



- ◆ 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.



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



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- DIN RAIL MOUNT VERSION**
- Single, two and three phase
  - Output voltage: 24VDC
  - Output power: 5-960W.

**Modular switching power supplies**

Single phase .....	SEC. PAGE
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**DIN rail mount switching power supplies**

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Two phase .....	<b>21- 3</b>
Three phase .....	<b>21- 3</b>



PSL1M 010...



Order code	Rated output voltage	Rated output current	Output power	Qty per pkg	Wt
	[V]	[A]	[W]	n°	[kg]
Single phase.					
PSL1M 010 12	12VDC	0.83	10	1	0.060
PSL1M 024 12		2	24	1	0.130
PSL1M 033 12		2.75	33	1	0.185
PSL1M 054 12		4.5	54	1	0.250
PSL1M 072 12		6	72	1	0.320

PSL1M 010 24	24VDC	0.42	10	1	0.060
PSL1M 024 24		1	24	1	0.130
PSL1M 036 24		1.5	36	1	0.185
PSL1M 060 24		2.5	60	1	0.250
PSL1M 100 24		4.2	100	1	0.320


 PSL1M 033 12  
 PSL1M 036 24

### 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 electromechanical and electronic devices.

### Protections:

- Short circuit
- Overload
- Input voltage surge suppressor.

### 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
- Degree of protection: IP20 on terminals.

### Certifications and compliance

Certifications obtained: cULus, GOST.  
 Compliant with standards: IEC/EN 60950-1, IEC/EN 61000-6-3, IEC/EN 61000-6-2, UL508, CSA C22.2 n° 14.



PSL1 005 24  
PSL1 010 24  
PSL1 018 24

PSL1 030 24  
PSL1 060 24



PSL1 100 24  
PSL1 120 24

PSL1 240 24  
PSL1 300 24



PSL1 480 24



PSL2 100 24

PSL3 120 24



PSL3 240 24



PSL3 480 24



PSL3 960 24

Order code	Rated output voltage	Rated output current	Output power	Qty per pkg	Wt
	[V]	[A]	[W]	n°	[kg]
Single phase.					
PSL1 005 24	24VDC	0.21	5	1	0.115
PSL1 010 24		0.42	10	1	0.120
PSL1 018 24		0.75	18	1	0.150
PSL1 030 24		1.25	30	1	0.290
PSL1 060 24		2.5	60	1	0.360
PSL1 100 24		4.2	100	1	0.520
PSL1 120 24		5	120	1	0.920
PSL1 240 24		10	240	1	1.000
PSL1 300 24		12.5	300	1	1.000
PSL1 480 24		20	480	1	1.800
Two phase.					
PSL2 100 24	24VDC	4.2	100	1	0.520
Three phase.					
PSL3 120 24	24VDC	5	120	1	0.800
PSL3 240 24		10	240	1	1.100
PSL3 480 24		20	480	1	1.750
PSL3 960 24		40	960	1	3.200

### General characteristics

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

#### Protections:

- Short circuit
- Overload
- Input voltage surge suppressor.

#### Indications:

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

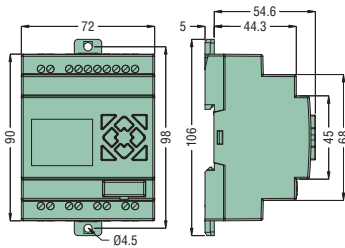
### Operational characteristics

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

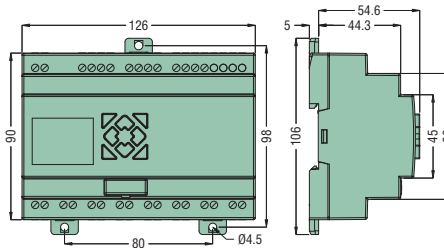
### Certifications and compliance

Certifications obtained: cULus, GOST.  
Compliant with standards: IEC/EN 60950-1, IEC/EN 61000-6-3, IEC/EN 61000-6-2, UL508, CSA C22.2 n° 14.

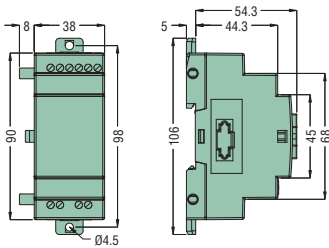
Base units **LRD10...**  
**LRD12...**



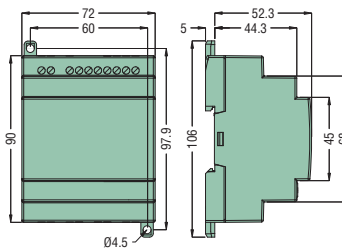
**LRD20...**



Expansion module **LRE...**

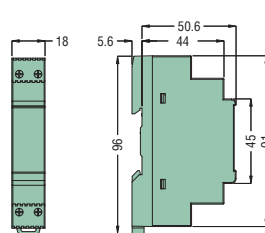


Power supply **LRX1V3 D024**

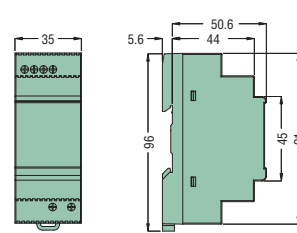


## Automatic power supplies

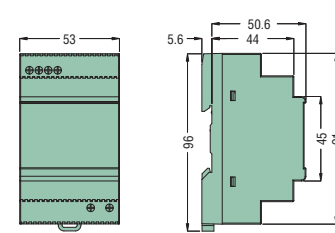
**PSL1M 010...**



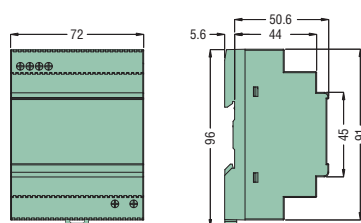
**PSL1M 024...**



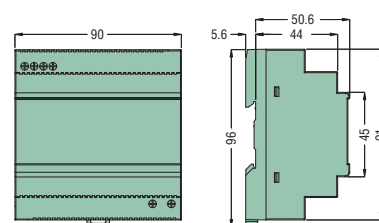
**PSL1M 033 12 - PSL1M 036 24**



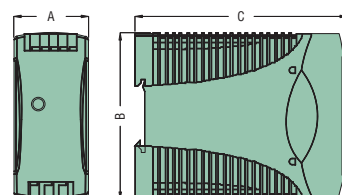
**PSL1M 054 12 - PSL1M 060 24**



**PSL1M 72 12 - PSL1M 100 24**

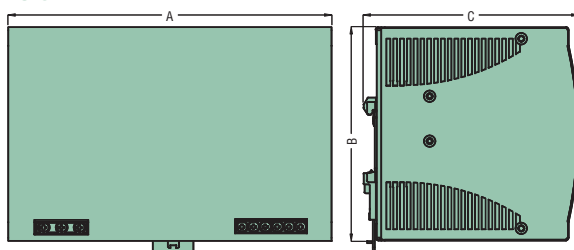


**PSL1 005 24 - PSL1 100 24**  
**PSL2 100 24**



TYPE	A	B	C
PSL1 005 24	22.5	90	115
PSL1 010 24	22.5	90	115
PSL1 018 24	22.5	90	115
PSL1 030 24	40.5	90	115
PSL1 060 24	40.5	90	115
PSL1 100 24	54	90	115
PSL2 100 24	54	90	115

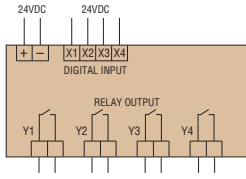
**PSL1 120 24 - PSL1 480 24**  
**PSL3...**



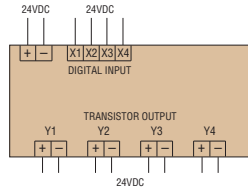
TYPE	A	B	C
PSL1 120 24	94	124.5	123.6
PSL1 240 24	83.5	124.5	123.6
PSL1 300 24	83.5	124.5	123.6
PSL1 480 24	175.5	124.5	123.6
PSL3 120 24	74.3	124	118.8
PSL3 240 24	89	124	118.8
PSL3 480 24	150	124	118.8
PSL3 960 24	275.8	126.2	118.8

### Expansion modules

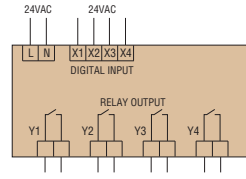
#### LRE08R D024



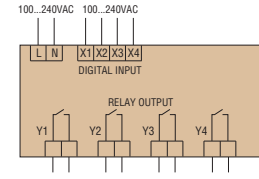
#### LRE08T D024



#### LRE8R A024

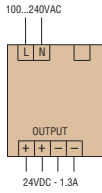


#### LRE8R A240



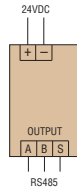
### Power supply unit

#### LRX 1V3 D024



### Communication modules

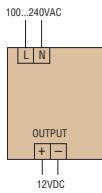
#### LRE P00



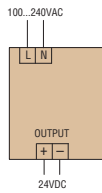
## Switching power supplies

### MODULAR SWITCHING POWER SUPPLIES

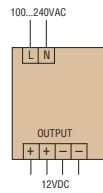
#### PSL1M 010 12



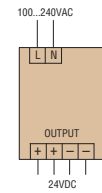
#### PSL1M 010 24



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



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

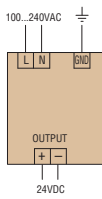


### DIN RAIL MOUNT SWITCHING POWER SUPPLIES

#### PSL1 005 24

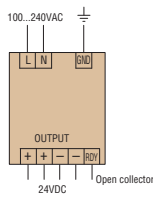
#### PSL1 010 24

#### PSL1 018 24



#### PSL1 030 24

#### PSL1 060 24

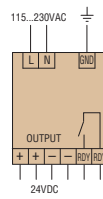


#### PSL1 100 24 - PSL1 120 24

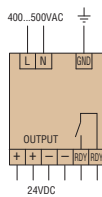
#### PSL1 240 24

#### PSL1 300 24

#### PSL1 480 24

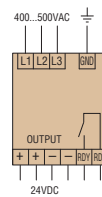


#### PSL2 100 24



#### PSL3 120 24 - PSL3 240 24

#### PSL3 480 24 - PSL3 900 24



### Operational characteristics

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	—	—	—	—	—	
<b>INPUT CHARACTERISTICS</b>							
Rated supply voltage	Multivoltage 100-240VAC						
Operating range	90-264VAC / 120-375VDC						
Consumption	—						
Frequency range	47-63Hz						
PFC	—						
Insulation voltage Input/output	3000VAC (4242VDC)						
Internal fuse (250VAC) ❶	T1A		T2A			T3A	
<b>OUTPUT CHARACTERISTICS</b>							
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)	2.7A (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	110-165%	120-160%	110-150%	110-150%	110-150%		
Short-circuit protection	Fold forward	Hiccup	Fold forward				
Ripple noise	50mV						
Parallel connection (n° of units)	—						
<b>INDICATIONS</b>							
LED indicator for power on	Yes						
LED indicator for low voltage	Yes						
Power Rdy (Ready) (minimum limit)	—						
<b>CONNECTIONS</b>							
Type of terminal	Screw						
Conductor section (min-max)	0.4-3.3mm <sup>2</sup> (26-12AWG)	0.2-3.3mm <sup>2</sup> (24-12AWG)					
Stripping length	4-5mm	7mm					
Tightening torque maximum	Input Output	0.5Nm/0.42lbft 0.5Nm/0.42lbft	0.6Nm/0.5lbft 0.6Nm/0.5lbft				
<b>AMBIENT CONDITIONS</b>							
Operating temperature ❷	-25...+71°C						
Storage temperature	-25...+85°C						
Derating >60°C	2.5%/°C						
<b>HOUSING</b>							
Material	Plastic						

❶ No replacement by user.

❷ Two-phase connection is possible with 25% power derating.

❸ Maximum surrounding temperature of 50°C for use according to UL508.

PSL1 005 24	PSL1 010 24	PSL1 018 24	PSL1 030 24	PSL1 060 24	PSL1 100 24	PSL1 120 24	PSL1 240 24	PSL1 300 24	PSL1 480 24	—	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	PSL2 100 24	—	—	—	—	
—	—	—	—	—	—	—	—	—	—	—	PSL3 120 24	PSL3 240 24	PSL3 480 24	PSL3 960 24	
Multivoltage 100-240VAC					Configurable 115/230VAC					Multivoltage 400-500VAC					
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	6A	7A	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	T5A	
24VDC															
21.6-28.8VDC			24-28VDC			22.5-28.5VDC									
0.21A	0.42A	0.75A	1.25A	2.5A	4.2A	5A	10A	12.5A	20A	4.2A	5A	10A	20A	40A	
0.03%/°C										0.03%/°C					
±1%			0.5%		±1%	±0.5%				±1%					
±2%			0.5%		±1%										
72%	76%	77%	86%	89%	88%	86%	89%	89%	89%	87%	89%	90%	90%	92%	
110-135%		110-140%		110-150%	110-140%	110-145%	120-145%		110-140%		115-135%		120-140%	110-135%	125-145%
Hiccup			Fold forward			Fold forward			Hiccup			Fold forward	Hiccup		
50mV					100mV			50mV		100mV			80mV		
—					3			2		—	2	2	2		
Yes															
Yes			—		—	Yes									
—			Yes (transistor output) (19.1VDC)			Yes (relay output) (17.6VDC)									
Screw															
0.4-3.3mm <sup>2</sup> (26-12AWG)					0.2-5.2mm <sup>2</sup> (24-12AWG)					0.2-5.2mm <sup>2</sup> (24-10AWG) 0.8-13.3mm <sup>2</sup> (20-6AWG)					
4-5mm					8mm										10mm
0.5Nm/0.42lbft					1Nm/0.75lbft					1Nm/0.75lbft					
0.5Nm/0.42lbft					0.6Nm/0.46lbft					0.6Nm/0.46lbft					1.7Nm/1.3lbft
-20...+71°C					-25...+71°C										
-25...+85°C															
2.5%/°C		3%/°C	3%/°C	2.5%/°C									3.5%/°C		
Plastic					Metal					Plastic		Metal			