



Autronic
Steuer- u. Regeltechnik GmbH D-74343 Sachsenheim

Type	AVP/KS	V _{in}	15...36V	12345
DC/DC-Converter Ser.-No.	2C	V _{out}	24 V	
Type-No.	09 39 94 0112 3 a01	I _{out}	3,2 A	

ADJ

Quick Selection Guide

Edition 2011

DC-DC Converters

● Partner for high quality electronics



Steuer- und Regeltechnik / Sachsenheim

DC-DC Converters

ACR-Series

PCB Mounting



ACR45



ACR150

NEW

PCB Mounting

- Isolated
- Single output
- CE marked
- According to Railway Standard EN 50155 and EN 50121-3-2
- Shock and Vibration according to EN 61373:1999 Cat. 1B

max. Output Power (W)	60	150
Type	ACR	ACR
Case	ACR 45	ACR 150
Dimensions (LxWxH) in mm	50.8x50.8x11	95x65x11
Outputs	1	1
Output Voltages (VDC)	5/12/15/24	5/12/24
Input Voltage Ranges (VDC)	9-36/14,4-40/43-101/66-154	14,4-40/43-101/66-154
Operating Temperature in °C	-40 up to +85	-40 up to +85

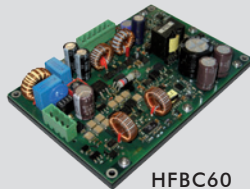
HFBC-Series

Chassis Mounting / Standard euro-rack size 19"



HFBC30

NEW



HFBC60



HEBC60

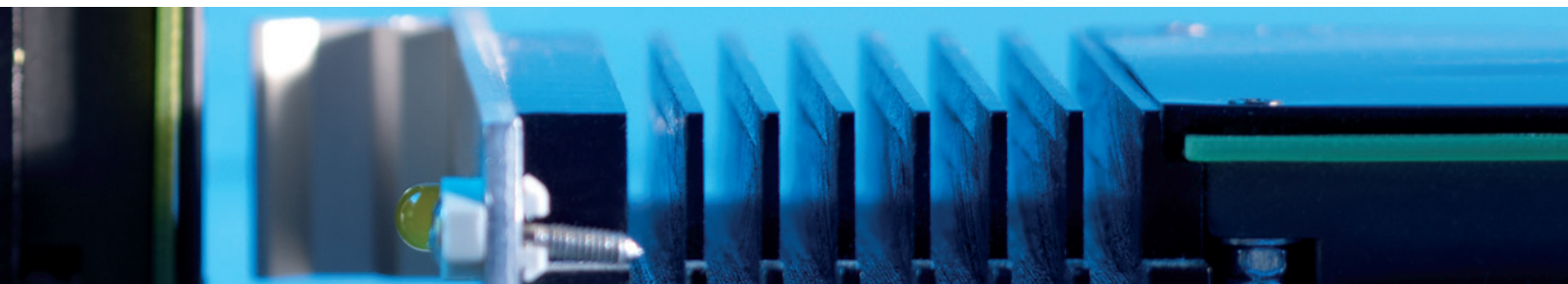
NEW

Chassis Mounting / Standard euro-rack size 19"

- Isolated
- Single and dual output
- Hold up time of 10 ms
- According to Railway Standard EN 50155 and EN 50121-3-2
- Shock and Vibration according to EN 61373:1999 Cat. 1B

max. Output Power (W)	33	60	55	60
Type	HFBC30-2DW/0	HFBC60-W/0	HFBC60-2DW/0	HEBC60-2DW/0
Case				
Dimensions (LxWxH) in mm	120x100x28	146x100x32	146x100x32	166,5x40,3x111
Outputs	2	1	2	2
Output Voltages (VDC)	5/12	24	5/12	5/12
Input Voltage Ranges (VDC)	14,4-154	14,4-154	14,4-154	14,4-154
Operating Temperature in °C	-40 up to +85	-40 up to +85	-40 up to +85	-40 up to +85

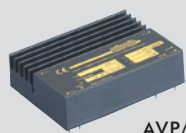
For complete data sheets
visit www.autronic.de



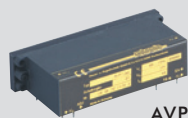
DC-DC Converters

AVP-Series

PCB Mounting



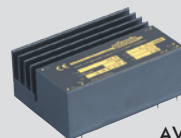
AVP/J



AVP/Jsp



AVP.../Ksp



AVP.../K

- Isolated
- Single, dual, bipolar and triple output
- CE marked
- Burst transients according to EN 61000-4-4
- Surge according to EN 61000-4-5
- Conducted immunity according to EN 61000-4-6
- Electrostatic discharge according to EN 61000-4-2
- Conducted RFI:
 - Input filtering according to EN 55022
- According to Railway Standard EN 50155 and EN 50121-3-2
- Vibration resistant and indifferent to humidity due to encapsulated case

max. Output Power (W)	36	41	42	51
Type	AVP-3	AVP-2	AVP	AVP-2
Case	Ksp	D/K	J	B/K
Dimensions (LxWxH) in mm	103.5x46x35	90.5x65.5x35	90.5x65.5x25	90.5x65.5x35
Outputs	3	2	1	2
Output Voltages (VDC)	+5, ±12/+5, ±15	5, 12/5, 15	5/12/15/24/30	±12/±15
Input Voltage Ranges (VDC)	9-40/15-36/ 32-74/66-154	9-40/15-36/ 32-74/66-154	9-40/15-36/ 32-74/43-101/ 66-154	9-40/15-36/ 32-74/66-154
Operating Temperature in °C	-40 up to +85	-40 up to +85	-40 up to +85	-40 up to +85

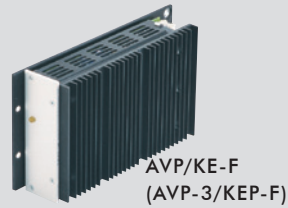
max. Output Power (W)	47	51	53	75
Type	AVP-2	AVP-2	AVP	AVP
Case	D/Ksp	B/Ksp	Jsp	K
Dimensions (LxWxH) in mm	103.5x46x35	103.5x46x35	103.5x46x25	90.5x65.5x35
Outputs	2	2	1	1
Output Voltages (VDC)	5, 12/5, 15	±12/±15	5/12/15/24/30	3.3/5/12/ 15/24/30
Input Voltage Ranges (VDC)	9-40/15-36/ 32-74/66-154	9-40/15-36/ 32-74/66-154	9-40/15-36/ 32-74/66-154	5-36/9-40/ 15-36/32-74/ 43-101/66-154
Operating Temperature in °C	-40 up to +85	-40 up to +85	-40 up to +85	-40 up to +85

max. Output Power (W)	78
Type	AVP
Case	Ksp
Dimensions (LxWxH) in mm	103.5x46x35
Outputs	1
Output Voltages (VDC)	3.3/5/12/ 15/24/30
Input Voltage Ranges (VDC)	5-36/9-40/15-36/ 19-51/32-74/ 43-101/66-154
Operating Temperature in °C	-40 up to +85

DC-DC Converters

AVP-Series

Chassis Mounting



Chassis Mounting

- Isolated
- Single, dual, bipolar and triple output
- CE marked
- Burst transients according to EN 61000-4-4
- Surge according to EN 61000-4-5
- Conducted immunity according to EN 61000-4-6
- Electrostatic discharge according to EN 61000-4-2
- Conducted RFI:
 - Input filtering according to EN 55022
- According to Railway Standard EN 50155 and EN 50121-3-2
- Case option C: for chassis mounting on power loss dissipating metal surface (heat sink)
- Case option F: for chassis mounting on no power loss dissipating surface

max. Output Power (W)	36	47	51	53
Type	AVP-3	AVP-2	AVP-2	AVP
Case	Ks	D/Ks	B/Ks	Js
Dimensions (LxWxH) in mm	113x46x35	113x46x35	113x46x35	113x46x25
Outputs	3	2	2	1
Output Voltages (VDC)	+5, ±12/+5, ±15	5, 12/5, 15	±12/±15	5/12/15/24/30
Input Voltage Ranges (VDC)	9-40/15-36/ 32-74/66-154	9-40/15-36/ 32-74/66-154	9-40/15-36/ 32-74/66-154	9-40/15-36/ 32-74/66-154
Operating Temperature in °C	-40 up to +85	-40 up to +85	-40 up to +85	-40 up to +85

max. Output Power (W)	78	87	87	100
Type	AVP	AVP-3	AVP-3	AVP
Case	Ks	KEP-F	KEP-C	KE-F
Dimensions (LxWxH) in mm	113x46x35	200x49x112	200x39x112	200x49x112
Outputs	1	3	3	1
Output Voltages (VDC)	3.3/5/12/ 15/24/30	+5, ±12/+5, ±15	+5, ±12/+5, ±15	5/12/15/24
Input Voltage Ranges (VDC)	5-36/9-40/ 15-36/19-51/32-74/ 43-101/66-154	15-36/32-74/ 66-154	15-36/32-74/ 66-154	9-40/15-36/ 19-51/32-74/ 43-101/66-154
Operating Temperature in °C	-40 up to +85	-40 up to +85	-40 up to +85	-40 up to +85

max. Output Power (W)	100	200	200
Type	AVP	AVP	AVP
Case	KE-C	KEP-F	KEP-C
Dimensions (LxWxH) in mm	200x39x112	200x64.6x112	200x43.6x112
Outputs	1	1	1
Output Voltages (VDC)	5/12/15/24	12/15/24	12/15/24
Input Voltage Ranges (VDC)	9-40/15-36/ 19-51/32-74/ 43-101/66-154	15-36/19-51/ 43-101/66-154	15-36/19-51/ 43-101/66-154
Operating Temperature in °C	-40 up to +85	-40 up to +85	-40 up to +85

For complete data sheets
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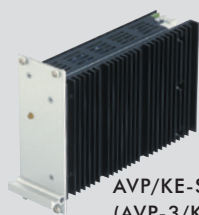


AVP-Series

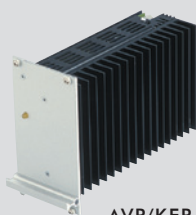
Standard euro-rack size 19"



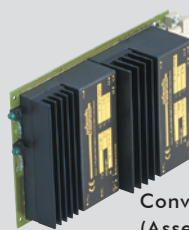
AVP/KE
(AVP-3/KEP)



AVP/KE-S
(AVP-3/KEP-S...)



AVP/KEP



Converter Card
(Assembly example)

Standard euro-rack size 19"

- Isolated
- Single, dual and triple output
- CE marked
- Burst transients according to EN 61000-4-4
- Surge according to EN 61000-4-5
- Conducted immunity according to EN 61000-4-6
- Electrostatic discharge according to EN 61000-4-2
- Conducted RFI:
 - Input filtering according to EN 55022
- According to Railway Standard EN 50155 and EN 50121-3-2
- Zero load operation and short circuit protection
- Overtemperature shutdown
- Remote off (inhibit) with TTL - L-signal
- Overvoltage protection in the output circuit, even in case of external supply (OVP)
- Reverse polarity protection by internal fuse
- Fully integrated heatsink provides extremely low thermal stress to temperature sensitive components
- Yellow LED to indicate operating mode
- Coated assembly
- Coated and glued parts for better vibration resistance
- Case option S: for sub racks with closed backplane
- Case option SB: for sub racks with closed backplane, metal sheet instead of front panel
- Frontplate 8 HP, 10 HP and 14 HP/3U (see table)

max. Output Power (W)	87	87
Type	AVP-3	AVP-3
Case	KEP	KEP-S SB
Dimensions (LxWxH) in mm	190x40.2x112	167.7x50.4x112
Outputs	3	3
Output Voltages (VDC)	+5, ±12/+5, ±15	+5, ±12/+5, ±15
Input Voltage Ranges (VDC)	15-36/ 32-74/66-154	15-36/ 32-74/66-154
Operating Temperature in °C	-40 up to +85	-40 up to +85

max. Output Power (W)	100	100	200
Type	AVP	AVP	AVP
Case	KE	KE-S	KEP
Dimensions (LxWxH) in mm	190x40.2x112	167.7x50.4x112	169.4x70.7x112
Outputs	1	1	1
Output Voltages (VDC)	5/12/15/24	5/12/15/24	12/15/24
Input Voltage Ranges (VDC)	9-40/15-36/ 19-51/32-74/ 43-101/66-154	9-40/15-36/ 19-51/32-74/ 43-101/66-154	15-36/19-51/ 43-101/66-154
Operating Temperature in °C	-40 up to +85	-40 up to +85	-40 up to +85

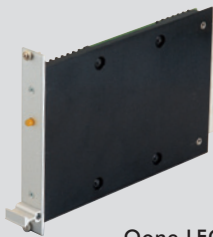
max. Output Power (W)	200	200	200	200
Type	Converter Card	Converter Card	Converter Card	Converter Card
Case	QD	MD	PD	SD
Dimensions (LxWxH) in mm	100x160	100x160	100x160	100x160
Outputs	4	1-3	1	2
Output Voltages (VDC)	depending on model	depending on model	depending on model	depending on model
Input Voltage Ranges (VDC)	depending on model	depending on model	depending on model	depending on model
Operating Temperature in °C	depending on model	depending on model	depending on model	depending on model

Qone-Series

Standard euro-rack size 19" / Chassis Mounting



Qone HEC-4/DB



Qone LEC



Qone LEC-C



Qone LEC-CS

Standard euro-rack size 19"

Qone HEC-4 for Compact PCI

- Isolated
- Quad output
- Front plate 8 HP / 3 U
- High power density
- Overtemperature and overvoltage shutdown
- Short circuit protection
- Remote on/off
- Coated assembly
- Glued parts for better vibration resistance
- Fixed switching frequency
- Yellow LED to indicate operating mode
- According to Railway Standard EN 50155 and EN 50121-3-2
- Inrush current limiting
- Reverse polarity protection
- Hold up time of 10 ms
- Supply fail
- Derating signal
- Sense
- Enable signal

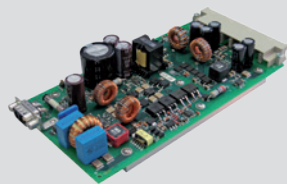
Qone LEC

- Isolated
- Single
- Front plate 4 HP / 3 U (LEC)
- CE marked
- High power density
- Overtemperature and overvoltage shutdown
- Short circuit protection
- Remote on/off
- Coated assembly
- Glued parts for better vibration resistance
- Fixed switching frequency
- Yellow LED to indicate operating mode

max. Output Power (W)	100	160	160	160
Type	Qone	Qone	Qone	Qone
Case	HEC-4DB	LEC	LEC-C	LEC-CS
Dimensions (LxWxH) in mm	166.5x40.3x111	164.5x20x111	162x19,2x111	119x19,2x111
Outputs	4	1	1	1
Output Voltages (VDC)	+3.3/+5/+12/-12	5/12/24	5/12/24	5/12/24
Input Voltage Ranges (VDC)	14.4-36/19-51/ 43-101/66-160	14-36/ 9-40/21-51/ 43-101/64-160	14-36/ 9-40/21-51/ 43-101/64-160	14-36/ 9-40/21-51/ 43-101/64-160
Operating Temperature in °C	-40 up to +85	-40 up to +85	-40 up to +85	-40 up to +85

DC-DC Converters

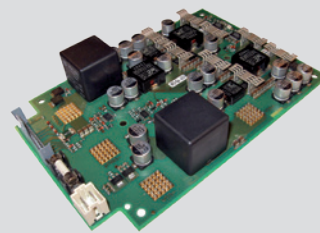
Special Solutions



HFBC-3W/0



Solution with ACR45



Custom-specific booster

Special Solutions

We are the right people to talk about particular requirements. We will develop and produce your own special converter.

Examples:

• HFBC-3W/O:

- Triple output
- Output power up to 43 Watts
- Ultra wide input range
- Wide temperature range
- Hold up time of 20ms
- According to RIA12 (A to G)
- According to EN 50155

• Solution with ACR45:

- Dual output
- Additional surge protection
- Active reverse polarity protection
- Integrated heat sink
- Hold up time of 10ms
- According to EN 50155

• Custom-specific booster:

- Output power 375W/25A
- Wide input range: 8-24V
- Output voltage up to 15V with sense function
- High efficiency through synchron-rectifier
- Suitable for fuel-cell

Inquiry by fax +49 (0) 7147/24 -252

Company: _____ Date: _____

First Name: _____ Last Name: _____

Street: _____ PO Box: _____

Zip Code: _____ City: _____

Country: _____

Telephone: _____ Fax: _____

Email: _____

Output Voltages

Output Currents

Input Voltages

Isolation

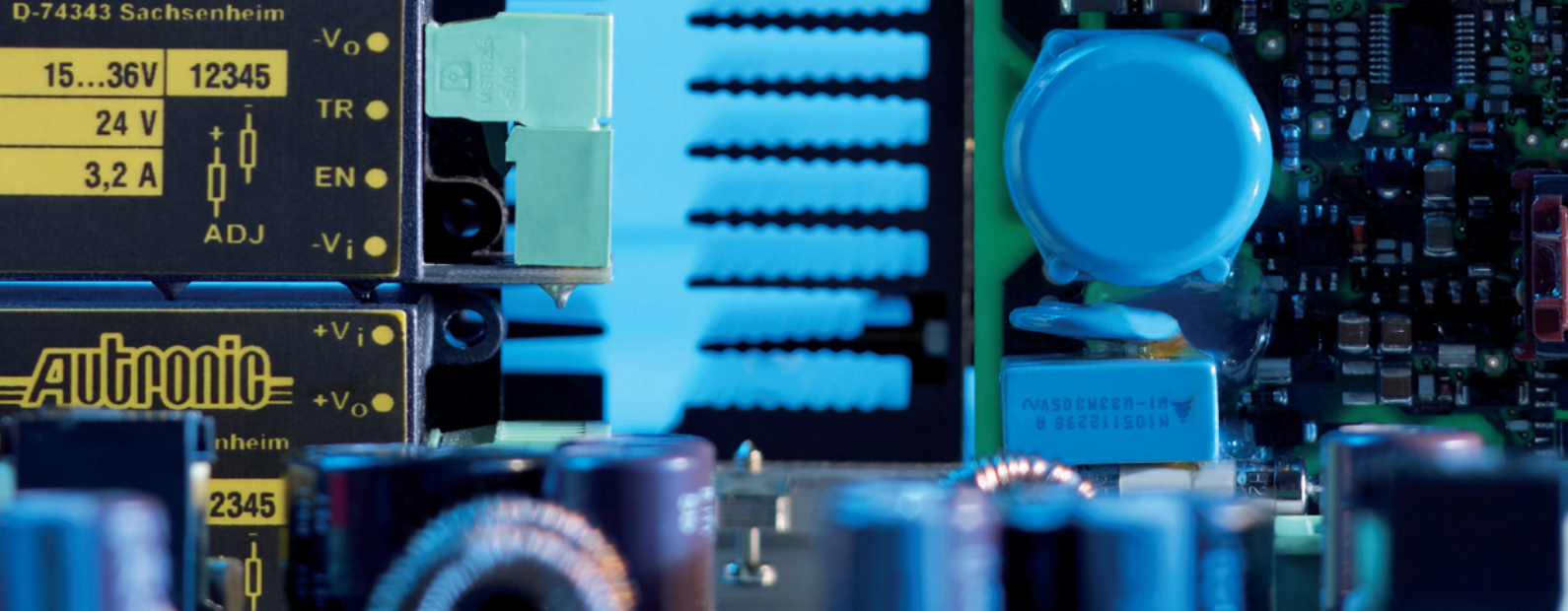
Construction/Mounting

Temperature Range

Quantity/Delivery Schedule

Remarks

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visit www.autronic.de



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visit www.autronic.de

Other types on request.
Specifications subject to change without notice.

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QUALITY SYSTEM



certified by DQS according to
DIN EN ISO 9001:2008 Reg.-No. 000510
QM