

Single phase, primary switched mode power supply

**PEL**



**General Data**

Input rated voltage 100 - 240 Vac
Output rated voltage 12 - 24 Vdc
Output rated current 1.3 - 6.5 A
Ambient temperature -25° C to +55° C
Efficiency up to 88 %
Protection index IP 20

**Advantages**

Stabilised and adjustable output voltage
DC OK signalling via LEDs
Parallel connection option
Service-friendly spring-loaded connector system
Panel installation on mounting rails

**Applications**

Primary switch mode power supply is concentrated on the core task of voltage and current supply. Flat step profile optimized for installation in control panels in the building automation.

**Standards**

Primary switched mode power supply to UL 60950, UL 508

Safety:  
EN 61558-2-17, EN 60950 (SELV)

EMC:  
EN 61204-3

**Certifications**



UL/CSA 60950 recognised, UL508 listed, Germanischer Lloyd

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# SWITCHED MODE POWER SUPPLIES/ PEL SERIES



## Single phase, primary switched mode power supply **PEL**

Type	PEL 230/12-2	PEL 230/12-4	PEL 230/12-6,5	PEL 230/18-1,1
<b>Electrical data</b>				
<u>Input</u>				
Input rated voltage	100 - 240 Vac	100 - 240 Vac	100 - 240 Vac	100 - 240 Vac
Input voltage range	85 - 264 Vac (120 - 373 Vdc)	85 - 264 Vac (120 - 373 Vdc)	85 - 264 Vac (120 - 373 Vdc)	85 - 264 Vac (120 - 373 Vdc)
Input rated current (rated load)	0.7 / 0.4 A (110 / 230 Vac)	0.9 / 0.5 A (110 / 230 Vac)	1.6 / 0.9 A (110 / 230 Vac)	0.6 / 0.4 A (110 / 230 Vac)
Rated frequency range	44 - 66 Hz / 0 Hz	44 - 66 Hz / 0 Hz	44 - 66 Hz / 0 Hz	44 - 66 Hz / 0 Hz
Starting current limiter	<30 A, NTC	<30 A, NTC	<30 A, NTC	<30 A, NTC
Input fuse internal	2 A (slow-blow)	2 A (slow-blow)	4 A (slow-blow)	2 A (slow-blow)
Recommended back-up fuse (circuit breaker)	6 A, 10 A, 16 A, characteristics B, C	6 A, 10 A, 16 A, characteristics B, C	6 A, 10 A, 16 A, characteristics B, C	6 A, 10 A, 16 A, characteristics B, C
Mains buffering	10 / 80 ms	10 / 80 ms	15 / 100 ms	10 / 80 ms
<u>Output</u>				
Output rated voltage	12 Vdc ±2 %	12 Vdc ±2 %	12 Vdc ±2 %	18 Vdc ±2 %
Output voltage range	10.5 - 15.5 Vdc	10.5 - 15.5 Vdc	10.5 - 15.5 Vdc	15.5 - 19.0 Vdc
Output rated current	2.00 A	4.00 A	6.50 A	1.10 A
Overload behaviour	Constant current	Constant current	Constant current	Constant current
Ripple factor	typ. 100 mVss	typ. 100 mVss	typ. 100 mVss	typ. 100 mVss
Parallel connection	Yes	Yes	Yes	Yes
Serial operation	Yes	Yes	Yes	Yes
Efficiency	typ. 80 %	typ. 85 %	typ. 87 %	typ. 80 %
<u>Signalling</u>				
Power Good (DC OK)	LED green	LED green	LED green	LED green
Feedback voltage max.	25 Vdc	25 Vdc	25 Vdc	25 Vdc
<u>Standards</u>				
Classification	Primary switched mode power supply	Primary switched mode power supply	Primary switched mode power supply	Primary switched mode power supply
<u>Approvals</u>				
Approvals	cURus, cULus, GL	cURus (prepared), cULus (prepared), GL	cURus (prepared), cULus (prepared), GL	cURus, cULus, GL
<u>Environment</u>				
Ambient temperature	-25° C to +55° C	-25° C to +55° C	-25° C to +55° C	-25° C to +55° C
Storage temperature	-25° C to +85° C	-25° C to +85° C	-25° C to +85° C	-25° C to +85° C
Derating	-3 %/K > +45° C	-3 %/K > +45° C	-3 %/K > +45° C	-3 %/K > +45° C
Current capacity by any mounting position	max. 1.4 A	max. 2.4 A	max. 3.9 A	max. 0.8 A
<u>Safety and protection</u>				
Protection index	IP 20	IP 20	IP 20	IP 20
Safety class	II, (in closed cabinet)	II, (in closed cabinet)	II, (in closed cabinet)	II, (in closed cabinet)
<u>Order numbers</u>				
<b>Order Number</b>	<b>PEL 230/12-2</b>	<b>PEL 230/12-4</b>	<b>PEL 230/12-6,5</b>	<b>PEL 230/18-1,1</b>



Single phase, primary switched mode  
power supply  
**PEL**

Type	PEL 230/24-1,3	PEL 230/24-2,5	PEL 230/24-4
<b>Electrical data</b>			
<b>Input</b>			
Input rated voltage	100 - 240 Vac	100 - 240 Vac	100 - 240 Vac
Input voltage range	85 - 264 Vac (120 - 373 Vdc)	85 - 264 Vac (120 - 373 Vdc)	85 - 264 Vac (120 - 373 Vdc)
Input rated current (rated load)	0.7 / 0.4 A (110 / 230 Vac)	1.4 / 0.6 A (110 / 230 Vac)	1.6 / 0.9 A (110 / 230 Vac)
Rated frequency range	44 - 66 Hz / 0 Hz	44 - 66 Hz / 0 Hz	44 - 66 Hz / 0 Hz
Starting current limiter	<30 A, NTC	<30 A, NTC	<30 A, NTC
Input fuse internal	2 A (slow-blow)	2 A (slow-blow)	2 A (slow-blow)
Recommended back-up fuse (circuit breaker)	6 A, 10 A, 16 A, characteristics B, C	6 A, 10 A, 16 A, characteristics B, C	6 A, 10 A, 16 A, characteristics B, C
Mains buffering	10 / 80 ms	10 / 80 ms	15 / 100 ms
<b>Output</b>			
Output rated voltage	24 Vdc ±2 %	24 Vdc ±2 %	24 Vdc ±2 %
Output voltage range	22.8 - 26.4 Vdc	22.8 - 26.4 Vdc	22.8 - 26.4 Vdc
Output rated current	1.30 A	2.50 A	4.00 A
Overload behaviour	Constant current	Constant current	Constant current
Ripple factor	typ. 100 mVss	typ. 100 mVss	typ. 100 mVss
Parallel connection	Yes	Yes	Yes
Serial operation	Yes	Yes	Yes
Efficiency	typ. 82 %	typ. 88 %	typ. 88 %
<b>Signalling</b>			
Power Good (DC OK)	LED green	LED green	LED green
Feedback voltage max.	30 Vdc	30 Vdc	30 Vdc
<b>Standards</b>			
Classification	Primary switched mode power supply	Primary switched mode power supply	Primary switched mode power supply
<b>Approvals</b>			
Approvals	cURus, cULus, GL	cURus, cULus, GL	cURus (prepared), cULus (prepared), GL
<b>Environment</b>			
Ambient temperature	-25° C to +55° C	-25° C to +55° C	-25° C to +55° C
Storage temperature	-25° C to +85° C	-25° C to +85° C	-25° C to +85° C
Derating	-3 %/K > +45° C	-3 %/K > +45° C	-3 %/K > +45° C
Current capacity by any mounting position	max. 0.9 A	max. 1.6 A	max. 2.4 A
<b>Safety and protection</b>			
Protection index	IP 20	IP 20	IP 20
Safety class	II, (in closed cabinet)	II, (in closed cabinet)	II, (in closed cabinet)
<b>Order numbers</b>			
<b>Order Number</b>	<b>PEL 230/24-1,3</b>	<b>PEL 230/24-2,5</b>	<b>PEL 230/24-4</b>

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## Single phase, primary switched mode power supply **PEL**

Mechanical data	Typ	Connections output, (spring clamp terminal)	Connections input, (spring clamp terminal)	Mounting position	Fixing method	Weight	Dimension picture (in mm)			
							A	B	C	D
	PEL 230/12-2	max. 2.5 mm <sup>2</sup>	max. 2.5 mm <sup>2</sup>	vertical	DIN Rail system TH 35	0.17 kg	54	89	59	54
	PEL 230/12-4	max. 2.5 mm <sup>2</sup>	max. 2.5 mm <sup>2</sup>	vertical	DIN Rail system TH 35	0.24 kg	72	89	59	54
	PEL 230/12-6,5	max. 2.5 mm <sup>2</sup>	max. 2.5 mm <sup>2</sup>	vertical	DIN Rail system TH 35	0.30 kg	90	89	59	54
	PEL 230/18-1,1	max. 2.5 mm <sup>2</sup>	max. 2.5 mm <sup>2</sup>	vertical	DIN Rail system TH 35	0.17 kg	54	89	59	54
	PEL 230/24-1,3	max. 2.5 mm <sup>2</sup>	max. 2.5 mm <sup>2</sup>	vertical	DIN Rail system TH 35	0.17 kg	54	89	59	54
	PEL 230/24-2,5	max. 2.5 mm <sup>2</sup>	max. 2.5 mm <sup>2</sup>	vertical	DIN Rail system TH 35	0.24 kg	72	89	59	54
	PEL 230/24-4	max. 2.5 mm <sup>2</sup>	max. 2.5 mm <sup>2</sup>	vertical	DIN Rail system TH 35	0.30 kg	90	89	59	54

## Dimension pictures

