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PSA-Family

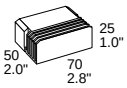
No input to output isolation
Single output of 12...48 V DC
Input voltage up to 144 V DC
PCB or chassis mount
See Data Book, chapter 4.1

Output voltage $U_{o\,nom}$ [V]	Output current $I_{o\,nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\,nom}$ [V]	Efficiency η [%]	Type	Options
12	1.5	18...144	60	86	PSA 121.5-7iR	-9, P, Y
15	1.5	22...144	60	89	PSA 151.5-7iR	-9, P, Y
24	1.5	31...144	60	93	PSA 241.5-7iR	-9, P, Y
36	1.2	44...144	80	94	PSA 361-7iR	-9, P, Y
48	1.0	58...144	80	95	PSA 481-7iR	-9, P, Y



– Very good dynamic properties
– Input undervoltage cut-out
– Inhibit and output voltage control (iR)
– Temperature range -7: –25...71 °C
– No derating
– Continuous no-load/short-circuit proof
– Safety according to IEC 950, EN 60950

Description of options:
-9 Ambient temperature range –40...71 °C
Y Small soldering pins (0.5 × 1 mm)
P Potentiometer



PSB-Family

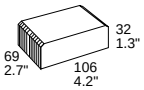
No input to output isolation
Single output of 5.1,...48 V DC
Input voltage up to 144 V DC
PCB or chassis mount
See Data Book, chapter 4.1

Output voltage $U_{o\,nom}$ [V]	Output current $I_{o\,nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\,nom}$ [V]	Efficiency η [%]	Type	Options
5.1	4...5	15...144	60	80	PSB 5A4-7iR	-9, L, P, C
12	3...4	18...144	60	89	PSB 123-7iR	-9, L, P, C
15	3...4	22...144	60	90	PSB 153-7iR	-9, L, P, C
24	3...4	31...144	60	94	PSB 243-7iR	-9, L, P, C
36	3...4	44...144	80	95	PSB 363-7iR	-9, L, P, C
48	3...4	58...144	80	96	PSB 483-7iR	-9, L, P, C



– Very good dynamic properties
– Input undervoltage cut-out
– Inhibit and output voltage control (iR)
– Temperature range -7: –25...71 °C
– No derating
– Continuous no-load/short-circuit proof
– Safety according to IEC 950, EN 60950

Description of options:
-9 Ambient temperature range –40...71 °C
L Input filter
P Potentiometer
C Thyristor-Crowbar



PSC-Family

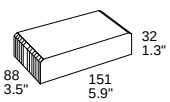
No input to output isolation
Single output of 12...48 V DC
Input voltage up to 144 V DC
PCB or chassis mount
See Data Book, chapter 4.1

Output voltage $U_{o\,nom}$ [V]	Output current $I_{o\,nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\,nom}$ [V]	Efficiency η [%]	Type	Options
12	6	18...144	60	89	PSC 126-7iR	-9, L, P, C, D
15	6	22...144	60	90	PSC 156-7iR	-9, L, P, C, D
24	6	31...144	60	94	PSC 246-7iR	-9, L, P, C, D
36	6	44...144	80	95	PSC 366-7iR	-9, L, P, C, D
48	6	58...144	80	96	PSC 486-7iR	-9, L, P, C, D



– Very good dynamic properties
– Input undervoltage cut-out
– Inhibit and output voltage control (iR)
– Temperature range -7: –25...71 °C
– No derating
– Continuous no-load/short-circuit proof
– Safety according to IEC 950, EN 60950

Description of options:
-9 Ambient temperature range –40...71 °C
D "Save Data" undervoltage monitor
C Thyristor-Crowbar
P Potentiometer
L Input filter



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PSL-Family

No input to output isolation
Single output of 12...48 V DC
Input voltage up to 144 V DC
19" rack or chassis mount
See Data Book, chapter 5.1

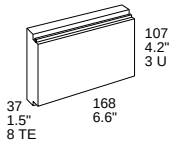


Output voltage $U_{o\,nom}$ [V]	Output current $I_{o\,nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\,nom}$ [V]	Efficiency η [%]	Type	Options
12	6	18...144	60	89	PSL 126-7R	-9, L, i, P, C, D, A
15	6	22...144	60	90	PSL 156-7R	-9, L, i, P, C, D, A
24	6	31...144	60	94	PSL 246-7R	-9, L, i, P, C, D, A
36	6	44...144	80	95	PSL 366-7R	-9, L, i, P, C, D, A
48	6	58...144	80	96	PSL 486-7R	-9, L, i, P, C, D, A

- Extremely wide Input voltage range
- Very good dynamic properties
- Input undervoltage cut-out
- Output voltage control (R)
- Temperature range -7: –25...71°C
- No derating
- Continuous no-load/short-circuit proof
- Safety according to IEC 950, EN 60950

Description of options:

-9 Ambient temperature range –40...71°C
D "Save Data" undervoltage monitor
C Thyristor-Crowbar
P Potentiometer
A Test sockets
i Inhibit input
L Input filter



PSS-Family

No input to output isolation
Single output of 12...48 V DC
Input voltage up to 144 V DC
19" rack or chassis mount
See Data Book, chapter 5.1

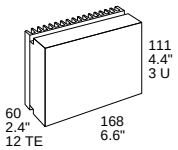


Output voltage $U_{o\,nom}$ [V]	Output current $I_{o\,nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\,nom}$ [V]	Efficiency η [%]	Type	Options
12 (15)	9	18...144	60	90	PSS 129-7	-9, E, P, C, B, B1
24	9	31...144	60	94	PSS 249-7	-9, E, P, C, B, B1
36	9	44...144	80	94	PSS 369-7	-9, E, P, C, B, B1
48	9	58...144	80	96	PSS 489-7	-9, E, P, C, B, B1

- Input undervoltage cut-out
- Output sense lines
- Current sharing
- Fast dynamic response
- Continuous no-load/short-circuit proof
- Temperature range -7: –25...71°C
- No derating
- Ext. output voltage adjustment and inhibit
- Safety according to IEC 950, EN 60950

Description of options:

-9 Ambient temperature range –40...71°C
E Inrush current limitation
C Thyristor-Crowbar
B Cooling plate large
B1 Cooling plate small
P Potentiometer



PSK-Family

No input to output isolation
Single output of 12...48 V DC
Input voltage up to 144 V DC
19" rack or chassis mount
See Data Book, chapter 5.1

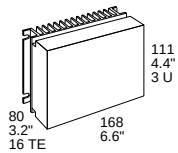


Output voltage $U_{o\,nom}$ [V]	Output current $I_{o\,nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\,nom}$ [V]	Efficiency η [%]	Type	Options
12 (15)	12	18...144	60	90	PSK 1212-7	-9, E, P, C, B, B1
24	12	31...144	60	94	PSK 2412-7	-9, E, P, C, B, B1
36	12	44...144	80	94	PSK 3612-7	-9, E, P, C, B, B1
48	12	58...144	80	96	PSK 4812-7	-9, E, P, C, B, B1

- Input undervoltage cut-out
- Output sense lines and current sharing
- Fast dynamic response
- Continuous no load/short-circuit proof
- Temperature range -7: –25...71°C
- No derating
- Ext. output voltage adjustment and inhibit
- Safety according to IEC 950, EN 60950

Description of options:

-9 Ambient temperature range –40...71°C
E Inrush current limitation
C Thyristor-Crowbar
B Cooling plate large
B1 Cooling plate small
P Potentiometer



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IBEK 1 Watt-Family

1 watt DC-DC converters
Input to output isolation
1 and 2 output up to 15 V DC
Input voltage up to 52.8 V DC
See Data Book, chapter 6.1

Output voltage 1, 2 $U_{o\,nom}$ [V]	Output current 1, 2 $I_{o\,nom}$ [mA]	Type Input voltage 4.75...5.25 V DC	Type Input voltage 10.8...13.2 V DC	Type Input voltage 13.5...16.5 V DC	Opt.
5	200	5 IWR 1-05-N	12 IWR 1-05-N	15 IWR 1-05-N	T, S
12	80	5 IWR 1-12-N	12 IWR 1-12-N	15 IWR 1-12-N	T, S
15	66	5 IWR 1-15-N	12 IWR 1-15-N	15 IWR 1-15-N	T, S
±5	±50	5 IWR 1-0505-N	12 IWR 1-0505-N	15 IWR 1-0505-N	T, S
±12	±40	5 IWR 1-1212-N	12 IWR 1-1212-N	15 IWR 1-1212-N	T, S
±15	±33	5 IWR 1-1515-N	12 IWR 1-1515-N	15 IWR 1-1515-N	T, S
5, 5	100, 100	5 IWR 1-05-05-N	12 IWR 1-05-05-N	15 IWR 1-05-05-N	T, S
5, 12	100, 40	5 IWR 1-05-12-N	12 IWR 1-05-12-N	15 IWR 1-05-12-N	T, S
5, 15	100, 33	5 IWR 1-05-15-N	12 IWR 1-05-15-N	15 IWR 1-05-15-N	T, S
12, 12	40, 40	5 IWR 1-12-12-N	12 IWR 1-12-12-N	15 IWR 1-12-12-N	T, S
15, 15	33, 33	5 IWR 1-15-15-N	12 IWR 1-15-15-N	15 IWR 1-15-15-N	T, S
±5, ±5	±50, ±50	5 IWR 1-2×0505-N	12 IWR 1-2×0505-N	15 IWR 1-2×0505-N	T
±12, ±12	±20, ±20	5 IWR 1-2×1212-N	12 IWR 1-2×1212-N	15 IWR 1-2×1212-N	T
±15, ±15	±17, ±17	5 IWR 1-2×1515-N	12 IWR 1-2×1515-N	15 IWR 1-2×1515-N	T

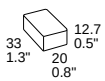
Output voltage 1, 2 $U_{o\,nom}$ [V]	Output current 1, 2 $I_{o\,nom}$ [mA]	Type Input voltage 21.6...26.4 V DC	Type Input voltage 25.2...30.8 V DC	Type Input voltage 43.2...52.8 V DC	Opt.
5	200	24 IWR 1-05-N	28 IWR 1-05-N	48 IWR 1-05-N	T, S
12	80	24 IWR 1-12-N	28 IWR 1-12-N	48 IWR 1-12-N	T, S
15	66	24 IWR 1-15-N	28 IWR 1-15-N	48 IWR 1-15-N	T, S
±5	±50	24 IWR 1-0505-N	28 IWR 1-0505-N	48 IWR 1-0505-N	T, S
±12	±40	24 IWR 1-1212-N	28 IWR 1-1212-N	48 IWR 1-1212-N	T, S
±15	±33	24 IWR 1-1515-N	28 IWR 1-1515-N	48 IWR 1-1515-N	T, S
5, 5	100, 100	24 IWR 1-05-05-N	28 IWR 1-05-05-N	48 IWR 1-05-05-N	T, S
5, 12	100, 40	24 IWR 1-05-12-N	28 IWR 1-05-12-N	48 IWR 1-05-12-N	T, S
5, 15	100, 33	24 IWR 1-05-15-N	28 IWR 1-05-15-N	48 IWR 1-05-15-N	T, S
12, 12	40, 40	24 IWR 1-12-12-N	28 IWR 1-12-12-N	48 IWR 1-12-12-N	T, S
15, 15	33, 33	24 IWR 1-15-15-N	28 IWR 1-15-15-N	48 IWR 1-15-15-N	T, S
±5, ±5	±50, ±50	24 IWR 1-2×0505-N	28 IWR 1-2×0505-N	48 IWR 1-2×0505-N	T
±12, ±12	±20, ±20	24 IWR 1-2×1212-N	28 IWR 1-2×1212-N	48 IWR 1-2×1212-N	T
±15, ±15	±17, ±17	24 IWR 1-2×1515-N	28 IWR 1-2×1515-N	48 IWR 1-2×1515-N	T



- Efficient input Pi-filter
- Standard temperature range N: 0...71 °C
- Aluminium solid electrolytic capacitors
- Linear voltage regulator at output
- High reliability
- Optimal dynamic response

Description of options
T Ambient temperature range –25...71 °C
S Ambient temperature range –40...85 °C

Isolation test voltage [V DC/V_{rms}]	Type
700/500	.. ICR ..
1500/1060	.. IWR ..
3530/2500	.. IXR ..
5300/3750	.. IYR ..
7070/5000	.. IZR ..



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IBEK 3 Watt-Family

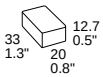
3 watt DC-DC converters
Input to output isolation
1 and 2 output up to 15 V DC
Input voltage up to 72 V DC
See Data Book, chapter 6.1

Output voltage 1, 2 $U_{o\ nom}$ [V]	Output current 1, 2 $I_{o\ nom}$ [mA]	Input voltage $U_{i\ nom}$ [V DC]	Type Isolation 700 V DC/500 V_{rms}	Type Isolation 1500 V DC/1060 V_{rms}	Option
5	500	10...33	24 IPS 3-05-T	24 IPW 3-05-T	S
12	250	10...33	24 IPS 3-12-T	24 IPW 3-12-T	S
15	200	10...33	24 IPS 3-15-T	24 IPW 3-15-T	S
+5, –5	250, 250	10...33	24 IPS 3-0505-T	24 IPW 3-0505-T	S
+12, –12	125, 125	10...33	24 IPS 3-1212-T	24 IPW 3-1212-T	S
+15, –15	100, 100	10...33	24 IPS 3-1515-T	24 IPW 3-1515-T	S
5, 5	250, 250	10...33	24 IPS 3-05-05-T	24 IPW 3-05-05-T	S
5, 12	250, 125	10...33	24 IPS 3-05-12-T	24 IPW 3-05-12-T	S
5, 15	250, 100	10...33	24 IPS 3-05-15-T	24 IPW 3-05-15-T	S
12, 12	125, 125	10...33	24 IPS 3-12-12-T	24 IPW 3-12-12-T	S
15, 15	100, 100	10...33	24 IPS 3-15-15-T	24 IPW 3-15-15-T	S
5	500	18...72	48 IPS 3-05-T	48 IPW 3-05-T	S
12	250	18...72	48 IPS 3-12-T	48 IPW 3-12-T	S
15	200	18...72	48 IPS 3-15-T	48 IPW 3-15-T	S
+5, –5	250, 250	18...72	48 IPS 3-0505-T	48 IPW 3-0505-T	S
+12, –12	125, 125	18...72	48 IPS 3-1212-T	48 IPW 3-1212-T	S
+15, –15	100, 100	18...72	48 IPS 3-1515-T	48 IPW 3-1515-T	S
5, 5	250, 250	18...72	48 IPS 3-05-05-T	48 IPW 3-05-05-T	S
5, 12	250, 125	18...72	48 IPS 3-05-12-T	48 IPW 3-05-12-T	S
5, 15	250, 100	18...72	48 IPS 3-05-15-T	48 IPW 3-05-15-T	S
12, 12	125, 125	18...72	48 IPS 3-12-12-T	48 IPW 3-12-12-T	S
15, 15	100, 100	18...72	48 IPS 3-15-15-T	48 IPW 3-15-15-T	S



- Efficient current compensated input filter
- Standard temperature range T: –25...71 °C
- Aluminium solid electrolytic capacitors
- SD shutdown input
- High reliability
- No derating

Description of option
S Ambient temperature range –40...85 °C



IMX-Family

7 watt DC-DC converters
Input to output isolation
1 and 2 output up to 48 V DC
Input voltage up to 121 V DC
See Data Book, chapter 6.1

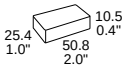
Output voltage 1, 2 $U_{o\ nom}$ [V]	Output current 1, 2 $I_{o\ nom}$ [mA]	Type Input voltage 8.4...36 V DC	Type Input voltage 16.8...75 V DC	Type Input voltage 40...121 V DC
3.3	1500	20 IMX 7-03-7	40 IMX 7-03-7	70 IMX 7-03-7
5.1	1200	20 IMX 7-05-7	40 IMX 7-05-7	70 IMX 7-05-7
5, 5	700, 700	20 IMX 7-05-05-7	40 IMX 7-05-05-7	70 IMX 7-05-05-7
12, 12	300, 300	20 IMX 7-12-12-7	40 IMX 7-12-12-7	70 IMX 7-12-12-7
15, 15	240, 240	20 IMX 7-15-15-7	40 IMX 7-15-15-7	70 IMX 7-15-15-7
24, 24	150, 150	20 IMX 7-24-24-7	40 IMX 7-24-24-7	70 IMX 7-24-24-7



LGA

- Very wide input voltage range
- Efficient input filter
- Temperature range -7: –25...71 °C
- Input to output isolation 1500 V DC
- Inhibit input
- Adjustable output voltage
- Outputs no-load and short-circuit proof
- No derating (exept 20 IMX 7 → 85 %)
- High reliability
- Safety according to IEC 950, EN 60950

Description of options
-9 Ambient temperature range –40...71 °C
-8 Ambient temperature range –40...85 °C
D Signal Out OK
X LED Out Ok
M Surface mount version
C C-pinout



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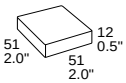
IBEK 10 Watt-Family

5 watt DC-DC converter
Input to output isolation
1 and 2 output up to 15 V DC
Input voltage up to 72 V DC
See Data Book, chapter 6.1

Output voltage 1, 2 $U_{o\ nom}$ [V]	Output current 1, 2 $I_{o\ nom}$ [mA]	Input voltage $U_{i\ nom}$ [V DC]	Input voltage range U_i [V DC]	Type Isolation 7070 V DC/5000 V_{rms}
5	1000	24	10...33	24 IPZ 5-05-TC
12	417	24	10...33	24 IPZ 5-12-TC
15	333	24	10...33	24 IPZ 5-15-TC
+5, –5	500, 500	24	10...33	24 IPZ 5-0505-TC
+12, –12	208, 208	24	10...33	24 IPZ 5-1212-TC
+15, –15	167, 167	24	10...33	24 IPZ 5-1515-TC
5	1000	48	18...72	48 IPZ 5-05-TC
12	417	48	18...72	48 IPZ 5-12-TC
15	333	48	18...72	48 IPZ 5-15-TC
+5, –5	500, 500	48	18...72	48 IPZ 5-0505-TC
+12, –12	208, 208	48	18...72	48 IPZ 5-1212-TC
+15, –15	167,167	48	18...72	48 IPZ 5-1515-TC



– Extremely high isolation test voltage
– Wide input voltage range
– Efficient input Pi-filter
– Standard temperature range T: –25...71 °C
  Temperature range on request –40...85 °C
– High reliability
– Continuous no-load
– Short-circuit proof



IBEK 10 Watt-Family

10 watt DC-DC converter
Input to output isolation
1 and 2 output up to 15 V DC
Input voltage up to 72 V DC
See Data Book, chapter 6.1

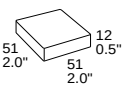
Output voltage 1, 2 $U_{o\ nom}$ [V]	Output current 1, 2 $I_{o\ nom}$ [mA]	Input voltage $U_{i\ nom}$ [V DC]	Input voltage range U_i [V DC]	Type Isolation 700 V DC/500 V_{rms}	Type Isolation 1500 V DC/1060 V_{rms}
5	2000	24	10...33	24 IPS 10-05-T ..	24 IPW 10-05-T ..
12	833	24	10...33	24 IPS 10-12-T ..	24 IPW 10-12-T ..
15	667	24	10...33	24 IPS 10-15-T ..	24 IPW 10-15-T ..
+5, –5	1000, 1000	24	10...33	24 IPS 10-0505-T ..	24 IPW 10-0505-T ..
+12, –12	417, 417	24	10...33	24 IPS 10-1212-T ..	24 IPW 10-1212-T ..
+15, –15	333, 333	24	10...33	24 IPS 10-1515-T ..	24 IPW 10-1515-T ..
5	2000	48	18...72	48 IPS 10-05-T ..	48 IPW 10-05-T ..
12	833	48	18...72	48 IPS 10-12-T ..	48 IPW 10-12-T ..
15	667	48	18...72	48 IPS 10-15-T ..	48 IPW 10-15-T ..
+5, –5	1000, 1000	48	18...72	48 IPS 10-0505-T ..	48 IPW 10-0505-T ..
+12, –12	417, 417	48	18...72	48 IPS 10-1212-T ..	48 IPW 10-1212-T ..
+15, –15	333, 333	48	18...72	48 IPS 10-1515-T ..	48 IPW 10-1515-T ..



– Wide input voltage range
– Efficient input Pi-filter
– Standard temperature range T: –25...71 °C
  Temperature range on request –40...85 °C
– High reliability
– Continuous no-load
– Short-circuit proof
– SD shutdown input (optional)

Ordering example: 48 IPS 10-15-TG

Pin configuration:
G Standard with shutdown input
F Special with shutdown input
C Standard
B Special



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M-Family

50 watt DC-DC converters
Input to output isolation
1, 2 or 3 output up to 48 V DC
Input voltage up to 372 V DC
See Data Book, chapter 7.1

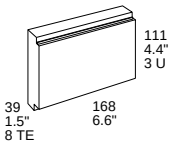
Output voltage 1, 2, 3 $U_{o\ nom}$ [V]	Output current 1, 2, 3 $I_{o\ nom}$ [A]	Type Input voltage 8...35 V DC	Type Input voltage 14...70 V DC	Type Input voltage 20...100 V DC	Options
5.1	8	AM 1001-7R	BM 1001-7R	FM 1001-7R	-9, P, D, V, A, H, F
12	4	AM 1301-7R	BM 1301-7R	FM 1301-7R	-9, P, D, A, H, F
15	3.4	AM 1501-7R	BM 1501-7R	FM 1501-7R	-9, P, D, A, H, F
24	2	AM 1601-7R	BM 1601-7R	FM 1601-7R	-9, P, D, A, H, F
48	1	AM 1901-7R	BM 1901-7R	FM 1901-7R	-9, P, D, A, H, F
12, 12	2, 2	AM 2320-7	BM 2320-7	FM 2320-7	-9, P, D, A, H, F
15, 15	1.7, 1.7	AM 2540-7	BM 2540-7	FM 2540-7	-9, P, D, A, H, F
5.1, 12, 12	5, 0.7, 0.7	AM 3020-7	BM 3020-7	FM 3020-7	-9, P, D, V, A, H, F
5.1, 15, 15	5, 0.6, 0.6	AM 3040-7	BM 3040-7	FM 3040-7	-9, P, D, V, A, H, F

Output voltage 1, 2, 3 $U_{o\ nom}$ [V]	Output current 1, 2, 3 $I_{o\ nom}$ [A]	Type Input voltage 28...140 V DC	Type Input voltage 44...220 V DC	Type Input voltage 88...372 V DC	Options
5.1	8	CM 1001-7R	DM 1001-7R	LM 1001-7R	-9, P, D, V, A, H, F
12	4	CM 1301-7R	DM 1301-7R	LM 1301-7R	-9, P, D, A, H, F
15	3.4	CM 1501-7R	DM 1501-7R	LM 1501-7R	-9, P, D, A, H, F
24	2	CM 1601-7R	DM 1601-7R	LM 1601-7R	-9, P, D, A, H, F
48	1	CM 1901-7R	DM 1901-7R	LM 1901-7R	-9, P, D, A, H, F
12, 12	2, 2	CM 2320-7	DM 2320-7	LM 2320-7	-9, P, D, A, H, F
15, 15	1.7, 1.7	CM 2540-7	DM 2540-7	LM 2540-7	-9, P, D, A, H, F
5.1, 12, 12	5, 0.7, 0.7	CM 3020-7	DM 3020-7	LM 3020-7	-9, P, D, V, A, H, F
5.1, 15, 15	5, 0.6, 0.6	CM 3040-7	DM 3040-7	LM 3040-7	-9, P, D, V, A, H, F



– Extremely wide input voltage range
– Output voltage control (R) and inhibit
– Temperature range -7: –25...71°C
– Surge and transient suppression circuitry
– 4 kV_{rms} input-output electric strength test
– Outputs individually isolated, controlled
– Outputs fully protected against overload
– CM, DM, LM types available as CMZ, DMZ, LMZ class II equipment ⧈
– Safety according to IEC 950, EN 60950

Description of options
-9 Ambient temperature range –40...71°C
H Increased electric strength test voltage
F Input fuse internally (not accessible)
E Inrush current limitation (CM, EM, LM)
A Output voltage test sockets
P Potentiometer for U_o
D Save data signal
V ACFAIL signal



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S-Family

100 watt DC-DC converters
Input to output isolation
1 or 2 output up to 48 V DC
Input voltage up to 372 V DC
See Data Book, chapter 7.1

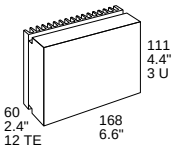
Output voltage 1, 2 $U_{o\ nom}$ [V]	Output current 1, 2 $I_{o\ nom}$ [A]	Type Input voltage 8...35 V DC	Type Input voltage 14...70 V DC	Type Input voltage 20...100 V DC	Options
5.1	16	AS 1001-7R	BS 1001-7R	FS 1001-7R	-9, D,V, P, T, B1
12	8	AS 1301-7R	BS 1301-7R	FS 1301-7R	-9, D, P, T, B1
15	6.5	AS 1501-7R	BS 1501-7R	FS 1501-7R	-9, D, P, T, B1
24	4.2	AS 1601-7R	BS 1601-7R	FS 1601-7R	-9, D, P, T, B1
24	4	AS 2320-7R	BS 2320-7R	FS 2320-7R	-9, D, P, T, B1
30	3.2	AS 2540-7R	BS 2540-7R	FS 2540-7R	-9, D, P, T, B1
48	2	AS 2660-7R	BS 2660-7R	FS 2660-7R	-9, D, P, T, B1
12, 12	4, 4	AS 2320-7R	BS 2320-7R	FS 2320-7R	-9, D, P, T, B1
15, 15	3.2, 3.2	AS 2540-7R	BS 2540-7R	FS 2540-7R	-9, D, P, T, B1
24, 24	2, 2	AS 2660-7R	BS 2660-7R	FS 2660-7R	-9, D, P, T, B1

Output voltage 1, 2 $U_{o\ nom}$ [V]	Output current 1, 2 $I_{o\ nom}$ [A]	Type Input voltage 28...140 V DC	Type Input voltage 44...220 V DC	Type Input voltage 88...372 V DC	Options
5.1	16	CS 1001-7R	DS 1001-7R	LS 1001-7R	-9, D,V, P, T, B1
12	8	CS 1301-7R	DS 1301-7R	LS 1301-7R	-9, D, P, T, B1
15	6.5	CS 1501-7R	DS 1501-7R	LS 1501-7R	-9, D, P, T, B1
24	4.2	CS 1601-7R	DS 1601-7R	LS 1601-7R	-9, D, P, T, B1
24	4	CS 2320-7R	DS 2320-7R	LS 2320-7R	-9, D, P, T, B1
30	3.2	CS 2540-7R	DS 2540-7R	LS 2540-7R	-9, D, P, T, B1
48	2	CS 2660-7R	DS 2660-7R	LS 2660-7R	-9, D, P, T, B1
12, 12	4, 4	CS 2320-7R	DS 2320-7R	LS 2320-7R	-9, D, P, T, B1
15, 15	3.2, 3.2	CS 2540-7R	DS 2540-7R	LS 2540-7R	-9, D, P, T, B1
24, 24	2, 2	CS 2660-7R	DS 2660-7R	LS 2660-7R	-9, D, P, T, B1



– Extremely wide input voltage range
– Output voltage control (R) and inhibit
– Temperature range -7: –25...71°C
– Input over- and undervoltage lock-out
– Surge and transient suppression circuitry
– 4 kV_{rms} input-output electric strength test
– Fully isolated outputs
– Outputs open- and short-circuit proof
– No derating
– Safety according to IEC 950, EN 60950

Description of options
-9 Ambient temperature range –40...71°C
D Save data signal
V ACFAIL signal
P Potentiometer for U_o
T Current sharing
B1 Cooling plate small



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K-Family

150 watt DC-DC converters
Input to output isolation
1 or 2 output up to 48 V DC
Input voltage up to 372 V DC
See Data Book, chapter 8.1

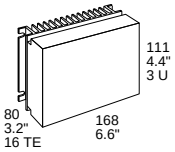
Output voltage 1, 2 $U_{o\ nom}$ [V]	Output current 1, 2 $I_{o\ nom}$ [A]	Type Input voltage 8...35 V DC	Type Input voltager 14...70 V DC	Type Input voltage 20...100 V DC	Options
5.1	25	AK 1001-7R	BK 1001-7R	FK 1001-7R	-9, D,V, P, T, B1
12	12	AK 1301-7R	BK 1301-7R	FK 1301-7R	-9, D, P, T, B1
15	10	AK 1501-7R	BK 1501-7R	FK 1501-7R	-9, D, P, T, B1
24	6	AK 1601-7R	BK 1601-7R	FK 1601-7R	-9, D, P, T, B1
24	6	AK 2320-7R	BK 2320-7R	FK 2320-7R	-9, D, P, T, B1
30	5	AK 2540-7R	BK 2540-7R	FK 2540-7R	-9, D, P, T, B1
48	3	AK 2660-7R	BK 2660-7R	FK 2660-7R	-9, D, P, T, B1
12, 12	6, 6	AK 2320-7R	BK 2320-7R	FK 2320-7R	-9, D, P, T, B1
15, 15	5, 5	AK 2540-7R	BK 2540-7R	FK 2540-7R	-9, D, P, T, B1
24, 24	3, 3	AK 2660-7R	BK 2660-7R	FK 2660-7R	-9, D, P, T, B1

Output voltage 1, 2 $U_{o\ nom}$ [V]	Output current 1, 2 $I_{o\ nom}$ [A]	Type Input voltage 28...140 V DC	Type Input voltager 44...220 V DC	Type Input voltage 88...372 V DC	Options
5.1	25	CK 1001-7R	DK 1001-7R	LK 1001-7R	-9, D,V, P, T, B1
12	12	CK 1301-7R	DK 1301-7R	LK 1301-7R	-9, D, P, T, B1
15	10	CK 1501-7R	DK 1501-7R	LK 1501-7R	-9, D, P, T, B1
24	6	CK 1601-7R	DK 1601-7R	LK 1601-7R	-9, D, P, T, B1
24	6	CK 2320-7R	DK 2320-7R	LK 2320-7R	-9, D, P, T, B1
30	5	CK 2540-7R	DK 2540-7R	LK 2540-7R	-9, D, P, T, B1
48	3	CK 2660-7R	DK 2660-7R	LK 2660-7R	-9, D, P, T, B1
12, 12	6, 6	CK 2320-7R	DK 2320-7R	LK 2320-7R	-9, D, P, T, B1
15, 15	5, 5	CK 2540-7R	DK 2540-7R	LK 2540-7R	-9, D, P, T, B1
24, 24	3, 3	CK 2660-7R	DK 2660-7R	LK 2660-7R	-9, D, P, T, B1



– Extremely wide input voltage range
– Input over- and undervoltage lock-out
– Output voltage control (R) and inhibit
– Temperature range -7: –25...71°C
– Surge and transient suppression circuitry
– 4 kV_{rms} input-output electric strength test
– Fully isolated outputs
– Outputs open- and short-circuit proof
– No derating
– Safety according to IEC 950, EN 60950

Description of options
-9 Ambient temperature range –40...71°C
P Potentiometer for U_o
B1 Cooling plate small
T Current sharing
D Save data signal
V ACFAIL signal



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M-Family

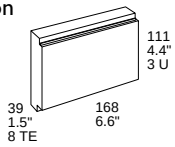
50 watt AC-DC converters
Input to output isolation
1, 2 or 3 output up to 48 V DC
Input voltage up to 264 V AC
See Data Book, chapter 10.1

Output voltage 1, 2, 3 $U_{o\ nom}$ [V]	Output current 1, 2, 3 $I_{o\ nom}$ [A]	Type class I Input 85...264 V AC	Type class II ⧈ Input 85...264 V AC	Options
5.1	8	LM 1001-7R	LMZ 1001-7R	-9, E, P, D, V, A, H, F
12	4	LM 1301-7R	LMZ 1301-7R	-9, E, P, D, A, H, F
15	3.4	LM 1501-7R	LMZ 1501-7R	-9, E, P, D, A, H, F
24	2	LM 1601-7R	LMZ 1601-7R	-9, E, P, D, A, H, F
48	1	LM 1901-7R	LMZ 1901-7R	-9, E, P, D, A, H, F
12, 12	2, 2	LM 2320-7	LMZ 2320-7	-9, E, P, D, A, H, F
15, 15	1.7, 1.7	LM 2540-7	LMZ 2540-7	-9, E, P, D, A, H, F
5.1, 12, 12	5, 0.7, 0.7	LM 3020-7	LMZ 3020-7	-9, E, P, D, V, A, H, F
5.1, 15, 15	5, 0.6, 0.6	LM 3040-7	LMZ 3040-7	-9, E, P, D, V, A, H, F



– Extremely wide input voltage range
– Efficient input filter
– Temperature range -7: –25...71 °C
– Output voltage control (R) and inhibit
– Surge and transient suppression circuitry
– 4 kV_{rms} input-output electric strength test
– Outputs individually isolated, controlled
– Outputs fully protected against overload
– Available as class II equipment ⧈
– Safety according to IEC 950, EN 60950

Description of options
-9 Ambient temperature range –40...71 °C
H Increased electric strength test voltage
F Input fuse internally (not accessible)
A Output voltage test sockets
E Inrush current limitation
P Potentiometer for U_o
D Save data signal
V ACFAIL signal



S- and K-Family

100/150 watt AC-DC converters
Input to output isolation
1 or 2 output up to 48 V DC
Input voltage up to 264 V AC
See Data Book,
chapter 10.1 and 11.1

Output voltage 1, 2 $U_{o\ nom}$ [V]	Output current 1, 2 $I_{o\ nom}$ [A]	Type Input voltage 85...264 V AC
5.1	16	LS 1001-7R
12	8	LS 1301-7R
15	6.5	LS 1501-7R
24	4.2	LS 1601-7R
24	4	LS 2320-7R
30	3.2	LS 2540-7R
48	2	LS 2660-7R
12, 12	4, 4	LS 2320-7R
15, 15	3.2, 3.2	LS 2540-7R
24, 24	2, 2	LS 2660-7R

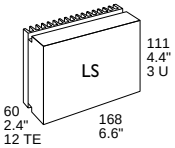
Output voltage 1, 2 $U_{o\ nom}$ [V]	Output current 1, 2 $I_{o\ nom}$ [A]	Type Input voltage 85...264 V AC
5.1	25	LK 1001-7R
12	12	LK 1301-7R
15	10	LK 1501-7R
24	6	LK 1601-7R
24	6	LK 2320-7R
30	5	LK 2540-7R
48	3	LK 2660-7R
12, 12	6, 6	LK 2320-7R
15, 15	5, 5	LK 2540-7R
24, 24	3, 3	LK 2660-7R

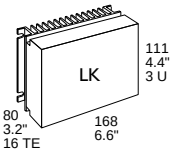




– Extremely wide input voltage range
– Efficient input filter
– Temperature range -7: –25...71 °C
– Output voltage control (R) and inhibit
– Input over- and undervoltage lock-out
– Surge and transient suppression circuitry
– 4 kV_{rms} input-output electric strength test
– Fully isolated outputs
– Outputs open- and short-circuit proof
– No derating
– Safety according to IEC 950, EN 60950

Description of available options
-9 Ambient temperature range –40...71 °C
E Inrush current limitation
D Save data signal
V ACFAIL signal (for 5 V outputs)
P Potentiometer for U_o
T Current sharing
B1 Cooling plate small





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T-Family

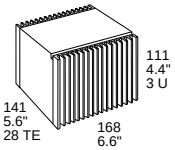
500 watt AC-DC converters
Input to output isolation
Single output up to 58 V DC
Input voltage up to 255 V AC
See Data Book, chapter 11.1

Output voltage at 0.5 • $I_{o\ nom}$ [V]	Temperature coefficient of output [mV/K]	Output current limit [A]	Input voltage 47...63 Hz [V_{rms}]	Type	Options
54.5	–5	14.5	85...255	LT 1701-7	B1
54.5	–72	14.5	85...255	LT 1720-7	B1
54.5	–72	14.5	85...255	LT 1730-7	P, Z, G, B1
53.52...55.68	–72	14.5	85...255	LT 1730-7Z	P, G, B1
53.5	–48...108	14.5	85...255	LT 1740-7	P, Z, G, B1
53.52...55.68	–48...108	14.5	85...255	LT 1740-7Z	P, G, B1



– 54.5 V DC output voltage for 48 V loads
– Battery charging temperature control
– Very high efficiency, typically 93 %
– Temperature range -7: –25...71 °C
– Power factor >0.99
– Harmonics <IEC 555-2
– No inrush current, hot plug-in capability
– High power density, 210 W/dm^3
– Immune to transients and disturbances according to IEC 1000-4-2, -3, -4, -5 and -6 and VDE 160
– Safety according to IEC 950, EN 60950

Description of options
P Potentiometer for U_o
Z Cell voltage selector switch
G Galvanically isolated signals
B1 Mounting plate



VSR-Family

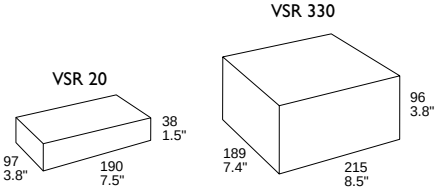
20...660 watt AC-DC converters
Input to output isolation
Single output up to 48 V DC
Input voltage up to 264 V AC
See Data Book, chapter 9.1, 10.1 and 11.1

Output voltage $U_{o\ nom}$ [V]	Output current T_A = 71 °C $I_{o\ nom}$ [A]	Output current T_A = 40 °C $I_{o\ max}$ [A]	Type Input 85...132 V/ 170...264 V
5	2	4	VSR 10-05
5	3.5	7	VSR 20-05
5	6	12	VSR 30-05
5	11	22	VSR 60-05
5	23	46	VSR 120-05
5	33	66	VSR 170-05
5	66	132	VSR 330-05
12	0.85	1.7	VSR 10-12
12	1.5	3	VSR 20-12
12	2.7	5.5	VSR 30-12
12	5	10	VSR 60-12
12	9.75	19.5	VSR 120-12
12	14	28	VSR 170-12
12	28	56	VSR 330-12
15	0.7	1.4	VSR 10-15
15	1.3	2.6	VSR 20-15
15	2.2	4.4	VSR 30-15
15	4	8	VSR 60-15
15	7.75	15.5	VSR 120-15
15	11.5	23	VSR 170-15
15	22.5	45	VSR 330-15

Output voltage $U_{o\ nom}$ [V]	Output current T_A = 71 °C $I_{o\ nom}$ [A]	Output current T_A = 40 °C $I_{o\ max}$ [A]	Type Input 85...132 V/ 170...264 V
24	0.45	0.9	VSR 10-24
24	0.9	1.8	VSR 20-24
24	1.65	3.3	VSR 30-24
24	2.5	5	VSR 60-24
24	5	10	VSR 120-24
24	7.5	15	VSR 170-24
24	14	28	VSR 330-24
48	0.2	0.4	VSR 10-48
48	0.45	0.9	VSR 20-48
48	0.75	1.5	VSR 30-48
48	1.25	2.5	VSR 60-48
48	2.5	5	VSR 120-48
48	3.75	7.5	VSR 170-48
48	7	14	VSR 330-48



– 110 V AC and 230 V AC input, auto select
– 3750 V_{rms} input to output isolation
– Excellent line/load regulation
– High level of electromagnetic compatibility
– Safety according to EN 60950, UL 478 and CSA 22.2



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PSR-Family

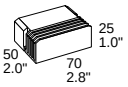
No input to output isolation
Single output of 5...36 V DC
Input voltage up to 80 V DC
PCB or chassis mount
As negative regulators: NSR (A01)
See Data Book, chapter 4.2



Output voltage $U_{o\,nom}$ [V]	Output current $I_{o\,nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\,nom}$ [V]	Efficiency η [%]	Type	Options
5	5	7...35	20	82	PSA 55-7	-9, i, P, R, Y
5	4	7...40	20	82	PSR 54-7	-9, i, P, R, Y
5	3	8...80	40	77	PSR 53-7	-9, i, P, R, Y
12	2.5	15...80	40	86	PSR 122.5-7	-9, i, P, R, Y
15	2.5	19...80	40	88	PSR 152.5-7	-9, i, P, R, Y
24	2	29...80	50	91	PSR 242-7	-9, i, P, R, Y
36	2	42...80	60	94	PSR 362-7	-9, i, P, R, Y

– Very good dynamic properties
– Input undervoltage cut-out
– Low input-output differential voltage
– Temperature range -7: –25...71 °C
– No derating
– Continuous no load/short-circuit proof
– Safety according to IEC 950, EN 60950

Description of options:
-9 Ambient temperature range –40...71 °C
R External output voltage adjustment
Y Small soldering pins (0.5 × 1 mm)
P Potentiometer
i Inhibit



PSB-Family

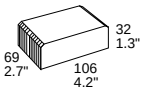
No input to output isolation
Single output of 5.1...36 V DC
Input voltage up to 80 V DC
PCB or chassis mount
See Data Book, chapter 4.2



Output voltage $U_{o\,nom}$ [V]	Output current $I_{o\,nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\,nom}$ [V]	Efficiency η [%]	Type	Options
5.1	7	7...40	20	84	PSB 5A7-7iR	-9, L, P, C
5.1	6	8...80	40	81	PSB 5A6-7iR	-9, L, P, C
12	5	15...80	40	90	PSB 125-7iR	-9, L, P, C
15	5	19...80	40	92	PSB 155-7iR	-9, L, P, C
24	5	29...80	50	95	PSB 245-7iR	-9, L, P, C
36	5	42...80	60	96	PSB 365-7iR	-9, L, P, C

– Very good dynamic properties
– Input undervoltage cut-out
– Inhibit and output voltage control (iR)
– Temperature range -7: –25...71 °C
– No derating
– Continuous no-load/short-circuit proof
– Safety according to IEC 950, EN 60950

Description of options:
-9 Ambient temperature range –40...71 °C
L Input filter
P Potentiometer
C Thyristor-Crowbar



PSC-Family

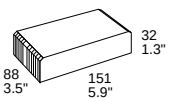
No input to output isolation
Single output of 5.1...36 V DC
Input voltage up to 80 V DC
PCB or chassis mount
As negative regulators NSR (C03)
See Data Book, chapter 4.2



Output voltage $U_{o\,nom}$ [V]	Output current $I_{o\,nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\,nom}$ [V]	Efficiency η [%]	Type	Options
5.1	12	7...40	20	83	PSC 5A12-7iR	-9, L, P, C, D
5.1	10	8...80	40	79	PSC 5A10-7iR	-9, L, P, C, D
12	8	15...80	40	90	PSC 128-7iR	-9, L, P, C, D
15	8	19...80	40	91	PSC 158-7iR	-9, L, P, C, D
24	8	29...80	50	94	PSC 248-7iR	-9, L, P, C, D
36	8	42...80	60	96	PSC 368-7iR	-9, L, P, C, D

– Very good dynamic properties
– Input undervoltage cut-out
– Inhibit and output voltage control (iR)
– Temperature range -7: –25...71 °C
– No derating
– Continuous no-load/short-circuit proof
– Safety according to IEC 950, EN 60950

Description of options:
-9 Ambient temperature range –40...71 °C
D "Save Data" undervoltage monitor
C Thyristor-Crowbar
P Potentiometer
L Input filter



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PSL-Family

No input to output isolation
Single output of 5.1...36 V DC
Input voltage up to 80 V DC
19" rack or chassis mount
See Data Book, chapter 5.2

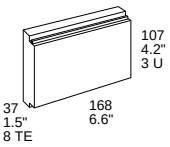


Output voltage $U_{o\ nom}$ [V]	Output current $I_{o\ nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\ nom}$ [V]	Efficiency η [%]	Type	Options
5.1	12	7...40	20	83	PSL 5A12-7R	-9, L, i, P, C, D, A
5.1	10	8...80	40	76	PSR 5A10-7R	-9, L, i, P, C, D, A
12	8	15...80	40	89	PSL 128-7R	-9, L, i, P, C, D, A
15	8	19...80	40	90	PSL 158-7R	-9, L, i, P, C, D, A
24	8	29...80	50	92	PSL 248-7R	-9, L, i, P, C, D, A
36	8	42...80	60	94	PSL 368-7R	-9, L, i, P, C, D, A

- Wide input voltage range
- Very good dynamic properties
- Input undervoltage cut-out
- Output voltage control (R)
- Temperature range -7: –25...71 °C
- No derating
- Continuous no-load/short-circuit proof
- Safety according to IEC 950, EN 60950

Description of options:

-9 Ambient temperature range –40...71 °C
D "Save Data" undervoltage monitor
C Thyristor-Crowbar
P Potentiometer
i Inhibit input
A Test sockets
L Input filter



PSK- and PSS-Family

No input to output isolation
Single output of 5.1,...36 V DC
Input voltage up to 80 V DC
19" rack or chassis mount
See Data Book, chapter 5.2



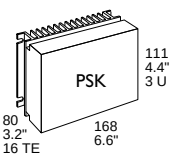


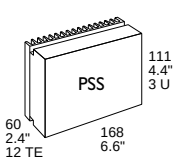
Output voltage $U_{o\ nom}$ [V]	Output current $I_{o\ nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\ nom}$ [V]	Efficiency η [%]	Type	Options
5.1	25	8...40	20	85	PSK 5A25-7	-9, E, P, C, B, B1
5.1	20	8...80	40	80	PSK 5A20-7	-9, E, P, C, B, B1
5.1	16	8...80	40	80	PSK 5A16-7	-9, E, P, C, B, B1
5.1	12	8...80	40	80	PSS 5A12-7	-9, E, P, C, B, B1
12 (15)	20	15...80	40	90	PSK 1220-7	-9, E, P, C, B, B1
12 (15)	16	15...80	40	90	PSK 1216-7	-9, E, P, C, B, B1
12 (15)	12	15...80	40	90	PSS 1212-7	-9, E, P, C, B, B1
24	20	29...80	50	94	PSK 2420-7	-9, E, P, C, B, B1
24	16	29...80	50	94	PSK 2416-7	-9, E, P, C, B, B1
24	12	29...80	50	94	PSS 2412-7	-9, E, P, C, B, B1
36	20	42...80	60	96	PSK 3620-7	-9, E, P, C, B, B1
36	16	42...80	60	96	PSK 3616-7	-9, E, P, C, B, B1
36	12	42...80	60	96	PSS 3612-7	-9, E, P, C, B, B1

- Input undervoltage cut-out
- Output sense lines and current sharing
- Fast dynamic response
- Continuous no-load/short-circuit proof
- Temperature range -7: –25...71 °C
- No derating
- Ext. output voltage adjustment and inhibit
- Safety according to IEC 950, EN 60950

Description of options:

-9 Ambient temperature range –40...71 °C
E Inrush current limitation
P Potentiometer
C Thyristor-Crowbar
B Cooling plate large
B1 Cooling plate small





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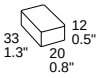
IMP 3-Family

3 watt DC-DC converter
Input to output isolation
1 and 2 output up to 30 V DC
Input voltage up to 72 V DC
See Data Book, chapter 6.2

Output voltage 1, 2 $U_{o\ nom}$ [V]	Output current 1, 2 $I_{o\ nom}$ [mA]	Input voltage $U_{i\ nom}$ [V DC]	Input voltage range U_i [V DC]	Rated power T_A = 71°C $P_{o\ tot}$ [W]	Type Isolation 1500 V DC/1060 V_{rms}
5	500	24	9...36	2.5	24 IMP 3-05-7
12	250	24	9...36	3	24 IMP 3-12-7
15	200	24	9...36	3	24 IMP 3-15-7
±5	±250	24	9...36	2.5	24 IMP 3-0505-7
±12	±125	24	9...36	3	24 IMP 3-1212-7
±15	±100	24	9...36	3	24 IMP 3-1515-7
5	500	48	18...72	2.5	48 IMP 3-05-7
12	250	48	18...72	3	48 IMP 3-12-7
15	200	48	18...72	3	48 IMP 3-15-7
±5	±250	48	18...72	2.5	48 IMP 3-0505-7
±12	±125	48	18...72	3	48 IMP 3-1212-7
±15	±100	48	18...72	3	48 IMP 3-1515-7



- Wide input voltage range
- Efficient input filter
- Temperature range -7: –25...71°C
- No derating
- High reliability
- Continuous no-load
- Short-circuit proof
- SD shutdown input



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IBEK 6 Watt-Family

6 watt DC-DC converters
Input to output isolation
1 and 2 output up to 30 V DC
Input voltage up to 48 V DC
See Data Book, chapter 6.2

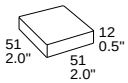
Output voltage $U_{o\ nom}$ [V]	Output current $I_{o\ nom}$ [mA]	Type Input voltage 5 V DC	Type Input voltage 12 V DC	Type Input voltage 15 V DC	Option Pin config.
5	1000	5 ICR 5-05-T	12 ICR 5-05-T	15 ICR 5-05-T	S, C, B
12	500	5 ICR 6-12-T	12 ICR 6-12-T	15 ICR 6-12-T	S, C, B
15	400	5 ICR 6-15-T	12 ICR 6-15-T	15 ICR 6-15-T	S, C, B
±12	±250	5 ICR 6-1212-T	12 ICR 6-1212-T	15 ICR 6-1212-T	S, C, B
±15	±200	5 ICR 6-1515-T	12 ICR 6-1515-T	15 ICR 6-1515-T	S, C, B

Output voltage $U_{o\ nom}$ [V]	Output current $I_{o\ nom}$ [mA]	Type Input voltage 24 V DC	Type Input voltage 28 V DC	Type Input voltage 48 V DC	Option Pin config.
5	1000	24 ICR 5-05-T	28 ICR 5-05-T	48 ICR 5-05-T	S, C, B
12	500	24 ICR 6-12-T	28 ICR 6-12-T	48 ICR 6-12-T	S, C, B
15	400	24 ICR 6-15-T	28 ICR 6-15-T	48 ICR 6-15-T	S, C, B
±12	±250	24 ICR 6-1212-T	28 ICR 6-1212-T	48 ICR 6-1212-T	S, C, B
±15	±200	24 ICR 6-1515-T	28 ICR 6-1515-T	48 ICR 6-1515-T	S, C, B



- Efficient Pi input filter
- Standard temperature range T: –25...71 °C
- Continuous no-load
- Short-circuit proof
- Linear voltage regulator at output
- High reliability
- Optimal dynamic response

Description of option and pin configurations
S Ambient temperature range –40...85 °C
C Pin configuration standard
B Pin configuration special



IMS-Family

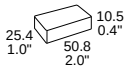
7 watt DC-DC converters
Input to output isolation
1 and 2 output up to 48 V DC
Input voltage up to 75 V DC
See Data Book, chapter 6.2

Output voltage 1, 2 $U_{o\ nom}$ [V]	Output current 1, 2 $I_{o\ nom}$ [mA]	Type Input voltage 14...35 V DC	Type Input voltage 36...75 V DC	Options
3.3	1200	24 IMS 7-03-7	48 IMS 7-03-7	M, C
5	1200	24 IMS 7-05-7	48 IMS 7-05-7	M, C
5, 5	700, 700	24 IMS 7-05-05-7	48 IMS 7-05-05-7	X, M, C
12, 12	300, 300	24 IMS 7-12-12-7	48 IMS 7-12-12-7	X, M, C
15, 15	240, 240	24 IMS 7-15-15-7	48 IMS 7-15-15-7	X, M, C
24, 24	150, 150	24 IMS 7-24-24-7	48 IMS 7-24-24-7	X, M, C



- High reliability and no derating
- Input to output isolation 1500 V DC
- Temperature range -7: –25...71 °C
- Inhibit input
- Adjustable output voltage
- Outputs no-load and short-circuit proof
- Safety according to IEC 950, EN 60950

Description of options
X LED "Out OK" indicator
M Surface mount version
C C-pinout



3.2

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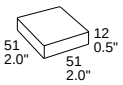
IMP 12-Family

12 watt DC-DC converter
Input to output isolation
1 and 2 output up to 30 V DC
Input voltage up to 72 V DC
For details contact sales office

Output voltage 1, 2 $U_{o\ nom}$ [V]	Output current 1, 2 $I_{o\ nom}$ [mA]	Input voltage $U_{i\ nom}$ [V DC]	Input voltage range U_i [V DC]	Rated power T_A = 71 °C $P_{o\ tot}$ [W]	Type Isolation 1500 V DC / 1060 V_{rms}
5	2000	24	10...36	10	24 IMP 12-05-7
12	1000	24	10...36	12	24 IMP 12-12-7
15	800	24	10...36	12	24 IMP 12-15-7
±5	±1000	24	10...36	10	24 IMP 12-0505-7
±12	±500	24	10...36	12	24 IMP 12-1212-7
±15	±400	24	10...36	12	24 IMP 12-1515-7
5	2000	48	18...72	10	48 IMP 12-05-7
12	1000	48	18...72	12	48 IMP 12-12-7
15	800	48	18...72	12	48 IMP 12-15-7
±5	±1000	48	18...72	10	48 IMP 12-0505-7
±12	±500	48	18...72	12	48 IMP 12-1212-7
±15	±400	48	18...72	12	48 IMP 12-1515-7



- Wide input voltage range
- Efficient input filter
- Temperature range -7: –25...71 °C
- No derating
- High reliability
- Continuous no-load
- Short-circuit proof



SR-Family

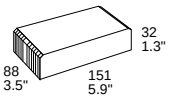
20 watt DC-DC converters
Input to output isolation
Single output 5...24 V DC
Input voltage up to 180 V DC
See Data Book, chapter 6.2

Output voltage $U_{o\ nom}$ [V]	Output current $I_{o\ nom}$ [A]	Type Input voltage 19...45 V DC	Type Input voltage 38...90 V DC	Type Input voltage 76...180 V DC	Options
5	4	BSR 2005-7	CSR 2005-7	DSR 2005-7	-6, R, i, P
12	1.67	BSR 2012-7	CSR 2012-7	DSR 2012-7	-6, R, i, P
15	1.34	BSR 2015-7	CSR 2015-7	DSR 2015-7	-6, R, i, P
24	0.84	BSR 2024-7	CSR 2024-7	DSR 2024-7	-6, R, i, P



- Full input to output isolation 2,5 kV_{rms}
- High efficiency up to 81%
- Temperature range -7: –25...71 °C
- Efficient input filter
- Very good dynamic characteristics
- Continuous no-load
- Short-circuit proof

Description of options
-6 Hermetic semi-conductors
R Shifted input voltage range
P Potentiometer for U_o
i Inhibit input



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Q-Family

100 (145) watt DC-DC converters
Input to output isolation
1 or 2 output up to 48 V DC
Input voltage up to 165 V DC
See Data Book, chapter 8.2

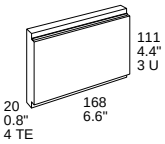
Output voltage 1, 2 $U_{o\,nom}$ [V]	Output current 1, 2 $I_{o\,nom}$ [A]	Output current $T_A = 50°C$ $I_{o\,max}$ [A]	Type Input voltage 14.4...36 V DC	Type Input voltage 22...54 V DC	Type Input voltage 35...75 V DC	Opt.
5.1	16	20	BQ 1001-7R	GQ 1001-7R	CQ 1001-7R	-9, P
12	8	10	BQ 2320-7R	GQ 2320-7R	CQ 2320-7R	-9, P
15	6.6	8	BQ 2540-7R	GQ 2540-7R	CQ 2540-7R	-9, P
24	4.4	6	BQ 2660-7R	GQ 2660-7R	CQ 2660-7R	-9, P
24	4	5	BQ 2320-7R	GQ 2320-7R	CQ 2320-7R	-9, P
30	3.3	4	BQ 2540-7R	GQ 2540-7R	CQ 2540-7R	-9, P
48	2.2	3	BQ 2660-7R	GQ 2660-7R	CQ 2660-7R	-9, P
12, 12	4, 4	5, 5	BQ 2320-7R	GQ 2320-7R	CQ 2320-7R	-9, P
15, 15	3.3, 3.3	4, 4	BQ 2540-7R	GQ 2540-7R	CQ 2540-7R	-9, P
24, 24	2.2, 2.2	3, 3	BQ 2660-7R	GQ 2660-7R	CQ 2660-7R	-9, P

Output voltage 1, 2 $U_{o\,nom}$ [V]	Output current 1, 2 $I_{o\,nom}$ [A]	Output current $T_A = 50°C$ $I_{o\,max}$ [A]	Type Input voltage 43...108 V DC	Type Input voltage 65...150 V DC	Options
5.1	16	20	DQ 1001-7R	EQ 1001-7R	-9, P
12	8	10	DQ 2320-7R	EQ 2320-7R	-9, P
15	6.6	8	DQ 2540-7R	EQ 2540-7R	-9, P
24	4.4	6	DQ 2660-7R	EQ 2660-7R	-9, P
24	4	5	DQ 2320-7R	EQ 2320-7R	-9, P
30	3.3	4	DQ 2540-7R	EQ 2540-7R	-9, P
48	2.2	3	DQ 2660-7R	EQ 2660-7R	-9, P
12, 12	4, 4	5, 5	DQ 2320-7R	EQ 2320-7R	-9, P
15, 15	3.3, 3.3	4, 4	DQ 2540-7R	EQ 2540-7R	-9, P
24, 24	2.2, 2.2	3, 3	DQ 2660-7R	EQ 2660-7R	-9, P



– Extremely high efficiency up to 91%
– High input to output isolation 2 kV_{rms}
– Temperature range -7: –25...71 °C
– Redundant operation
– Auto current sharing
– Extremely low inrush current, hot plug-in
– Output voltage control (R) and inhibit
– Safety according to IEC 950, EN 41003

Description of options
-9 Ambient temperature range –40...71 °C
P Potentiometer for U_o



3.2

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VEW-Family

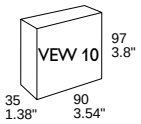
15/20 watt AC-DC converters
Input to output isolation
Single output up to 48 V DC
Input voltage up to 265 V AC
See Data Book, chapter 9.2

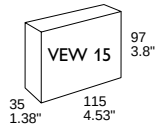


Output voltage $U_{o\,nom}$ [V]	Output current $T_A = 60°C$ $I_{o\,nom}$ [A]	Output current $T_A = 50°C$ $I_{o\,max}$ [A]	Type Input voltage 85...265 V
5	1.5	3	VEW 10-05
12	0.7	1.4	VEW 10-12
15	0.55	1.1	VEW 10-15
24	0.35	0.7	VEW 10-24
28	0.3	0.6	VEW 10-28
48	0.175	0.35	VEW 10-48

Output voltage $U_{o\,nom}$ [V]	Output current $T_A = 60°C$ $I_{o\,nom}$ [A]	Output current $T_A = 50°C$ $I_{o\,max}$ [A]	Type Input voltage 85...265 V
5	2.5	5	VEW 15-05
12	1.1	2.2	VEW 15-12
15	0.9	1.8	VEW 15-15
24	0.6	1.2	VEW 15-24
28	0.5	1	VEW 15-28
48	0.3	0.6	VEW 15-48

- 110 V AC and 230 V AC input, auto select
- 3750 V_{rms} input to output isolation
- Excellent line/load regulation
- High level of electromagnetic compatibility





VEW-Family

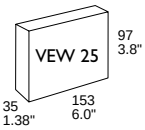
50/100 watt AC-DC converters
Input to output isolation
Single output up to 48 V DC
Input voltage up to 265 V AC
See Data Book, chapter 10.2

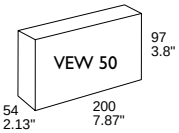


Output voltage $U_{o\,nom}$ [V]	Output current $T_A = 60°C$ $I_{o\,nom}$ [A]	Output current $T_A = 50°C$ $I_{o\,max}$ [A]	Type Input voltage 85...265 V
5	5	10	VEW 25-05
12	2.2	4.4	VEW 25-12
15	1.8	3.6	VEW 25-15
24	1.2	2.4	VEW 25-24
28	1	2	VEW 25-28
48	0.6	1.2	VEW 25-48

Output voltage $U_{o\,nom}$ [V]	Output current $T_A = 60°C$ $I_{o\,nom}$ [A]	Output current $T_A = 50°C$ $I_{o\,max}$ [A]	Type Input voltage 85...265 V
5	10	20	VEW 50-05
12	4.2	8.4	VEW 50-12
15	3.35	6.7	VEW 50-15
24	2.1	4.2	VEW 50-24
28	1.8	3.6	VEW 50-28
48	1	2	VEW 50-48

- 110 V AC and 230 V AC input, auto select
- 3750 V_{rms} input to output isolation
- Excellent line/load regulation
- High level of electromagnetic compatibility





VEW 1-Ph.-Family

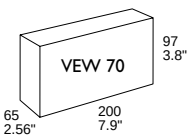
150...600 watt AC-DC converters
Input to output isolation
Single output up to 48 V DC
Input voltage up to 265 V AC
See databook, chapter 11.2

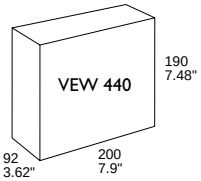


Output voltage $U_{o\,nom}$ [V]	Output current $T_A = 60°C$ $I_{o\,nom}$ [A]	Output current $T_A = 50°C$ $I_{o\,max}$ [A]	Type Input voltage 85...265 V
2	42	60	VEW 200-02
2	84	120	VEW 440-02
5	15	30	VEW 70-05
5	42	60	VEW 200-05
5	84	120	VEW 440-05
12	6.25	12.5	VEW 70-12
12	18.9	27	VEW 200-12
12	37.1	53	VEW 440-12
15	5	10	VEW 70-15
15	15.4	22	VEW 200-15
15	30.1	43	VEW 440-15

Output voltage $U_{o\,nom}$ [V]	Output current $T_A = 60°C$ $I_{o\,nom}$ [A]	Output current $T_A = 50°C$ $I_{o\,max}$ [A]	Type Input voltage 85...265 V
24	3.15	6.3	VEW 70-24
24	9.8	14	VEW 200-24
24	18.9	27	VEW 440-24
28	2.7	5.4	VEW 70-28
28	8.4	12	VEW 200-28
28	16.1	23	VEW 440-28
48	1.58	3.15	VEW 70-48
48	4.9	7	VEW 200-48
48	9.1	13	VEW 440-48

- 110 V AC and 230 V AC input, auto select
- 3750 V_{rms} input to output isolation
- Excellent line/load regulation
- High level of electromagnetic compatibility
- Output current sharing (master-slave)
- Inhibit function
- Sense lines





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VEW 3-Ph.-Family

1500/3000 W AC-DC converters
Input to output isolation
Single output up to 48 V DC
Input voltage up to 265 V AC
See Data Book, chapter 11.2

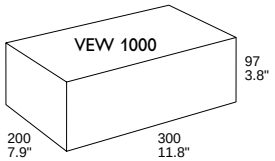


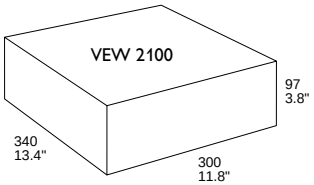


Output voltage $U_{o\ nom}$ [V]	Output current $T_A = 60°C$ $I_{o\ nom}$ [A]	Output current $T_A = 50°C$ $I_{o\ max}$ [A]	Type Input voltage 3-ph. 170...265 V
5	210	300	VEW 1000-05
12	87.5	125	VEW 1000-12
15	70	100	VEW 1000-15
24	44.1	63	VEW 1000-24
48	22.4	32	VEW 1000-48

Output voltage $U_{o\ nom}$ [V]	Output current $T_A = 60°C$ $I_{o\ nom}$ [A]	Output current $T_A = 50°C$ $I_{o\ max}$ [A]	Type Input voltage 3-ph. 170...265 V
5	420	600	VEW 2100-05
12	175	250	VEW 2100-12
15	140	200	VEW 2100-15
24	87.5	125	VEW 2100-24
48	44.1	63	VEW 2100-48

- 110 V AC and 230 V AC input, jumper select, single phase
- 230 V AC input, 3-phases
- 3750 V_{rms} input to output isolation, 1-phase
  2500 V_{rms} input to output isolation, 3-phase
- Excellent line/load regulation
- High level of electromagnetic compatibility
- Output current sharing (master-slave)
- Programmable output voltage and inhibit
- Sense lines





3.2

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PSA-Family

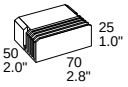
No input to output isolation
Single output of 5.1...24 V DC
Input voltage up to 60 V DC
PCB or chassis mount
See Data Book, chapter 4.3



Output voltage $U_{o\,nom}$ [V]	Output current $I_{o\,nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\,nom}$ [V]	Efficiency η [%]	Type	Option package
5.1	5	7...35	20	81	PSA 5A5-2	iRY
5.1	2	8...40	20	74	PSA 5A2-2	iRY
12	3	15...40	20	86	PSA 123-2	iRY
15	3	19...40	30	88	PSA 153-2	iRY
24	2.5	29...60	40	91	PSA 242.5-2	iRY

– Very good dynamic properties
– Input undervoltage cut-out
– Low input-output differential voltage
– Continuous no-load/short-circuit proof
– Temperature range -2: –10...50 °C
– No derating
– Safety according to IEC 950, EN 60950

Description of option package:
i Inhibit
R External output voltage adjustment
Y Small soldering pins (0.5 × 1 mm)



PSB-Family

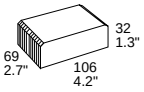
No input to output isolation
Single output of 5.1...24 V DC
Input voltage up to 60 V DC
PCB or chassis mount
See Data Book, chapter 4.3



Output voltage $U_{o\,nom}$ [V]	Output current $I_{o\,nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\,nom}$ [V]	Efficiency η [%]	Type	Option package
5.1	8	7...40	20	81	PSB 5A8-2	iR
12	6	15...40	20	90	PSB 126-2	iR
15	6	19...40	30	92	PSB 156-2	iR
24	6	29...60	40	95	PSB 246-2	iR

– Very good dynamic properties
– Input undervoltage cut-out
– Low input-output differential voltage
– Continuous no-load/short-circuit proof
– Temperature range -2: –10...50 °C
– No derating
– Safety according to IEC 950, EN 60950

Description of option package:
i Inhibit
R External output voltage adjustment



PSC-Family

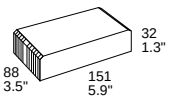
No input to output isolation
Single output of 5.1...24 V DC
Input voltage up to 60 V DC
PCB or chassis mount
See Data Book, chapter 4.3



Output voltage $U_{o\,nom}$ [V]	Output current $I_{o\,nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\,nom}$ [V]	Efficiency η [%]	Type	Option package
5.1	11	8...40	20	79	PSC 5A11-2	iR
12	9	15...40	20	90	PSC 129-2	iR
15	9	19...40	30	91	PSC 159-2	iR
24	9	29...60	40	94	PSC 249-2	iR

– Very good dynamic properties
– Input undervoltage cut-out
– Low input-output differential voltage
– Continuous no-load/short-circuit proof
– Temperature range -2: –10...50 °C
– No derating
– Safety according to IEC 950, EN 60950

Description of option package:
i Inhibit
R External output voltage adjustment



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PSL-Family

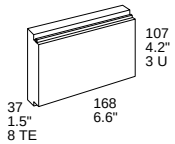
No input to output isolation
Single output of 5.1...24 V DC
Input voltage up to 60 V DC
19" rack or chassis mount
See databook, chapter 5.3

Output voltage $U_{o\ nom}$ [V]	Output current $I_{o\ nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\ nom}$ [V]	Efficiency η [%]	Type
5.1	11	8...40	20	79	PSL 5A11-2R
12	9	15...40	20	90	PSL 129-2R
15	9	19...40	30	91	PSL 159-2R
24	9	29...60	40	94	PSL 249-2R



– Wide Input voltage range
– Very good dynamic properties
– Input undervoltage cut-out
– External output voltage adjustment (R)
– Low input-output differenal voltage
– Continuous no-load/short-circuit proof
– No derating
– Temperature range -2: –10...50 °C
– Safety according to IEC 950, EN 60950

No option available



PSS-Family

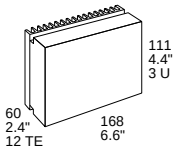
No input to output isolation
Single output of 5.1...24 V DC
Input voltage up to 60 V DC
19" rack or chassis mount
See Data Book, chapter 5.3

Output voltage $U_{o\ nom}$ [V]	Output current $I_{o\ nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\ nom}$ [V]	Efficiency η [%]	Type	Options
5.1	14	8...40	20	80	PSS 5A14-2	B, B1
12 (15)	14	16...40	30	90	PSS 1214-2	B, B1
24	14	29...60	40	94	PSS 2414-2	B, B1



– Input undervoltage cut-out
– Output sense lines and current sharing
– Fast dynamic response
– Continuous no-load/short-circuit proof
– Temperature range -2: –10...50 °C
– No derating
– Ext. output voltage adjustment and inhibit
– Safety according to IEC 950, EN 60950

Description of options:
B Cooling plate large
B1 Cooling plate small



PSK-Family

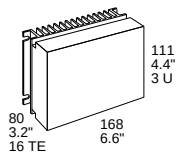
No input to output isolation
Single output of 5.1...24 V DC
Input voltage up to 60 V DC
19" rack or chassis mount
See Data Book, chapter 5.3

Output voltage $U_{o\ nom}$ [V]	Output current $I_{o\ nom}$ [A]	Input voltage U_i [V]	Input voltage $U_{i\ nom}$ [V]	Efficiency η [%]	Type	Options
5.1	18	8...40	20	80	PSS 5A18-2	B, B1
12 (15)	18	16...40	30	90	PSK 1218-2	B, B1
24	18	29...60	40	94	PSK 2418-2	B, B1



– Input undervoltage cut-out
– Output sense lines and current sharing
– Fast dynamic response
– Continuous no-load/short-circuit proof
– Temperature range -2: –10...50 °C
– No derating
– Ext. output voltage adjustment and inhibit
– Safety according to IEC 950, EN 60950

Description of options:
B Cooling plate large
B1 Cooling plate small



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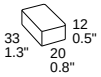
IMR 3-Family

3 watt DC-DC converters
Input to output isolation
1 and 2 output up to 30 V DC
Input voltage up to 72 V DC
See Data Book, chapter 6.3



Output voltage $U_{o\,nom}$ [V]	Output current $I_{o\,nom}$ [mA]	Type Input voltage 9...18 V DC	Type Input voltage 18...36 V DC	Type Input voltage 20...60 V DC	Type Input voltage 36...72 V DC
5	500	12 IMR 3-05-2	24 IMR 3-05-2	40 IMR 3-05-2	48 IMR 3-05-2
12	250	12 IMR 3-12-2	24 IMR 3-12-2	40 IMR 3-12-2	48 IMR 3-12-2
15	200	12 IMR 3-15-2	24 IMR 3-15-2	40 IMR 3-15-2	48 IMR 3-15-2
±5	±250	12 IMR 3-0505-2	24 IMR 3-0505-2	40 IMR 3-0505-2	48 IMR 3-0505-2
±12	±125	12 IMR 3-1212-2	24 IMR 3-1212-2	40 IMR 3-1212-2	48 IMR 3-1212-2
±15	±100	12 IMR 3-1515-2	24 IMR 3-1515-2	40 IMR 3-1515-2	48 IMR 3-1515-2

– High efficiency up to 75%
– Temperature range -2: –10...50 °C
  extra temperature range on request
– Short-circuit proof
– No derating (exept 12 IMR 3 → 80%)



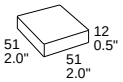
IMR 6-Family

6 watt DC-DC converters
Input to output isolation
1 and 2 output up to 30 V DC
Input voltage up to 72 V DC
See Data Book, chapter 6.3



Output voltage $U_{o\,nom}$ [V]	Output current $I_{o\,nom}$ [mA]	Type Input voltage 9...18 V DC	Type Input voltage 18...36 V DC	Type Input voltage 20...60 V DC	Type Input voltage 36...72 V DC
5	1000	12 IMR 6-05-2	24 IMR 6-05-2	40 IMR 6-05-2	48 IMR 6-05-2
12	500	12 IMR 6-12-2	24 IMR 6-12-2	40 IMR 6-12-2	48 IMR 6-12-2
15	400	12 IMR 6-15-2	24 IMR 6-15-2	40 IMR 6-15-2	48 IMR 6-15-2
±5	±500	12 IMR 6-0505-2	24 IMR 6-0505-2	40 IMR 6-0505-2	48 IMR 6-0505-2
±12	±250	12 IMR 6-1212-2	24 IMR 6-1212-2	40 IMR 6-1212-2	48 IMR 6-1212-2
±15	±200	12 IMR 6-1515-2	24 IMR 6-1515-2	40 IMR 6-1515-2	48 IMR 6-1515-2

– High efficiency up to 75%
– Temperature range -2: –10...50 °C
  extra temperature range on request
– Short-circuit proof
– No derating



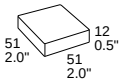
IMR 15-Family

15 watt DC-DC converters
Input to output isolation
1 and 2 output up to 30 V DC
Input voltage up to 72 V DC
See Data Book, chapter 6.3



Output voltage $U_{o\,nom}$ [V]	Output current $I_{o\,nom}$ [mA]	Type Input voltage 9...18 V DC	Type Input voltage 18...36 V DC	Type Input voltage 36...72 V DC
5	3000	12 IMR 15-05-2	24 IMR 15-05-2	48 IMR 15-05-2
12	1250	12 IMR 15-12-2	24 IMR 15-12-2	48 IMR 15-12-2
15	1000	12 IMR 15-15-2	24 IMR 15-15-2	48 IMR 15-15-2
±12	±625	12 IMR 15-1212-2	24 IMR 15-1212-2	48 IMR 15-1212-2
±15	±500	12 IMR 15-1515-2	24 IMR 15-1515-2	48 IMR 15-1515-2

– High efficiency up to 82%
– Temperature range -2: –10...50 °C
– Short-circuit proof
– No derating (exept 12 IMR 15 → 80%)



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H-Family

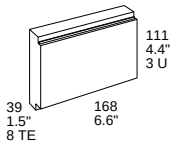
50 watt DC-DC converters
Input to output isolation
1, 2 or 3 output up to 48 V DC
Input voltage up to 60 V DC
See Data Book, chapter 7.3

Output voltage 1, 2, 3 $U_{o\ nom}$ [V]	Output current 1, 2, 3 $I_{o\ nom}$ [A]	Type Input voltage 9...15 V DC	Type Input voltage 18...30 V DC	Type Input voltage 36...60 V DC	Options
5.1	8	12H1001-2R	24H1001-2R	48H1001-2R	D, V
12	4	12H1301-2R	24H1301-2R	48H1301-2R	D
15	3.4	12H1501-2R	24H1501-2R	48H1501-2R	D
24	2	12H1601-2R	24H1601-2R	48H1601-2R	D
48	1	12H1901-2R	24H1901-2R	48H1901-2R	D
12, 12	2, 2	12H2320-2	24H2320-2	48H2320-2	D
15, 15	1.7, 1.7	12H2540-2	24H2540-2	48H2540-2	D
5.1, 12, 12	5, 0.7, 0.7	12H3020-2	24H3020-2	48H3020-2	D, V
5.1, 15, 15	5, 0.6, 0.6	12H3040-2	24H3040-2	48H3040-2	D, V



– Wide input voltage range suitable for battery operation
– Output voltage control (R) and inhibit
– Temperature range -2: –10...50 °C
– Built-in surge, transient suppression circuit
– 3 kV_{rms} input-output electric strength test
– Outputs individually isolated, controlled
– Outputs fully protected against overload
– Safety according to IEC 950, EN 60950

Description of options
D Save data signal
V ACFAIL signal



Q-Family

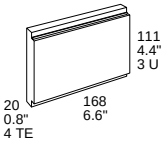
100 watt DC-DC converters
Input to output isolation
1 or 2 output up to 48 V DC
Input voltage up to 75 V DC
See Data Book, chapter 7.3

Output voltage 1, 2 $U_{o\ nom}$ [V]	Output current 1, 2 $I_{o\ nom}$ [A]	Type Input voltage 16...36 V DC	Type Input voltage 38...75 V DC	Option
5.1	16	24Q1001-2R	48Q1001-2R	P
12	8	24Q2320-2R	48Q2320-2R	P
15	6.6	24Q2540-2R	48Q2540-2R	P
24	4.4	24Q2660-2R	48Q2660-2R	P
24	4	24Q2320-2R	48Q2320-2R	P
30	3.3	24Q2540-2R	48Q2540-2R	P
48	2.2	24Q2660-2R	48Q2660-2R	P
12, 12	4, 4	24Q2320-2R	48Q2320-2R	P
15, 15	3.3, 3.3	24Q2540-2R	48Q2540-2R	P
24, 24	2.2, 2.2	24Q2660-2R	48Q2660-2R	P



– Very high efficiency up to 86%
– High input to output isolation 2 kV_{rms}
– Temperature range -2: –10...50 °C
– Output voltage control (R) and inhibit
– Redundant operation
– Auto current sharing
– Extremely low inrush current, hot plug-in
– Safety according to IEC 950, EN 41003

Description of option
P Potentiometer for U_o



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H-Family

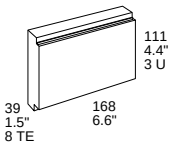
50 watt AC-DC converters
Input to output isolation
1, 2 or 3 output up to 48 V DC
Input voltage up to 255 V AC
See Data Book, chapter 10.3

Output voltage 1, 2, 3 $U_{o\,nom}$ [V]	Output current 1, 2, 3 $I_{o\,nom}$ [A]	Type Input voltage 85...132 V AC	Type Input voltage 187...255 V AC	Options
5.1	8	110H1001-2R	230H1001-2R	D,V
12	4	110H1301-2R	230H1301-2R	D
15	3.4	110H1501-2R	230H1501-2R	D
24	2	110H1601-2R	230H1601-2R	D
48	1	110H1901-2R	230H1901-2R	D
12, 12	2, 2	110H2320-2	230H2320-2	D
15, 15	1.7, 1.7	110H2540-2	230H2540-2	D
5.1, 12, 12	5, 0.7, 0.7	110H3020-2	230H3020-2	D,V
5.1, 15, 15	5, 0.6, 0.6	110H3040-2	230H3040-2	D,V



– Two input voltage ranges suitable for most AC mains
– Output voltage control (R)
– Temperature range -2: –10...50 °C
– Built-in surge, transient suppression circuit
– 3 kV_{rms} input-output electric strength test
– Outputs individually isolated, controlled
– Outputs fully protected against overload
– Safety according to IEC 950, EN 60950

Description of options
D Save data signal
V ACFAIL signal



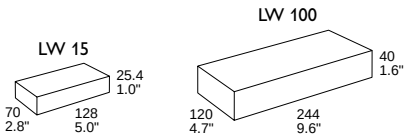
LW-Family

15...100 watt AC-DC converters
Input to output isolation
3 or 4 output up to 24 V DC
Input voltage up to 264 V AC
See Data Book, chapter 9.3 and 10.3

Output voltage 1, 2, 3, 4 $U_{o\,nom}$ [V]	Output current 1, 2, 3, 4 $I_{o\,nom}$ [A]	Rated power T_A = 40°C $P_{o\,tot}$ [W]	Type Input voltage 85...264 V AC
5, 12, 12	3, 0.5, 0.5	15	LW 15-01
5, 15, 15	3, 0.5, 0.5	15	LW 15-11
5, 12, 12	5, 1.2, 0.5	30	LW 30-01
5, 15, 15	5, 1.2, 0.5	30	LW 30-11
5, 12, 12	8, 1.5, 1	50	LW 50-01
5, 15, 15	8, 1.5, 1	50	LW 50-11
5, 12, 5	8, 1.5, 1	50	LW 50-21
5, 24, 12, 12	12, 2, 2, 1	100	LW 100-01
5, 12, 12, 12	12, 2, 2, 1	100	LW 100-02
5, 12, 12	12, 2, 2	100	LW 100-03
24, 12, 5, 12	3, 2, 2, 1	100	LW 100-04
5, 5, 12, 12	12, 0.5, 2, 1	100	LW 100-05
5, 5, 15, 15	7, 2, 2, 2	100	LW 100-06



– Universal or selectable AC input
– High input to output isolation 3.75 kV_{rms}
– Flex power topology
– Component derating for high reliability
– Safety according to EN 60950, UL 1950, CSA 22.2



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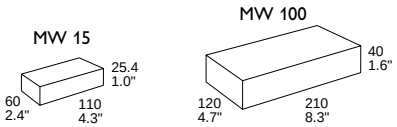
MWE-Family

15...100 watt AC-DC converters
Input to output isolation
3 or 4 output up to 24 V DC
Input voltage up to 264 V AC
See Data Book, chapter 9.3 and 10.3

Output voltage 1, 2, 3, 4 $U_{o\ nom}$ [V]	Output current 1, 2, 3, 4 $I_{o\ nom}$ [A]	Rated power T_A = 40 °C $P_{o\ tot}$ [W]	Type Input voltage 85...264 V AC
5, 12, 12	3, 0.5, 0.5	15	MWE 15-01
5, 15, 15	3, 0.5, 0.5	15	MWE 15-11
5, 12, 12	5, 1.2, 0.5	30	MWE 30-01
5, 15, 15	5, 1.2, 0.5	30	MWE 30-11
5, 12, 12	8, 1.5, 1	50	MWE 50-01
5, 15, 15	8, 1.5, 1	50	MWE 50-11
5, 12, 5	8, 1.5, 1	50	MWE 50-21
5, 24, 12, 12	12, 2, 2, 1	100	MWE 100-01
5, 12, 12, 12	12, 2, 2, 1	100	MWE 100-02
5, 12, 12	12, 2, 2	100	MWE 100-03
24, 12, 5, 12	3, 2, 2, 1	100	MWE 100-04
5, 5, 12, 12	12, 0.5, 2, 1	100	MWE 100-05
5, 5, 15, 15	7, 2, 2, 2	100	MWE 100-06



- Universal or selectable AC input
- High input to output isolation 3.75 kV_{rms}
- Flex power topology
- Component derating for high reliability
- Safety according to EN 60950, UL 1950, CSA 22.2



SWE-Family

5...100 watt AC-DC converters
Input to output isolation
Single output up to 48 V DC
Input voltage up to 264 V AC
See Data Book, chapter 9.3 and 10.3

Output voltage $U_{o\ nom}$ [V]	Output current T_A = 40 °C $I_{o\ nom}$ [A]	Type Input voltage 85...264 V AC	Config.
5	1	SWE 05-05 ..	FC
5	2	SWE 10-05 ..	F, FC
5	3	SWE 15-05 ..	C, F, FC
5	6	SWE 30-05 ..	C, F, FC
5	10	SWE 50-05 ..	C, F, FC
5	20	SWE 100-05 ..	C, F, FC
12	0.42	SWE 05-12 ..	FC
12	0.83	SWE 10-12 ..	F, FC
12	1.3	SWE 15-12 ..	C, F, FC
12	2.5	SWE 30-12 ..	C, F, FC
12	4.2	SWE 50-12 ..	C, F, FC
12	6.3	SWE 75-12 ..	C, F, FC
12	8.3	SWE 100-12 ..	C, F, FC

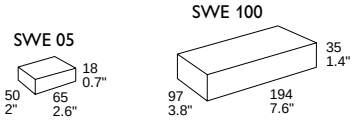
Output voltage $U_{o\ nom}$ [V]	Output current T_A = 40 °C $I_{o\ nom}$ [A]	Type Input voltage 85...264 V AC	Config.
15	0.67	SWE 10-15 ..	F, FC
15	1	SWE 15-15 ..	C, F, FC
15	2	SWE 30-15 ..	C, F, FC
15	3.4	SWE 50-15 ..	C, F, FC
15	5	SWE 75-15 ..	C, F, FC
15	6.7	SWE 100-15 ..	C, F, FC
24	0.42	SWE 10-24 ..	F, FC
24	0.63	SWE 15-24 ..	C, F, FC
24	1.33	SWE 30-24 ..	C, F, FC
24	2.1	SWE 50-24 ..	C, F, FC
24	3.1	SWE 75-24 ..	C, F, FC
24	4.2	SWE 100-24 ..	C, F, FC
48	1.6	SWE 75-48 ..	C, F, FC
48	2.1	SWE 100-48 ..	C, F, FC



Ordering example: SWE 15-12 FC

- Ultra thin and compact
- Input to output isolation 2 kV_{rms}
- Noise standard: meet FCC class A or B
- Safety according to EN 60950, UL 1950, CSA 22.2

Description of configurations:
C Case cover, terminal strip
F Open frame, terminal strip
FC Open frame, connector



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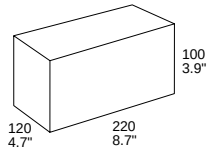
HK-Family

300 watt AC-DC converters
Input to output isolation
Single output up to 48 V DC
Input voltage up to 264 V AC
See Data Book, chapter 11.3



Output voltage $U_{o\ nom}$ [V]	Output current $I_{o\ nom}$ [A]	Rated power T_A = 40 °C $P_{o\ tot}$ [W]	Type Input voltage 85...264 V AC
5	60	300	HK 300-05
12	25	300	HK 300-12
15	20	300	HK 300-15
24	12.5	300	HK 300-24
36	9	300	HK 300-36
48	6.3	300	HK 300-48

– Universal input
– Power factor corrected
– Special functions, e.g. current sharing, power fail signal, remote control and sense lines
– Noise standards: meets EN 55011/55022 class B
– Safety according to UL 1950, CSA 22.2, EN 60951



VRW-Family

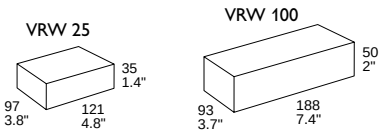
15...100 watt AC-DC converters
Input to output isolation
Single output up to 48 V DC
Input voltage up to 265 V AC
See databook, chapter 9.3 and 10.3

Output voltage $U_{o\ nom}$ [V]	Output current $I_{o\ nom}$ [A]	Rated power T_A = 50 °C $P_{o\ tot}$ [W]	Type Input voltage 85...265 V AC	Configurations
5	3	15	VRW 15-05	A, B, C
5	6	30	VRW 25-05	A, B, C
5	10	50	VRW 50-05	A, B, C
5	20	100	VRW 100-05	A
12	1.3	15	VRW 15-12	A, B, C
12	2.5	30	VRW 25-12	A, B, C
12	4.2	50	VRW 50-12	A, B, C
12	8.5	100	VRW 100-12	A
15	1	15	VRW 15-15	A, B, C
15	2.0	30	VRW 25-15	A, B, C
15	3.4	50	VRW 50-15	A, B, C
15	7	100	VRW 100-15	A
24	0.7	15	VRW 15-24	A, B, C
24	1.3	30	VRW 25-24	A, B, C
24	2.1	50	VRW 50-24	A, B, C
24	4.5	100	VRW 100-24	A
48	0.3	15	VRW 15-48	A, B, C
48	0.6	30	VRW 25-48	A, B, C
48	1	50	VRW 50-48	A, B, C
48	2.1	100	VRW 100-48	A



– AC input universal or selectable
– Input to output isolation 3000 V_{rms}
– Compact design
– Excellent line/load regulation
– High efficiency
– Safety according to EN 60950, UL 1950, CSA 22.2

Description of configurations:
Standard: Open frame, terminal block
A Chassis cover, terminal block
B Open frame, connector
C Chassis cover, connector



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VRW-Family

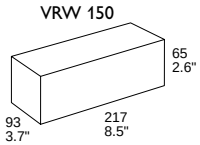
120...450 watt AC-DC converters
Input to output isolation
Single output up to 48 V DC
Input voltage up to 265 V AC
See Data Book, chapter 11.3

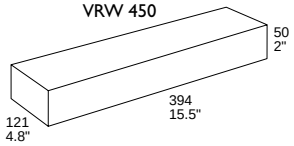
Output voltage $U_{o\ nom}$ [V]	Output current $I_{o\ nom}$ [A]	Rated power T_A = 40°C $P_{o\ tot}$ [W]	Type Input voltage 85...265 V AC	Configuration
3	40	120	VRW 200-03	A
3	60	180	VRW 300-03	A
5	30	150	VRW 150-05	A
5	40	200	VRW 200-05	A
5	60	300	VRW 300-05	A
5	90	450	VRW 450-05	A
12	13	150	VRW 150-12	A
12	19	200	VRW 200-12	A
12	26	300	VRW 300-12	A
12	40	450	VRW 450-12	A
15	10	150	VRW 150-15	A
15	15	200	VRW 200-15	A
15	21	300	VRW 300-15	A
15	32	450	VRW 450-15	A
24	6,5	150	VRW 150-24	A
24	9	200	VRW 200-24	A
24	13	300	VRW 300-24	A
24	20	450	VRW 450-24	A
28	4.5	150	VRW 150-28	A
48	3.2	150	VRW 150-48	A



- AC input universal or selectable
- 300 W and 450 W types power factor corrected
- Input to output isolation 3000 V_{rms}
- Compact design
- Excellent line/load regulation
- High efficiency
- Safety according to EN 60950, UL 1950, CSA 22.2

Description of configuration:
Standard: Open frame, terminal block
A Chassis cover, terminal block





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