

## Power Supplies

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### *Power Products for Industrial control panels*



### **Woertz-USA/GBU ElectroTech, Inc**

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#### **Web sites:**

[www.woertz-usa.com](http://www.woertz-usa.com)  
[www.gbuelectrotech.com](http://www.gbuelectrotech.com)

# Woertz-USA

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# WOERTZ -USA

## Total Automation Solutions

[www.woertz-usa.com](http://www.woertz-usa.com)

Please call for a catalog



(215) 997-8855

### Interface

**Cables:**  
And more... Sec. 24

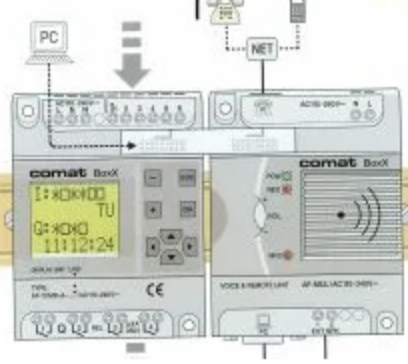
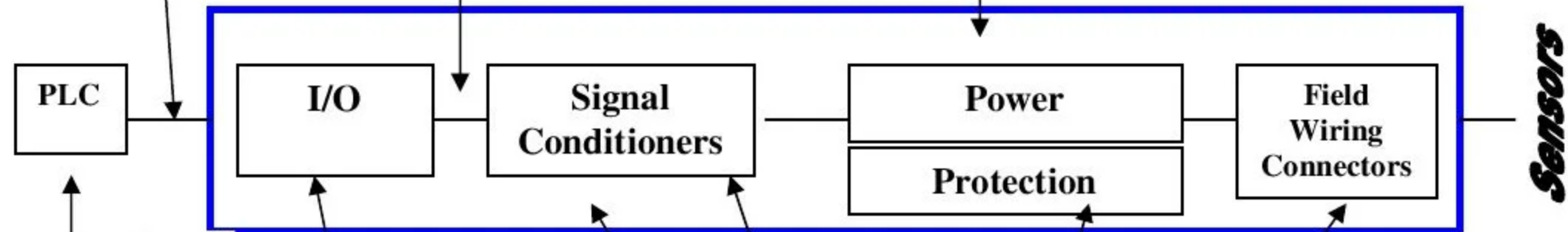


### Wire Management:

- Wire Duct
- Wire Ferrules
- Wiring Tools



**Switching Power Supplies:**  
45700K/24S: 2Amp; 24VDC  
45702K/24S: 5 AMP; 24VDC  
And more...Sec. 27



**Mini-controller & Telephone dialer**



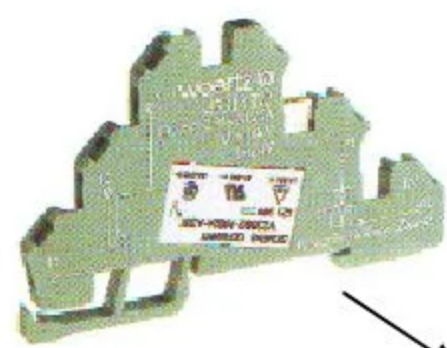
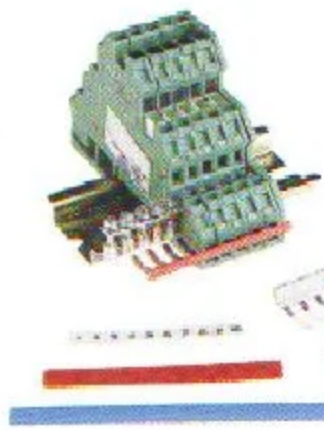
**Interface Modules:**  
➤ Flat cable  
➤ D-Sub connector  
➤ High density connectors  
And more...Sec 24



**Din Rail Mountable Terminals:**  
➤ Screw Terminal Block Catalog 1:1  
➤ Spring Clamp Terminal 1:3

### Snap Line Series

Snap-Line: 5.08 mm wide



**Power relays: (6 Amps)**  
➤ 45314T/2: 24VDC  
➤ 45329T/15: 115VAC/DC  
And more...Sec. 25. 10

**Opto-couplers - solid state switching:**  
➤ 45306T/7 5VDC  
➤ 45306T/3 24VDC  
And more...Sec. 26.5; 26.9-26.11

**Over Voltage Protection**  
➤ 45385T/2 24VDC  
➤ 45385T/5 110-120VAC  
And more...Sec.23.14

**Analog converters and Isolators**  
0-20mA; 4-20mA; PT100;  
PT1000  
And more...Sec. 28

**Comat Control Products**  
• Multifunction Time Delay Relays  
• Measuring and Monitoring Equipment  
• Industrial Relays: 3 and 4 Pole

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<b>Single phase switching power supplies</b> (25W, 30W, 45W, 60W, 75W, 120W, 240W, 480W)	<b>27.7-27.11</b>
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### **Tech notes**

#### **Regulated power supplies**

In the case of regulated power supplies, the output voltage is maintained at nearly constant value, from no load up to rated current.

Our range of regulated power supplies can be divided into two groups:

- Power supplies with linear regulators
- Switching power supplies

In the case of small power supplies, a linear controller is usually used.

Linear regulated power supplies consist of three parts: transformer, rectifier and regulator. The transformer achieves the galvanic separation between output and mains and adapts to the voltage to a suitable level for further steps. The obtained AC voltage is then rectified and smoothed. The linear regulator keeps the output voltage stable, even if the current varies. The greater voltage difference between input and output of the regulator, the more power will be dissipated as heat.

Therefore power supplies with linear regulators need heat sinks. The advantage of this type of regulation is: It does not induce high frequency disturbance into sensitive devices, regulates fast and very accurately. When high power has to be supplied, the linear type of regulator becomes less attractive due to high power losses. Therefore switched mode power supplies are introduced.

Switching power supplies “cut” the input voltage and transmit these pulses to the output current by the means of a HF transformer. The output voltage is usually regulated by adjustment of the duty cycle. Often the switching power supplies operate with fixed frequencies of 100-200 kHz. In the case of an ideal controller, output power is equal to the output voltage; this means that the power dissipation in the controller is equal to zero and independent of both voltage and current at the input and at the output. The efficiency of a switching power supply is between 70% and 95%. The losses are comparably lower than those in a power supply with linear regulator.

## Mini Regulator

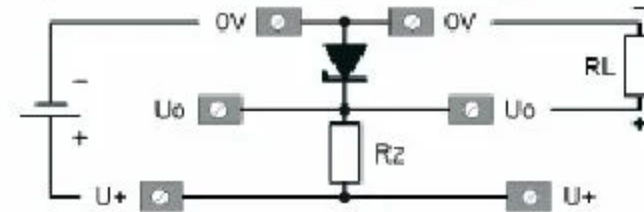
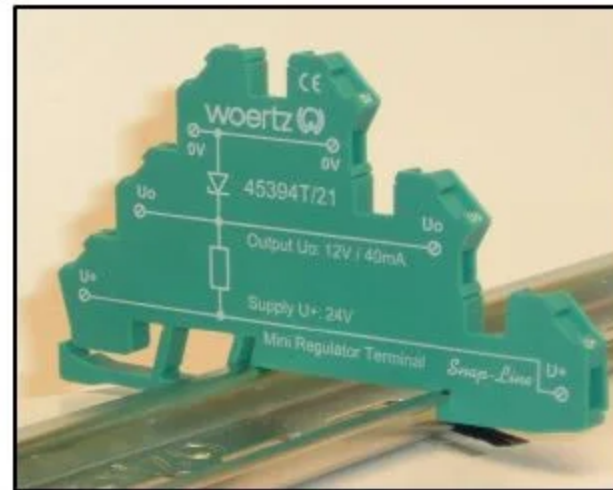
Snapline with low power voltage regulator

### Properties

- Low power shunt regulator in 5.08mm Snapline housing
- Protected against short-circuits (10s)
- Up to Three terminals can be connected in parallel to increase output current

### Accessories

30407T	End barrier
30403	Compatible 3-level terminal
30413RO	Cross connection 20-pole Red
30413BL	Cross connection 20-pole Blue
81535/X	Insulated cross connections w. Screws x= 2,3,4,5,10 poles
30411,12	Isolation strip red, blue
80247,48	Test plug red, black
35455/55XX	Labels

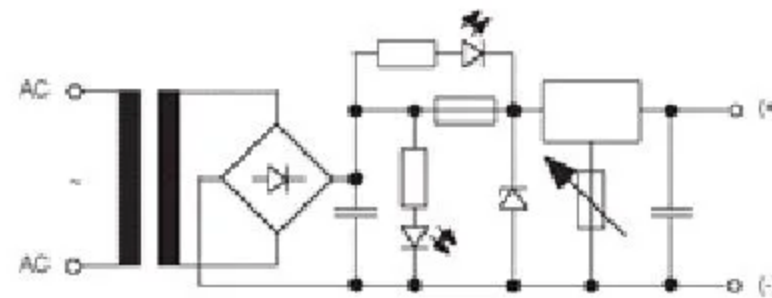
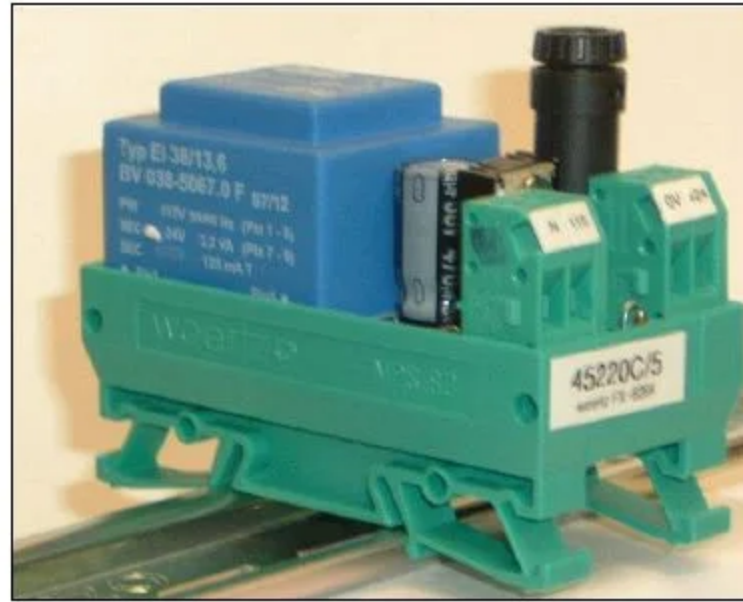


Technical Data		
<b>Regulator Part</b>		
Max. Input voltage		$U_n + 10\%$
Output voltage tolerance (at $U_n$ )		$\pm 5\%$
Max. Output current at rated input voltage $U_n$		See below table
<b>General data</b>		
Max. Through-going current (0V/0V or U+/U+)		10 Amps
Operating temperature range		-55°C up to +45°C
Normal cross section / AWG		2.5mm <sup>2</sup> / up to 14 AWG
Max Torque		0.4 Nm
Size W x H x D (from rail)		5.08 x 86.5 x 44 mm
<b>Order Numbers</b>		
<b>Un: 12VDC</b> <b>UO: 5.1 VDC/80mA</b> (Rz = 82Ω,    RLmin = 65Ω)		<b>45394T/17</b>
<b>Un: 24VDC</b> <b>UO: 5.1 VDC/35mA</b> (Rz = 470Ω,    RLmin = 145Ω)		<b>45394T/27</b>
<b>Un: 24VDC</b> <b>UO: 12.0 VDC/40mA</b> (Rz = 270Ω,    RLmin = 300Ω)		<b>45394T/21</b>
<b>Un: 48VDC</b> <b>UO: 5.1 VDC/15mA</b> (Rz = 2.2kΩ,    RLmin = 330Ω)		<b>45394T/37</b>
<b>Un: 48VDC</b> <b>UO: 12.0 VDC/20mA</b> (Rz = 1.5kΩ,    RLmin = 600Ω)		<b>45394T/31</b>
<b>Un: 48VDC</b> <b>UO: 24.0 VDC/20mA</b> (Rz = 1.0kΩ,    RLmin = 1.2kΩ)		<b>45394T/32</b>

**Regulated miniature power supplies**  
Output current 50mA resp. 100 mA

**Properties**

- Regulated power supply
- Primary side, standard voltage 230 or 115VAC
- With green LED as operating indicator and red LED as fuse failure indicator

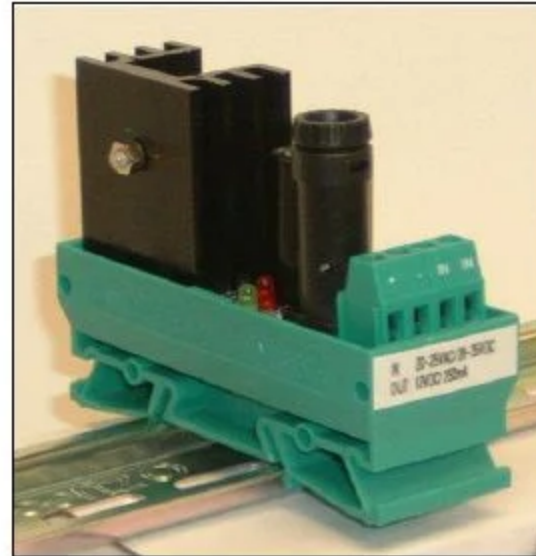


Technical Data	Adjustable Voltage	Voltage 12 V DC	Voltage 24 VDC
Output voltage	1.5-25 VDC	12 VDC	24 VDC
Output current	50 mA	100 mA	100 mA
Ripple $\Delta U_{eff}$ max. At $I_{nom}$	Max. 10 mV	Max. 10 mV	Max. 10 mV
Operating temperature range	-20°C up to +40°C	-20°C up to +40°C	-20°C up to +40°C
Normal cross section / AWG	2.5mm <sup>2</sup> / up to 14 AWG	2.5mm <sup>2</sup> / up to 14 AWG	2.5mm <sup>2</sup> / up to 14 AWG
Size W x H x D (from rail)	40 x 83 x 57 mm	40 x 83 x 57 mm	40 x 83 x 57 mm
<b>Order Numbers</b>			
115 VAC/ 60 Hz	<b>45220C/6</b>	<b>45220C/4</b>	<b>45220C/5</b>

**Regulated power supplies**  
Without transformer, Output current 250mA and 1 Amp

**Properties**

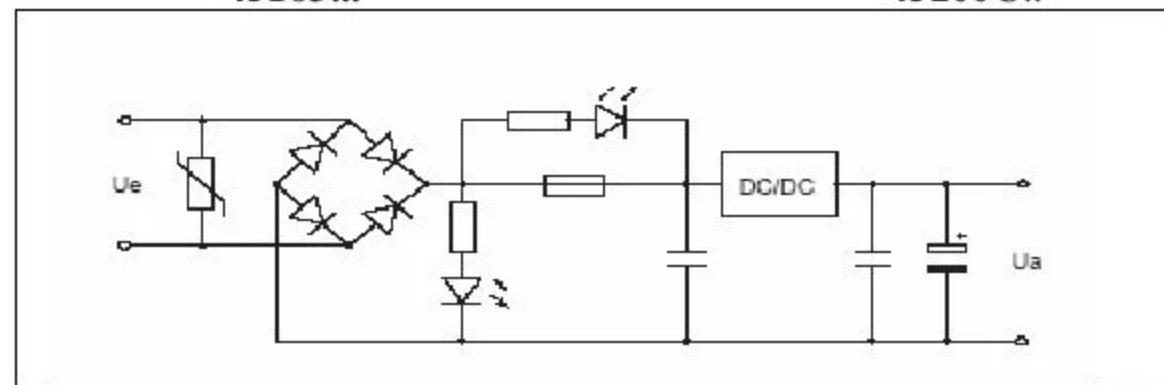
- Power supply module without transformer
- Can be used as AC/DC or DC/DC converter
- Regulator with thermal overload protection
- Tolerate brief overload
- With LEDs indicating operation and fuse failure



45163...



45200C..



Technical Data	Output voltage 5 VDC	Output voltage 12 VDC	Output voltage 24 VDC	Output Voltage 12 VDC	Output Voltage 24VDC
Output voltage	5 VDC +- 5%	12 VDC +- 5%	24 VDC +- 5%	12 VDC +-5%	24 VDC +- 5%
Input voltage range V AC	8-18 VAC	12-24 VAC	20-25 VAC	12-17.5 VAC	24-27 VAC
Input voltage range V DC	11-25 VDC	16-35 VDC	28-35 VDC	14.5-21 VDC	20-32 VDC
<b>Output current</b>	<b>250mA</b>	<b>250 mA</b>	<b>250 mA</b>	<b>1 A</b>	<b>1A</b>
Ripple $\Delta U_{eff}$ max. At $I_{nom} = 250mA$	5 mV	5 mV	5 mV	5 mV	5 mV
Fuse	0.315 A lag	0.315 A lag	0.315 A lag	1 A lag	1 A lag
Operating temperature range	-20°C up to +40°C	-20°C up to +40°C	-20°C up to +40°C	-20°C up to +40°C	-20°C up to +40°C
Normal cross section / AWG	2.5mm <sup>2</sup> / 14 AWG	2.5mm <sup>2</sup> / 14 AWG	2.5mm <sup>2</sup> / 14 AWG	2.5mm <sup>2</sup> / 14 AWG	2.5mm <sup>2</sup> / 14 AWG
Size W x H x D (from rail)	30 x 83 x 60 mm	30 x 83 x 60 mm	30 x 83 x 60 mm	70 x 83 x 56 mm	70 x 83 x 56 mm
<b>Order Numbers</b>	<b>45163C/6</b>	<b>45163C/1</b>	<b>45163C</b>	<b>45200C/1</b>	<b>45200C</b>

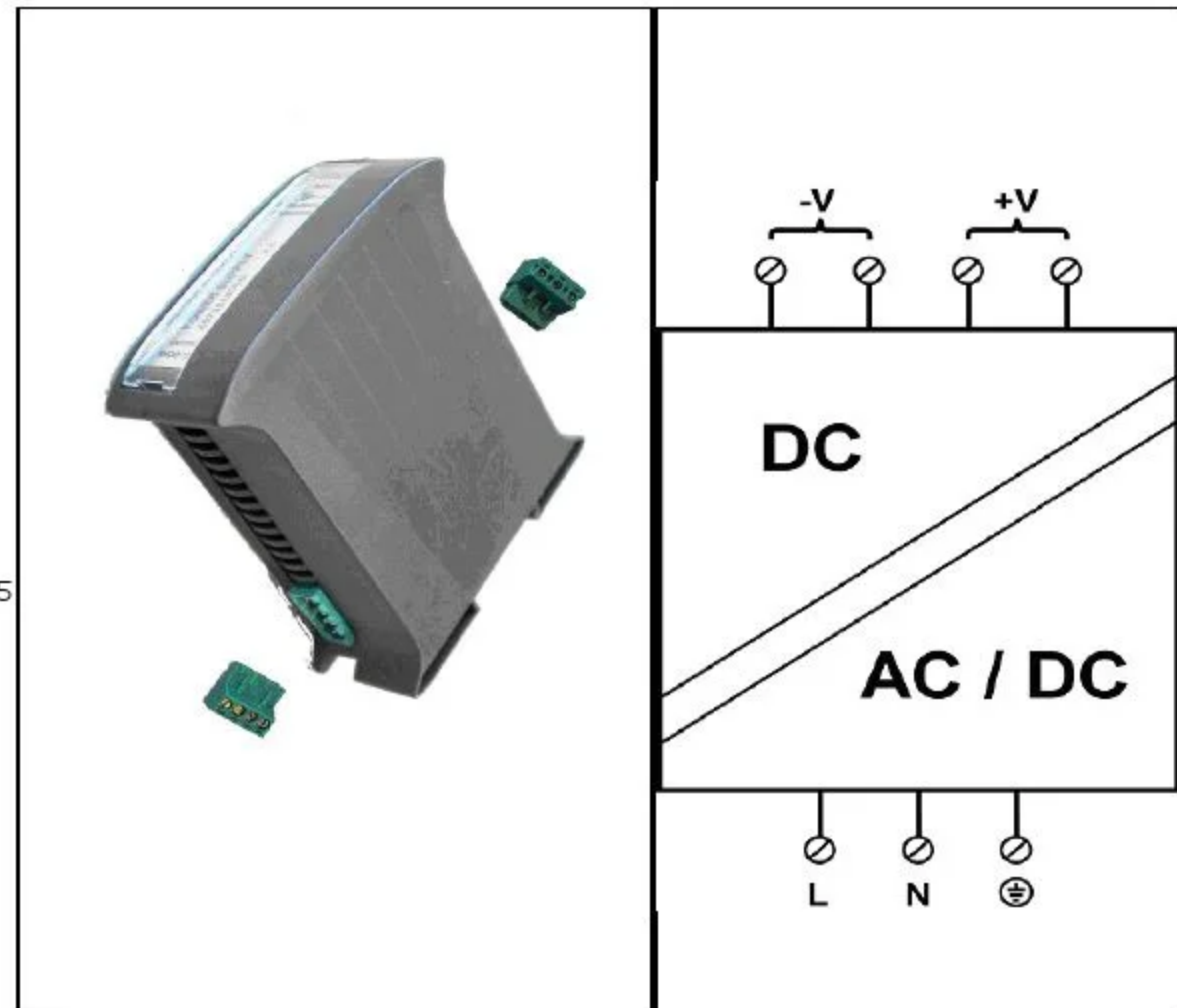
### Switched power supplies 25W

**Properties**

- High grade DIN rail power supply
- wide input voltage range
- LED indication for power on
- Protected against overvoltage / short circuit
- Protected against overload-current / over temperature
- Low output ripple
- Fix switching frequency at 100KHz
- Low leakage current < 0.5mA (at 240VAC)
- CE-conform
- Safety standards: EN 60950
- EMC: EN55022 class B, EN61000-3-2,3, EN61000-4-2,3,4,5
- Can be mounted on rails to EN60715 TH35-7.5 or 15

**On request**

Other output voltages



**Technical data (T<sub>a</sub>= 25°C)**

**Input**

Rated voltage range 120-370VDC | 85-264VAC  
 Inrush current, cold start 20A / 115VAC | 40A / 230VAC  
 Supply frequency DC or 50/60Hz  
 Leakage current less than 0.5mA at 240VAC

**Output**

Voltage / current	5VDC / 5.0A	12VDC / 2.1A	±15V / 0.8A	24VDC / 1.0A	48VDC / 0.5A
Initial accuracy	±2%	±2%	±4% (0.1-0.8A)	±2%	±2%
Max. ripple and noise	80mV	100mV	50mV	240mV	350mV
Efficiency	74%	78%	75%	79%	79%

Over temp protection U1, T<sub>j</sub>: 135°C, power shutdown  
 Working temperature / load 0°C...+45°C / 100%  
 -10°C / 80%  
 +55°C / 60%

Overvoltage protection at >115-135% of rated output voltage  
 Overload-current limitation at >105% hiccup mode, auto recovery

**General data**

Input connection 3 pole, pluggable terminal  
 Output connection 4 pole, pluggable terminal  
 Rated cross section of connecting terminals 2.5mm<sup>2</sup>  
 Input / output isolation (1min AC) 3.0 kV  
 Input / ground isolation (1min AC) 1.5 kV  
 Weight 0.25kg  
 Mounting on DIN rails EN60715 TH35  
 Cooling convection cooling  
 Size W x H x D 35 x 112 x 119mm

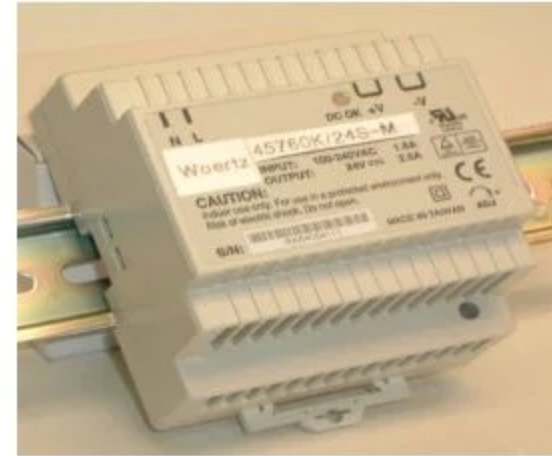
**Order numbers**

Output voltage / current	5VDC / 5.0A	12VDC / 2.1A	±15VDC / 0.8A	24VDC / 1.0A	48VDC / 0.5A
Product number	45738U/05S	45738U/12S	45738U/15D	45738U/24S	45738U/48S

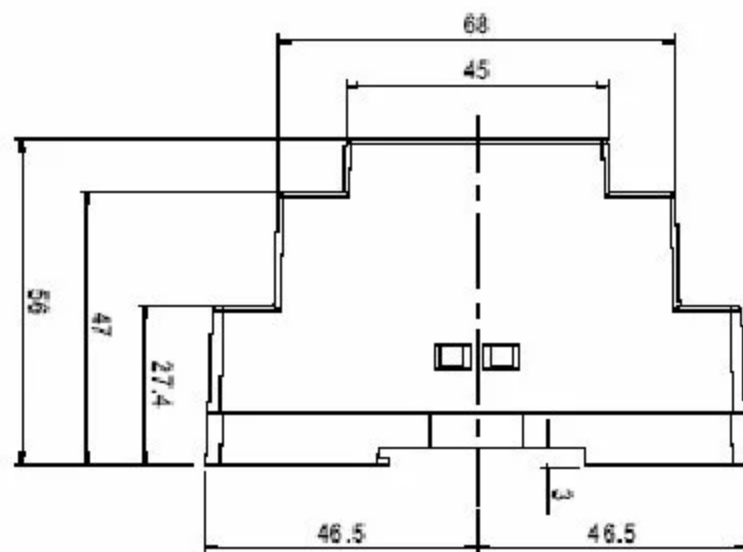
**Switching power supplies 30W**

**Properties**

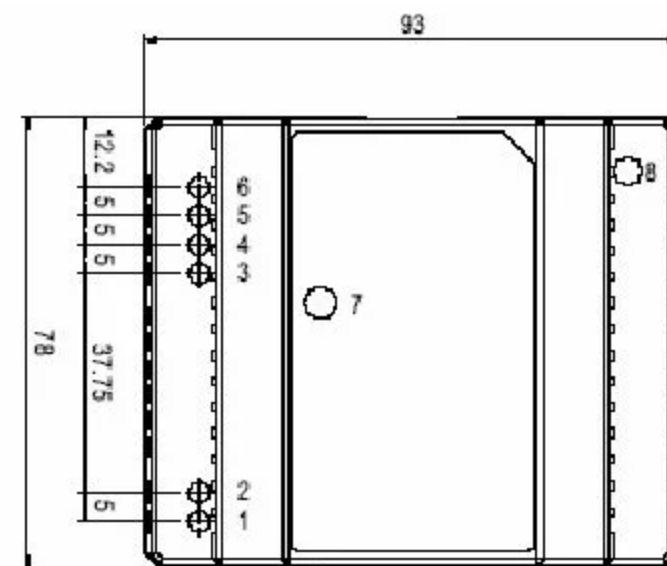
- Universal AC input/Full range
- Protections: Short circuit/Over load/Over voltage
- Cooling by free air convection
- Can be installed on Din TS-35/7.5 or 15mm
- Isolation class II
- LED indicator for power on
- 100% full load burn-in test
- 3 year warranty



Woertz order No.	45730K/05S	45730K/12S	45730K/15S	45730K/24S	
Model No.	DR-30-5	DR-30-12	DR-30-15	DR-30-24	
Output	DC Voltage	5V	12V	15V	24V
	Rated current	3A	2A	2A	1.5A
	Current range	0~3A	0~2A	0~2A	0~1.5A
	Rated power	15W	24W	30W	36W
	Ripple	80mV	120mV	120mV	150mV
	Voltage adj. range	4.75~5.5V	10.8~13.2V	13.5~16.5V	21.6~26.4V
	Voltage tolerance	+/- 2.0%	+/- 1.0%	+/- 1.0%	+/- 1.0%
	Line regulation	+/- 1.0%	+/- 1.0%	+/- 1.0%	+/- 1.0%
	Load regulation	+/- 1.0%	+/- 1.0%	+/- 1.0%	+/- 1.0%
	Setup, Rise time	100ms, 30ms/230VAC 100ms, 30ms/115VAC at full load			
Hold time	100ms/230VAC 30ms/115VAC at full load				
Input	Voltage range	85~264VAC 120-370VDC			
	Frequency range	47~63Hz			
	Efficiency	74%	81%	82%	83%
	AC current	0.88A/115VAC 0.48A/230VAC			
	Inrush current	COLD START 15A/115VAC 30A/230VAC			
Protection	Over load	105 ~160% RATED OUTPUT POWER: Protection type: Constant current limiting, recovers automatically after fault condition is removed			
	Over voltage	5.75~6.75V	13.8 ~ 16.2V	17.25~20.25V	27.6~32.4V
		Protection type: Shut down o/p voltage, re-power on to recover			
Environment	Working temp	-20~+60°C (refer to output load de-rating chart)			
	Working humidity	20-90% RH non-condensing			
	Storage temp., humidity	-40 ~ +85°C, 10-95% RH			
Others	Dimensions	78 x 93 x 56 mm (W x H x D)			
	Packing	0.27Kg			



Side view



Top view



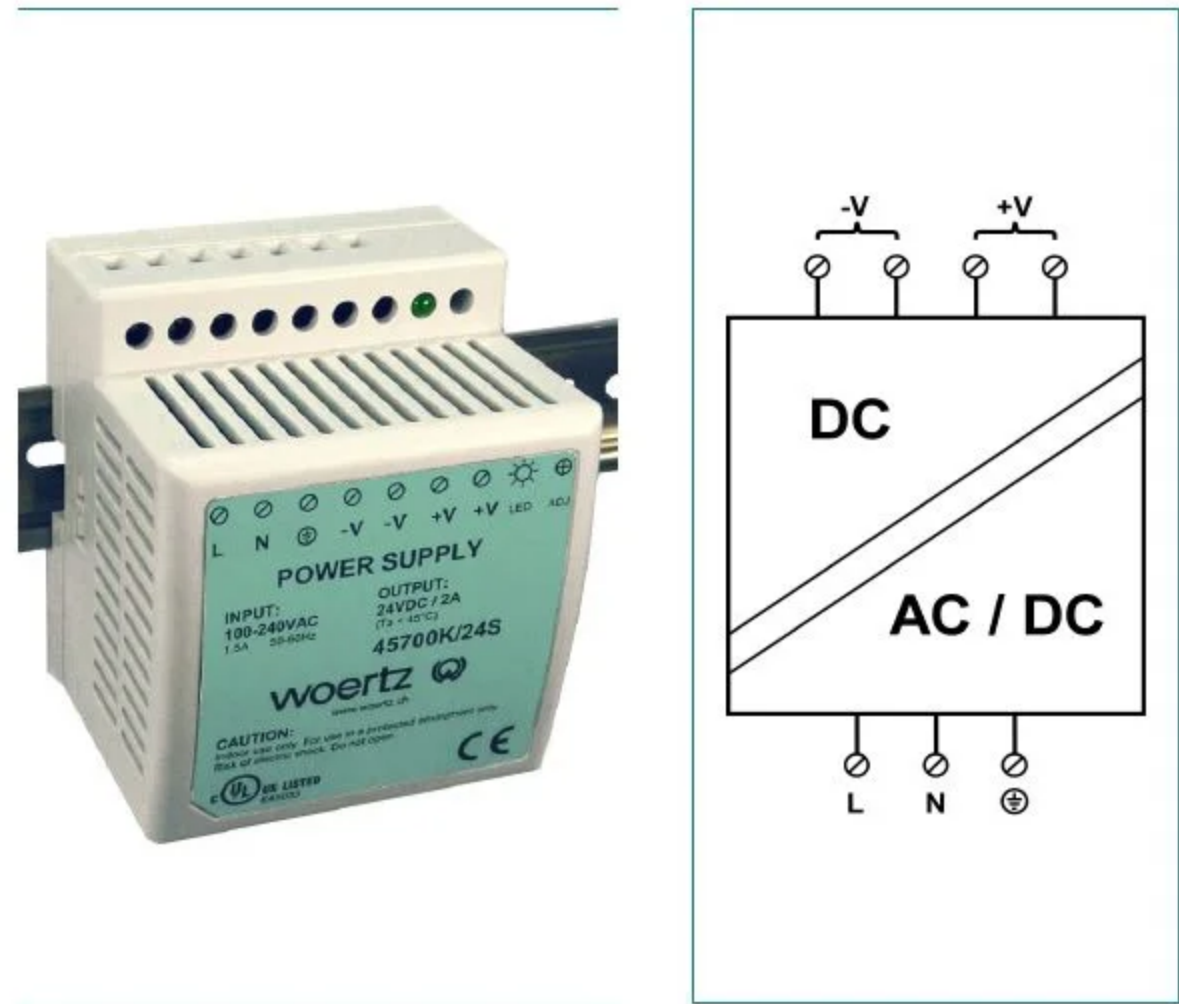
**Switching power supplies 45W**

**Properties**

- High grade DIN rail power supply
- Large input voltage range
- LED indication for power on
- Protected against overvoltage / short circuit
- Protected against overload-current / over temperature
- Low output ripple
- CE-conform, CUL-listed
- Safety standards: EN 60950, UL 508
- EMC: EN55022 class B, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, ENV50204
- Can be mounted on Din 35mm rail

**On request**

Other output voltage (e.g. 15V)



**Technical data (T<sub>a</sub>=25°C)**

**Input**

Rated voltage range  
Inrush current  
Supply frequency

120-370VDC | 85-264VAC  
30A / 115VAC | 60A / 230VAC  
DC or 50/60Hz

**Output**

Voltage / current  
Initial accuracy  
Max. ripple and noise  
Efficiency  
DC adjust range  
Working temperature / load

5VDC / 5.0A	12VDC / 3.5A	24VDC / 2.0A
±2%	±1%	±1%
100mV	200mV	480mV
72%	77%	80%
±10%	±10%	±10%

Set time / hold up time / raise time  
Overvoltage protection at  
Overload-current limitation at

0°C...+45°C / 100%  
-10°C / 80%  
+50°C / 80%  
800ms / 50ms / 60ms  
115-135% of rated voltage  
105-150% of rated current, auto recovery

**General data**

Input connection  
Output connection  
Rated cross section of connecting terminals  
Input / output isolation (1min AC)  
Input / ground isolation (1min AC)  
Weight  
Mounting  
Cooling  
Size W x H x D

3 poles, screw terminal  
4 poles, screw terminal  
2.5mm<sup>2</sup>  
3.0 kV  
1.5 kV  
0.3kg  
on DIN rails EN60715 TH35  
convection cooling  
78 x 93 x 67mm

**Order numbers**

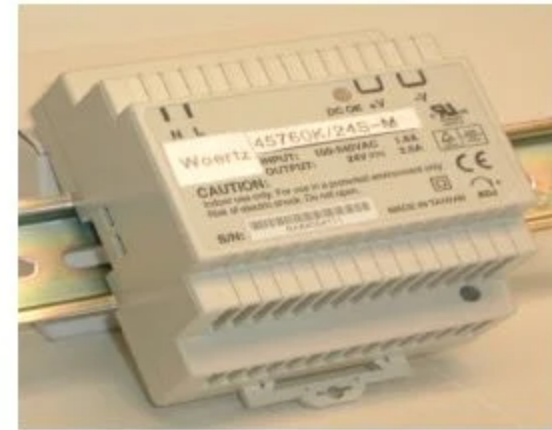
Output voltage / current  
Product number

5VDC / 5.0A	12VDC / 3.5 A	24VDC / 2.0A
45700K/05S	45700K/12S	45700K/24S

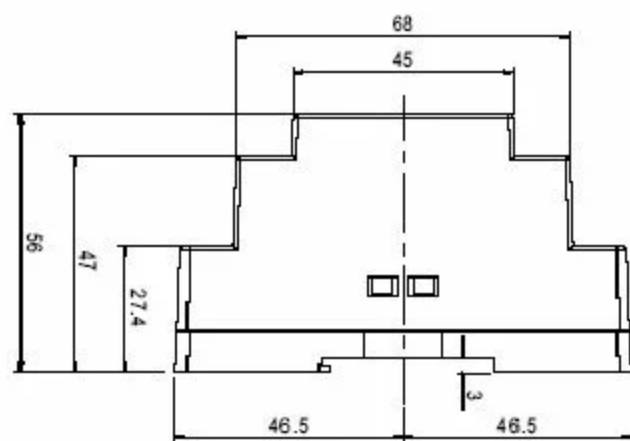
**Switching power supplies 60W**

**Properties**

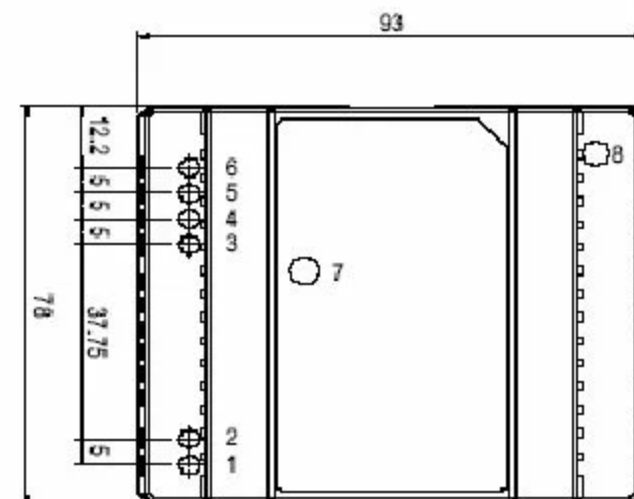
- Universal AC input/Full range
- Protections: Short circuit/Over load/Over voltage
- Cooling by free air convection
- Can be installed on Din TS-35/7.5 or 15mm
- Isolation class II
- LED indicator for power on
- 100% full load burn-in test
- 3 year warranty



Woertz order No.	45760K/05S	45760K/12S	45760K/15S	45760K/24S	
Model No.	DR-60-5	DR-60-12	DR-60-15	DR-60-24	
<b>Output</b>	DC Voltage	5V	12V	15V	24V
	Rated current	6.5A	4.5A	4A	2.5A
	Current range	0~6.5A	0~4.5A	0~4A	0~2.5A
	Rated power	32.5W	54W	60W	60W
	Ripple	80mV	120mV	120mV	150mV
	Voltage adj. range	4.75~5.5V	11.1~13.2V	13.5~16.5V	21.6~26.4V
	Voltage tolerance	+ - 2.0%	+ - 1.0%	+ - 1.0%	+ - 1.0%
	Line regulation	+ - 1.0%	+ - 1.0%	+ - 1.0%	+ - 1.0%
	Load regulation	+ - 1.0%	+ - 1.0%	+ - 1.0%	+ - 1.0%
	Setup, Rise time	100ms, 30ms/230VAC 200ms, 30ms/115VAC at full load			
Hold time	100ms/230VAC 23ms/115VAC at full load				
<b>Input</b>	Voltage range	88~264VAC 124-370VDC			
	Frequency range	47~63Hz			
	Efficiency	76%	82%	83%	84%
	AC current	1.2A/115VAC 0.8A/230VAC			
	Inrush current	COLD START 18A/115VAC 36A/230VAC			
<b>Protection</b>	Over load	105 ~160% RATED OUTPUT POWER: Protection type: Constant current limiting, recovers automatically after fault condition is removed			
	Over voltage	5.75~6.75V	13.8 ~ 16.2V	17.25~20.25V	27.6~32.4V
		Protection type: Shut down o/p voltage, re-power on to recover			
<b>Environment</b>	Working temp	-20~+60°C (refer to output load de-rating chart)			
	Working humidity	20-90% RH non-condensing			
	Storage temp., humidity	-40 ~ +85°C, 10-95% RH			
<b>Others</b>	Dimensions	78 x 93 x 56 mm (W x H x D)			
	Packing	0.3Kg			



27.10



### Single phase **Switching Power Supplies**

#### Properties

- High grade DIN rail power supply
- Large input voltage range
- LED indication for power on
- Protected against overvoltage / short circuit
- Protected against overload-current / over Temperature
- Low output ripple
- CE-approved, CUL-listed
- Safety standards: EN 60950, UL 508
- EMC: EN55022 class B,
- Mounting: Din 35mm rails



75W  
45701K/...series



120W  
45702K/...series



240W  
45703K/...series



480W  
45704K/...series

Input	75W	120W	240W	480W
Rated voltage range	120-370VDC 85-264VAC	88-132/176-264VAC	120-370VDC 85-264VAC	100-120/200- 240VAC
Inrush current	30A/115VAC; 60A/ 230VAC			Cold start 50A/230VAC
Supply frequency	DC or 47-63Hz	50/60Hz	DC or 50/60Hz	
Efficiency (Typ.)	24VDC: 80%	24VDC: 84%	24VDC: 84%	89%
<b>Output</b>				
<b>Voltage/current</b>				
12VDC model	12VDC/6.3A	12VDC/10.0A	-	-
24VDC model	24VDC/3.2A	24VDC/5.0A	24VDC/10.0A	24VDC/20.0A
48VDC model	48VDC/1.6A	48VDC/2.5A	48VDC/5.0A	-
Initial accuracy	12V +- 2%; 24&48V +- 2%	12V +- 2%; 24&48V +- 2%	24V & 48V +- 1%	+ - 1%
Max. Ripple and noise	12V 100mV; 24V 150mV;	12V 80mV; 24V 80mV;	24V 80mV	120mV peak-peak
DC adjust range	10%			24-28V
Working temp./load	0°C...+50°C / 100%	0°C...+45°C / 100%	0°C...+55°C / 100%	0°C...+50°C / 100%
Set time/hold up time/raise time	1000ms / 50ms / 60ms	500ms / 30ms / 70ms	800ms / 20ms / 40ms	1200ms / 16ms / 40ms
Overvoltage protection at	120-140% of rated output voltage		120-150% of rated output voltage	
Overload-current protection at	Min. 115% of rated current, auto recovery	105-150% of rated current, auto recovery		
<b>General data</b>				
Input / output connection	3-pole, screw terminal / 4-pole screw terminal			
MTBF	123.1K hrs Min.	136.8Khrs min.	105.5Khrs min.	180.9Khrs min.
Wire size of terminal connection	Up to 12AWG			
Input/output isolation (1 min.)	3kV			
Input/ground isolation (1 min.)	1.5kV			
Cooling	Conversion cooling			
Size W x H x D	55.5x125.2x104 mm	65.5x125.2x100mm	125.5x125.5x100mm	227x125.2x100mm
<b>Order Numbers</b>				
	<b>75W</b>	<b>120W</b>	<b>240W</b>	<b>480W</b>
12VDC output	P/N: 45701K/12S (6.3 Amps)	P/N: 45702K/12S (10 Amps)	-	-
24VDC output	P/N: 45701K/24S (3.2 Amps)	P/N: 45702K/24S (5.0 Amps)	P/N: 45703K/24S (10.0 Amps)	P/N: 45704K/24S (115) (20.0 Amps)
48VDC output	P/N: 45701K/48S (1.6 Amps)	P/N: 45702K/48S (2.5 Amps)	P/N: 45703K/48S (5.0 Amps)	-

### Three phase **Switching Power Supplies**

**Properties**

- High grade DIN rail power supply
- Large input voltage range
- LED indication for power on
- Protected against overvoltage / short circuit
- Protected against overload-current / over Temperature
- Low output ripple
- CE-approved, CUL-listed
- Safety standards: EN 60950, UL 508
- EMC: EN55022 class B,
- Mounting: Din 35mm rails



240W



480W



960W

<b>Input</b>	<b>240W</b>	<b>480W</b>	<b>960W</b>
Rated voltage range	340-550VAC; 3-phase 4 wires	340-550VAC; 3-phase 4 wires	340-550VAC; 3-phase 4 wires
AC Inrush current	Cold start, 50Amps	Cold start, 50Amps	Cold start, 50Amps
Efficiency (Typ.)	89%	89%	91%
<b>Output</b>			
<b>Voltage/current</b>	24VDC / 10.0 A	24VDC / 20.0 A	24VDC / 40.0 A
Initial accuracy	+ - 1%	+ - 1%	+ - 1%
DC adjust range	24 ~ 28V	24 ~ 28V	24 ~ 28V
Working temp./load	-20°C ~ +70°C	-20°C ~ +70°C	-20°C ~ +40°C / 100%
Set time/hold up time/raise time	1000ms / 50ms / 60ms	500ms / 30ms / 70ms	800ms / 20ms / 40ms
Overvoltage protection at	30 ~ 36V shut off; AC recycle to re-start		
Overload-current protection at	105%~150% of rated current, auto recovery		
<b>General data</b>			
Input connection	4 poles	4 poles	4 poles
Output connection	4 poles	4 poles	4 poles
Wire size of terminal connection	Up to 12 AWG	Up to 12 AWG	Up to 12 AWG
MTBF	114.6Khrs. min	91.1Khrs. min	122.5Khrs. min.
Weight	1.3kg	2.5kg	3.3kg
Size W x H x D	125.5x125.5x100mm	227x125.2x100mm	276x125.2x100mm
<b>Order Numbers</b>	<b>240W</b>	<b>480W</b>	<b>960W</b>
24VDC output	P/N: 45703K/24S-3Phase (10.0 Amps)	P/N: 45704K/24S-3Phase (20.0 Amps)	P/N: 45705K/24S-3Phase (40.0 Amps)
Model number	DRT-240-24	DRT-480-24	DRT-960-24

Note: 48VDC output units are also available. Please call for price and availability

### 20 Amp Power Supply Redundancy Module



**Features:**

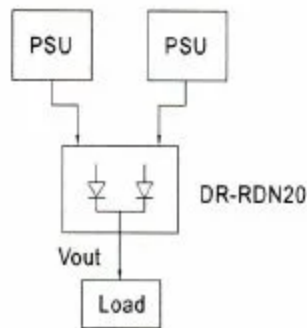
- Suitable for redundant operation of 24V system
- Installed on Din 35mm rail
- Relay contact signal output and LED indicator for input failure alarm
- Cooling by free convection

<b>Model</b>	WPSRM-DR-RDN20	
<b>Output</b>	Reverse Voltage (max.)	30V
	Output Current (max.)	20A
	Voltage Drop	0.5V
	LED Indicators	Two green LEDs for "OK or fail"
<b>Input</b>	Input voltage range	21~28V
	Number of Inputs	Two
	Input current	20A per input
<b>Function</b>	Input Function Alarm	When input is >20V (+5%) or 30V(+5%) relay contacts
	Relay Contact Rating (max.)	30VDC, 1A
<b>Other</b>	Working Temp.	-20~+70°C
	Working Humidity	20~90% RH non condensing
	Storage Temp., Humidity	-40~+85°C, 10~95% RH
	MTBF	996.8Khrs min. MIL-HDBK-217f (25°C)
	Dimensions	55.5x125.2x100mm (WxHxD)
	Packing	0.5Kg; 20pcs/11Kg/1.1CUFT
Note: All parameters NOT specially mentioned are measured at 24VDC, rated load and 25°C of ambient temperature.		

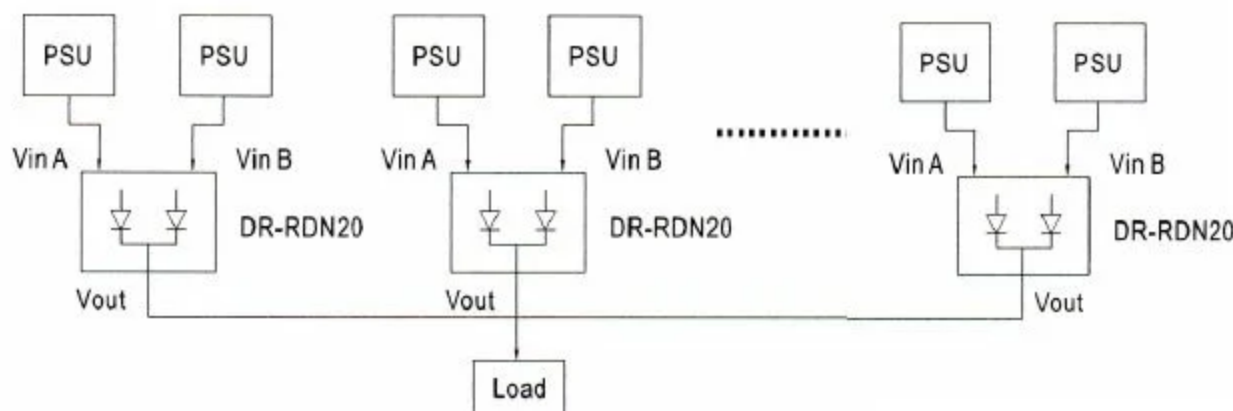
**Application Notes:**

1. 1+1 Redundancy

Using 1 more PSU as the redundant unit



2. 1+N redundancy: Using more PSUs as the redundant unit to increase the reliability



### 40 A DC UPS Module

**Features**

- Battery Controller for Din Rail UPS system
- Parallel connection to DC BUS
- Suitable for 24V system up to 40 Amps
- Built-in Battery test function
- Battery polarity protection
- Relay contact signal output and LED indicator for DC BUS OK, Battery fail, and battery discharge

**Specs:**

**Model # WUPS-DR-UPS40**

**DC Input/DC Bus:** 24V~29VDC

**Rated Current** 40A

**Battery IP/OP** 21~29VDC/  
0~40Amps

Charge current 2A

**Relay Contact** 30VDC, 1 A

**Working temp.** -20~+70°C

**Dimensions** 55.5x125.2x100mm  
(WxHxD)

**New Miniature Power Supply series: 20W, 40W, 60W, 100W**



**Features:**

- Universal AC input/Full range
- Mounts to Din 35mm rail
- No load power consumption <0.75W
- LED indicator for power on
- 100% full load burn-in test

**General Specifications:**

Model No.	MDR-20	MDR-40	MDR-60	MDR-100
<b>AC Input Voltage</b>	85~264VAC; 120~370VDC			
<b>AC inrush current</b>	Cold start, 20A at 115VAC, 40A at 230VAC	Cold start, 30A at 115VAC, 60A at 230VAC		
<b>DC adjust range</b>	+/-10% rated output volt.	0~+/-20% rated output voltage		
<b>Overload protection</b>	105%~160% constant current limiting, auto-recovery	105%~150% constant current limiting, auto-recovery	95%~150% constant current limiting, auto-recovery	
<b>Over Volt. Protection</b>	115%~135% rated output voltage	125%~150% rated output voltage		
<b>Setup, rise, hold up time</b>	500ms, 30ms, 50ms at full load and 230VAC			
<b>Withstand voltage</b>	I/P-O/P:3KVAC, I/P-FG:1.5KVAC, 1 minute			
<b>Working temp.</b>	-20~50°C@100%, 70°C@50% load	-20~60°C@100%, 70°C@60% load	-20~55°C@100%, 70°C@60% load *	-20~50°C@100%, 70°C@50% load
<b>DC OK signal</b>	Open collector	Relay contact		
<b>Safety standards</b>	UL508; TUV approved			
<b>Connection</b>	I/P:3 poles, O/P 3 poles screw DIN terminal	I/P:3 poles, O/P 6 poles screw DIN terminal		
<b>Dimensions (W*H*D) (mm)</b>	22.5x90x100	40x90x100		55x90x100

**20W Series**

Woertz Part No.	Output	Tol.	R&N	Effi.
45720M/5V	5V, 0~3.0A	+/-2%	80mV	76%
45720M/12V	12V, 0~1.67A	+/-1%	120mV	80%
45720M/15V	15V, 0~1.34A	+/-1%	120mV	81%
45720M/24V	24V, 0~1.0A	+/-1%	120mV	84%

**40W Series**

Woertz Part No.	Output	Tol.	R&N	Effi.
45740M/5V	5V, 0~6.0A	+/-2%	80mV	76%
45740M/12V	12V, 0~3.33A	+/-1%	120mV	86%
45740M/24V	24V, 0~1.70A	+/-1%	150mV	88%

**60W Series**


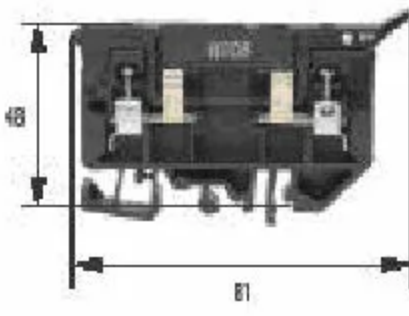


Woertz Part No.	Output	Tol.	R&N	Effi.
45760M/5V	5V, 0~10.0A	+/-2%	80mV	78%
45760M/12V	12V, 0~5.0A	+/-1%	120mV	86%
45760M/24V	24V, 0~2.5A	+/-1%	150mV	88%

**100W Series**

Woertz Part No.	Output	Tol.	R&N	Effi.
457100M/24V	24V, 0~4.0A	+/-1%	150mV	88%

\*working temp: 60W series; 5V only -20~45°C@100%, 70°C@50% load

### Circuit Protection

			
Fuse holders for 5x20mm fuses	Fuse holders for 1/4"x1 1/4" fuses	Fuse holder for midget and cc fuses	Circuit breakers <ul style="list-style-type: none"> <li>• UL1077</li> <li>• UL489 listed GFCI Circuit breakers</li> </ul>
<b>Part No.</b>	<b>Part No.</b>	<b>Part No.</b>	<b>Part No.</b>
<b>30930</b> – no indication	<b>30935</b> – no indication	<b>WFH-1,2,or 3P-Midget</b>	<b>WCB-1,2, or 3P-2 or 9-x</b> <b>X=1-5-Amps</b>
<b>30930/24</b> – 24V fuse blown indication	<b>30935/24</b> – 24V fuse blown indication	<b>WFH-1,2,or 3P-CC</b>	<b>WCB-1or2-KM-x</b> <b>X=1-25 Amps</b>
<b>30930/250</b> – AC fuse blown indication	<b>30935/250</b> – AC fuse blown indication	<b>WFH-1,2,or 3P-Midget-neon</b>	
	<b>30945BC</b> – End barrier	<b>WFH-1,2,or 3P-CC-neon</b>	

Please visit [www.woertz-usa.com](http://www.woertz-usa.com) for complete specifications on circuit protection

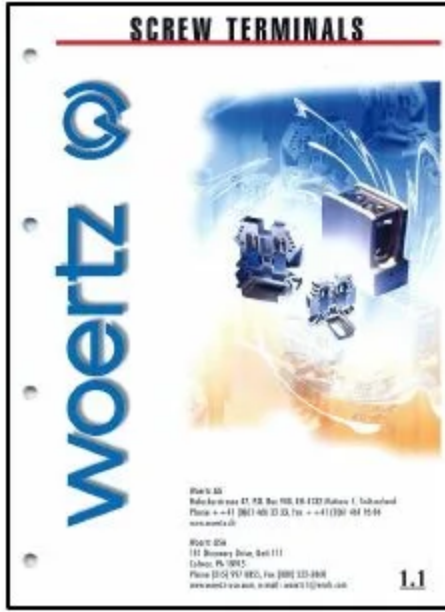
### DIN Rail Receptacle Outlet

- UL 508 listed Standard Receptacles – Available in 15 and 20 Amps
- DIN rail attachment is spring-loaded and securely fastens the box to any DIN 35mm rail



Part No.	Description
WRO-15STDRGY	15A Standard Grade Receptacle Gray/White
WRO-20SPECGY	20A SPEC Grade Receptacle Gray/White

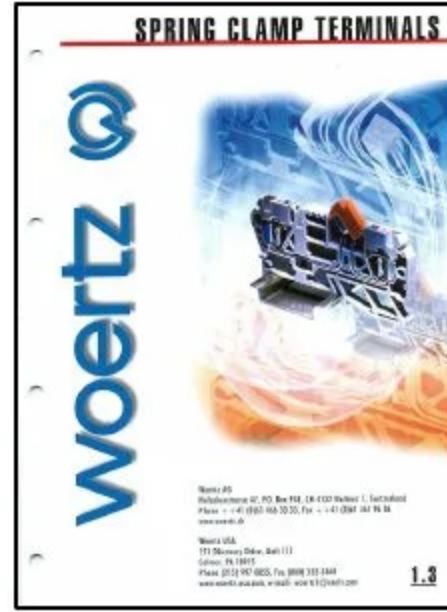
Information available on other  
Products offered from Woertz-USA/GBU Electrotech.



**Din rail mounted terminal blocks**

*Featuring:*

- Screw terminals for Din 35mm rail (22AWG-500MCM)
- Terminals for hazardous locations
- Fuse terminals
- Grounding terminals
- Din 35mm Din rail...and more



**Din rail mounted terminals  
Spring Clamp**

*Featuring:*

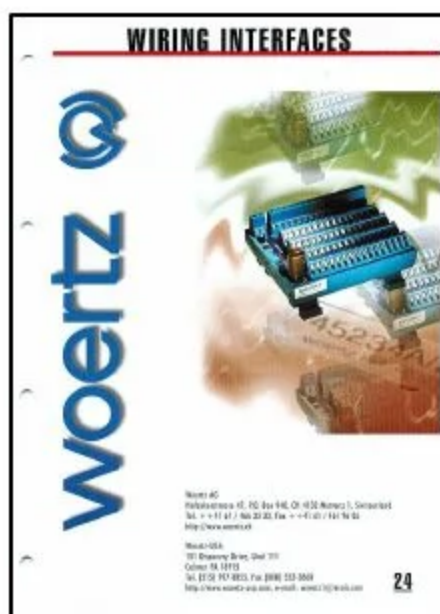
- Terminals with spring clamps (26AWG-4AWG)
- Fuse terminals
- Grounding terminals...and more



**Snapline Electronic Terminals**

*Featuring:*

- Diode terminals
- Transient suppression terminals
- Signal relay terminals
- Power relay terminals
- Optocoupler terminals
- Signal conditioning-analog converters...and more



**Wire Interface Modules**

*Featuring:*

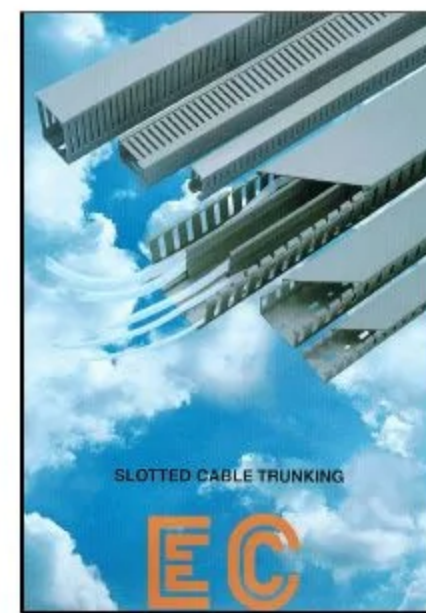
- Passive interface modules for flat ribbon connectors, D-sub
- Prox. Switch / Sensor interface modules
- RJ45 interface modules...and more



**Comat Control Components**

*Featuring:*

- Industrial relays
- Timing relays/Monitoring relays
- Comat BoxX - miniature controller with expandable telephone dialer...and more



**Wire Duct**

*Featuring:*

- PVC wire duct for control panels
- Available in Low density or High density
- Available colors: gray and white
- Will cut wire duct to size!
- Spiral wrap...and more