

Overview switched mode power supplies



PowerVision series

PowerVision, a product line that's a leading light in the world of power supplies in terms of its technical and economical benefits. PowerVision is a true system of perfectly matched components: all of the modules are slim, feature communication capabilities and boast maximum power reserves for optimum system availability. And all this is available at a cost that won't break the bank. This concept has been brought to life thanks to unique innovations such as the fully equipped Line versions, which do away with the need for a whole range of other diagnostics modules in the wiring cabinet. What's more, the built-in fault memory provides a truly easy means of troubleshooting any faults which might occur in the system. The power supply system is complemented by other modules which increase the operational reliability of machines and systems still further.



PEL series

Our powerful miniature units ensure optimum power supply for miniature controllers. The output voltage can be set easily using the rotary potentiometer on the front of the housing. A powerful and flexible option that's still light and compact.



PSR series

Our star products with universal appeal: ideal for voltage supplies virtually anywhere in the world thanks to their wide-range inputs. Whether they're being used in industrial applications or hooked up to public supply networks, our primary switched-mode regulators will guarantee a secure connection wherever they are. The DIN rail fastening method and pluggable spring-loaded terminals ensure quick and easy mounting.

Power at a glance

	Rated output voltage	Type	Rated input voltage							Page
				20 - 30 W	50 - 60 W	70 - 100 W	120 W	180 - 240 W	450 - 480 W	
Single-phase	12 Vdc	PEL	100 - 240 Vac	2 A	4 A	6,5 A				21
		PSR	100 - 240 Vac	2 A	4 A	8 A				76
		PVSE	100 - 240 Vac			6 A	10 A	15 A		30
Single-phase	18 Vdc	PEL	100 - 240 Vac	1,1 A						21
		PEL	100 - 240 Vac	1,3 A	2,5 A	4 A				21
		PSR	100 - 240 Vac	1,3 A	2,5 A		5 A	10 A		76
Single-phase	24 Vdc	PVSE	110 - 240 Vac			3 A	5 A	10 A	20 A	30
		PVSE	110 - 240 Vac						15 A	30
		AS-i	85 - 264 Vac			3 A				80
Single-phase	48 Vdc	PVSE	110 - 240 V					5 A	10 A	30
		PVSE	3 x 400 - 500 Vac					10 A	20 A	40 A
		PVSB	3 x 400 - 500 Vac					10 A	20 A	40 A
Three-phase	24 Vdc	PVSL	3 x 400 - 500 Vac					10 A	20 A	40 A
		PSR	3 x 400 Vac				5 A	10 A	20 A	40 A
									25 A	35
Three-phase	30 Vdc	PVSE	3 x 400 - 500 Vac						20 A	35
		PVSE	3 x 400 - 500 Vac							83
		PSR	3 x 400 Vac				5 A			83
Three-phase	48 Vdc	PVSE	3 x 400 - 500 Vac							2.3
		PSR	3 x 400 Vac							2.3
										2.3

Additional modules

	Electronic circuit breakers	Redundancy modules	Capacitive buffer modules	UPS Accumulator management	Accumulator modules	
Power Vision						45
PEL						45

Features switched mode power supplies

Type	PEL	PSR230	PSR500	PVSE230	PVSE400	PVSB400	PVSL400	PSRA 3	AS-i-power supply
									graph icon
									graph icon
									color dots icon
									two ports icon
									waveform icon
									square wave icon
									AC icon
									DC icon
									multimeter icon
									88 icon
									Y icon
									U icon
Page	21	76	83	30	35	40	44	80	





Real Power Boost: Reliable starting of heavy loads thanks to huge power reserves [Page 123](#)



Top Boost: Transient current rise makes possible the selective tripping of circuit breakers at 24 Vdc [Page 124](#)



LED signalling: Colour-coded LEDs provide information about the operational status of the device



Parallel connection option: For increased power and redundancy



2-phase operation: Error-free function3-phase devices even if one phase fails irreparably



Active inrush current limiting: Actively limits the inrush current of the devices to the rated input current



Interface: Used to set the device parameters and to visualise relevant operating data [Page 125](#)



DC current and voltage monitoring: Permanent current and voltage monitoring at 24 Vdc



AC power input monitoring: Permanent monitoring of voltage, frequency and phase sequence direction on the primary side



Configurable overcurrent behaviour: Implementation of output characteristic for optimum dimensioning of the entire system [Page 125](#)



Display: Used to set the device parameters and visualise operating data. Active signal outputs:



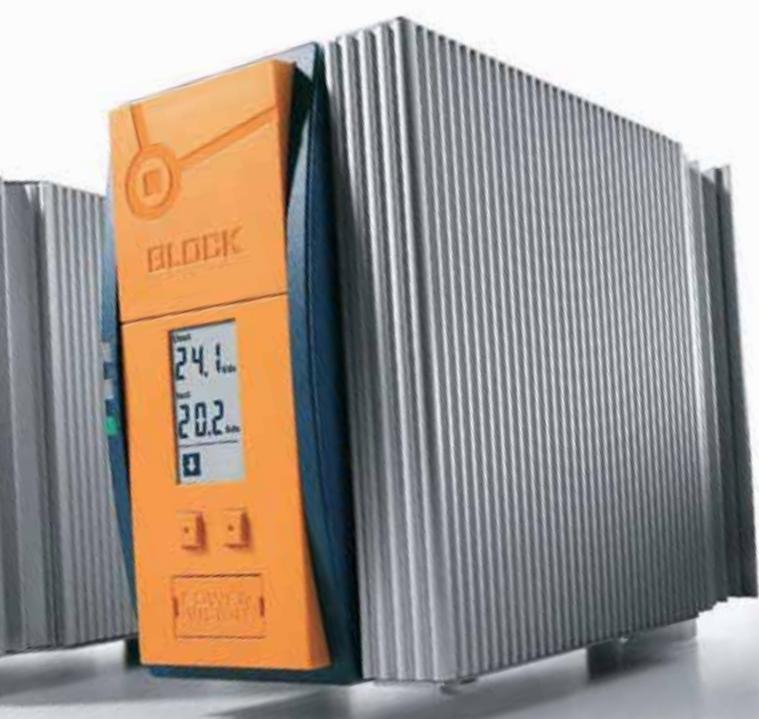
Active signal outputs for remote monitoring



Isolated signal contact for remote monitoring



Stabilised output voltage: Stabilised and configurable output voltage



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Features additional modules





LED signalling: Colour-coded LEDs provide information about the operational status of the device



Parallel connection option:
For increased power and redundancy



Active current limiting in the event of an error:
Current limiting is activated in the event of an overload at the device output



Interface: Used to set the device parameters and to visualise relevant operating data
[Page 125](#)



DC current and voltage monitoring:
Permanent current and voltage monitoring at 24 Vdc



Configurable overcurrent behaviour: Implementation of output characteristic for optimum dimensioning of the entire system [Page 125](#)



Display: Used to set the device parameters and visualise operating data. Active signal outputs:



Active signal outputs for remote monitoring



Isolated signal contact for remote monitoring

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The system PowerVision

Versatile and powerful

In addition to three-phase and single-phase switched mode power supplies, system modules ensure a selectively protected, uninterruptible and redundant power supply. All the components for the system concept are available from a single source.



**powerful
comprehensive
communicative
programmable**



PowerVision power supplies

Many of today's projects rely on compact switched mode power supplies which ensure maximum system availability. To meet this demand, we offer an extensive range of high-quality switched mode power supplies - from the Economy version whose main focus is on supplying power, right up to the Line version, which also supports preventive I/O monitoring.

Economy

The low-cost option

The PVSE 230 and PVSE 400 are optimised single-phase or three-phase switched mode power supplies with high-precision output voltage, and are designed to meet all automation technology requirements. They are focused on the key task of supplying voltage and current, and offer maximum power reserves of up to 200% thanks to their real power boost function. Meanwhile, the top boost function provides up to 60 A above the rated current in the event of a fault, which allows you to adopt cost-effective protection measures in the form of standard miniature circuit breakers.

Available with rated output currents of 3, 5, 6, 10, 15 or 20 A for the PVSE 230 and 10, 20, 25 or 40 A for the PVSE 400. Also available with a DC OK signal output and an active starting current limiting option.

In addition to the electrical and mechanical data on the following pages, you will find more technical information about the individual PV modules from page 122 in Chapter 2.3

2.1

Basic

Featuring load monitoring

The PVS 400 is a three-phase switched mode power supply with high-precision output voltage and is designed to meet all automation technology requirements. It features a multitude of parameterisation and display functions including output current and voltage monitoring. In addition to the PVS 400 power reserves, a serial interface and four active signal outputs ensure uninterrupted communication with the system environment.

Available with rated output currents of 10, 20 or 40 A; also available with active starting current limiting as an option.

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Line

Featuring load and mains supply monitoring

The PVS 400 is a top-of-the-range three-phase switched mode power supply with high-precision output voltage, and is designed to meet all automation technology requirements. It features a whole range of parameterisation and display functions, including output current and voltage monitoring as well as integrated supply input analysis.

In addition to the features of the Basic version, this model also offers full input monitoring.

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Available with rated output currents of 10, 20 or 40 A; also available with active starting current limiting as an option.

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SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES

Single phase, primary switched mode
power supply, Economy
PVSE 230



General Data

Input rated voltage 100 - 240 Vac
Output rated voltage 12 - 48 Vdc
Output rated current 3 - 20 A
Ambient temperature -10° C to +70° C
Efficiency up to 92 %
Protection index IP 20

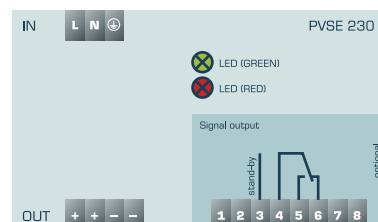
Advantages

Stabilised and adjustable output voltage
Up to 200 % real power boost for 4 seconds
Top boost to trip miniature circuit breakers
DC OK signalling
Stand-by-input
Parallel connection option
Service-friendly spring-loaded connector system
Optional with active inrush current limiter
Panel installation on mounting rails

Applications

Primary switched mode power supply with massive power reserves focussing on the key task of power supply.

Simplified diagram



Standards

Primary switched mode power supply
to UL 60950, UL 508

Safety:
EN 61558-2-17, EN 60950 (SELV), EN 60204 (PELV)

EMC:
EN 61204-3

Certifications



UL/CSA 60950 recognised, UL508 listed



Single phase, primary switched mode power supply, Economy **PVSE 230**

More technical Information you will
find on Page 126 in Chapter 2.3

Type	PVSE 230/12-6	PVSE 230/12-10	PVSE 230/12-15	PVSE 230/24-3
Electrical data				
Input				
Input rated voltage	100 - 240 Vac	100 - 240 Vac	100 - 240 Vac	100 - 240 Vac
Input rated current (rated load)	0.86 / 0.51 Aac (110 / 230 Vac)	1.7 / 0.97 Aac (110 / 230 Vac)	1.9 / 0.9 Aac (110 / 230 Vac)	0.86 / 0.51 Aac (110 / 230 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)
Rated frequency range	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz
Starting current limiter	<15 A, NTC	<15 A, NTC	<2 x rated current, active	<15 A, NTC
Input fuse internal	2 A (slow-blow)	4 A (slow-blow)	6.3 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	10 A, 16 A, characteristics B, C	6 A, 10 A, 16 A, characteristics B, C
Harmonic correction	-	-	active	-
Mains buffering	10 / 70 ms (110 / 230 Vac)	12 / 35 ms (110 / 230 Vac)	30 / 30 ms (110 / 230 Vac)	10 / 70 ms (110 / 230 Vac)
Output				
Output rated voltage	12 Vdc ±1 %	12 Vdc ±1 %	12 Vdc ±1 %	24 Vdc ±1 %
Output voltage range	11 - 18 Vdc	11 - 18 Vdc	11 - 18 Vdc	22 - 29.5 Vdc
Output rated current	6.00 A	10.00 A	15.00 A	3.00 A
Parallel connection	Yes	Yes	Yes	Yes
Power boost	12 A / 4 s (9 A / 8 s)	20 A / 4 s (15 A / 8 s)	30 A / 4 s (22.5 A / 8 s)	6,5 A / 4 s (5.8 A / 8 s)
Overload behaviour	Constant current	Constant current	Constant current	Constant current
max. Power loss idling/nominal load	3.0 / 8.8 W	5.0 / 14.6 W	4.6 / 23.4 W	3.0 / 8.8 W
Serial operation	Yes	Yes	Yes	Yes
Efficiency	typ. 83 %	typ. 87.8 %	typ. 87 %	typ. 87.7 %
Ripple factor	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss
Top Boost	21 A / 25 ms	60 A / 25 ms	55 A / 25 ms	14 A / 25 ms
Signalling				
Stand-by-input	Yes, active at 10 to 28.8 Vdc	Yes, active at 10 to 28.8 Vdc	Yes, active at 10 to 28.8 Vdc	Yes, active at 10 to 28.8 Vdc
Power Good (DC OK)	LED green, LED red	LED green, LED red	LED green, LED red	LED green, LED red
Potential free signal contact	Changeover contact	Changeover contact	Changeover contact	Changeover contact
Active signal outputs	No	No	No	No
Display, interface	No	No	No	No
Feedback voltage max.	25 Vdc	25 Vdc	25 Vdc	35 Vdc
Standards				
Classification	Primary switched mode power supply	Primary switched mode power supply	Primary switched mode power supply	Primary switched mode power supply
Approvals				
Approvals	cURus, cULus	cURus, cULus	cURus, cULus	cURus, cULus
Environment				
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 > +50° C, -5 %/Vac < 95 Vac	-3 %/K > +50° C, -5 %/Vac < 95 Vac	-3 %/K > +50° C, -15 %/Vac < 110 Vac	-3 %/K > +50° C, -5 %/Vac < 95 Vac
Ambient temperature	-10° C to +70° C	-10° C to +70° C	-10° C to +70° C	-10° C to +70° C
Safety and protection				
Safety class	I, with PE connection	I, with PE connection	I, with PE connection	I, with PE connection
Protection index	IP 20	IP 20	IP 20	IP 20
Accessory				
Connector for signalling	PV-CON (optional)	PV-CON (optional)	PV-CON (optional)	PV-CON (optional)
Side DIN Rail mounting	PV-TS35M (optional)	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)	PV-WB2 (optional)
Order numbers				
Order Number	PVSE 230/12-6	PVSE 230/12-10	PVSE 230/12-15	PVSE 230/24-3

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SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES



Single phase, primary switched mode power supply, Economy **PVSE 230**

More technical Information you will
find on Page 126 in Chapter 2.3

Type	PVSE 230/24-3B	PVSE 230/24-5	PVSE 230/24-5B	PVSE 230/24-10
Electrical data				
Input				
Input rated voltage	100 - 240 Vac	100 - 240 Vac	100 - 240 Vac	110 - 240 Vac
Input rated current (rated load)	0.86 / 0.51 A (110 / 230 Vac)	1.7 / 0.97 Aac (110 / 230 Vac)	1.7 / 0.97 Aac (110 / 230 Vac)	2.5 / 1.2 Aac (110 / 230 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)
Rated frequency range	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz
Starting current limiter	<2 x rated current, active	<15 A, NTC	<2 x rated current, active	<2 x rated current, active
Input fuse internal	2 A (slow-blow)	4 A (slow-blow)	4 A (slow-blow)	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	6 A, 10 A, 16 A, characteristics B, C	10 A, 16 A, characteristics B, C
Harmonic correction	-	-	-	active
Mains buffering	10 / 70 ms (110 / 230 Vac)	12 / 35 ms (110 / 230 Vac)	12 / 35 ms (110 / 230 Vac)	24 / 24 ms (110 / 230 Vac)
Output				
Output rated voltage	24 Vdc ±1 %			
Output voltage range	22 - 29.5 Vdc			
Output rated current	3.00 A	5.00 A	5.00 A	10.00 A
Parallel connection	Yes	Yes	Yes	Yes
Power boost	6,5 A / 4 s (5,8 A / 8 s)	10 A / 4 s (7,5 A / 8 s)	10 A / 4 s (7,5 A / 8 s)	20 A / 4 s (15 A / 8 s)
Overload behaviour	Constant current	Constant current	Constant current	Constant current
max. Power loss idling/nominal load	3.0 / 8.8 W	5.0 / 14.6 W	5.0 / 14.6 W	3.5 / 19.7 W
Serial operation	Yes	Yes	Yes	Yes
Efficiency	typ. 87.7 %	typ. 87.8 %	typ. 87.8 %	typ. 91.8 %
Ripple factor	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss
Top Boost	14 A / 25 ms	21 A / 25 ms	21 A / 25 ms	60 A / 25 ms
Signalling				
Stand-by-input	Yes, active at 10 to 28.8 Vdc			
Power Good (DC OK)	LED green, LED red			
Potential free signal contact	Changeover contact	Changeover contact	Changeover contact	Changeover contact
Active signal outputs	No	No	No	No
Display, interface	No	No	No	No
Feedback voltage max.	35 Vdc	35 Vdc	35 Vdc	35 Vdc
Standards				
Classification	Primary switched mode power supply			
Approvals				
Approvals	cURus, cULus	cURus, cULus	cURus, cULus	cURus, cULus
Environment				
Storage temperature	-25° C to +85° C			
Derating	-3 %/K > +50° C, -5 %/Vac < 95 Vac	-3 %/K > +50° C, -5 %/Vac < 95 Vac	-3 %/K > +50° C, -5 %/Vac < 95 Vac	-3 %/K > +50° C, -1.5 %/Vac < 110 Vac
Ambient temperature	-10° C to +70° C			
Safety and protection				
Safety class	I, with PE connection			
Protection index	IP 20	IP 20	IP 20	IP 20
Accessory				
Connector for signalling	PV-CON (optional)	PV-CON (optional)	PV-CON (optional)	PV-CON (optional)
Side DIN Rail mounting	PV-TS35M (optional)	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)	PV-WB2 (optional)
Order numbers				
Order Number	PVSE 230/24-3B	PVSE 230/24-5	PVSE 230/24-5B	PVSE 230/24-10



Single phase, primary switched mode power supply, Economy **PVSE 230**

More technical Information you will
find on Page 126 in Chapter 2.3

Type	PVSE 230/24-20	PVSE 230/30-15	PVSE 230/48-5	PVSE 230/48-10
Electrical data				
Input rated voltage	110 - 240 Vac			
Input rated current (rated load)	5.7 / 2.3 Aac (110 / 230 Vac)	5.7 / 2.3 Aac (110 / 230 Vac)	2.5 / 1.2 Aac (110 / 230 Vac)	5.7 / 2.3 Aac (110 / 230 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)
Rated frequency range	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz	44 Hz - 66 Hz / 0 Hz
Starting current limiter	<2 x rated current, active			
Input fuse internal	10 A (slow-blow)	10 A (slow-blow)	6.3 A (slow-blow)	10 A (slow-blow)
Recommended back-up fuse (circuit breaker)	10 A, 16 A, characteristics B, C			
Harmonic correction	active	active	active	active
Mains buffering	20 / 25 ms (110 / 230 Vac)	20 / 25 ms (110 / 230 Vac)	24 / 24 ms (110 / 230 Vac)	20 / 25 ms (110 / 230 Vac)
Output				
Output rated voltage	24 Vdc ±1 %	30 Vdc ±1 %	48 Vdc ±1 %	48 Vdc ±1 %
Output voltage range	22 - 29.5 Vdc	27 - 43 Vdc	33 - 52 Vdc	33 - 52 Vdc
Output rated current	20.00 A	15.00 A	5.00 A	10.00 A
Parallel connection	Yes	Yes	Yes	Yes
Power boost	30 A / 4 s (25 A / 8 s)	15 A / 4 s (12.5 A / 8 s)	10 A / 4 s (7.5 A / 8 s)	15 A / 4 s (12.5 A / 8 s)
Overload behaviour	Constant current	Constant current	Constant current	Constant current
max. Power loss idling/nominal load	4.8 / 50.2 W	4.8 / 50.2 W	7.4 / 21.6 W	4.8 / 50.2 W
Serial operation	Yes	Yes	Yes	Yes
Efficiency	typ. 91 %	typ. 91 %	typ. 91 %	typ. 91 %
Ripple factor	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss
Top Boost	80 A / 25 ms	70 A / 25 ms	30 A / 25 ms	40 A / 25 ms
Signalling				
Stand-by-input	Yes, active at 10 to 28.8 Vdc			
Power Good (DC OK)	LED green, LED red			
Potential free signal contact	Changeover contact	Changeover contact	Changeover contact	Changeover contact
Active signal outputs	No	No	No	No
Display, interface	No	No	No	No
Feedback voltage max.	35 Vdc	63 Vdc	63 Vdc	63 Vdc
Standards				
Classification	Primary switched mode power supply			
Approvals				
Approvals	cURus (prepared), cULus (prepared)	cURus (prepared), cULus (prepared)	cURus, cULus	cURus (prepared), cULus (prepared)
Environment				
Storage temperature	-25° C to +85° C			
Derating	-3 %/K > +50° C, -1.5 %/Vac < 110 Vac	-3 %/K > +50° C, -1.5 %/Vac < 110 Vac	-3 %/K > +50° C, -1.5 %/Vac < 110 Vac	-3 %/K > +50° C, -1.5 %/Vac < 110 Vac
Ambient temperature	-10° C to +70° C			
Safety and protection				
Safety class	I, with PE connection			
Protection index	IP 20	IP 20	IP 20	IP 20
Accessory				
Connector for signalling	PV-CON (optional)	PV-CON (optional)	PV-CON (optional)	PV-CON (optional)
Side DIN Rail mounting	PV-TS35M (optional)	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)	PV-WB2 (optional)
Order numbers				
Order Number	PVSE 230/24-20	PVSE 230/30-15	PVSE 230/48-5	PVSE 230/48-10

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SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES

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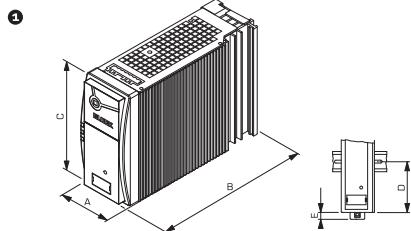


**Single phase, primary switched mode power supply, Economy
PVSE 230**

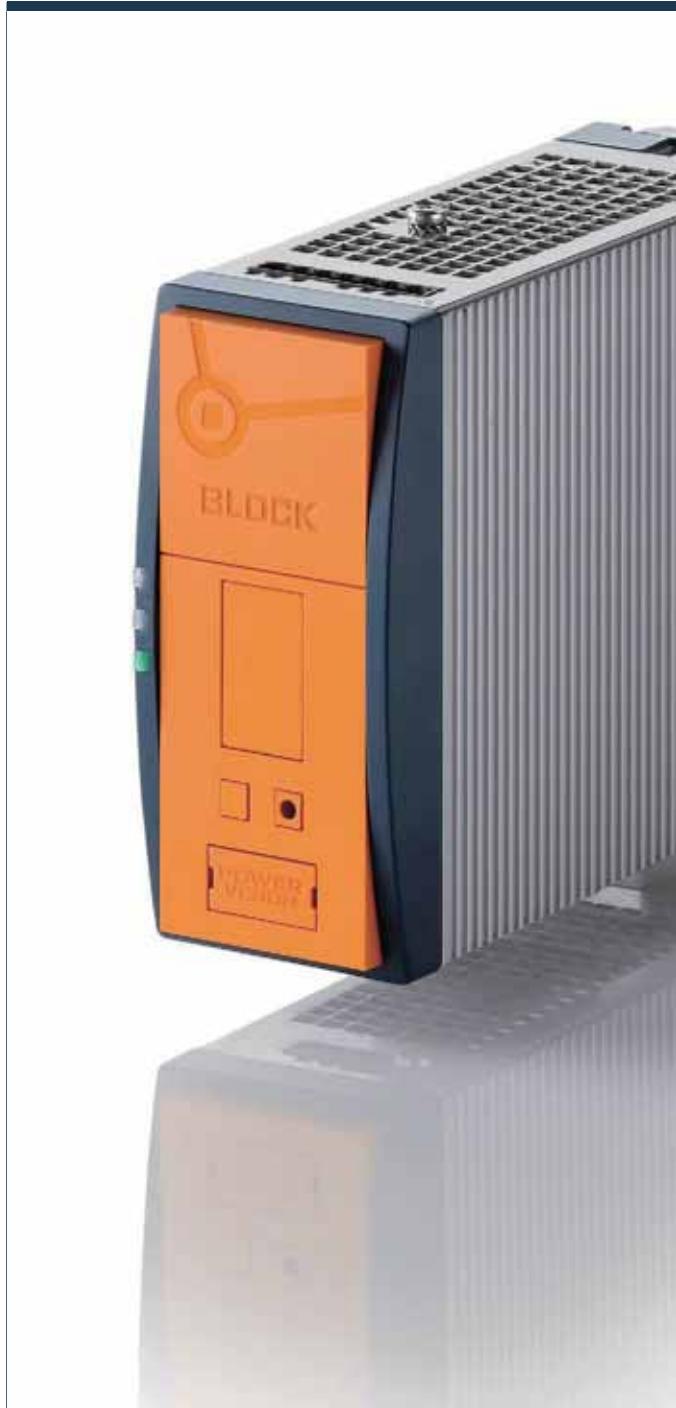
More technical Information you will find on Page 126 in Chapter 2.3

Mechanical data	Typ	Connections input, (spring clamp terminal, pluggable)	Connections output, (spring clamp terminal, pluggable)	Connections signalling, (spring clamp terminal, pluggable)	Mounting position	Fixing method	Weight	Dimension picture (in mm)				
		A	B	C				E				
PVSE 230/12-6	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	0.80 kg	①	40	163.5	127	76	12.5
PVSE 230/12-10	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	110 kg	①	57	163.5	127	76	12.5
PVSE 230/12-15	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	130 kg	①	57	179.5	127	76	12.5
PVSE 230/24-3	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	0.80 kg	①	40	163.5	127	76	12.5
PVSE 230/24-3B	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	0.80 kg	①	40	163.5	127	76	12.5
PVSE 230/24-5	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.10 kg	①	57	163.5	127	76	12.5
PVSE 230/24-5B	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.10 kg	①	57	163.5	127	76	12.5
PVSE 230/24-10	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.30 kg	①	57	179.5	127	76	12.5
PVSE 230/24-20	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	2.30 kg	①	97	187.5	127	76	12.5
PVSE 230/30-15	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	2.30 kg	①	97	187.5	127	76	12.5
PVSE 230/48-5	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.30 kg	①	57	179.5	127	76	12.5
PVSE 230/48-10	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	2.30 kg	①	97	187.5	127	76	12.5

Dimension pictures



Three phase, primary switched mode power supply, Economy **PVSE 400**



General Data

Input rated voltage 3 x 400 - 500 Vac
Output rated voltage 24 - 48 Vdc
Output rated current 10 - 40 A
Ambient temperature -25° C to +70° C
Efficiency up to 95 %
Protection index IP 20

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Advantages

Stabilised and adjustable output voltage
Up to 200 % real power boost for 4 seconds
Top boost to trip miniature circuit breakers
DC OK signalling
Parallel connection option
Service-friendly spring-loaded connector system
Can be supplied with active inrush current limiting option
Can be supplied with isolated DC OK signalling function
Panel installation on mounting rails

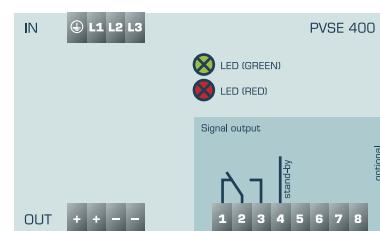
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Applications

Primary switched mode power supply with massive power reserves focussing on the key task of power supply.

2.3

Simplified diagram



2.4

Standards

Primary switched mode power supply
to UL 60950, UL 508

Safety:
EN 61558-2-17, EN 60950 (SELV), EN 60204 (PELV)

EMC:
EN 61204-3

Certifications



UL/CSA 60950 recognised, UL508 listed

SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES



Three phase, primary switched mode power supply, Economy **PVSE 400**

More technical Information you will
find on Page 128 in Chapter 2.3

Type	PVSE 400/24-10	PVSE 400/24-10B	PVSE 400/24-10W	PVSE 400/24-20
Electrical data				
Input				
Input rated voltage	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)	340 - 550 Vac (480 - 780 Vdc)
Input rated current (rated load)	0.6 A (3 x 340 Vac)	0.6 A (3 x 340 Vac)	0.6 A (3 x 340 Vac)	1.1 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	44 Hz - 66 Hz / 0 Hz
Starting current limiter	<30 A, NTC	<2 x rated current, active	<30 A, NTC	<30 A, NTC
Input fuse internal	3 x 1.6 A (slow-blow)	3 x 1.6 A (slow-blow)	3 x 1.6 A (slow-blow)	3 x 2.5 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
Harmonic correction	passive	passive	passive	passive
Mains buffering	22.6 / 51.5 ms (400 / 500 Vac)	22.6 / 51.5 ms (400 / 500 Vac)	22.6 / 51.5 ms (400 / 500 Vac)	13.2 / 36.8 ms (400 / 500 Vac)
Output				
Output rated voltage	24 Vdc ±1 %			
Output voltage range	22.8 - 28.8 Vdc			
Output rated current	10.00 A	10.00 A	10.00 A	20.00 A
Parallel connection	Yes	Yes	Yes	Yes
Power boost	20 A / 4 s (15 A / 8 s)	20 A / 4 s (15 A / 8 s)	20 A / 4 s (15 A / 8 s)	40 A / 4 s (30 A / 8 s)
Overload behaviour	Constant current	Constant current	Constant current	Constant current
max. Power loss idling/nominal load	7.8 / 19.9 W	7.8 / 19.9 W	7.8 / 19.9 W	8.3 / 38.4 W
Serial operation	Yes	Yes	Yes	Yes
Efficiency	typ. 91.7 %	typ. 91.7 %	typ. 91.7 %	typ. 92.9 %
Ripple factor	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss
Top Boost	70 A / 50 ms	70 A / 50 ms	70 A / 50 ms	80 A / 50 ms
Signalling				
Power Good (DC OK)	LED green, LED red			
Potential free signal contact	No	No	No	No
Active signal outputs	No	No	No	No
Stand-by-input	No	No	No	No
Display, interface	No	No	No	No
Feedback voltage max.	35 Vdc	35 Vdc	35 Vdc	35 Vdc
Standards				
Classification	Primary switched mode power supply			
Approvals				
Approvals	cURus, cULus	cURus, cULus	cURus, cULus	cURus, cULus
Environment				
Ambient temperature	-25° C to +70° C			
Storage temperature	-25° C to +85° C			
Derating	-3 %/K > +50° C			
Safety and protection				
Protection index	IP 20	IP 20	IP 20	IP 20
Safety class	I, with PE connection			
Accessory				
Connector for signalling	PV-CON (optional)	-	-	PV-CON (optional)
Side DIN Rail mounting	PV-TS35M (optional)	PV-TS35M (optional)	PV-TS35M (optional)	PV-TS35M (optional)
Direct screw fastening plate for lateral mounting	-	PV-WB2 (optional)	-	-
Order numbers				
Order Number	PVSE 400/24-10	PVSE 400/24-10B	PVSE 400/24-10W	PVSE 400/24-20



Three phase, primary switched mode power supply, Economy **PVSE 400**

More technical Information you will
find on Page 128 in Chapter 2.3

Type	PVSE 400/24-20B	PVSE 400/24-20W	PVSE 400/24-40	PVSE 400/24-40B
Electrical data				
Input				
Input rated voltage	3 x 400 - 500 Vac	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)	340 - 550 Vac (480 - 780 Vdc)
Input rated current (rated load)	1.1 A (3 x 340 Vac)	1.1 A (3 x 340 Vac)	2 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	44 Hz - 66 Hz / 0 Hz
Starting current limiter	<2 x rated current, active	<30 A, NTC	<30 A, NTC	<2 x rated current, active
Input fuse internal	3 x 2.5 A (slow-blow)	3 x 2.5 A (slow-blow)	3 x 6.3 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	10 A, 16 A, characteristics B, C
Harmonic correction	passive	passive	passive	passive
Mains buffering	13.2 / 36.8 ms (400 / 500 Vac)	13.2 / 36.8 ms (400 / 500 Vac)	15.6 / 42.9 ms (400 / 500 Vac)	15.6 / 42.9 ms (400 / 500 Vac)
Output				
Output rated voltage	24 Vdc ±1 %	24 Vdc ±1 %	24 Vdc ±1 %	24 Vdc ±1 %
Output voltage range	22.8 - 28.8 Vdc	22.8 - 28.8 Vdc	22.8 - 28.8 Vdc	22.8 - 28.8 Vdc
Output rated current	20.00 A	20.00 A	40.00 A	40.00 A
Parallel connection	Yes	Yes	Yes	Yes
Power boost	40 A / 4 s (30 A / 8 s)	40 A / 4 s (30 A / 8 s)	60 A / 4 s (50 A / 8 s)	60 A / 4 s (50 A / 8 s)
Overload behaviour	Constant current	Constant current	Constant current	Constant current
max. Power loss idling/nominal load	8.3 / 38.4 W	8.3 / 38.4 W	7.0 / 66.2 W	7.0 / 66.2 W
Serial operation	Yes	Yes	Yes	Yes
Efficiency	typ. 92.9 %	typ. 92.9 %	typ. 93.1 %	typ. 93.1 %
Ripple factor	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss
Top Boost	80 A / 50 ms	80 A / 50 ms	100 A / 50 ms	100 A / 50 ms
Signalling				
Power Good (DC OK)	LED green, LED red	LED green, LED red	LED green, LED red	LED green, LED red
Potential free signal contact	No	No	No	No
Active signal outputs	No	No	No	No
Stand-by-input	No	No	No	No
Display, interface	No	No	No	No
Feedback voltage max.	35 Vdc	35 Vdc	35 Vdc	35 Vdc
Standards				
Classification	Primary switched mode power supply	Primary switched mode power supply	Primary switched mode power supply	Primary switched mode power supply
Approvals				
Approvals	cURus, cULus	cURus, cULus	cURus, cULus	cURus, cULus
Environment				
Ambient temperature	-25° C to +70° C	-25° C to +70° 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 > +50° C	-3 %/K > +50° C	-5 %/K > +45° C	-3 %/K > +50° C
Safety and protection				
Protection index	IP 20	IP 20	IP 20	IP 20
Safety class	I, with PE connection	I, with PE connection	I, with PE connection	I, with PE connection
Accessory				
Connector for signalling	-	PV-CON (optional)	PV-CON (optional)	-
Side DIN Rail mounting	PV-TS35M (optional)	PV-TS35M (optional)	PV-TS35M (optional)	PV-TS35M (optional)
Direct screw fastening plate for lateral mounting	PV-WB2 (optional)	-	-	PV-WB2 (optional)
Order numbers				
Order Number	PVSE 400/24-20B	PVSE 400/24-20W	PVSE 400/24-40	PVSE 400/24-40B

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SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES



Three phase, primary switched mode power supply, Economy **PVSE 400**

More technical Information you will
find on Page 128 in Chapter 2.3

Type	PVSE 400/24-40W	PVSE 400/30-25A	PVSE 400/48-10	PVSE 400/48-20
Electrical data				
Input				
Input rated voltage	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)	340 - 550 Vac (480 - 780 Vdc)
Input rated current (rated load)	2 A (3 x 340 Vac)	1.6 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	44 Hz - 66 Hz / 0 Hz
Starting current limiter	<30 A, NTC	<30 A, NTC	<30 A, NTC	<30 A, NTC
Input fuse internal	3 x 6.3 A (slow-blow)			
Recommended back-up fuse (circuit breaker)	10 A, 16 A, characteristics B, C			
Harmonic correction	passive	passive	passive	passive
Mains buffering	15.6 / 42.9 ms (400 / 500 Vac)	15.6 / 42.9 ms (400 / 500 Vac)	12 / 35 ms (400 / 500 Vac)	15.6 / 42.9 ms (400 / 500 Vac)
Output				
Output rated voltage	24 Vdc ±1 %	30 Vdc ±1 %	48 Vdc ±1 %	48 Vdc ±1 %
Output voltage range	22.8 - 28.8 Vdc	27 - 43 Vdc	37 - 51 Vdc	37 - 51 Vdc
Output rated current	40.00 A	25.00 A	10.00 A	20.00 A
Parallel connection	Yes	Yes	Yes	Yes
Power boost	60 A / 4 s (50 A / 8 s)	45 A / 4 s (35 A / 8 s)	15 A / 4 s (12.5 A / 8 s)	30 A / 4 s (25 A / 8 s)
Overload behaviour	Constant current	Constant current	Constant current	Constant current
max. Power loss idling/nominal load	7.0 / 66.2 W	5.2 / 47.3 W	8.2 / 38 W	5.2 / 59.2 W
Serial operation	Yes	Yes	Yes	Yes
Efficiency	typ. 93.1 %	typ. 94.1 %	typ. 93 %	typ. 94.4 %
Ripple factor	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss
Top Boost	100 A / 50 ms	85 A / 50 ms	55 A / 50 ms	80 A / 50 ms
Signalling				
Power Good (DC OK)	LED green, LED red			
Potential free signal contact	No	Switch over	Switch over	Switch over
Active signal outputs	No	No	No	No
Stand-by-input	No	No	No	No
Display, interface	No	No	No	No
Feedback voltage max.	35 Vdc	63 Vdc	63 Vdc	63 Vdc
Standards				
Classification	Primary switched mode power supply			
Approvals				
Approvals	cURus, cULus	cURus, cULus	cURus, cULus	cURus, cULus
Environment				
Ambient temperature	-25° C to +55° C	-25° C to +70° C	-25° C to +70° C	-25° C to +70° C
Storage temperature	-25° C to +85° C			
Derating	-5 %/K > +45° C	-3 %/K > +50° C	-3 %/K > +50° C	-3 %/K > +50° C
Safety and protection				
Protection index	IP 20	IP 20	IP 20	IP 20
Safety class	I, with PE connection			
Accessory				
Connector for signalling	PV-CON (optional)	PV-CON (optional)	PV-CON (optional)	PV-CON (optional)
Side DIN Rail mounting	PV-TS35M (optional)	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	PVSE 400/24-40W	PVSE 400/30-25A	PVSE 400/48-10	PVSE 400/48-20



Three phase, primary switched mode power supply, Economy **PVSE 400**

More technical Information you will
find on Page 128 in Chapter 2.3

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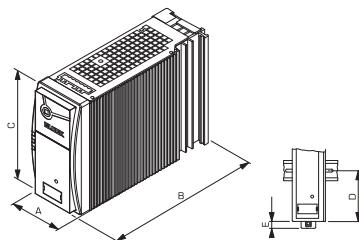
Mechanical data

Typ

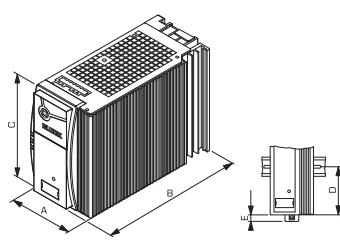
Typ	Connections input, (spring clamp terminal, pluggable)	Connections output, (spring clamp terminal, pluggable)	Connections signalling, (spring clamp terminal, pluggable)	Mounting position	Fixing method	Weight	Dimension picture (in mm)					
	A	B	C				E					
PVSE 400/24-10	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.00 kg	①	57	179.5	127	76	12.5
PVSE 400/24-10B	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.00 kg	①	57	179.5	127	76	12.5
PVSE 400/24-10W	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35, send with WB2	1.00 kg	①	-	-	-	-	-
PVSE 400/24-20	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.30 kg	②	77	179.5	127	76	12.5
PVSE 400/24-20B	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.30 kg	②	77	179.5	127	76	12.5
PVSE 400/24-20W	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35, send with WB2	1.30 kg	①	-	-	-	-	-
PVSE 400/24-40	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	2.50 kg	③	128	205.5	127	76	12.5
PVSE 400/24-40B	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	2.50 kg	③	128	205.5	127	76	12.5
PVSE 400/24-40W	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35, send with WB2	2.50 kg	①	-	-	-	-	-
PVSE 400/30-25A	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	2.50 kg	③	128	205.5	127	76	12.5
PVSE 400/48-10	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.30 kg	②	77	179.5	127	76	12.5
PVSE 400/48-20	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	2.50 kg	③	128	205.5	127	76	12.5

Dimension pictures

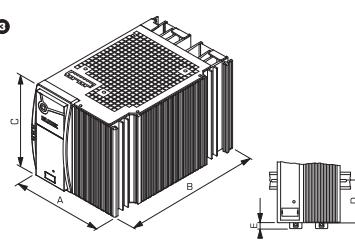
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SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES

Three phase, primary switched mode
power supply, Basic
PVSB 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

LCD
Output current and voltage monitoring
RS-232 interface
Stabilised and digitally adjustable output voltage
Up to 200 % real power boost for 4 seconds
Top boost to trip miniature 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 option
Panel installation on mounting rails

Applications

Primary switch 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.

Simplified diagram



Standards

Primary switched mode power supply
to UL 60950, UL 508

Safety:
EN 61558-2-17, EN 60950 (SELV), EN 60204 (PELV)

EMC:
EN 61204-3

Certifications



UL/CSA 60950 recognised, UL508 listed



Three phase, primary switched mode power supply, Basic **PVSB 400**

More technical Information you will find on Page 130 in Chapter 2.3

Type	PVSB 400/24-10	PVSB 400/24-10B	PVSB 400/24-20	PVSB 400/24-20B
Electrical data				
Input				
Input rated voltage	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)	340 - 550 Vac (480 - 780 Vdc)
Input rated current (rated load)	0.6 A (3 x 340 Vac)	0.6 A (3 x 340 Vac)	1.1 A (3 x 340 Vac)	1.1 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	44 Hz - 66 Hz / 0 Hz
Starting current limiter	<30 A, NTC	<2 x rated current, active	<30 A, NTC	<2 x rated current, active
Input fuse internal	3 x 1.6 A (slow-blow)	3 x 1.6 A (slow-blow)	3 x 2.5 A (slow-blow)	3 x 2.5 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
Harmonic correction	passive	passive	passive	passive
Mains buffering	22.6 / 51.5 ms (400 / 500 Vac)	22.6 / 51.5 ms (400 / 500 Vac)	13.2 / 36.8 ms (400 / 500 Vac)	13.2 / 36.8 ms (400 / 500 Vac)
Output				
Output rated voltage	24 Vdc ±1 %			
Output voltage range	22.8 - 28.8 Vdc			
Output rated current	10.00 A	10.00 A	20.00 A	20.00 A
Parallel connection	Yes	Yes	Yes	Yes
Power boost	20 A / 4 s (15 A / 8 s)	20 A / 4 s (15 A / 8 s)	40 A / 4 s (30 A / 8 s)	40 A / 4 s (30 A / 8 s)
Overload behaviour	Constant current or fuse			
Efficiency	typ. 91.7 %	typ. 91.7 %	typ. 92.9 %	typ. 92.9 %
Ripple factor	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss
Top Boost	70 A / 50 ms	70 A / 50 ms	80 A / 50 ms	80 A / 50 ms
Signalling				
Power Good (DC OK)	LED green, LED red, LED yellow			
Potential free signal contact	No	No	No	No
Active signal outputs	4 x 24 Vdc, 2 configurable			
Stand-by-input	No	No	No	No
Display, interface	Yes, RS 232	Yes, RS 232	Yes, RS 232	Yes, RS 232
Feedback voltage max.	35 Vdc	35 Vdc	35 Vdc	35 Vdc
Standards				
Classification	Primary switched mode power supply			
Approvals				
Approvals	cURus, cULus	cURus, cULus	cURus, cULus	cURus, cULus
Environment				
Ambient temperature	-25° C to +70° C			
Storage temperature	-25° C to +85° C			
Derating	-3 %/K > +50° C			
Safety and protection				
Protection index	IP 20	IP 20	IP 20	IP 20
Safety class	I, with PE connection			
Accessory				
Connector for signalling	PV-CON (optional)	PV-CON (optional)	PV-CON (optional)	PV-CON (optional)
Adapter cable	PV-KOK2 (optional)	PV-KOK2 (optional)	PV-KOK2 (optional)	PV-KOK2 (optional)
Side DIN Rail mounting	PV-TS35M (optional)	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)	PV-WB2 (optional)
Order numbers				
Order Number	PVSB 400/24-10	PVSB 400/24-10B	PVSB 400/24-20	PVSB 400/24-20B

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SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES



Three phase, primary switched mode power supply, Basic **PVSB 400**

More technical Information you will
find on Page 130 in Chapter 2.3

Electrical data	Type	PVSB 400/24-40	PVSB 400/24-40B
	<u>Input</u>		
Input			
Input rated voltage	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)	
Input rated current (rated load)	2 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	
Starting current limiter	<30 A, NTC	<2 x rated current, active	
Input fuse internal	3 x 6.3 A (slow-blow)	3 x 6.3 A (slow-blow)	
Recommended back-up fuse (circuit breaker)	10 A, 16 A, characteristics B, C	10 A, 16 A, characteristics B, C	
Harmonic correction	passive	passive	
Mains buffering	15.6 / 42.9 ms (400 / 500 Vac)	15.6 / 42.9 ms (400 / 500 Vac)	
Output			
Output rated voltage	24 Vdc ±1 %	24 Vdc ±1 %	
Output voltage range	22.8 - 28.8 Vdc	22.8 - 28.8 Vdc	
Output rated current	40.00 A	40.00 A	
Parallel connection	Yes	Yes	
Power boost	60 A / 4 s (50 A / 8 s)	60 A / 4 s (50 A / 8 s)	
Overload behaviour	Constant current or fuse	Constant current or fuse	
Efficiency	typ. 93.1 %	typ. 93.1 %	
Ripple factor	typ. 70 mVss	typ. 70 mVss	
Top Boost	100 A / 50 ms	100 A / 50 ms	
Signalling			
Power Good (DC OK)	LED green, LED red, LED yellow	LED green, LED red, LED yellow	
Potential free signal contact	No	No	
Active signal outputs	4 x 24 Vdc, 2 configurable	4 x 24 Vdc, 2 configurable	
Stand-by-input	No	No	
Display, interface	Yes, RS 232	Yes, RS 232	
Feedback voltage max.	35 Vdc	35 Vdc	
Standards			
Classification	Primary switched mode power supply	Primary switched mode power supply	
Approvals			
Approvals	cURus, cULus	cURus, cULus	
Environment			
Ambient temperature	-25° C to +55° C	-25° C to +55° C	
Storage temperature	-25° C to +85° C	-25° C to +85° C	
Derating	-5 %/K > +50°C	-5 %/K > +45° C	
Safety and protection			
Protection index	IP 20	IP 20	
Safety class	I, with PE connection	I, with PE connection	
Accessory			
Connector for signalling	PV-CON (optional)	PV-CON (optional)	
Adapter cable	PV-KOK2 (optional)	PV-KOK2 (optional)	
Side DIN Rail mounting	PV-TS35M (optional)	PV-TS35M (optional)	
Direct screw fastening plate for lateral mounting	PV-WB2 (optional)	PV-WB2 (optional)	
Order numbers			
Order Number	PVSB 400/24-40	PVSB 400/24-40B	



Three phase, primary switched mode power supply, Basic **PVSB 400**

More technical Information you will
find on Page 130 in Chapter 2.3

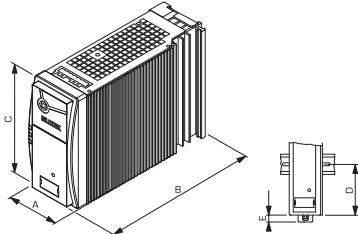
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Mechanical data

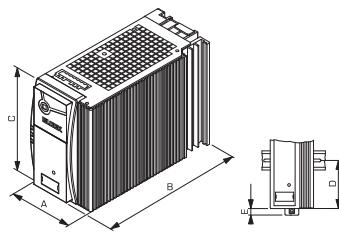
Typ	Connections input, (spring clamp terminal, pluggable)	Connections output, (spring clamp terminal, pluggable)	Connections signalling, (spring clamp terminal, pluggable)	Mounting position	Fixing method	Weight	Dimension picture (in mm)					
							A	B	C	D	E	
PVSB 400/24-10	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.00 kg	❶	57	179.5	127	76	12.5
PVSB 400/24-10B	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.00 kg	❶	57	179.5	127	76	12.5
PVSB 400/24-20	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.30 kg	❷	77	179.5	127	76	12.5
PVSB 400/24-20B	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.30 kg	❷	77	179.5	127	76	12.5
PVSB 400/24-40	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	2.50 kg	❸	128	205.5	127	76	12.5
PVSB 400/24-40B	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	2.50 kg	❸	128	205.5	127	76	12.5

Dimension pictures

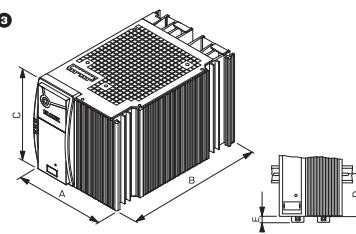
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SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES

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 92 %
Protection index IP 20

Advantages

Power input monitoring
LCD
Current and voltage output monitoring
RS-232 interface
Stabilised and adjustable output voltage
Up to 200 % real power boost for 4 seconds
Top boost to trip miniature 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 switch 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.

Simplified diagram



Standards

Primary switched mode power supply
to UL 60950, UL 508

Safety:
EN 61558-2-17, EN 60950 (SELV), EN 60204 (PELV)

EMC:
EN 61204-3

Certifications



UL/CSA 60950 recognised, UL508 listed



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

More technical Information you will find on Page 132 in Chapter 2.3

Type	PVSL 400/24-10	PVSL 400/24-10B	PVSL 400/24-20	PVSL 400/24-20B
Electrical data				
Input				
Input rated voltage	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)	340 - 550 Vac (480 - 780 Vdc)
Input rated current (rated load)	0.6 A (3 x 340 Vac)	0.6 A (3 x 340 Vac)	1.1 A (3 x 340 Vac)	1.1 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	44 Hz - 66 Hz / 0 Hz
Starting current limiter	<30 A, NTC	<2 x rated current, active	<30 A, NTC	<2 x rated current, active
Input fuse internal	3 x 1.6 A (slow-blow)	3 x 1.6 A (slow-blow)	3 x 2.5 AT	3 x 2.5 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
Harmonic correction	passive	passive	passive	passive
Mains buffering	22.6 / 51.5 ms (400 / 500 Vac)	22.6 / 51.5 ms (400 / 500 Vac)	13.2 / 36.8 ms (400 / 500 Vac)	13.2 / 36.8 ms (400 / 500 Vac)
Output				
Output rated voltage	24 Vdc ±1 %			
Output voltage range	22.8 - 28.8 Vdc			
Output rated current	10.00 A	10.00 A	20.00 A	20.00 A
Parallel connection	Yes	Yes	Yes	Yes
Power boost	20 A / 4 s (15 A / 8 s)	20 A / 4 s (15 A / 8 s)	40 A / 4 s (30 A / 8 s)	40 A / 4 s (30 A / 8 s)
Overload behaviour	Constant current or fuse			
Efficiency	typ. 91.7 %	typ. 91.7 %	typ. 92.9 %	typ. 92.9 %
Ripple factor	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss	typ. 70 mVss
Top Boost	70 A / 50 ms	70 A / 50 ms	80 A / 50 ms	80 A / 50 ms
Signalling				
Power Good (DC OK)	LED green, LED red, LED yellow			
Active signal outputs	4 x 24 Vdc, 2 configurable			
Stand-by-input	No	No	No	No
Display, interface	Yes, RS 232	Yes, RS 232	Yes, RS 232	Yes, RS 232
Feedback voltage max.	35 Vdc	35 Vdc	35 Vdc	35 Vdc
Standards				
Classification	Primary switched mode power supply			
Approvals				
Approvals	cURus, cULus	cURus, cULus	cURus, cULus	cURus, cULus
Environment				
Ambient temperature	-25° C to +70° C			
Storage temperature	-25° C to +85° C			
Derating	-3 %/K > +50° C			
Safety and protection				
Protection index	IP 20	IP 20	IP 20	IP 20
Safety class	I, with PE connection			
Accessory				
Connector for signalling	PV-CON (optional)	PV-CON (optional)	PV-CON (optional)	PV-CON (optional)
Adapter cable	PV-KOK2 (optional)	PV-KOK2 (optional)	PV-KOK2 (optional)	PV-KOK2 (optional)
Side DIN Rail mounting	PV-TS35M (optional)	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)	PV-WB2 (optional)
Order numbers				
Order Number	PVSL 400/24-10	PVSL 400/24-10B	PVSL 400/24-20	PVSL 400/24-20B

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SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES



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

More technical Information you will
find on Page 132 in Chapter 2.3

Electrical data	Type	PVSL 400/24-40	PVSL 400/24-40B
	<u>Input</u>		
Input rated voltage			
	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)	
Input rated current (rated load)			
	2 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	
Starting current limiter			
	<30 A, NTC	<2 x rated current, active	
Input fuse internal			
	3 x 6.3 A (slow-blow)	3 x 6.3 A (slow-blow)	
Recommended back-up fuse (circuit breaker)			
	10 A, 16 A, characteristics B, C	10 A, 16 A, characteristics B, C	
Harmonic correction			
	passive	passive	
Mains buffering			
	15.6 / 42.9 ms (400 / 500 Vac)	15.6 / 42.9 ms (400 / 500 Vac)	
<u>Output</u>			
Output rated voltage			
	24 Vdc ±1 %	24 Vdc ±1 %	
Output voltage range			
	22.8 - 28.8 Vdc	22.8 - 28.8 Vdc	
Output rated current			
	40.00 A	40.00 A	
Parallel connection			
	Yes	Yes	
Power boost			
	60 A / 4 s (50 A / 8 s)	60 A / 4 s (50 A / 8 s)	
Overload behaviour			
	Constant current or fuse	Constant current or fuse	
Efficiency			
	typ. 93.1 %	typ. 93.1%	
Ripple factor			
	typ. 70 mVss	typ. 70 mVss	
Top Boost			
	100 A / 50 ms	100 A / 50 ms	
<u>Signalling</u>			
Power Good (DC OK)			
	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	
Stand-by-input			
	No	No	
Display, interface			
	Yes, RS 232	Yes, RS 232	
Feedback voltage max.			
	35 Vdc	35 Vdc	
<u>Standards</u>			
Classification			
	Primary switched mode power supply	Primary switched mode power supply	
<u>Approvals</u>			
Approvals			
	cURus, cULus	cURus, cULus	
<u>Environment</u>			
Ambient temperature			
	-25° C to +55° C	-25° C to +55° C	
Storage temperature			
	-25° C to +85° C	-25° C to +85° C	
Derating			
	-5 %/K > +50° C	-5 %/K > +45° C	
<u>Safety and protection</u>			
Protection index			
	IP 20	IP 20	
Safety class			
	I, with PE connection	I, with PE connection	
<u>Accessory</u>			
Connector for signalling			
	PV-CON (optional)	PV-CON (optional)	
Adapter cable			
	PV-KOK2 (optional)	PV-KOK2 (optional)	
Side DIN Rail mounting			
	PV-TS35M (optional)	PV-TS35M (optional)	
Direct screw fastening plate for lateral mounting			
	PV-WB2 (optional)	PV-WB2 (optional)	
<u>Order numbers</u>			
Order Number			
	PVSL 400/24-40	PVSL 400/24-40B	



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

More technical Information you will
find on Page 132 in Chapter 2.3

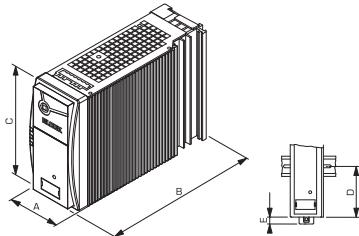
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Mechanical data

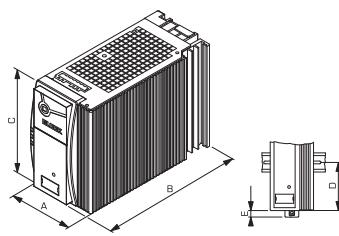
Typ	Connections input, (spring clamp terminal, pluggable)	Connections output, (spring clamp terminal, pluggable)	Connections signalling, (spring clamp terminal, pluggable)	Mounting position	Fixing method	Weight	Dimension picture (in mm)					
							A	B	C	D	E	
PVSL 400/24-10	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.00 kg	❶	57	179.5	127	76	12.5
PVSL 400/24-10B	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.00 kg	❶	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 TH 35	1.30 kg	❷	77	179.5	127	76	12.5
PVSL 400/24-20B	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.30 kg	❷	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 TH 35	2.50 kg	❸	128	205.5	127	76	12.5
PVSL 400/24-40B	max. 2.5 mm ²	max. 10 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	2.50 kg	❸	128	205.5	127	76	12.5

Dimension pictures

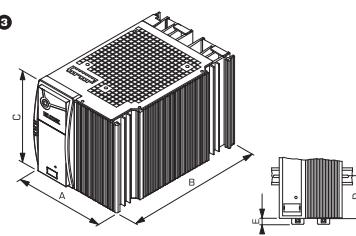
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SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES

Electronic protection module, Economy **PVFE**



General Data

Input rated voltage 24 Vdc
Output rated voltage 24 Vdc
Output rated current up to 2/4 x 6 A, 2/4 x 10 A
Ambient temperature -10° C to +60° C
Efficiency typ. 96 %
Protection index IP 20

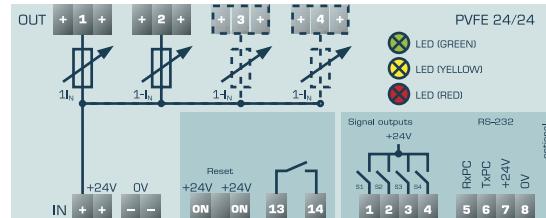
Advantages

Current monitoring and shutdown in the event of an error
Up to 4 current channels per module
Delayed switching-in of channels
Reactivation of tripped channels via external signal
Isolated signal contact
Service-friendly spring-loaded connector system
LCD
Current and voltage monitoring
Active signal outputs for watchdog functions
RS-232 interface
Panel installation on mounting rails

Applications

Electronic circuit breaker for machines and installations for which a maximum of operational safety is our top priority. The module can without regard to line impedances defective 24-VDC power trails off selectively. A variety of parameter settings and display functions, including output current and output voltage monitoring are integrated.

Simplified diagram



Standards

Electronic circuit breaker
to UL 60950, UL 508

Safety:
EN 60950, EN 60950 (SELV), EN 60204 (PELV)

EMC:
EN 61000-6-3 (Interference emissions), EN 61000-6-2 (Interference immunity)

Certifications



UL/CSA 60950 recognised, UL508 listed



Electronic protection module, Economy **PVFE**

More technical Information you will
find on Page 134 in Chapter 2.3

Type	PVFE 24/24-12	PVFE 24/24-20	PVFE 24/24-24	PVFE 24/24-40
Electrical data				
Input				
Input rated voltage	24 Vdc	24 Vdc	24 Vdc	24 Vdc
Input voltage range	18 - 30 Vdc	18 - 30 Vdc	18 - 30 Vdc	18 - 30 Vdc
Input fuse internal	2 x 15 A (slow-blow)	2 x 15 A (slow-blow)	4 x 15 A (slow-blow)	4 x 15 A (slow-blow)
Voltage drop per channel at rated load	140 mVdc	240 mVdc	140 mVdc	240 mVdc
Output				
Output rated voltage	24 Vdc	24 Vdc	24 Vdc	24 Vdc
Number of current channels	2	2	4	4
Output rated current	1 - 6 A (adjustable in 1 A steps)	1 - 10 A (adjustable in 1 A steps)	1 - 6 A (adjustable in 1 A steps)	1 - 10 A (adjustable in 1 A steps)
Overload behaviour	Shutdown without current limiting	Shutdown without current limiting	Shutdown without current limiting	Shutdown without current limiting
Parallel connection	No	No	No	No
Turn on capacity	max. 20.000 µF per channel	max. 20.000 µF per channel	max. 20.000 µF per channel	max. 20.000 µF per channel
Serial operation	No	No	No	No
max. Power loss idling/nominal load	2 / 4 W	2 / 7 W	2 / 5.5 W	2 / 12 W
Efficiency	typ. 96 %	typ. 96 %	typ. 96 %	typ. 96 %
Signalling				
Power Good (DC OK)	LED green, LED red, LED yellow	LED green, LED red, LED yellow	LED green, LED red, LED yellow	LED green, LED red, LED yellow
Display, interface	Yes, RS 232	Yes, RS 232	Yes, RS 232	Yes, RS 232
Reset input	Yes, (18 - 30 Vdc)	Yes, (18 - 30 Vdc)	Yes, (18 - 30 Vdc)	Yes, (18 - 30 Vdc)
Feedback voltage max.	33 Vdc	33 Vdc	33 Vdc	33 Vdc
Active signal outputs	4 x 24 Vdc, 1 configurable	4 x 24 Vdc, 1 configurable	4 x 24 Vdc, 1 configurable	4 x 24 Vdc, 1 configurable
Potential free signal contact	Closing contact, configurable	Closing contact, configurable	Closing contact, configurable	Closing contact, configurable
Standards				
Classification	Electronic circuit breaker	Electronic circuit breaker	Electronic circuit breaker	Electronic circuit breaker
Approvals				
Approvals	cURus, cULus	cURus, cULus	cURus, cULus	cURus, cULus
Environment				
Storage temperature	-25° C to +85° C	-25° C to +85° C	-25° C to +85° C	-25° C to +85° C
Ambient temperature	-10°C to + 60°C	-10°C to + 60°C	-10°C to + 60°C	-10°C to + 60°C
Safety and protection				
Protection index	IP 20	IP 20	IP 20	IP 20
Safety class	III, without PE connection	III, without PE connection	III, without PE connection	III, without PE connection
Accessory				
Connector for signalling	PV-CON (optional)	PV-CON (optional)	PV-CON (optional)	PV-CON (optional)
Adapter cable	PV-KOK2 (optional)	PV-KOK2 (optional)	PV-KOK2 (optional)	PV-KOK2 (optional)
Side DIN Rail mounting	PV-TS35M (optional)	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)	PV-WB2 (optional)
Order numbers				
Order Number	PVFE 24/24-12	PVFE 24/24-20	PVFE 24/24-24	PVFE 24/24-40

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SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES



Electronic protection module, Economy **PVFE**

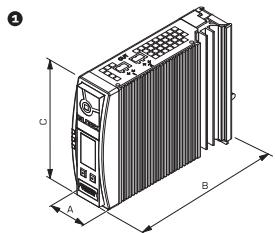
More technical Information you will
find on Page 134 in Chapter 2.3

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Mechanical data

Typ	Connections input, (spring clamp terminal, pluggable)	Connections output, (spring clamp terminal, pluggable)	Connections signalling relay, reset (spring clamp terminal, pluggable)	Connections signalling, (spring clamp terminal, pluggable)	Mounting position	Fixing method	Weight	Dimension picture (in mm)		
								A	B	C
PVFE 24/24-12	max. 10 mm ²	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	0.80 kg	①	40	163.5 127
PVFE 24/24-20	max. 10 mm ²	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	0.80 kg	①	40	163.5 127
PVFE 24/24-24	max. 10 mm ²	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	0.80 kg	①	40	163.5 127
PVFE 24/24-40	max. 10 mm ²	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	0.80 kg	①	40	163.5 127

Dimension pictures



Electronic fuse, Basic **PVFB**



General Data

Input rated voltage 24 Vdc
Output rated voltage 24 Vdc
Output rated current 4 x 8 A
Ambient temperature -10° C to +60° C
Efficiency typ. 96 %
Protection index IP 20

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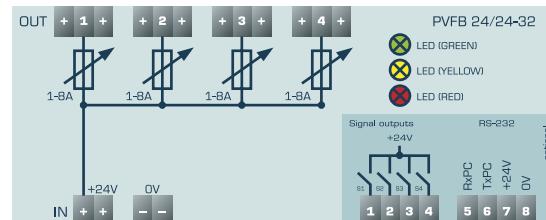
Advantages

- Active current limiting in the event of an error
- Current monitoring and shutdown in the event of an error
- 4 current channels
- Delayed switching-in of channels
- Service-friendly spring-loaded connector system
- LCD
- Current and voltage monitoring
- Active signal outputs for watchdog function
- RS-232 interface
- Panel installation on mounting rails

Applications

Electronic fuse for machines and installations for which a maximum of operational safety is our top priority. The module can without regard to line impedances defective 24-VDC power trails off selectively. A variety of parameter settings and display functions, including output current and output voltage monitoring are integrated.

Simplified diagram



Standards

Electronic circuit breaker
to UL 60950, UL 508

Safety:
EN 60950, EN 60950 (SELV), EN 60204 (PELV)

EMC:
EN 61000-6-3 (Interference emissions), EN 61000-6-2 (Interference immunity)

Certifications



UL/CSA 60950 recognised, UL508 listed

SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES



Electronic fuse, Basic **PVFB**

More technical Information you will
find on Page 136 in Chapter 2.3

Electrical data	Type	PVFB 24/24-32
	Input	
	Input rated voltage	24 Vdc
	Input voltage range	18 - 30 Vdc
	Input fuse internal	4 x 15 A (slow-blow)
	Voltage drop per channel at rated load	200 mVdc
	Output	
	Output rated voltage	24 Vdc
	Number of current channels	4
	Output rated current	1 - 8 A (adjustable in 1 A steps)
	Overload behaviour	Shutdown with active current limiting
	Parallel connection	No
	Turn on capacity	typ. 20.000 µF
	Serial operation	No
	max. Power loss idling/nominal load	2 / 8.2 W
	Efficiency	typ. 96 %
	Signalling	
	Power Good (DC OK)	LED green, LED red, LED yellow
	Potential free signal contact	No
	Display, interface	Yes, RS 232
	Reset input	No
	Feedback voltage max.	33 Vdc
	Standards	
	Classification	Electronic circuit breaker
	Approvals	
	Approvals	cURus, cULus
	Environment	
	Ambient temperature	-10° C to + 60° C
	Storage temperature	-25° C to +85° C
	Safety and protection	
	Protection index	IP 20
	Safety class	III, without PE connection
	Accessory	
	Connector for signalling	PV-CON (optional)
	Adapter cable	PV-KOK2 (optional)
	Side DIN Rail mounting	PV-TS35M (optional)
	Direct screw fastening plate for lateral mounting	PV-WB2 (optional)
	Order numbers	
	Order Number	PVFB 24/24-32

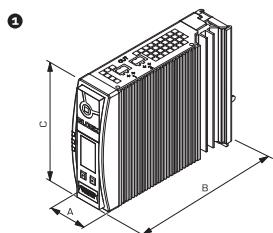


Electronic fuse, Basic **PVFB**

More technical Information you will
find on Page 136 in Chapter 2.3

Mechanical data		Dimensions									
Type		Connections input, (spring clamp terminal, pluggable)	Connections output, (spring clamp terminal, pluggable)	Connections signalling, (spring clamp terminal, pluggable)	Mounting position	Fixing method	Weight	Dimension picture (in mm)	A	B	C
PVFB 24/24-32	max. 10 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	0.80 kg	1	40 163.5 127			

Dimension pictures



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SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES

Redundant module, Economy **PVRE**



General Data

Input rated voltage 24 - 48 Vdc
Output rated voltage 24 - 48 Vdc
Output rated current 40 A
Ambient temperature -10° C to +60° C
Efficiency typ. 96 %
Protection index IP 20

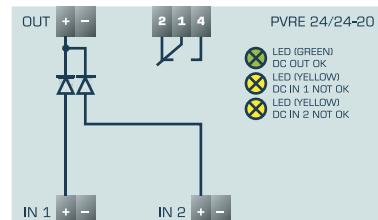
Advantages

Reverse polarity protection
Isolated signal contact
3 LEDs for signalling purposes
Service-friendly spring-loaded connector system
Panel installation on mounting rails

Applications

Redundancy module for decoupling two power supplies for building a fail-safe delivery system. set of machines and equipment requiring high operational reliability.

Simplified diagram



Standards

Redundancy module
to UL 60950, UL 508

Safety:
EN 60950 (SELV), EN 60204 (PELV)

EMC:
EN 61000-6-3 (Interference emissions), EN 61000-6-2 (Interference immunity)

Certifications



UL/CSA 60950 recognised, UL508 listed



Redundant module, Economy **PVRE**

More technical Information you will
find on Page 138 in Chapter 2.3

Electrical data	Type	PVRE 24/24-20	PVRE 48/48-20	
	<u>Input</u>			
Input				
Input rated voltage				
	24 Vdc	48 Vdc		
Input voltage range				
	18 - 30 Vdc	36 - 54 Vdc		
Input rated current				
	2 x 20 A / 1 x 40 A	2 x 20 A / 1 x 40 A		
Output				
Output rated voltage				
	24 Vdc	48 Vdc		
Output voltage				
	typ. Uin - 1 Vdc (20 A)	typ. Uin - 1 Vdc (20 A)		
Output rated current				
	40.00 A	40.00 A		
Internal fuse				
	No	No		
Parallel connection				
	Yes	Yes		
max. Power loss idling/nominal load				
	1.5 / 14 W (20 A), 1.5 / 26 W (40 A)	1.7 / 20 W (20 A), 1.7 / 40 W (40 A)		
Efficiency				
	typ. 97 %	typ. 96 %		
Signalling				
Power Good (DC OK)				
	LED green, LED red, LED yellow	LED green, LED red, LED yellow		
Potential free signal contact				
	Changeover contact	Changeover contact		
Active signal outputs				
	No	No		
Display, interface				
	No	No		
Feedback voltage max.				
	35 Vdc	60 Vdc		
Standards				
Classification				
	Redundancy module	Redundancy module		
Approvals				
Approvals				
	cURus, cULus	cURus (prepared), cULus (prepared)		
Environment				
Ambient temperature				
	-10° C to +60° C	-10° C to +60° C		
Storage temperature				
	-25° C to +85° C	-25° C to +85° C		
Safety and protection				
Protection index				
	IP 20	IP 20		
Safety class				
	III, without PE connection	III, without PE connection		
Accessory				
Side DIN Rail mounting				
	PV-TS35M (optional)	PV-TS35M (optional)		
Direct screw fastening plate for lateral mounting				
	PV-WB2 (optional)	PV-WB2 (optional)		
Order numbers				
Order Number				
	PVRE 24/24-20	PVRE 48/48-20		

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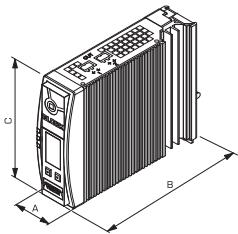
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SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES

	<p>Redundant module, Economy PVRE</p>	<p>More technical Information you will find on Page 138 in Chapter 2.3</p>							
<p>Mechanical data</p>									
Type	Connections input, (spring clamp terminal, pluggable)	Connections output, (spring clamp terminal, pluggable)							
PVRE 24/24-20	max. 10 mm ²	max. 10 mm ²	max. 2.5 mm ²	vertical	DIN Rail system TH 35	1.00 kg	① 40	163.5	127
PVRE 48/48-20	max. 10 mm ²	max. 10 mm ²	max. 2.5 mm ²	vertical	DIN Rail system TH 35	1.00 kg	① 40	163.5	127

Dimension pictures

①



Redundant module, Basic **PVRB**



General Data

Input rated voltage 24 Vdc
Output rated voltage 24 Vdc
Output rated current 20 A
Ambient temperature -10° C to +60° C
Efficiency typ. 96 %
Protection index IP 20

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Advantages

LCD
Current and voltage monitoring
Active signal contacts for watchdog functions
RS-232 interface
Reverse polarity protection
Isolated signal contact
3 LEDs for signalling purposes
Service-friendly spring-loaded connector system
Panel installation on mounting rails

2.2

Applications

Redundancy module for decoupling two power supplies for building a fail-safe delivery system. set of machines and equipment requiring high operational reliability. A variety of parameter settings and display functions, including output current and output voltage monitoring are integrated.

2.3

Standards

Redundancy module
to UL 60950, UL 508

Safety:
EN 60950 (SELV), EN 60204 (PELV)

EMC:
EN 61000-6-3 (Interference emissions), EN 61000-6-2 (Interference immunity)

Certifications



UL/CSA 60950 recognised, UL508 listed

SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES

	Redundant module, Basic PVRB	More technical Information you will find on Page 140 in Chapter 2.3
Type	PVRB 24/24-20	
Electrical data		
Input		
Input rated voltage	24 Vdc	
Input voltage range	18 - 30 Vdc	
Input rated current	2 x 20 A / 1 x 40 A	
Output		
Output rated voltage	typ. Uin - 1 Vdc (20 A)	
Output voltage	typ. Uin - 1 Vdc (20 A)	
Output rated current	20.00 A	
Internal fuse	No	
Parallel connection	Yes	
max. Power loss idling/nominal load	1.5 / 14 W (20 A), 1.5 / 26 W (40 A)	
Efficiency	typ. 97 %	
Signalling		
Power Good (DC OK)	LED green, LED red, LED yellow	
Potential free signal contact	Changeover contact	
Active signal outputs	3 x 24 Vdc, 2 configurable	
Display, interface	Yes, RS 232	
Feedback voltage max.	35 Vdc	
Standards		
Classification	Redundancy module	
Approvals		
Approvals	cURus, cULus	
Environment		
Ambient temperature	-10° C to +60° C	
Storage temperature	-25° C to +85° C	
Safety and protection		
Protection index	IP 20	
Safety class	III, without PE connection	
Reverse connection protection	Yes	
Accessory		
Connector for signalling	PV-CON (optional)	
Adapter cable	PV-KOK2 (optional)	
Side DIN Rail mounting	PV-TS35M (optional)	
Direct screw fastening plate for lateral mounting	PV-WB2 (optional)	
Order numbers		
Order Number	PVRB 24/24-20	

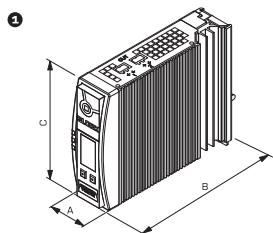


Redundant module, Basic **PVRB**

More technical Information you will
find on Page 140 in Chapter 2.3

Mechanical data		PVRB 24/24-20						Dimension picture (in mm)			
Typ		Connections input, [spring clamp terminal, pluggable]	Connections output, [spring clamp terminal, pluggable]	Connections signalling relay, reset [spring clamp terminal, plugable]	Connections signalling, [spring clamp terminal, pluggable]	Mounting position	Fixing method	Weight	A	B	C
	PVRB 24/24-20	max. 10 mm ²	max. 10 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	vertical	DIN Rail system TH 35	1.00 kg	① 40	163.5	127

Dimension pictures



2.1

2.2

2.3

2.4

SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES

Buffer module **PVUC**



General Data

Input rated voltage 24 Vdc
Output rated voltage 24 Vdc
Output rated current 10 - 20 A
Ambient temperature -10° C to +60° C
Efficiency typ. 97 %
Protection index IP 20

Advantages

Electronic overcurrent and short circuit protection
Reverse polarity protection
Configurable switch-in threshold
3 LEDs for signalling purposes
Isolated signal contact
Service-friendly spring-loaded connector system
Parallel connection option
Decoupled output
Panel installation on mounting rails

Applications

Maintenance-free buffer module to secure the power supply during short power interruptions.

Simplified diagram



Standards

Maintenance-free buffer module
to UL 508

Safety:
EN 60950, EN 60950 (SELV), EN 60204 (PELV)

EMC:
EN 61000-6-3 (Interference emissions), EN 61000-6-2 (Interference immunity)

Certifications



UL 508



Buffer module **PVUC**

More technical Information you will
find on Page 142 in Chapter 2.3

Electrical data	Type	PVUC 24/24-10	PVUC 24/24-20	
	<u>Input</u>			
Input				
Input rated voltage	24 Vdc	24 Vdc		
Input voltage range	20 - 30 Vdc	20 - 30 Vdc		
Current input (idle/charging/max.)	60 mA / 1 A / 11 A	60 mA / 1 A / 22 A		
Switching threshold for buffer mode	20 - 24 Vdc	21 - 24 Vdc		
<u>Output</u>				
Output				
Output rated voltage	24 Vdc	24 Vdc		
Output voltage normal operation	typ. Uin - 0.5 Vdc (10 A)	typ. Uin - 1 Vdc (20 A)		
Output rated voltage, battery mode	20 - 24 Vdc (adjustable)	20 - 24 Vdc (adjustable)		
Output rated current	10.00 A	20.00 A		
Buffer period	0.4 s (10 A) / 6.3 s (1 A)	0.4 s (20 A) / 15.5 s (1 A)		
Charging time	typ. 5 minutes	typ. 5 minutes		
Internal fuse	No	No		
Overload behaviour	Constant current (typ. 11 A)	Constant current (typ. 22 A)		
Parallel connection	Yes	Yes		
Serial operation	No	No		
max. Power loss idling/nominal load	1.5 / 6.5 W	1.5 / 15 W		
Efficiency	typ. 97 %	typ. 97 %		
<u>Storage medium</u>				
Type of the storage medium	Capacities, internal	Capacities, internal		
<u>Signalling</u>				
Operating status	LED green, LED red, LED yellow	LED green, LED red, LED yellow		
Potential free signal contact	Changeover contact	Changeover contact		
Active signal outputs	No	No		
Display, interface	No	No		
Feedback voltage max.	35 Vdc	35 Vdc		
<u>Standards</u>				
Classification	Maintenance-free buffer module	Maintenance-free buffer module		
<u>Approvals</u>				
Approvals	cULus	cULus		
<u>Environment</u>				
Ambient temperature	-10° C to +60° C	-10° C to +60° C		
Storage temperature	-25° C to +85° C	-25° C to +85° C		
<u>Safety and protection</u>				
Protection index	IP 20	IP 20		
Safety class	III, without PE connection	III, without PE connection		
Reverse connection protection	Yes	Yes		
<u>Accessory</u>				
Side DIN Rail mounting	PV-TS35M (optional)	PV-TS35M (optional)		
Direct screw fastening plate for lateral mounting	PV-WB2 (optional)	PV-WB2 (optional)		
<u>Order numbers</u>				
Order Number	PVUC 24/24-10	PVUC 24/24-20		

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SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES

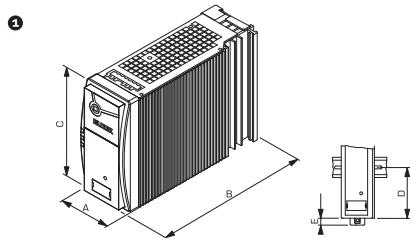


**Buffer module
PVUC**

More technical Information you will find on Page 142 in Chapter 2.3

Mechanical data												
Type	Connections input, (spring clamp terminal, pluggable)	Connections output, (spring clamp terminal, pluggable)	Connections signalling, (spring clamp terminal, pluggable)	Mounting position	Fixing method	Weight	Dimension picture (in mm)					
PVUC 24/24-10	max. 2.5 mm ²	max. 2.5 mm ²	max. 2.5 mm ²	vertical	DIN Rail system TH 35	1.00 kg	①	57	179.5	127	76	12.5
PVUC 24/24-20	max. 10 mm ²	max. 10 mm ²	max. 2.5 mm ²	vertical	DIN Rail system TH 35	1.00 kg	①	57	179.5	127	76	12.5

Dimension pictures



Uninterruptible power supply **PVUA**



General Data

Input rated voltage 24 Vdc
Output rated voltage 24 Vdc
Output rated current 10 - 20 A
Ambient temperature -10° C to +60° C
Efficiency up to 97 %
Protection index IP 20

2.1

Advantages

Electronic overcurrent and short circuit protection
Active current limiting in the event of an error
Optimum battery management
Temperature-controlled charging voltage
Accum. presence and quality check
Service-friendly spring-loaded connector system
Isolated signal contact
Reverse polarity protection
Exhaustive discharge protection for accumulator
LCD
Current and voltage monitoring
Active signal outputs for watchdog functions
RS-232 interface
Decoupled output

2.2

Applications

Load and control module for building a secure 24-Vdc power supply in case of power failure. A variety of parameter settings and display functions, including output current and output voltage monitoring are integrated.

2.3

Standards

Uninterruptible power supply
to UL 60950, UL 508

Safety:
EN 60950, EN 60950 (SELV), EN 60204 (PELV)

EMC:
EN 61000-6-3 (Interference emissions), EN 61000-6-2 (Interference immunity)

Certifications



UL/CSA 60950 recognised, UL508 listed

SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES



Uninterruptible power supply **PVUA**

More technical Information you will
find on Page 144 in Chapter 2.3

Type		PVUA 24/24-10	PVUA 24/24-20	PVUA 24/24-40
Electrical data				
Input				
Input rated voltage	24 Vdc	24 Vdc	24 Vdc	
Input voltage range	18 - 29 Vdc	18 - 29 Vdc	18 - 29 Vdc	
Current input (idle/charging/max.)	0.1 / 0.8 / 10.8 A	0.1 / 1.5 / 21.5 A	0.1 / 2.5 / 42.5 A	
Switching threshold for buffer mode	20 - 25.5 Vdc	20 - 25.5 Vdc	20 - 25.5 Vdc	
Output				
Output voltage normal operation	typ. Uin - 1 Vdc (10 A)	typ. Uin - 1 Vdc (20 A)	typ. Uin - 1 Vdc (40 A)	
Output rated voltage, battery mode	typ. battery voltage - 1 Vdc (10 A)	typ. battery voltage - 1 Vdc (20 A)	typ. battery voltage - 1 Vdc (40 A)	
Output rated voltage	24 Vdc	24 Vdc	24 Vdc	
Output rated current	10.00 A	20.00 A	40.00 A	
Internal fuse	15 A (slow-blow)	30 A (slow-blow)	2 x 30 A (slow-blow)	
Overload behaviour	Constant current with cyclic shutdown	Constant current with cyclic shutdown		
Parallel connection	No	No	Yes	
Serial operation	No	No	No	
max. Power loss idling/nominal load	15 / 20 W	15 / 30 W	15 / 30 W	
Efficiency	typ. 95.4 %	typ. 96.3 %	typ. 97 %	
Storage medium				
Type of the storage medium	Accumulator, external	Accumulator, external	Accumulator, external	
Rated charging voltage	24 Vdc	24 Vdc	24 Vdc	
Charge voltage range	26 to 29.5 Vdc	26 to 29.5 Vdc	26 to 29.5 Vdc	
Temperaturnachführung der Ladespannung	automatical or manual	automatical or manual	automatical or manual	
Charging current	max. 0.6 A	max. 1.0 A	max. 2.0 A	
Recommended storage medium	24 Vdc / 1.2 Ah, 3.2 Ah, 7 Ah, 12 Ah	24 Vdc / 7 Ah, 12 Ah	24 Vdc / 7 Ah, 12 Ah	
Signalling				
Operating status	LED green, LED red, LED yellow	LED green, LED red, LED yellow	LED green, LED red, LED yellow	
Potential free signal contact	Changeover contact, configurable	Changeover contact, configurable	Changeover contact, configurable	
Active signal outputs	3 x 24 Vdc, 2 configurable	3 x 24 Vdc, 2 configurable	4 x 24 Vdc, 3 configurable	
Remote shutdown in buffer mode operation	Yes (break contact)	Yes (break contact)	Yes (break contact)	
Display, interface	Yes, RS 232	Yes, RS 232	Yes, RS 232	
Feedback voltage max.	35 Vdc	35 Vdc	35 Vdc	
Standards				
Classification	Uninterruptible power supply	Uninterruptible power supply	Uninterruptible power supply	
Approvals				
Approvals	cURus, cULus	cURus, cULus		
Environment				
Ambient temperature	-10° C to +60° C	-10° C to +60° C	-25° C to +60° C	
Storage temperature	-25° C to +85° C	-25° C to +85° C	-25° C to +85° C	
Safety and protection				
Protection index	IP 20	IP 20	IP 20	
Accessory				
Connector for signalling	PV-CON (optional)	PV-CON (optional)	PV-CON (optional)	
Adapter cable	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	PVUA 24/24-10	PVUA 24/24-20	PVUA 24/24-40	

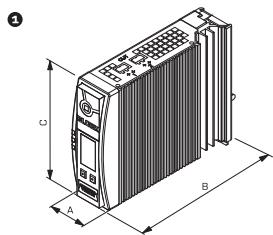
More technical Information you will
find on Page 144 in Chapter 2.3



Uninterruptible power supply **PVUA**

Mechanical data	Typ	Dimension picture (in mm)							
		A	B	C					
	PVUA 24/24-10	max. 2.5 mm ²	max. 2.5 mm ²	max. 0.5 mm ²	max. 2.5 mm ²	vertical	DIN Rail system TH 35	0.80 kg	① 40 163.5 127
	PVUA 24/24-20	max. 10 mm ²	max. 10 mm ²	max. 0.5 mm ²	max. 10 mm ²	vertical	DIN Rail system TH 35	0.80 kg	① 57 163.5 127
	PVUA 24/24-40	max. 10 mm ²	max. 10 mm ²	max. 0.5 mm ²	max. 10 mm ²	vertical	DIN Rail system TH 35	0.80 kg	① 57 163.5 127

Dimension pictures



2.1

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2.4

SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES

Accumulator module

PVA



General Data

Input rated voltage 24 Vdc
Output rated voltage 24 Vdc
Capacity 3.2 - 12 Ah
Ambient temperature -10° C to +40° C
Protection index IP 20

Advantages

Includes temperature meter in housing
Includes battery fuse
Various mounting options
Hard-wearing housing
Service-friendly spring-loaded connector system

Applications

Battery module for building a secure 24-Vdc power supply in case of power failure.



Accumulator module **PVA**

More technical Information you will
find on Page 146 in Chapter 2.3

Electrical data	Type	PVA 24/3,2Ah	PVA 24/7Ah	PVA 24/12Ah
	<u>Input</u>			
Input rated voltage				
	24 Vdc	24 Vdc	24 Vdc	
Rated capacity				
	3.2 Ah	7.0 Ah	12.0 Ah	
<u>Output</u>				
Output rated voltage				
	24 Vdc	24 Vdc	24 Vdc	
Output rated current				
	max. 21.00 A	max. 21 A	max. 21 A	
Internal fuse				
	15 A (slow-blow)	25 A (slow-blow)	25 A (slow-blow)	
Parallel connection				
	Yes	Yes	Yes	
Resistor for temperature measurement				
	NTC K164 / 4,7 kΩ	NTC K164 / 4,7 kΩ	NTC K164 / 4,7 kΩ	
<u>Environment</u>				
Ambient temperature				
	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	
Storage temperature				
	-20° C to +40° C	-20° C to +40° C	-20° C to +40° C	
Service life				
	5 years by +20° C	5 years by +20° C	5 years by +20° C	
Latest commissioning (only accumulators)				
	6 months by +30° C to +40° C	6 months by +30° C to +40° C	6 months by +30° C to +40° C	
<u>Safety and protection</u>				
Protection index				
	IP 20	IP 20	IP 20	
Safety class				
	III, without PE connection	III, without PE connection	III, without PE connection	
<u>Order numbers</u>				
Order Number	PVA 24/3,2Ah	PVA 24/7Ah	PVA 24/12Ah	

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Accumulator module **PVA**

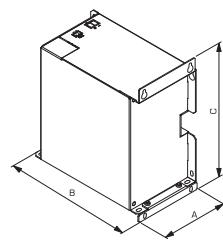
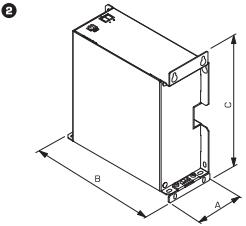
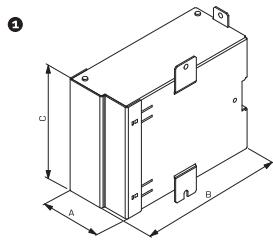
More technical Information you will
find on Page 146 in Chapter 2.3

30

Mechanical data

Type	Connections input / output (spring clamp terminal, pluggable)	Connections temperature measurement: (spring clamp terminal, pluggable)	Fixing method	Weight	Dimension picture (in mm)		
					A	B	C
PVA 24/3,2Ah	max. 2.5 mm ²	max. 2.5 mm ²	Straps at the case	4.20 kg	① 73	175.5	165
PVA 24/7Ah	max. 10 mm ²	max. 2.5 mm ²	Straps at the case	6.50 kg	② 86	217.5	236
PVA 24/12Ah	max. 10 mm ²	max. 2.5 mm ²	Straps at the case	10.60 kg	③ 120.5	217.5	236

Dimension pictures



Accumulator module **PVAF**



General Data

Input rated voltage 24 Vdc
Output rated voltage 24 Vdc
Capacity 1.2 - 12 Ah
Ambient temperature -10° C to +40° C
Protection index IP 20

Advantages

Includes temperature meter in housing
Includes battery fuse
Various mounting options
Hard-wearing housing
Service-friendly spring-loaded connector system

Applications

Battery module for building a secure 24-Vdc power supply in case of power failure.

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SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES

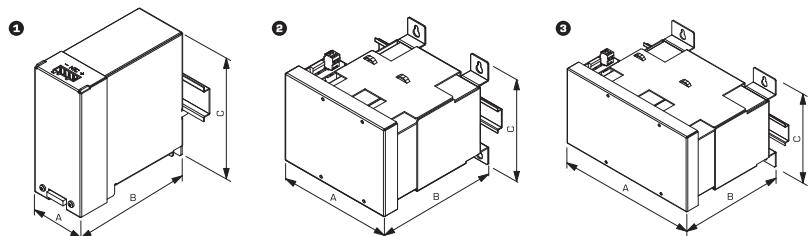


Accumulator module **PVAF**

More technical Information you will
find on Page 146 in Chapter 2.3

Electrical data	Type	PVAF 24/1,2Ah	PVAF 24/7Ah	PVAF 24/12Ah
	<u>Input</u>			
<u>Input rated voltage</u>				
	24 Vdc	24 Vdc	24 Vdc	
<u>Rated capacity</u>				
	1.2 Ah	7.0 Ah	12.0 Ah	
<u>Output</u>				
<u>Output rated voltage</u>				
	24 Vdc	24 Vdc	24 Vdc	
<u>Output rated current</u>				
	max. 7,50 A	max. 21 A	max. 21 A	
<u>Internal fuse</u>				
	15 A (slow blow)	25 A (slow-blow)	25 A (slow-blow)	
<u>Parallel connection</u>				
	Yes	Yes	Yes	
<u>Resistor for temperature measurement</u>				
	NTC K164 / 4,7 kΩ	NTC K164 / 4,7 kΩ	NTC K164 / 4,7 kΩ	
<u>Environment</u>				
<u>Ambient temperature</u>				
	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	
<u>Storage temperature</u>				
	-20° C to +40° C	-20° C to +40° C	-20° C to +40° C	
<u>Service life</u>				
	5 years by +20° C	5 years by +20° C	5 years by +20° C	
<u>Latest commissioning (only accumulators)</u>				
	6 months by +30 - +40° C	6 months by +30 - +40° C	6 months by +30 - +40° C	
<u>Safety and protection</u>				
<u>Protection index</u>				
	IP 20	IP 20	IP 20	
<u>Safety class</u>				
	III, without PE connection	III, without PE connection	III, without PE connection	
<u>Order numbers</u>				
Order Number	PVAF 24/1,2Ah	PVAF 24/7Ah	PVAF 24/12Ah	
<u>Mechanical data</u>				
<u>Terminal and mounting</u>				
<u>Connections input / output (spring clamp terminal, pluggable)</u>				
	max. 10 mm ²	max. 10 mm ²	max. 10 mm ²	
<u>Connections temperature measurement, (spring clamp terminal, pluggable)</u>				
	max. 2.5 mm ²	max. 2.5 mm ²	max. 2.5 mm ²	
<u>Fixing method</u>				
	Straps at the case	Straps at the case	Straps at the case	
<u>Measures and weights</u>				
<u>Wide</u>				
	136 mm	163 mm	230 mm	
<u>Height</u>				
	55 mm	145 mm	145 mm	
<u>Depth</u>				
	126.6 mm	173.5 mm	173.5 mm	
<u>Weight</u>				
	1.80 kg	6.50 kg	10.60 kg	
<u>Dimension picture (in mm)</u>				
	①	②	③	
<u>A</u>				
	136	163	230	
<u>B</u>				
	55	173.5	173.5	
<u>C</u>				
	126.6	145	145	

Dimension pictures



Autotransformer **PVAT3**



General Data

Input rated voltage 3 x 690 Vac
Output rated voltage 3 x 400 Vac
Rated power 650 - 1386 VA
Ambient temperature +60° C
Protection index IP 00

Applications

Matching transformers to adjust the supply voltage of three-phase switching power supplies from 690 Vac to 400 Vac.

2.1

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2.4

Standards



Autotransformer
to: VDE 0570 Part 2-13, DIN EN 61558-2-13, EN 61558-2-13,
IEC 61558-2-13

Certifications



UL 506, CSA 22.2

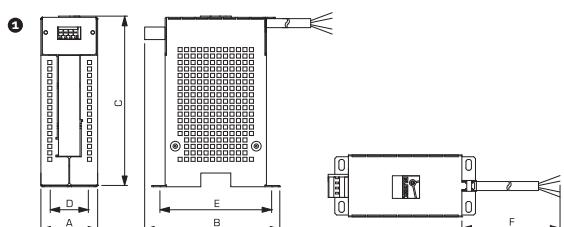
SWITCHED MODE POWER SUPPLIES/ POWERVISION SERIES



Autotransformer **PVAT3**

Type	PVAT3 20	PVAT3 40
Electrical data		
Rated input Voltage	3 x 690 Vac	3 x 690 Vac
Frequency range	50 - 60 Hz	50 - 60 Hz
Output		
Rated output voltage	3 x 400 Vac	3 x 400 Vac
Rated Power	650 VA	1386 VA
Rated current	3 x 0.94 A	3 x 2.0 A
Vector group	Ya0	Ya0
Standards		
Classification	Autotransformer	Autotransformer
Approvals		
Approvals	cURus	cURus
Environment		
Ambient temperature max.	60° C	60° C
Safety and protection		
Type	closed type	closed type
Class of Insulation System	F	F
Protection index	IP 00	IP 00
Safety class (prepared)	I	I
Short circuit strength	non-short-circuit proof	non-short-circuit proof
Order numbers		
Order Number	PVAT3 20	PVAT3 40
Mechanical data		
Terminal and mounting		
Terminals PRI	Spring clamp terminal, 4 mm ²	Spring clamp terminal, 4 mm ²
Terminals SEC	Supply cable 4 x 1.5 mm ²	Supply cable 4 x 1.5 mm ²
Fixing method	Straps at the case	Straps at the case
Measures and weights		
Weight	4.60 kg	6.60 kg
Core type	3UI 75/26,5	3UI 75/41,5
Dimension picture (in mm)	①	②
A	72	90
B	170	170
C	215	215
D	47,5	63
E	145	145
F	350	350

Dimension pictures



2.1

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2.3

2.4

**POWER
VISION**



Accessories



PV-KOK2

1.8 m long adapter cable for RS-232 interface. Used to connect PowerVision components to controllers or PCs.

Order number

PV-KOK2



PV-WB2

For direct wall screw mounting sideways.

Order number

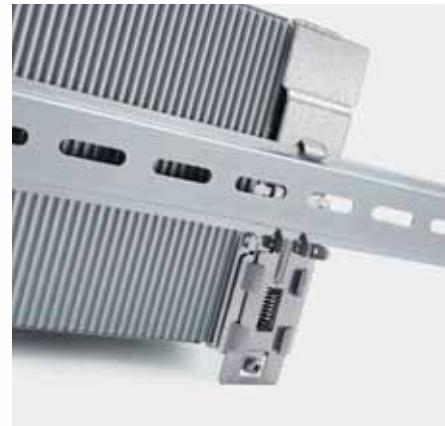
PV-WB2

PV-TS35M

For mounting sideways on a DIN rail.

Order number

PV-TS35M





PV-USB/SERIELL

USB converter for connection of series equipment (RS232 9 pole Sub-D) to the USB-Bus device.

Order number

PV-USB/SERIELL



PV-CON

Connector for signal contacts on the front panel of all PowerVision components with integrated control unit.

Order number

PV-CON

Software

Windows-compatible software for the configuration and visualisation of all PowerVision components with integrated control unit. Available for free at www.block-trafo.de.



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2.4