



- Versions: modular and 35mm DIN rail mount
- Output voltage adjustment by front potentiometer
- Short-circuit protection
- Built-in input voltage surge suppressor
- Used as power supply for DC electromechanical and electronic equipment
- Redundancy modules

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#### POWER SUPPLIES MODULAR AND DIN RAIL MOUNT VERSIONS

- Single phase
- Output voltage: 12 or 24VDC
- Output power: 10...100W.



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#### POWER SUPPLIES DIN RAIL MOUNT VERSION

- Single, two and three phase
- Output voltage: 24 or 48VDC
- Output power: 5...960W.



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#### REDUNDANCY MODULES

- Modular and 35mm DIN rail mount
- Output voltage: 12 or 24VDC
- Output current: 10 or 20A.

## Modular version



PSL1M 010...

PSL1M 033 12  
PSL1M 036 24

Order code	Rated output voltage	Rated output current	Output power	Qty per pkg	Wt
	[V]	[A]	[W]	n°	[kg]
Single phase.					
<b>PSL1M 010 12</b>	12VDC	0.83	10	1	0.114
<b>PSL1M 024 12</b>		2	24	1	0.177
<b>PSL1M 033 12</b>		2.75	33	1	0.248
<b>PSL1M 054 12</b>		4.5	54	1	0.311
<b>PSL1M 072 12</b>		6	72	1	0.443
<b>PSL1M 010 24</b>	24VDC	0.42	10	1	0.114
<b>PSL1M 024 24</b>		1	24	1	0.177
<b>PSL1M 036 24</b>		1.5	36	1	0.248
<b>PSL1M 060 24</b>		2.5	60	1	0.311
<b>PSL1M 100 24</b>		4.2	100	1	0.443

## General characteristics

Switching power supplies transform an AC input voltage into a DC output one. This type of equipment is used in industrial and domestic automation fields. The power supplies are equipped with switching technology offering very high efficiency in an extremely compact size. Dimensions are compatible with modular consumer panels and its plastic housing is suitable for building automation installations as well as industrial automation applications.

The wide range of power supply voltages and the choice of DC current outputs provide for the best adaptability to supply voltage needs of the most common electronic and electromechanical devices.

## Protections:

- Short circuit
- Overload
- Input voltage peaks.

## Indications:

- LED indicator for low voltage conditions
- LED indicator for power on.

## Operational characteristics

- Rated supply voltage: 100...240VAC
- Rated output voltage: 12VDC for PSL1M...12 types; 24VDC for PSL1M...24 types
- Mains frequency: 50/60Hz
- Output voltage adjustment by front potentiometer
- High efficiency up to 89%
- 35mm DIN rail (IEC/EN 60715) mounting
- Screw connection terminals
- Modular DIN 43880 housing; number of modules:
  - 1 for PSL1M 010...
  - 2 for PSL1M 024...
  - 3 for PSL1M 033 12 and PSL1M 036 24
  - 4 for PSL1M 054 12 and PSL1M 060 24
  - 5 for PSL1M 072 12 and PSL1M 100 24
- IEC degree of protection: IP20 on terminals.

## Certifications and compliance

Certifications obtained: EAC, RCM; UL Listed for USA and Canada (cULus-File E318016) as Power Supplies in power circuit and motor-mounted apparatus category.

Compliant with standards: IEC/EN 60950-1 (Class II), IEC/EN 61000-6-2, IEC/EN 61000-6-3, UL508, CSA C22.2 n° 107-1.

## 22 Switching power supplies

DIN rail mount.  
Redundancy modules

### Din Rail mount version



PSL1 005 24  
PSL1 010 24  
PSL1 018 24

PSL1 030...  
PSL1 060...



PSL1 100...  
PSL1 120...

PSL1 240...  
PSL1 300...



PSL1 480 24  
PSL1 480 48



PSL3 960...

Order code	Rated output voltage [V]	Rated output current [A]	Output power [W]	Qty per pkg n°	Wt [kg]
Single phase.					
PSL1 005 24	24VDC	0.21	5	1	0.190
PSL1 010 24		0.42	10	1	0.196
PSL1 018 24		0.75	18	1	0.226
PSL1 030 24		1.25	30	1	0.336
PSL1 060 24		2.5	60	1	0.400
PSL1 100 24		4.2	100	1	0.508
PSL1 120 24		5	120	1	1.018
PSL1 240 24		10	240	1	1.486
PSL1 300 24		12.5	300	1	1.496
PSL1 480 24		20	480	1	2.348
PSL1 030 48	48VDC	0.625	30	1	0.336
PSL1 060 48		1.25	60	1	0.400
PSL1 100 48		2.1	100	1	0.508
PSL1 120 48		2.5	120	1	1.018
PSL1 240 48		5	240	1	1.486
PSL1 300 48		6.25	300	1	1.496
PSL1 480 48		10	480	1	2.348
Two phase.					
PSL2 100 24	24VDC	4.2	100	1	0.570
PSL2 100 48	48VDC	2.1	100	1	0.570
Three phase <sup>①</sup> .					
PSL3 120 24	24VDC	5	120	1	0.910
PSL3 240 24		10	240	1	1.190
PSL3 480 24		20	480	1	1.995
PSL3 960 24		40	960	1	3.672
PSL3 240 48	48VDC	5	240	1	1.190
PSL3 480 48		10	480	1	1.995
PSL3 960 48		20	960	1	3.672

① Two-phase connection is admissible with a 25% output power derating.

#### General characteristics

This type of equipment is used to power supply electromechanical and electronic devices with DC control, such as contactors, time relays, sensors, PLCs, DC motors, displays, SSRs and other equipment normally found in automation systems and networks.

#### Protections:

- Short circuit
- Overload
- Input voltage peaks.

#### Indications:

- LED indicator for low voltage conditions
- LED indicator for power on.

#### Operational characteristics

- Rated supply voltage:  
100...240VAC (PSL1 005...PSL1 100)  
115...230VAC self-configurable (PSL1 120...PSL1 480)  
400...500VAC (PSL2... and PSL3...<sup>①</sup>)
- Rated output voltage: 24VDC (PSL...24) / 48VDC (PSL...48)
- Mains frequency: 50/60Hz
- Output voltage adjustment by front potentiometer
- PFC function for types:  
PSL1 120 24...PSL3 960 24  
PSL1 120 48...PSL3 960 48
- Parallel connection for types: PSL1 120 24, PSL1 240 24, PSL1 300 24, PSL1 480 24, PSL2 100 24, PSL3 240 24, PSL3 480 24, PSL3 960 24, PSL1 120 48, PSL1 240 48, PSL1 300 48, PSL1 480 48, PSL2 100 48, PSL3 240 48, PSL3 480 48, PSL3 960 48
- High efficiency up to 92%
- 35mm DIN rail (IEC/EN 60715) mounting
- Screw connection terminals
- Plastic or metal housing depending on type
- IEC degree of protection: IP20 on terminals.

#### Certifications and compliance

Certifications obtained: EAC, RCM; UL Listed for USA and Canada (cULus-File E318016) as Power Supplies in power circuit and motor-mounted apparatus category. Compliant with standards: IEC/EN 60950-1 (Class II), IEC/EN 61000-6-2, IEC/EN 61000-6-3, UL508, CSA C22.2 n° 107.1.

### Redundancy modules



PSLR M1024



PSLR 2024

Order code	Rated output voltage [V]	Rated output current [A]	Qty per pkg n°	Wt [kg]
PSLRM 10 24	12...24VDC	10	1	0.075
PSLR 20 24	24VDC	20	1	0.210

#### Indications (PSLR 20 24)

Input voltage A	Input voltage B	LED A	LED B	Relay A	Relay B
Within limits	Within limits	ON	ON	Energ.	Energ.
Within limits	<MIN or >MAX	ON	OFF	Energ.	De-energ.
<MIN or >MAX	Within limits	OFF	ON	De-energ.	Energ.
<MIN or >MAX	<MIN or >MAX	OFF	OFF	De-energ.	De-energ.

#### General characteristics

They are used for the redundancy connection of two or more power supplies to enhance the reliability of the DC supply. The redundancy modules ensure a perfect insulation between the power supplies connected.

#### Indications (only for PSLR 20 24):

- LED indicator for DC voltage within limit
- Alarm relay.

#### Operational characteristics

- Rated input voltage:  
12...24VDC (PSLRM 10 24)  
24VDC (PSLR 20 24)
- Rated input current:  
10A (PSLRM 10 24)  
20A (PSLR 20 24)
- Maximum input current (for channel):  
8A per 300s (PSLRM 10 24)  
16A per 300s (PSLR 20 24)
- Rated output current:  
10A (PSLRM 10 24)  
20A (PSLR 20 24)
- Maximum output current:  
16A per 300s (PSLRM 10 24)  
30A per 300s (PSLR 20 24)
- Modular housing DIN 43880 2 modules (PSLRM 10 24)
- 35mm DIN rail (IEC/EN 60715) mounting (PSLR 20 24)
- Screw connection terminals
- Plastic or metal housing depending on type
- IEC degree of protection: IP20 on terminals.

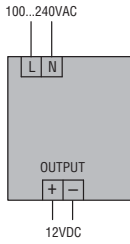
#### Certifications and compliance

Certifications obtained: cULus (only for PSLR 20 24), EAC. Compliant with standards: IEC/EN 60950-1, IEC/EN 61000-4-2, IEC/EN 61000-4-3, IEC/EN 61000-4-4, IEC/EN 61000-4-6, IEC/EN 61000-4-8, UL 508 (only for PSLR 20 24).

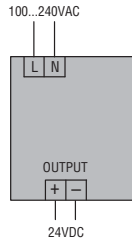


### MODULAR SWITCHING POWER SUPPLIES

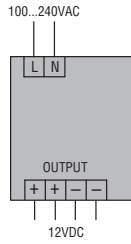
#### PSL1M 010 12



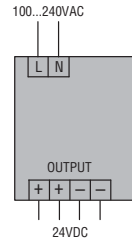
#### PSL1M 010 24



#### PSL1M 024 12 - PSL1M 033 12 PSL1M 054 12 - PSL1M 072 12

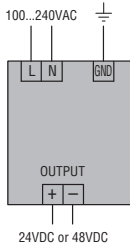


#### PSL1M 024 24 - PSL1M 036 24 PSL1M 060 24 - PSL1M 100 24

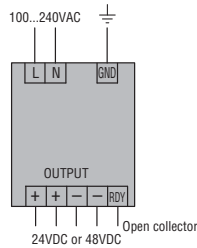


### SWITCHING POWER SUPPLIES

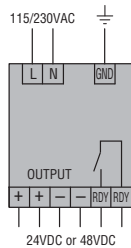
#### PSL1 005 24 PSL1 010 24 PSL1 018 24



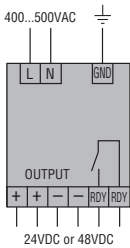
#### PSL1 030... PSL1 060...



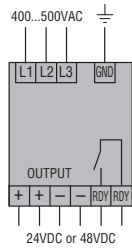
#### PSL1 100... - PSL1 120... PSL1 240... - PSL1 300... PSL1 480...



#### PSL2 100...



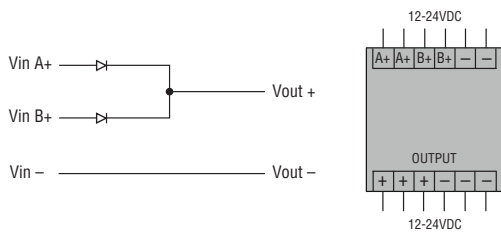
#### PSL3 120 24 - PSL3 240... PSL3 480... - PSL3 900...



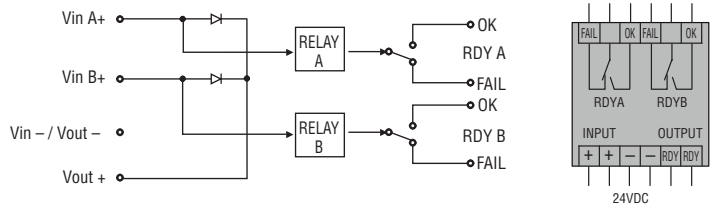
① Two-phase connection is permissible with a 25% output power derating.

### REDUNDANCY MODULES

#### PSLRM 10 24



#### PSLR 20 24



### MODULAR SWITCHING POWER SUPPLIES PSL1M... TYPES

TYPE	Single phase	PSL1M 010 12 - PSL1M 010 24	PSL1M 024 12 - PSL1M 024 24	PSL1M 033 12 - PSL1M 036 24	PSL1M 054 12 - PSL1M 060 24	PSL1M 072 12 - PSL1M 100 24
	Two phase	—	—	—	—	—
	Three phase	—	—	—	—	—

#### INPUT CHARACTERISTICS

Rated supply voltage	Multivoltage 100...240VAC					
Operating range	90...264VAC / 120...375VDC					
Consumption (max)	300mA	600mA	900mA	1.5A	1.7/2.2A	
Frequency range	47...63Hz					
PFC	—					
Insulation voltage Input/output	3000VAC (4242VDC)					
Internal fuse (250VAC) ①	T1A	T2A			T3A	

#### OUTPUT CHARACTERISTICS

Voltage	12VDC (PSL1M...12); 24VDC (PSL1M...24)					
Voltage trimming (potentiometer)	—	12...14VDC (PSL1M...12) 24...28VDC (PSL1M...24)				
Current	0.83A (PSL1M...12) 0.42A (PSL1M...24)	2A (PSL1M...12) 1A (PSL1M...24)	2.75A (PSL1M...12) 1.5A (PSL1M...24)	4.5A (PSL1M...12) 2.5A (PSL1M...24)	6A (PSL1M...12) 4.2A (PSL1M...24)	
Temperature coefficient	±0.03%/°C					
Line adjustment	±1%					
Load adjustment	±1%					
Efficiency	78% (PSL1M...12) 80% (PSL1M...24)	84% (PSL1M...12) 85% (PSL1M...24)	83% (PSL1M...12) 84% (PSL1M...24)	84% (PSL1M...12) 86% (PSL1M...24)	86% (PSL1M...12) 89% (PSL1M...24)	
Overload protection	125...185%	120...160%	110...150%	110...150%	110...150%	
Short-circuit protection	Hiccup	Hiccup	Fold forward			
Ripple noise	50mV					
Parallel connection (n° of units) ②	—					

#### INDICATIONS

LED indicator for power on	Yes
LED indicator for low voltage	Yes
Power Rdy (Ready) (minimum limit)	—

#### AMBIENT CONDITIONS

Operating temperature ③	-40...+71°C
Storage temperature	-40...+85°C
Derating (>60°C)	2.5%/°C

#### HOUSING

Material	Plastic
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#### REDUNDANCY MODULES PSLR...

TYPE	PSLRM 10 24	PSLR 20 24
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#### INPUTS CHARACTERISTICS

Rated input voltage	12-24VDC	24VDC
Operating range	9...35VDC	21...28VDC
Number of input	2	2
Rated input current	10A	20A
Maximum input current (for channel)	8A for 300s	15A for 300s

#### OUTPUTS CHARACTERISTICS

Output voltage drop	0.5V	0.5V
Rated output current	10A	20A
Maximum reverse voltage	35V	30V
Maximum output current	16A for 300s	30A for 300s

#### INDICATIONS

DC ON indicator for input A	-	Yes
DC ON indicator for input B	-	Yes
Power Rdy (Ready) (minimum limit)	-	Ok if input >20V (±5%) or <30V(±5%) Fail if input <20V (±5%) or >30V(±5%) 1A at 30VDC

#### AMBIENT CONDITIONS

Operating temperature	-40...+71°C
Storage temperature	-40...+85°C

#### HOUSING

Material	Plastic	Plastic
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### SWITCHING POWER SUPPLIES PSL... TYPES

PSL1 005 24	PSL1 010 24	PSL1 018 24	PSL1 030 24 PSL1 030 48	PSL1 060 24 PSL1 060 48	PSL1 100 24 PSL1 100 48	PSL1 120 24 PSL1 120 48	PSL1 240 24 PSL1 240 48	PSL1 300 24 PSL1 300 48	PSL1 480 24 PSL1 480 48	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	PSL2 100 24 PSL2 100 48	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	PSL3 120 24	PSL3 240 24	PSL3 480 24	PSL3 960 24
—	—	—	—	—	—	—	—	—	—	—	—	PSL3 240 48	PSL3 480 48	PSL3 960 48

Multivoltage 100...240VAC					Self-configurable 115...230VAC					Multivoltage 400...500VAC ②					
90...264VAC / 120...375VDC			85...264VAC / 90...375VDC		90...264VAC 120...375VDC	90...132VAC / 180...264VAC 210...375VDC			90...264VAC 120...375VDC		340...575VAC 480...820VDC				
200mA	300mA	500mA	800mA	1.5A	2.4A	2.8A	5.4A/2.2A	6A	6A/3A	750mA	500mA	850mA	1.4A	2.4A	
—					47...63Hz			0.7		0.97		0.55		0.65	0.8
3000VAC (4242VDC)															
T2A					T3.15A		T6.3A	T8A	T10A		T2A		T3.15A/500VAC	T5A/500VAC	

24VDC (PSL...24); 48VDC (PSL...48)														
21.6...28.8VDC			24...28VDC 48...55VDC		22.5...28.5VDC 47...56VDC					22.5...28.5 VDC		22.5...28.5VDC 47...56VDC		
0.21A	0.42A	0.75A	1.25A 0.625A	2.5A 1.25A	4.2A 2.1A	5A 2.5A	10A 5A	12.5A 6.25A	20A 10A	4.2A 2.1A	5A	10A 5A	20A 10A	40A 20A
0.03%/°C										0.03%/°C				
±1%			0.5%		±1%	±0.5%				±1%				
±2%			0.5%		±1%									
72%	76%	77%	86%	89%	86% 88%	86% 87%	89% 90%	89% 90%	87% 89%	89%	90% 91%	90% 91%	92% 93%	
110...135%	110...145%	110...140%	110...150%		110...140%	110...145%	120...145%	110...140%	115...135%	120...140%	110...135%	125...145%		
Hiccup			Fold forward					Hiccup		Fold forward	Hiccup			
50mV					50mV	100mV			50mV	100mV		80mV		
—					3			2	—		2	2	2	

Yes														
Yes			—		—		Yes							
—			Yes (transistor output) (18.8VDC)		Yes (relay output) (17.6VDC)					Yes (trans. output) (60VDC)		Yes (relay output) (17.6VDC)		

-20...+71°C			-40...+71°C		-35...+71°C	-40...+71°C	-30...+71°C	-40...+71°C				-30...+71°C	-40...+71°C	
-25...+85°C			-40...+85°C											
2.5%/°C													3.5%/°C	

Plastic					Metal					Plastic		Metal		
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- ① No replacement by user.
- ② Two-phase connection is possible with 25% power derating, except types PSL2 100 24 and PSL3 120 24.
- ③ Minimum load of 150mA.
- ④ Maximum surrounding temperature of 50°C for use according to UL508.