

**VP200-4-cPCI, GK200-4-cPCI
AC/DC- und DC/DC-Netzteile**

200 Watt primärgetaktete AC/DC- und DC/DC Netzteile für cPCI-
Anwendungen in 3HE/8TE-Eurokassetten für 19"-Einschubtechnik



- AC-DC Wandler für 85-264VAC Eingang, oder
- DC-DC Wandler für 24VDC und 48VDC Eingang
- Hoher Wirkungsgrad >81% bei 230VAC, >83% bei 48VDC
- Aktive Powerfaktor Korrektur PFC
- 4 Ausgangsspannungen +5V, +3,3V, +12V, -12V
- N+1 redundanter Betrieb mit „Hot-swap“ und current share
- Interne Entkoppeldioden an jedem Ausgang
- Standard 47Pin Stecker nach PICMG Norm
- Betriebstemperaturbereich -10°C...+55°C ohne Derating
- Stabile 3HE/8TE-Eurokassette aus Aluminium mit Aushebelgriff

**200 Watt switched mode AC/DC- and DC/DC power supplies for
cPCI applications in 3U/8HP-Eurocassette for 19"-plug-in technics**

- AC-DC converter for 85-264VAC input, or
- DC-DC converter for 24VDC and 48VDC input
- Superior high efficiency >81% at 230VAC, >83% at 48VDC
- Active Powerfactor Correction PFC
- 4 outputs +5V, +3,3V, +12V, -12V
- „Hot-swap“ and current share for N+1 redundant connection
- Internal decoupling diodes at every output
- Standard 47Pin connector per PICMG standard
- Operation temperature range -10°C...+55°C with no derating
- Stable 3U/8HP Eurocassettes of aluminium with ejector handle

Technische Daten

Ausgangsleistung
Eingangsspannung
Eingangsspannungsbereich
Eingangsfrequenz
Einschaltstrombegrenzung, Kaltstart
Netzausfallüberbrückung
Wirkungsgrad
Powerfaktor Korrektur PFC
Eingangsüberstromsicherung
Ausgänge:
Ausgangsspannung
Ausgangs-Nennstrom
Ripple bei Vollast
Netz- und Lastregelung, statisch
Regelzeit (50...100%I _{OUT})
Begrenzung Ausgangsstrom
Ausgangsüberspannungsschutz OVP
Spannungsausregelung mit Sense max.
Sicherheit
Übertemperaturschutz
EMV-Störaussendung
EMV-Störfestigkeit
Schock- und Vibrationsfest
Betriebstemperatur
Lagertemperatur
Abmaße (L x B x H) mm
Gewicht
MTBF nach Bellcore

Technical Data

Output power
Input voltage
Input voltage range
Input frequency
Inrush current limit, cold start
Hold-up time
Efficiency
Powerfactor correction PFC
Input overcurrent fuse
Outputs:
Output voltage
Output nominal current
Ripple at full load
Line and load regulation, static
response time (50...100%I _{OUT})
Output current limit
Output overvoltage protection OVP
Output regulation with SENSE max.
Safety
Overtemperature protection
EMI Conducted & radiated emission
EMI immunity
Shock- and vibration proof
Operating temperature
Storage temperature
Dimensions (L x W x H)mm
Weight
MTBF per Bellcore

VP200-4-cPCI	GK200-4-cPCI 24V	GK200-4-cPCI 48V	
200 Watt	200 Watt	200 Watt	
100 – 230VAC	24VDC	48VDC	
85...264V	18...36V	36...72V	
47-63Hz	–	–	
30A/110V, 60A/230V	max. 20A	max.20A	
>20 msec	–	–	
>79%/100V, >81%/230V	>82%	>83%	
>0,95 per EN61000-2-3	–	–	
durch interne Sicherung, by internal fuse			
V1	V2	V3	V4
+5V ±2%	+3,3V ±2%	+12V ±2%	-12V ±4%
25A	36A	3A	0,5A
<60mV _{PP}	<60mV _{PP}	<120mV _{PP}	<120mV _{PP}
<0,5%	<0,5%	<0,5%	<0,5%
1ms	1ms	1ms	1ms
125% I _{NOMINAL}	all outputs		
+6,5...7V	+4...4,5V	+15...16V	-15...-16V
0,5V	0,5V	–	–
zugelassen / approved to EN60950 and UL1950, with CE marking			
shuts down all outputs with auto-recovery			
per EN 55022 Class B and EN 61000, measured in typical application			
Surge, spikes and lightning per EN 61000-4			
nach ETSI ETS-300, per ETSI ETS-300			
-10°C...+55°C with no derating, with 250 LFM forced air cooling			
-40°C...+85°C			
3HE/8TE x 169,6 mm tief, 3U/8HP x 169,6 mm depth			
790g			
>400.000 h (AC-Version)		>500.000 h (DC-Version)	

Bestell-Informationen

Ausgangsleistung
Eingangsspannung
Bestell-Code

Ordering Information

Output power
Input voltage
Ordercode

VP200-4-cPCI	GK200-4-cPCI 24V	GK200-4-cPCI 48V
200 Watt	200 Watt	200 Watt
100-230VAC	24VDC	48VDC
116-062230A	116-062024C	116-062048E

VP400-4-cPCI, GK400-4-cPCI AC/DC- und DC/DC-Netzteile

400 Watt primärgetaktete AC/DC- und DC/DC Netzteile für cPCI-
Anwendungen in 6HE/8TE-Eurokassetten für 19"-Einschubtechnik



- AC-DC Wandler für 85-264VAC Eingang, oder
- DC-DC Wandler für 24VDC und 48VDC Eingang
- Hoher Wirkungsgrad >81% bei 230VAC, >83% bei 48VDC
- Aktive Powerfaktor Korrektur PFC
- 4 Ausgangsspannungen +5V, +3,3V, +12V, -12V
- N+1 redundanter Betrieb mit „Hot-swap“ und current share
- Interne Entkoppeldioden an jedem Ausgang
- Standard 47Pin Stecker nach PICMG Norm; I²C Bus optional
- Betriebstemperaturbereich -10°C...+55°C ohne Derating
- Stabile 3HE/8TE-Eurokassette aus Aluminium mit Aushebelgriffen

400 Watt switched mode AC/DC- and DC/DC power supplies for cPCI applications in 6U/8HP-Eurocassettes for 19"-plug-in technics

- AC-DC converter for 85-264VAC input, or
- DC-DC converter for 24VDC and 48VDC input
- Superior high efficiency >81% at 230VAC, >83% at 48VDC
- Active Powerfactor Correction PFC
- 4 outputs +5V, +3,3V, +12V, -12V
- „Hot-swap“ and current share for N+1 redundant connection
- Internal decoupling diodes at every output
- Standard 47Pin connector per PICMG standard; I²C Bus optional
- Operation temperature range -10°C...+55°C with no derating
- Stable 6U/8HP Eurocassette of aluminium with ejector handles

Technische Daten	Technical Data	VP400-4-cPCI	GK400-4-cPCI 24V	GK400-4-cPCI 48V	
Ausgangsleistung	Output power	400 Watt	350 Watt	400 Watt	
Eingangsspannung	Input voltage	100 – 230VAC	24VDC	48VDC	
Eingangsspannungsbereich	Input voltage range	85...264V	18...36V	36...72V	
Eingangsfrequenz	Input frequency	47-63Hz	–	–	
Einschaltstrombegrenzung, Kaltstart	Inrush current limit, cold start	32A/110V, 60A/230V	max. 20A	max.20A	
Netzausfallüberbrückung	Hold-up time	>16 msec	–	–	
Wirkungsgrad	Efficiency	>77%/100V, >81%/230V	>79%	>83%	
Powerfaktor Korrektur PFC	Powerfactor correction PFC	>0,95 per EN61000-2-3	–	–	
Eingangüberstromsicherung	Input overcurrent fuse	durch interne Sicherung, by internal fuse			
Ausgänge:	Outputs:	V1	V2	V3	V4
Ausgangsspannung	Output voltage	+5V ±2%	+3,3V ±2%	+12V ±2%	-12V ±4%
Ausgangs-Nennstrom	Output nominal current	50A	80A (60A *)	7,5A	1,5A
Ripple bei Vollast	Ripple at full load	<60mV _{pp}	<60mV _{pp}	<120mV _{pp}	<120mV _{pp}
Netz- und Lastregelung, statisch	Line and load regulation, static	<0,5%	<0,5%	<0,5%	<0,5%
Regelzeit (50...100I _{OUT})	response time (50...100I _{OUT})	1ms	1ms	1ms	1ms
Begrenzung Ausgangsstrom	Output current limit	125% I _{NOMINAL}	all outputs		
Ausgangsüberspannungsschutz OVP	Output overvoltage protection OVP	+6,5...7V	+4...4,5V	+15...16V	-15...-16V
Spannungsausregelung mit Sense max.	Output regulation with SENSE max.	0,5V	0,5V	–	–
Sicherheit	Safety	* bei / at GK400-4-cPCI24V Type zugelassen / approved to EN60950 and UL1950, with CE marking			
Übertemperaturschutz	Overtemperature protection	shuts down all outputs with auto-recovery			
EMV-Störaussendung	EMI Conducted & radiated emission	per EN 55022 Class B and EN 61000, measured in typical application			
EMV-Störfestigkeit	EMI immunity	Surge, spikes and lightning per EN 61000-4			
Schock- und Vibrationsfest	Shock- and vibration proof	nach ETSI ETS-300, per ETSI ETS-300			
Betriebstemperatur	Operating temperature	-10°C...+55°C with no derating, with 250 LFM forced air cooling			
Lagertemperatur	Storage temperature	-40°C...+85°C			
Abmaße (L x B x H) mm	Dimensions (L x W x H) mm	6HE/8TE x 169,6 mm tief, 6U/8HP x 169,6 mm depth			
Gewicht	Weight	1800g			
MTBF nach Bellcore	MTBF per Bellcore	>400.000 h (AC-Version)		>500.000 h (DC-Version)	

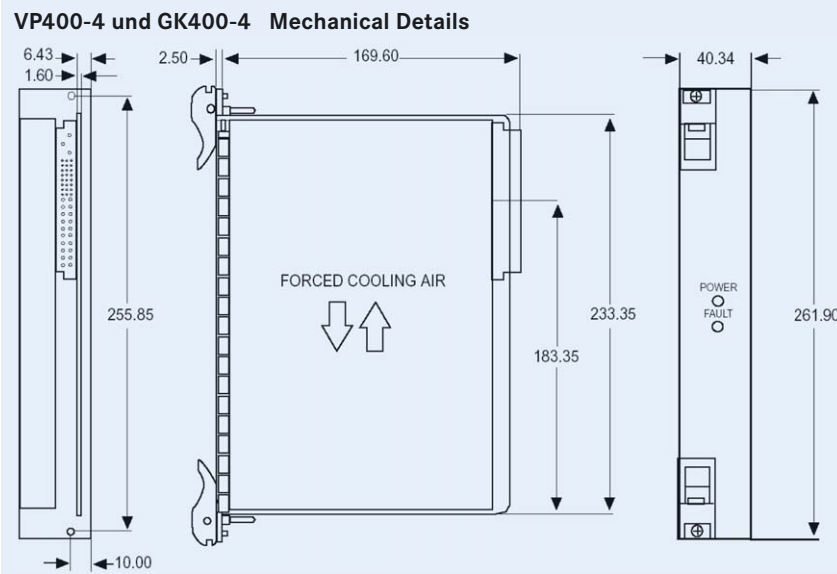
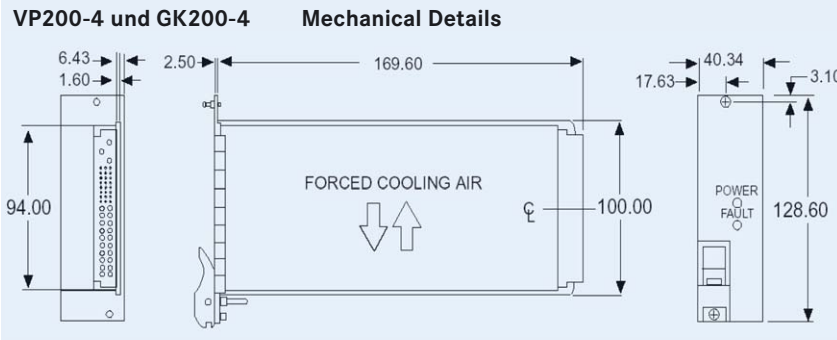
Bestell-Informationen	Ordering Information	VP400-4-cPCI	GK400-4-cPCI 24V	GK400-4-cPCI 48V
Ausgangsleistung	Output power	400 Watt	350 Watt	400 Watt
Eingangsspannung	Input voltage	100-230VAC	24VDC	48VDC
Bestell-Code	Ordercode	116-064230L	116-064024B	116-064048D

VP200/400-cPCI, GK200/400-cPCI

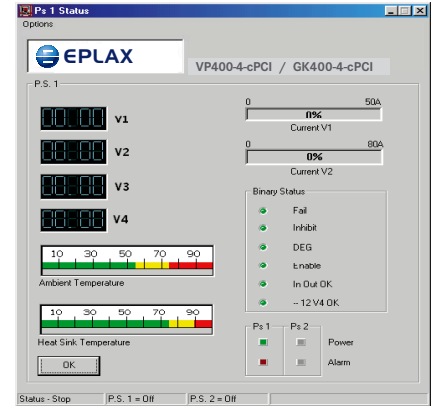
Mechanische Details, Steckerbelegung, I²C-Bus System

VP200/400-cPCI, GK200/400-cPCI

Mechanische Details, Connector Pinning, I²C-Bus System



I²C-Bus Compact PCI Power Supply Status Monitoring System (optional)

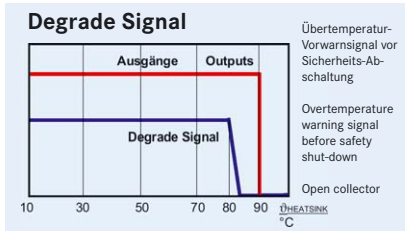


I²C Bus Status Monitoring System optional on 6U height models. On 3U height models as static parameters outputs. Status monitoring features:

- Monitor in real time both analogue and digital functions of the power supply.
- On-Line information for the following parameters:
 - All four output voltages
 - Output current of the two main outputs
 - Self test
 - Power supply internal ambient temperature and heat-sink temperature
 - Powerfail
 - Remote turn on/off capability.
 - „electronic serial number“, identifies the unit,
 - indicates manufacture revision level, safety agency
 - approval status, date code, etc.

Output Voltages:

- Output Voltages measured and transmitted are:
 - +5V, +3.3V, and the +12V.
 - The -12V output has „in-range“ voltage comparator that it's output is transmitted via the I²C digital status bits and more details.



47pin PCI connector per PICMG 2.11



Steckerbelegung Connector Pinning

Pin #	Signal Name	Description
1-4	V1	V1 Output
5-12	RTN	V1 and V2 Return
13-18	V2	V2 Output
19	RTN	V3 Return
20	V3	V3 Output
21	V4	V4 Output
22	RTN	Signal Return
23	RESERVED	
24	RTN	V4 Return
25	GA0	Geographic Address Bit 0
26	RESERVED	
27	EN/	Enable, short pin for hot swap
28	GA1	Geographic Address Bit 1
29	V1ADJ	not used - adjust from trim-pot
30	V1 SENSE	V1 Remote Sense
31	GA2	Geographic Address Bit 2
32	V2ADJ	not used - adjust from trim-pot
33	V2 SENSE	V2 Remote Sense
34	S RTN	V1 Sense Return
35	V1 SHARE	V1 Current Share
36	V3 SENSE	not used
37	IPMB_SCL	reserved for System-Manag-Bus
38	DEG/	Degrade Signal
39	INH/	Inhibit, active low
40	IPMB_SDA	reserved for System-Manag-Bus
41	V2 SHARE	V2 Current Share
42	FAL/	Fail Signal
43	IPMB_PWR	reserved for System-Manag-Bus
44	V3 SHARE	Not used - natural current share
45	CGND	Chassis Ground (safety ground)
46	AC N /+DCin	AC Input - Neutral or +DC Input
47	AC L /-DCin	AC Input - Neutral or -DC Input

