

Three-phase, primary switched mode power supply, Line **PVSL 400**



General Data

Input rated voltage	3 x 400 - 500 Vac
Output rated voltage	24 Vdc
Output rated current	10 - 40 A
Ambient temperature	-25 °C to +70 °C
Efficiency	up to 94 %
Protection index	IP 20

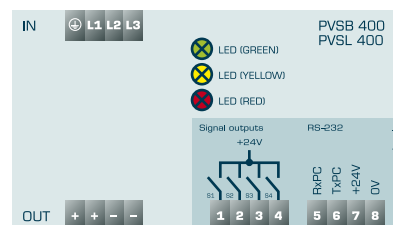
Advantages

Power input monitoring
LCD
Output current and output voltage monitoring
RS-232 interface
Stabilised and adjustable output voltage
Up to 200 % Real Power Boost for 4 seconds
Top Boost to trip conventional circuit breakers
3 LEDs and active signal outputs to indicate operating status
Parallel connection option
Service-friendly spring-loaded connector system
Can be supplied with active inrush current limiting
Panel installation on mounting rails

Applications

Primary switched mode power supply with high power reserves for all automation requirements with a variety of parameter setting and display functions, including output current and output voltage monitoring. Intelligent additional functions for the input power to replace a variety of external devices such as diagnostic voltmeter, phase meter, hour meter.

Sample application



Standards

Primary switched mode power supply
to UL 60950, UL 508

Safety:
EN 61558-2-16, EN 60950-1

EMC:
EN 61204-3

Approvals



UL/CSA 60950 recognised (E213214), UL508 listed (E219022)



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Typ	PVSL 400/24-10	PVSL 400/24-20	PVSL 400/24-40
Electrical data			
Input			
Input rated voltage	3 x 400 - 500 Vac	3 x 400 - 500 Vac	3 x 400 - 500 Vac
Input voltage range	340 - 550 Vac (480 - 780 Vdc)	340 - 550 Vac (480 - 780 Vdc)	340 - 550 Vac (480 - 780 Vdc)
Input rated current (rated load)	0.6 A (3 x 340 Vac)	1.1 A (3 x 340 Vac)	2 A (3 x 340 Vac)
Rated frequency range	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz
Starting current limiter	<30 A, NTC	<30 A, NTC	<30 A, NTC
Input fuse internal	3 x 1.6 A (slow-blow)	3 x 2.5 A (slow-blow)	3 x 6.3 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	10 A, 16 A, characteristics B, C
Harmonic correction	passive	passive	passive
Mains buffering (rated load)	22.6 / 51.5 ms (400 / 500 Vac)	13.2 / 36.8 ms (400 / 500 Vac)	15.6 / 42.9 ms (400 / 500 Vac)
Transient surge voltage protection	Varistor	Varistor	Varistor
Output			
Output rated voltage	24 Vdc	24 Vdc	24 Vdc
Output voltage range	22.8 - 28.8 Vdc	22.8 - 28.8 Vdc	22.8 - 28.8 Vdc
Resistance to reverse feed max.	35 Vdc	35 Vdc	35 Vdc
Output rated current	10.00 A	20.00 A	40.00 A
Parallel connection	Yes	Yes	Yes
Power Boost	20 A / 4 s (15 A / 8 s)	40 A / 4 s (30 A / 8 s)	60 A / 4 s (50 A / 8 s)
Overload behaviour	Constant current or fuse	Constant current or fuse	Constant current or fuse
Efficiency	typ. 91.7 %	typ. 92.9%	typ. 93.1 %
Ripple factor	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss
Top Boost	70 A / 50 ms	80 A / 50 ms	100 A / 50 ms
Signaling			
Power Good (DC OK)	LED green, LED red, LED yellow	LED green, LED red, LED yellow	LED green, LED red, LED yellow
Active signal outputs	4 x 24 Vdc, 2 configurable	4 x 24 Vdc, 2 configurable	4 x 24 Vdc, 2 configurable
Stand-by-input	No	No	No
Display, interface	Yes, RS 232	Yes, RS 232	Yes, RS 232
Approvals			
Approvals	cURus, cULus	cURus, cULus	cURus, cULus
Environment			
Ambient temperature	-25 °C to +70 °C	-25 °C to +70 °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 > +50 °C	-3%/K > +50 °C	-5%/K > +50 °C
Safety and protection			
Protection index	IP 20	IP 20	IP 20
Safety class	I, with PE connection	I, with PE connection	I, with PE connection
Accessory			
Connector for signaling	PV-CON (optional)	PV-CON (optional)	PV-CON (optional)
Adapter cable for interface	PV-KOK2 (optional)	PV-KOK2 (optional)	PV-KOK2 (optional)
Side DIN rail mounting	PV-TS35M (optional)	PV-TS35M (optional)	PV-TS35M (optional)
Direct screw fastening plate for lateral mounting	PV-WB2 (optional)	PV-WB2 (optional)	PV-WB2 (optional)
Order numbers			
Order Number	PVSL 400/24-10	PVSL 400/24-20	PVSL 400/24-40

1.1

1.2

1.3

2.1

2.2

3.1

3.2

3.3

4.0

5.1

5.2



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Mechanical data	Typ	Terminals input, (spring clamp terminal, pluggable)	Terminals output, (spring clamp terminal, pluggable)	Terminals signalling, (spring clamp terminal, pluggable)	Mounting position	Fixing method	Weight	Dimension picture (in mm)					
								1	A	B	C	D	E
	PVSL 400/24-10	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TS35	1.30 kg	1	57	179.5	127	76	12.5
	PVSL 400/24-20	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TS35	1.76 kg	2	77	179.5	127	76	12.5
	PVSL 400/24-40	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TS35	3.03 kg	3	128	205.5	127	76	12.5

Dimension pictures

