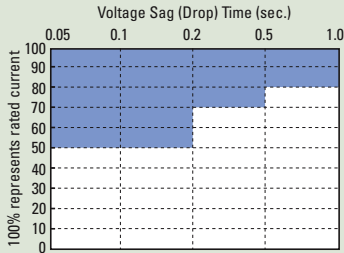


Ventilation Grill

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

Safety Charts

SEMI-F47 Approved (PS5R Slim 120W and 240W only)

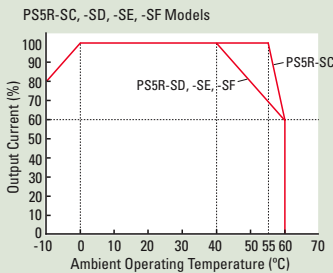


Voltage Sag Sliding Scale

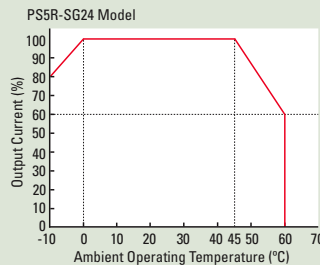
The SEMI F47 (Semiconductor Processing Equipment Voltage Sag Immunity) defines the minimum voltage sag ride-through requirements for semiconductor processing, automated test equipment, and other equipment. It requires that the equipment be able to tolerate voltage sags on their AC power line without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

Derating Curves



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

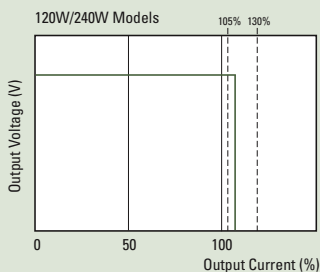


Output Derating PS5R-SG

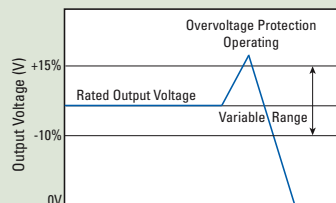
All IDEC power supplies are listed to UL 508 which allows operation at 100% capacity inside a panel. This eliminates the need to use oversize power supplies or utilize two power supplies derated at 50% of their rated output.

The charts to the left show that the PS5R Slim 30W/60W/90W (at 55°C), 120W (at 40°C), and 240W (at 45°C) meet the ambient temperature required by the UL 508 and EN60950 standards to operate at an output current of 100%. The output current starts to derate beyond the required temperature.

OVERLOAD PROTECTION:



Overcurrent Protection PS5R-SF/SG



Overvoltage Protection

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

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- 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.

OUTPUT



Slim Line Key Features



- Lightweight and Compact in size
- Wide Power Range: 30W – 240W
- Universal Input:
30W to 90W: 85-264V AC/100-370V DC
120W and 240W: 85-264V AC/100-350V DC
- Power Factor Correction (EN61000-3-2) for 60W to 240W
- 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, UL 508
UL 1310 (PS5R-SC, -SD)
UL 1604
EN 50178:1997
LVD: EN60950:2000
EMC: Directive EN61204-3:2000
(EMI: Class B, EMS: Industrial)

PS5R Slim Line



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



OUTPUT
24VDC 10A
-V +V



240 Watt Power Supply

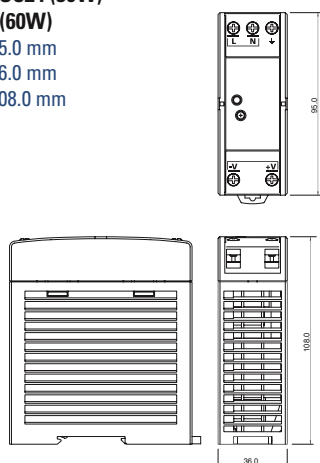
Part Number	Rated Voltage	Rated Current
PS5R-SG24	24V DC	10A

Slim Line Dimensions

PS5R-SC12/SC24 (30W)

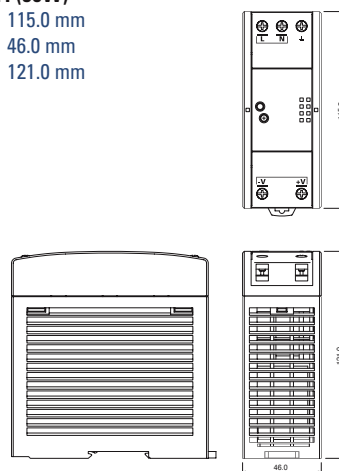
PS5R-SD24 (60W)

Height 95.0 mm
Width 36.0 mm
Depth 108.0 mm



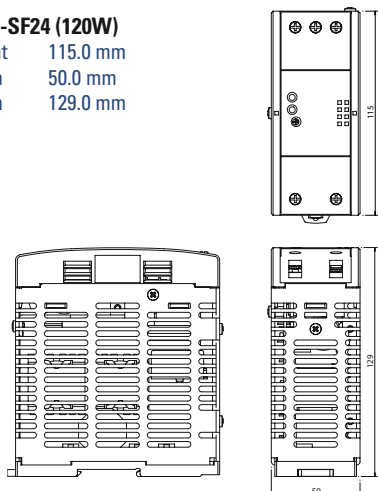
PS5R-SE24 (90W)

Height 115.0 mm
Width 46.0 mm
Depth 121.0 mm



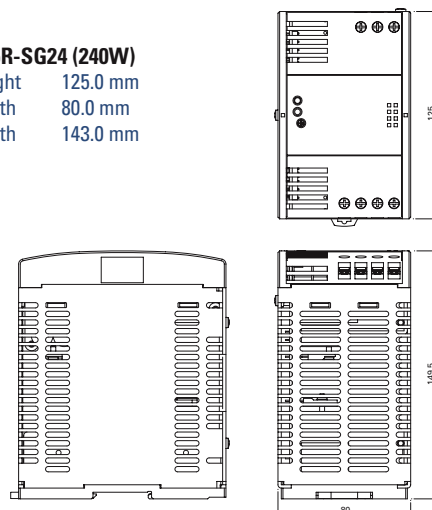
PS5R-SF24 (120W)

Height 115.0 mm
Width 50.0 mm
Depth 129.0 mm



PS5R-SG24 (240W)

Height 125.0 mm
Width 80.0 mm
Depth 143.0 mm



Standard Model Key Features



- Wide Power Range: 7.5W-240W
- Universal Input :
 - 7.5W-75W: 85-264V AC/105-370V DC
 - 100W: 100-120V AC/200-240V AC (Selectable) 240-370V DC
 - 120W-240W: 85-264V AC/105-370V AC
- Overcurrent/Overvoltage Protection
- Power Factor Correction (75W, 120W, 240W models)
 - EN61000-3-3
 - EN61000-3-2
- Voltage adjustment $\pm 10\%$
- 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



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



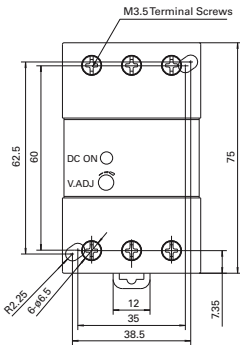
240 Watt Power Supply

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

Standard Power Supply Dimensions

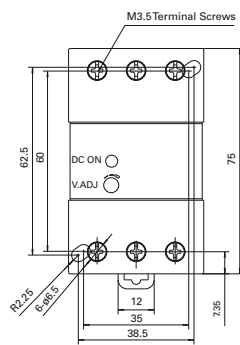
PS5R-A (7.5W)

Height 75.0 mm
Width 45.0 mm
Depth 70.0 mm



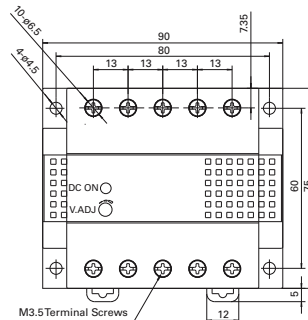
PS5R-B (15W)

Height 75.0 mm
Width 45.0 mm
Depth 95.0 mm



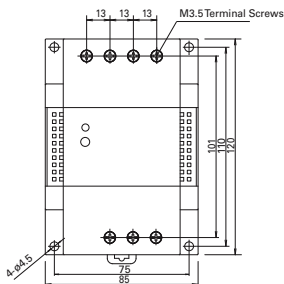
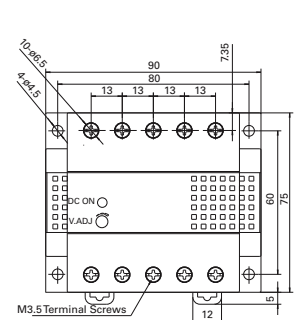
PS5R-C (30W)

Height 75.0 mm
Width 90.0 mm
Depth 95.0 mm



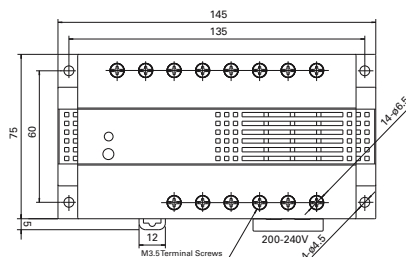
PS5R-D (50W)

Height 75.0 mm
Width 90.0 mm
Depth 95.0 mm



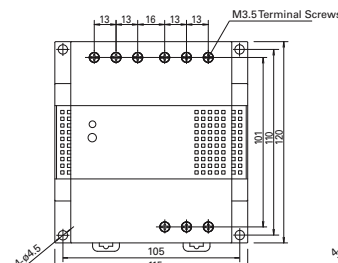
PS5R-Q (75W)

Height 120.0 mm
Width 85.0 mm
Depth 140.0 mm



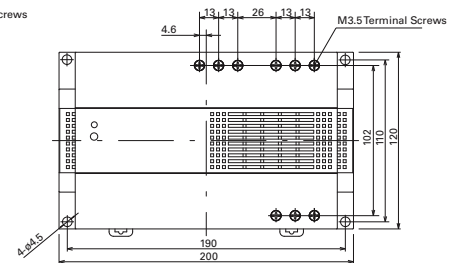
PS5R-E (100W)

Height 75.0 mm
Width 145.0 mm
Depth 95.0 mm



PS5R-F (120W)

Height 120.0 mm
Width 115.0 mm
Depth 140.0 mm



PS5R-G (240W)

Height 120.0 mm
Width 200.0 mm
Depth 140.0 mm

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 Fault protection
 - EN61000-3-2
 - EN61000-3-3 (50W to 300W models)
- Overcurrent/Overvoltage protection
- Voltage $\pm 10\%$ adjustment
- DIN rail or Panel Surface Mount
- Approvals:
 - CE marked
 - UL 508 listed
 - UL 1950 recognized
 - 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

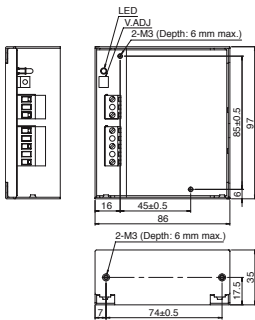


Part Number	Rated Voltage	Rated Current
PS3L-G24AFF	24V DC	12.5A

Metal Power Supply Dimensions

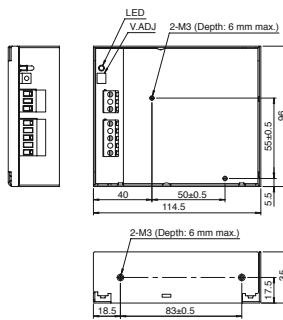
PS3L-A (10W)/PS3L-B (15W)

Height 97.0 mm
Width 35.0 mm
Depth 86.0 mm



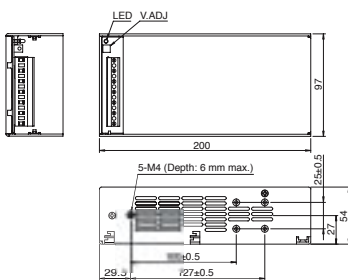
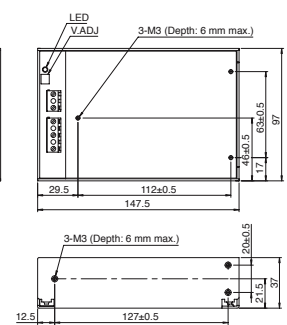
PS3L-C (30W)

Height 96.0 mm
Width 35.0 mm
Depth 114.5 mm



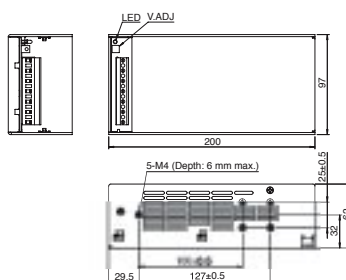
PS3L-D (50W)

Height 97.0 mm
Width 37.0 mm
Depth 147.5 mm



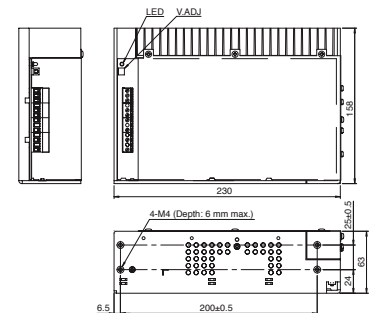
PS3L-E (100W)

Height 97.0 mm
Width 54.0 mm
Depth 200.0 mm



PS3L-F (150W)

Height 97.0 mm
Width 62.0 mm
Depth 200.0 mm



PS3L-G24 (300W)

Height 158.0 mm
Width 63.0 mm
Depth 230.0 mm



PS9Z mounting brackets



BNL6 and BNL5 end stops



PS9Z bracket attached to power supply



PS9Z-3E4D mounting brackets



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Optional Accessories

PS5R-S Panel Mounting Brackets

Power Supply	Bracket Number
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

Power Supply	Bracket Part Number
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)

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

Smart Products. Simple Solutions.

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