

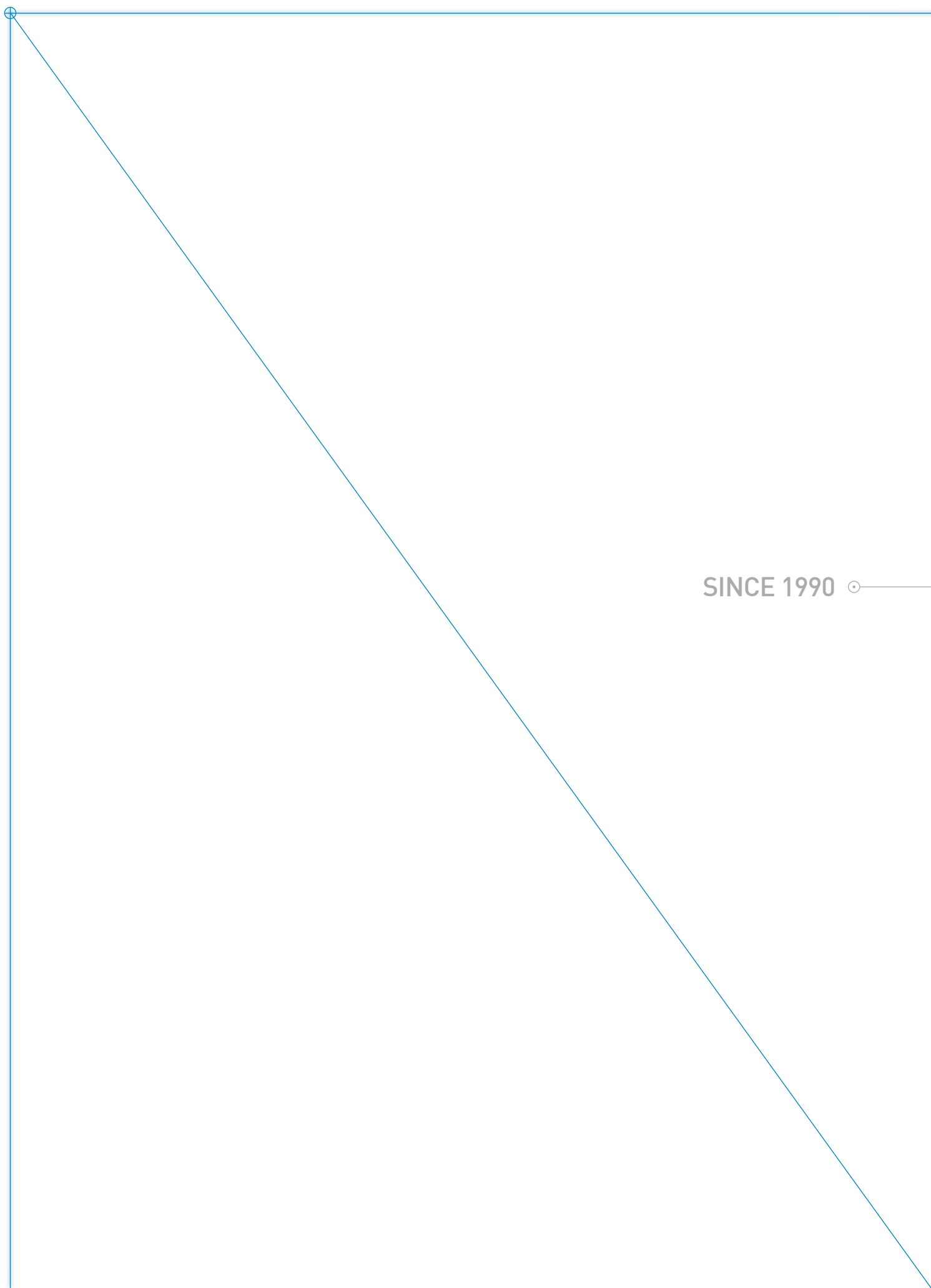
PRODUCT LINE PORTFOLIO

2023



POWER FOR
A BETTER FUTURE



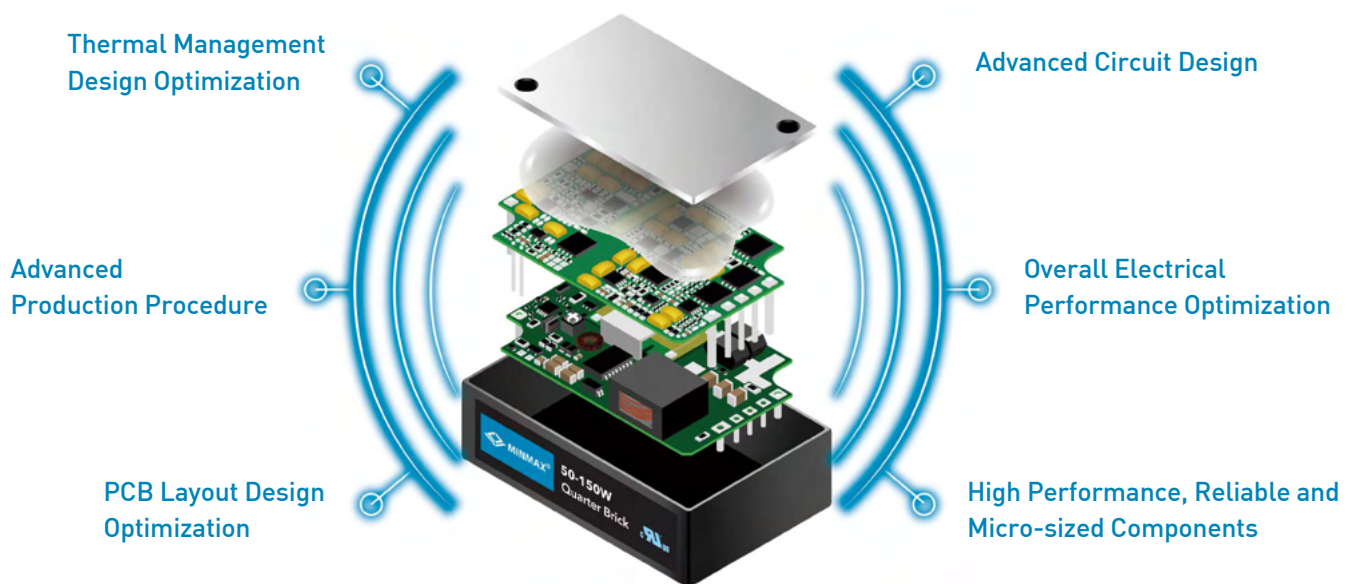


SINCE 1990 

ABOUT MINMAX

- In the three decades since MINMAX was established in 1990, we have prided ourselves on providing our customers with products and excellent service in a timely way. Our adherence to the best quality standards has also helped MINMAX win customers' hearts and become a preferred business partner.
- **"Power for a Better Future"** We want MINMAX to be better than ever and to focus on the future. We hope MINMAX can work closely with all of our customers, materials suppliers, and employees. Our long-term partnership will help all of us move toward a brighter future, together.

OUR ADVANTAGES



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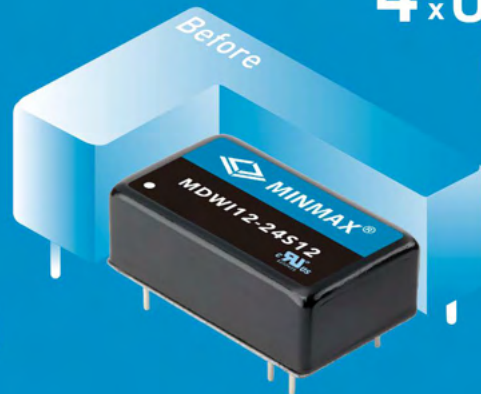
GENERAL INDUSTRIAL POWER SOLUTIONS



Power Density
4 x UP

75%
Board Space

79%
Weight



GENERAL INDUSTRIAL • DC-DC CONVERTERS

1-10W SIP PACKAGE



Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Isolation (VDC)	Efficiency	Operating Ambient Temp. Range ⁽¹⁾	Output Regulation	No Min. Load	Package	OCV	SCP	Remote ON/OFF Control	UL/cUL/IEC/EN 60950-1	UL/cUL/IEC/EN 62368-1
MBU100	1W	2.97-3.63, 4.5-5.5, 10.8-13.2, 21.6-26.4	3.3, 5, 9, 12, 15	1000	80%	-40~+85°C			SIP-4					
MAU100	1W	4.5-5.5, 10.8-13.2, 13.5-16.5, 21.6-26.4	3.3, 5, 9, 12, 15, ±5, ±9, ±12, ±15	1000	81%	-40~+85°C			SIP-7				•	
MA01	1W	4.5-5.5, 10.8-13.2, 21.6-26.4	5, 9, 12, 15, ±5, ±9, ±12, ±15	1000	88.5%	-40~+95°C			SIP-7				•	
MA01H	1W	4.5-5.5, 10.8-13.2, 21.6-26.4	5, 9, 12, 15	3000	88%	-40~+95°C			SIP-7				•	
MAU200	1W	4.5-5.5, 10.8-13.2, 21.6-26.4	3.3, 5, 9, 12, 15, ±5, ±9, ±12, ±15	3000	81%	-40~+90°C			SIP-7				•	
MAPU01H	1W	2.97-3.63, 4.5-5.5, 10.8-13.2, 21.6-26.4	3.3, 5, 9, 12, 15, ±5, ±12, ±15	3000	84%	-40~+90°C			SIP-7	•			•	•
MAW01	1W	4.5-9, 9-18, 18-36, 36-75	5, 12, 15, 24, ±12, ±15	1500	80%	-40~+95°C	•	•	SIP-6	•	•		•	•
MAU300	2W	4.5-5.5, 10.8-13.2, 21.6-26.4	3.3, 5, 12, 15, ±5, ±12, ±15	1000	83%	-40~+85°C			SIP-7					
MAPU02H	2W	4.5-5.5, 10.8-13.2, 21.6-26.4	3.3, 5, 9, 12, 15, ±5, ±12, ±15	3000	82%	-40~+90°C			SIP-7		•			
MCW1000	2W	4.5-9, 9-18, 18-36, 36-75	3.3, 5, 12	1000	81%	-40~+85°C	•		SIP-8	•	•	•	•	•
MCWI02	2W	4.5-18, 9-36, 18-75	3.3, 5, 12, 15, ±5, ±12, ±15	1500	82%	-40~+90°C	•	•	SIP-8	•	•	•	•	•
MEW1000	2W	9-36, 18-75	3.3, 5, 12, 15, ±5, ±12, ±15	1500	80%	-40~+85°C	•		SIP-9	•	•	•	•	•
MBSU03	3W	4.5-5.5, 10.8-13.2, 21.6-26.4	5, 12, 15	1500	86%	-40~+90°C			SIP-4		•			•
MA03	3W	4.5-5.5, 10.8-13.2, 21.6-26.4	5, 9, 12, 15	1000	89%	-40~+95°C			SIP-7				•	•
MCW03	3W	4.5-9, 9-18, 18-36, 36-75	3.3, 5, 12, 15, ±5, ±12, ±15	1600	83%	-40~+85°C	•		SIP-8	•	•	•	•	•
MCWI03	3W	4.5-18, 9-36, 18-75	3.3, 5, 12, 15, ±5, ±12, ±15	1600	81%	-40~+85°C	•		SIP-8	•	•	•	•	•
MCW04	4W	9-18, 18-36, 36-75	5, 12, 15, 24, ±12, ±15	1600	87%	-40~+85°C	•	•	SIP-8	•	•	•	•	•
MCWI04	4W	9-36, 18-75	5, 12, 15, 24, ±12, ±15	1600	83%	-40~+85°C	•	•	SIP-8	•	•	•	•	•
MCWI05	5W	4.5-18, 9-36, 18-75	3.3, 5, 12, 15, 24, ±12, ±15	1500	84%	-40~+75°C	•	•	SIP-8	•	•	•	•	•
NEW MCWI08	8W	4.5-18, 9-36, 18-75	5, 12, 15, 24, ±12, ±15	1500	86%	75°C~90°C	•	•	SIP-8	•	•	•	•	•
NEW MCWI10	10W	4.5-18, 9-36, 18-75	5.1, 12, 15, 24, ±12, ±15	1500	89%	-40~+87.5°C	•	•	SIP-8	•	•	•	•	•

⁽¹⁾ Please refer to derating curve information from datasheet

GENERAL INDUSTRIAL • DC-DC CONVERTERS



1-6W SMD PACKAGE



Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Isolation (VDC)	Efficiency	Operating Ambient Temp. Range ⁽¹⁾	Output Regulation	No Min. Load	OCP	SCP	Remote ON/OFF Control	Water-washable Process Available	UL/cUL/IEC/EN 60950-1	UL/cUL/IEC/EN 62368-1	
MSLU100	1W	4.5-5.5, 10.8-13.2, 13.5-16.5, 21.6-26.4	3.3, 5, 9, 12, 15, ±5, ±12, ±15	1500	80%	-40~+90°C							•	•	•
MSLU300	1W	4.5-5.5, 10.8-13.2, 21.6-26.4	3.3, 5, 12, 15, ±5, ±12, ±15	3000	81%	-40~+90°C							•		
MSPU01H	1W	2.97-3.63, 4.5-5.5, 10.8-13.2	3.3, 5, 12, 15, ±5, ±12, ±15	3000	85%	-40~+85°C			•	•			•	•	•
MSCW01	1W	4.5-9, 9-18, 18-36, 36-75	5, 12, 15, ±12, ±15	1500	82%	-40~+85°C	•	•	•	•	•	•	•	•	•
NEW MSU01	1W	4.5-5.5, 10.8-13.2, 21.6-26.4	3.3, 5, 12, 15, 24, ±5, ±12, ±15	1500	91%	-40~+95°C		•		•			•		
MSLU400	2W	4.5-5.5, 10.8-13.2, 21.6-26.4	3.3, 5, 12, ±5, ±12, ±15	1500	80%	-40~+92.5°C							•		
MSDW1000	2W	4.5-9, 9-18, 18-36, 36-75	3.3, 5, 12, 15, ±5, ±12, ±15	1500	81%	-40~+85°C	•		•				•	•	
MSCWI02	2W	4.5-12, 9-36, 18-75	5, 12, 15, 24, ±12, ±15	1500	85%	-40~+80°C	•	•	•	•	•	•	•	•	•
NEW MSU02	2W	4.5-5.5, 10.8-13.2, 21.6-26.4	3.3, 5, 12, 15, 24, ±5, ±12, ±15	1500	91%	-40~+92.5°C		•		•			•		
MSDWI03	3W	9-36, 18-75	3.3, 5, 12, 15, 24, ±5, ±12, ±15	1500	80%	-40~+80°C	•		•	•	•	•	•	•	•
MSCWI03	3W	4.5-12, 9-36, 18-75	5, 12, 15, 24, ±12, ±15	1500	85%	-40~+80°C	•	•	•	•	•	•	•	•	•
MSGWI06	6W	9-36, 18-75	3.3, 5, 12, 15, 24 ±5, ±12, ±15	1500	83%	-40~+80°C	•		•	•	•	•	•	•	•

* Qualified to IPC/JEDEC J-STD-020D.1

* Tape & Reel Package Available

⁽¹⁾ Please refer to derating curve information from datasheet

GENERAL INDUSTRIAL • DC-DC CONVERTERS



1-20W DIP PACKAGE



Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Isolation (VDC)	Efficiency	Operating Ambient Temp. Range ⁽¹⁾	Output Regulation	No Min. Load	Package	OC/SCP	Remote ON/OFF Control	UL/cUL/IEC/EN 62368-1
MFSU01	1W	4.5-5.5, 10.8-13.2, 21.6-26.4	5, 12, 15	1500	83%	-40~+85°C			DIP-8	SCP		
MFU100	1W	4.5-5.5, 10.8-13.2, 21.6-26.4	5, 9, 12, 15	3000	79%	-40~+85°C			DIP-8			
MFP01H	1W	2.97-3.63, 4.5-5.5, 10.8-13.2	3.3, 5, 12, 15, ±5, ±12, ±15	3000	83%	-40~+90°C			DIP-8	•		•
MFW02	2W	4.5-10, 9-18, 18-36, 36-75	3.3, 5, 12, 15, ±5, ±12, ±15	1500	87%	-40~+80°C	•	•	DIP-8	•		•
MDW1000	2W	4.5-9, 9-18, 18-36, 36-75	3.3, 5, 12, 15, ±5, ±12, ±15	1500	81%	-40~+80°C	•		DIP-16	SCP		
MFW03	3W	4.5-10, 9-18, 18-36, 36-75	3.3, 5, 12, 15, ±5, ±12, ±15	1500	87%	-40~+80°C	•	•	DIP-8	•		•
MDWI03	3W	9-36, 18-75	3.3, 5, 12, 15, 24, ±5, ±12, ±15	1500	80%	-40~+85°C	•		DIP-16	•	•	•
MIAR03	3W	4.5-5.5, 10.8-13.2, 21.6-26.4	5, 12, 15, ±12, ±15	1500	82%	-40~+85°C	•	•	DIP-24	SCP		•
MIW1100	3W	4.5-9, 9-18, 18-36, 36-75, 10-30	5, 12, 15, ±12, ±15	1500	81%	-40~+85°C	•		DIP-24	•		
MIW03	3W	4.5-9, 9-18, 18-36, 36-75	3.3, 5, 12, 15, 24, ±5, ±12, ±15	1500 3000	85%	-40~+85°C	•	•	DIP-24	•		•
MIWI03	3W	9-36, 18-75	3.3, 5, 12, 15, 24, ±5, ±12, ±15	1500 3000	84%	-40~+85°C	•	•	DIP-24	•		•
MIW06	6W	9-18, 18-36, 36-75	3.3, 5, 12, 15, 24, ±5, ±12, ±15	1500 3000	84%	-40~+85°C	•	•	DIP-24	•		
MIWI06	6W	9-36, 18-75	3.3, 5, 12, 15, 24, ±5, ±12, ±15	1500 3000	84%	-40~+85°C	•	•	DIP-24	•		•
MDWI06	6W	9-36, 18-75	3.3, 5, 12, 15, 24, ±5, ±12, ±15	1500	87%	-40~+90°C	•	•	DIP-16	•		•
MDW08	8W	9-18, 18-36, 36-75	3.3, 5, 12, 15, 24, ±12, ±15	1500	86%	-40~+80°C	•	•	DIP-16	•		•
MDW10	10W	9-18, 18-36, 36-75	3.3, 5, 5.1, 12, 15, 24, ±12, ±15	1500	88%	-40~+88°C	•	•	DIP-16	•		•
MDWI10	10W	9-36, 18-75	3.3, 5, 5.1, 12, 15, 24, ±12, ±15	1500	88%	-40~+88°C	•	•	DIP-16	•		•
MIW10	10W	9-18, 18-36, 36-75	3.3, 5, 5.1, 12, 15, ±12, ±15	1500	89%	-40~+85°C	•	•	DIP-24	•	•	•
MIWI10	10W	9-36, 18-75	3.3, 5, 5.1, 12, 15, 24, ±12, ±15	1500	87%	-40~+85°C	•	•	DIP-24	•	•	•
MDW12	12W	9-18, 18-36, 36-75	5, 5.1, 12, 15, 24, ±12, ±15	1500	88%	-40~+85°C	•	•	DIP-16	•		•
MDWI12	12W	9-36, 18-75	5, 5.1, 12, 15, 24, ±12, ±15	1500	88%	-40~+85°C	•	•	DIP-16	•		•
NEW MDW15	15W	9-18, 18-36, 36-75	5.1, 12, 15, 24, ±12, ±15	1500	87%	-40~+85°C	•	•	DIP-16	•		•
NEW MDWI15	15W	9-36, 18-75	5.1, 12, 15, 24, ±12, ±15	1500	87%	-40~+85°C	•	•	DIP-16	•		•
NEW MDWI20	20W	4.5-18, 9-36, 18-75	5, 12, 15, 24, ±12, ±15	1500	90%	-40~+87.5°C	•	•	DIP-16	SCP		•

⁽¹⁾ Please refer to derating curve information from datasheet



GENERAL INDUSTRIAL • DC-DC CONVERTERS



10-40W 1"x1" PACKAGE



Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Isolation (VDC)	Efficiency	Operating Ambient Temp. Range ⁽¹⁾	Output Regulation	No Min. Load	OCP/SCP	OVD	Remote ON/OFF Control	Output Voltage Trim	UL/cUL/IEC/EN 62368-1
MJW10	10W	9-18, 18-36, 36-75	3.3, 5, 5.1, 12, 15, ±5, ±12, ±15	1500	89%	-40~+80°C	•	•	•		•		•
MJWI10	10W	9-36, 18-75	3.3, 5, 5.1, 12, 15, 24, ±5, ±12, ±15	1500	87%	-40~+80°C	•		•		•		•
MJW15	15W	9-18, 18-36, 36-75	3.3, 5, 12, 15, 24, ±12, ±15	1500	91%	-40~+90°C	•	•	•	•	•	•	•
MJWI15	15W	9-36, 18-75	3.3, 5, 12, 15, 24, ±12, ±15	1500	91%	-40~+90°C	•	•	•	•	•	•	•
MJWI20	20W	9-36, 18-75	3.3, 5, 12, 15, 24, ±12, ±15	1500	89%	-40~+85°C	•	•	•	•	•	•	•
MJW25	25W	9-18, 18-36, 36-75	3.3, 5, 12, 15, ±12, ±15	1500	90%	-40~+80°C	•	•	•	•	•	•	•
MJWI25	25W	9-36, 18-75	3.3, 5, 12, 15, ±12, ±15	1500	90%	-40~+80°C	•	•	•	•	•	•	•
MJWI30	30W	9-36, 18-75	3.3, 5, 12, 15, 24, ±12, ±15	1500	90%	-40~+80°C	•	•	•	•	•	•	•
NEW MJWI40	40W	9-36, 18-75	5, 12, 15, 24, 48, 54, ±12, ±15	1500	93%	-40~+85°C	•	•	•	•	•	•	•



40-80W 2"x1" PACKAGE



Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Isolation (VDC)	Efficiency	Operating Ambient Temp. Range ⁽¹⁾	Output Regulation	No Min. Load	Package	OCP/SCP	OVP/OTP	Remote ON/OFF Control	Output Voltage Trim	UL/cUL/IEC/EN 60950-1	UL/cUL/IEC/EN 62368-1
MKW40	40W	9-18, 18-36, 36-75	3.3, 5, 12, 15, 24, ±12, ±15	1500	92%	-40~+80°C	•	•	2"x1"	•	•	•	•	•	•
MKWI40	40W	9-36, 18-75	3.3, 5, 12, 15, 24, ±12, ±15	1500	91%	-40~+80°C	•	•	2"x1"	•	•	•	•	•	•
MKW50	50W	9-18, 18-36, 36-75	3.3, 5, 12, 15, 24	1500	92%	-40~+80°C	•	•	2"x1"	•	•	•	•	•	•
MKWI50	50W	9-36, 18-75	3.3, 5, 12, 15, 24	1500	92%	-40~+80°C	•	•	2"x1"	•	•	•	•	•	•
NEW MKWI80	80W	9-36, 18-75	5, 12, 15, 24, 48, 54, ±12, ±15	1500	92%	-40~+82.5°C	•	•	2"x1"	•	•	•	•	•	•

⁽¹⁾ Please refer to derating curve information from datasheet

GENERAL INDUSTRIAL • DC-DC CONVERTERS



6-60W CHASSIS & DIN-RAIL MOUNTING



Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Isolation (VDC)	Efficiency	Operating Ambient Temp. Range ⁽¹⁾	Output Regulation	No Min. Load	Package	OC/SCP	OVP	Remote ON/OFF Control	UL/cUL/IEC/EN 62368-1
MJWI06C	6W	9-36, 18-75	5, 5.1, 12, 15, 24, 48, ±12, ±15, ±24	3000VDC	85%	-40~+92.5°C	•	•	Chassis DIN-Rail	•		•	•
MKWI10C	10W	9-36, 18-75	5, 5.1, 12, 15, 24, 48, ±12, ±15, ±24	3000VDC	86%	-40~+92.5°C	•	•	Chassis DIN-Rail	•		•	•
MOWI20C	20W	9-36, 18-75	5.1, 12, 24, 48	2500VDC	91%	-40~+90°C	•	•	Chassis DIN-Rail	•	•	•	•
MQWI40C	40W	9-36, 18-75	5.1, 12, 24, 48	2500VDC	92%	-40~+85°C	•	•	Chassis DIN-Rail	•	•	•	•
MRWI60C	60W	9-36, 18-75	5.1, 12, 24, 48	2500VDC	92%	-40~+85°C	•	•	Chassis DIN-Rail	•	•	•	•



0.5-1A SWITCHING REGULATORS



Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Efficiency	Operating Ambient Temp. Range ⁽¹⁾	Output Regulation	No Min. Load	Package	OTP	SCP	Remote ON/OFF Control	UL/cUL/IEC/EN 62368-1
M78AR-0.5	0.5A	4.75-32	1.5, 1.8, 2.5, 3.3	91%	-40~+90°C	•	•	SIP-3	•	•		
		6.5-32	5	94%	-40~+90°C	•	•	SIP-3	•	•		
		8-32	6.5	95%	-40~+90°C	•	•	SIP-3	•	•		
		11-32	9	96%	-40~+90°C	•	•	SIP-3	•	•		
		15-32	12	97%	-40~+90°C	•	•	SIP-3	•	•		
		18-32	15	97%	-40~+90°C	•	•	SIP-3	•	•		
M78SAR-0.5	0.5A	4.75-32	1.5, 1.8, 2.5, 3.3	91%	-40~+90°C	•	•	SMD	•	•	•	•
		6.5-32	5	94%	-40~+90°C	•	•	SMD	•	•	•	•
		8-32	6.5	95%	-40~+90°C	•	•	SMD	•	•	•	•
		11-32	9	96%	-40~+90°C	•	•	SMD	•	•	•	•
		15-32	12	97%	-40~+90°C	•	•	SMD	•	•	•	•
		18-32	15	97%	-40~+90°C	•	•	SMD	•	•	•	•
M78AR-1	1A	6.5-32	3.3	93%	-40~+85°C	•	•	SIP-3	•	•		
		6.5-32	5	94%	-40~+85°C	•	•	SIP-3	•	•		
		15-32	12	96%	-40~+85°C	•	•	SIP-3	•	•		

⁽¹⁾ Please refer to derating curve information from datasheet

GENERAL INDUSTRIAL • AC-DC POWER SUPPLIES



3-60W ENCAPSULATED PACKAGE

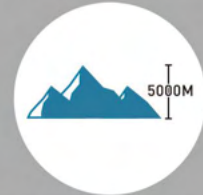
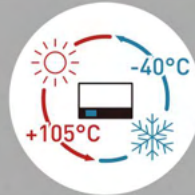
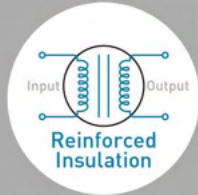
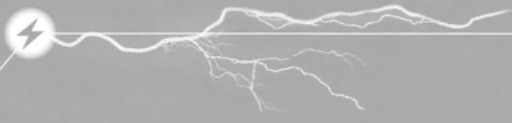


Series	Output Power	Input Voltage Range	Output Voltage (VDC)	Isolation (VDC)	Efficiency	Operating Ambient Temp. Range ⁽¹⁾	Output Regulation	No Min. Load	Package	Case Size (inches)	SCP/OCP/OVP	UL/cUL/IEC/EN 62368-1	UL/cUL/IEC/EN 60335-1
AAF-03	3W	85 – 264VAC 120-370VDC	3.3, 5, 9, 12, 15, 24	3000 VAC Reinforced	78%	-25~+70°C	•	•	PCB	1.00x1.00x0.64"	•	•	•
ABF-04	4W	85 – 264VAC 120-370VDC	3.3, 5, 9, 12, 15, 24, 5/3.3, 12/5, ±12, ±15	3000 VAC Reinforced	77%	-25~+60°C	•	•	PCB	1.44x1.06x0.67"	•	•	
AAF-05	5W	85 – 264VAC 120-370VDC	3.3, 5, 9, 12, 15, 24, 48	3000 VAC Reinforced	85%	-25~+70°C	•	•	PCB Chassis	1.00x1.00x0.64" 1.65x1.02x0.76"	•	•	•
AMF-07	7W	85 – 264VAC 90-370VDC	5, 12, 15, 24, 48	3000 VAC Reinforced	85%	-40~+80°C	•		PCB Chassis	1.52x1.0x0.66" 2.40x1.20x0.74"	•	•	•
ACF-10	10W	85 – 264VAC 120-370VDC	3.3, 5, 12, 15, 24, 48	4000 VAC Reinforced	86%	-25~+70°C	•	•	PCB	1.52x1.00x0.62"	•	•	•
AGF-15	15W	85 – 264VAC 120-370VDC	3.3, 5, 9, 12, 15, 24, 48	3000 VAC Reinforced	84%	-25~+70°C	•	•	PCB	2.06x1.07x0.93	•	•	•
AMF-15	15W	85 – 264VAC 90-370VDC	5.1, 12, 15, 24, 48	3000 VAC Reinforced	86%	-40~+70°C	•	•	PCB Chassis & DIN-Rail	2.06x1.07x0.93" 2.89x1.18x0.91"	•	•	•
AMF-30	30W	85 – 264VAC 90-370VDC	5.1, 12, 15, 24, 48	3000 VAC Reinforced	88%	-40~+70°C	•	•	PCB Chassis & DIN-Rail	2.52x1.77x0.94" 3.39x1.15x1.00"	•	•	•
AMF-60	60W	85 – 264VAC 90-370VDC	5.1, 12, 15, 24, 48	3000 VAC Reinforced	89%	-40~+70°C	•	•	PCB Chassis & DIN-Rail	2.99x2.13x1.10" 3.86x2.20x1.12"	•	•	•

⁽¹⁾ Please refer to derating curve information from datasheet



RAILWAY CERTIFIED POWER SOLUTIONS



MINMAX TECHNOLOGY



RAILWAY CERTIFIED • DC-DC CONVERTERS



3-150W • DIP • 2"×1" PACKAGE • QUARTER BRICK • HALF BRICK



Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Isolation (VAC)	Efficiency	Operating Ambient Temp. Range ⁽¹⁾	No Min. Load	OCP/SCP	OVP	OTP	Remote ON/OFF Control	Output Voltage Trim	Output Sense	EN50155 (IEC60571)	UL/cUL/IEC/FEN 62368-1
3W • DIP Package															
MIZI03	3W	9-36 18-75 40-160	5, 12, 15, ±12, ±15	3000VAC Reinforced	85%	-40~+92°C Ambient	•	•						•	•
10-40W • 2"×1" Package															
MKZI10	10W	9-36 18-75 40-160	5, 12, 15, 24, ±12, ±15	3000VAC Reinforced	89%	-40~+95°C Ambient	•	•	•			•		•	•
MKZI20	20W	9-36 18-75 40-160	5, 12, 15, 24, ±12, ±15	3000VAC Reinforced	88%	-40~+88.5°C Ambient	•	•	•			•		•	•
MKZI40	40W	36-160	5, 12, 15, 24, 54, ±12, ±15	3000VAC Reinforced	90%	-40~+77.5°C Ambient	•	•	•	•	•	•		•	•
50-150W • Quarter Brick															
MTQZ50	50W	43-101 66-160	5, 12, 15, 24	3000VAC Reinforced	92%	-40~+85°C Ambient	•	•	•	•	•	•	•	•	•
NEW MRZI75	75W	36-160 ⁽²⁾	5, 12, 15, 24, 54	2000VAC Reinforced	91%	-40~+105°C Base plate	•	•	•	•	•	•	•	•	•
MRZI100	100W	36-160 ⁽²⁾	5, 12, 15, 24, 54	2000VAC Reinforced	91.5%	-40~+105°C Base plate	•	•	•	•	•	•	•	•	•
MRZI150	150W	36-160 ⁽²⁾	5, 12, 15, 24, 54	2000VAC Reinforced	90%	-40~+105°C Base plate	•	•	•	•	•	•	•	•	•
150W • Half Brick															
NEW MRHI150	150W	9-36	5, 12, 15, 24, 54	1680VAC Reinforced	90%	-40~+100°C Base plate	•	•	•	•	•	•	•	•	•

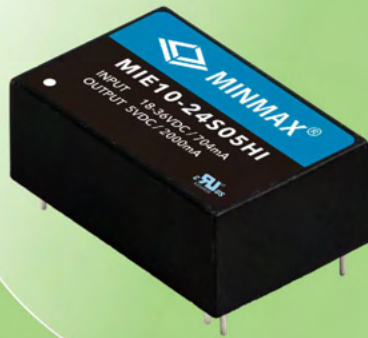
⁽¹⁾Please refer to derating curve information from datasheet
⁽²⁾Please refer to star-up voltage information from datasheet



ULTRA-HIGH ISOLATION POWER SOLUTIONS

Input →

Isolation
5K VAC / 60sec



Output →

Reinforced Insulation



ULTRA-HIGH ISOLATION • DC-DC CONVERTERS



1-60W • SIP • SMD • DIP • 2"×1" CHASSIS & DIN-RAIL PACKAGE



Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Isolation	Working Voltage	Efficiency	Operating Ambient Temp. Range ⁽¹⁾	Output Regulation	No Min. Load	OCP	OVP	SCP	UL/cUL/IEC/EN 62368-1
1-2W • SIP Package													
MA01-HI	1W	4.5-5.5, 10.8-13.2, 13.5-16.5, 21.6-26.4	3.3, 5, 9, 12, 15, ±5, ±9, ±12, ±15, +15/-9	5200VDC		80%	-40~+90°C					•	•
MAEU01-HI	1W	4.5-5.5, 10.8-13.2, 21.6-26.4	5, 12, 15	3000VAC Reinforced	480 Vrms	81%	-40~+95°C					•	•
MAEU02-HI	2W	4.5-5.5, 10.8-13.2, 13.5-16.5, 21.6-26.4	3.3, 5, 9, 12, 15, ±5, ±9, ±12, ±15, +15/-9	5200VDC		85%	-40~+85°C					•	•
1W • SMD Package													
MSCEU01-HI	1W	4.5-5.5, 10.8-13.2, 21.6-26.4	5, 12, 15, ±12, ±15	3000VAC Reinforced	480 Vrms	84%	-40~+95°C					•	•
2-10W • DIP Package													
MDEU02-HI	2W	4.5-5.5, 10.8-13.2, 21.6-26.4	5, 12, 15, ±12, ±15	4000VAC Reinforced	300 Vrms	75%	-25~+80°C					•	•
MIR500	2W	4.5-5.5, 10.8-13.2, 21.6-26.4	5, 12, 15, ±5, ±12, ±15	6000VDC		64%	-25~+75°C	•				•	
MIE03-HI	3.5W	4.5-9, 9-18, 18-36, 36-75	5, 5.8, 12, 15, 24, ±12, ±15	5000VAC Reinforced	1000 Vrms	87%	-40~+96°C	•	•	•	•	•	•
MIEI03-HI	3W	9-40, 18-80	5, 12, ±12, ±15	4000VAC Reinforced	1000 Vrms	83%	-40~+85°C	•		•		•	
MIE06-HI	6W	9-18, 18-36, 36-75	5, 12, 15, 24, ±12, ±15	5000VAC Reinforced	1000 Vrms	89%	-40~+95°C	•	•	•	•	•	•
MIE10-HI	10W	9-18, 18-36, 36-75	3.3, 5, 5.1, 12, 15, 24, ±12, ±15	5000VAC Reinforced	1000 Vrms	88%	-40~+90°C	•	•	•	•	•	•
15-20W • 2 × 1 Package													
MKE15-HI	15W	9-18, 18-36, 36-75	5, 5.1, 12, 15, 24, ±12, ±15	4200VAC Reinforced	1000 Vrms	90%	-40~+85°C	•	•	•	•	•	•
MKE20-HI	20W	9-18, 18-36, 36-75	5, 5.1, 12, 15, 24, ±12, ±15	4200VAC Reinforced	1000 Vrms	90%	-40~+80°C	•	•	•	•	•	•
6-60W • Chassis & DIN-Rail Mounting													
MJA06C	6W	80-160	5, 5.1, 12, 15, 24, 48, ±12, ±15, ±24	3000VAC Reinforced	1000 Vrms	84%	-40~+92.5°C	•	•	•	•	•	•
MKA10C	10W	80-160	5, 5.1, 12, 15, 24, 48, ±12, ±15, ±24	3000VAC Reinforced	1000 Vrms	85%	-40~+87°C	•	•	•	•	•	•
MOA20C	20W	80-160	5, 5.1, 12, 15, 24, 48, ±12, ±15, ±24	3000VAC Reinforced	1000 Vrms	88%	-40~+94.5°C	•	•	•	•	•	•
MQA40C	40W	80-160	5, 5.1, 12, 15, 24, 48, ±12, ±15, ±24	3000VAC Reinforced	1000 Vrms	89%	-40~+90°C	•	•	•	•	•	•
MRA60C	60W	80-160	5, 5.1, 12, 15, 24, 48, ±12, ±15, ±24	3000VAC Reinforced	1000 Vrms	89%	-40~+90.5°C	•	•	•	•	•	•

⁽¹⁾Please refer to derating curve information from datasheet



MEDICAL SAFETY POWER SOLUTIONS

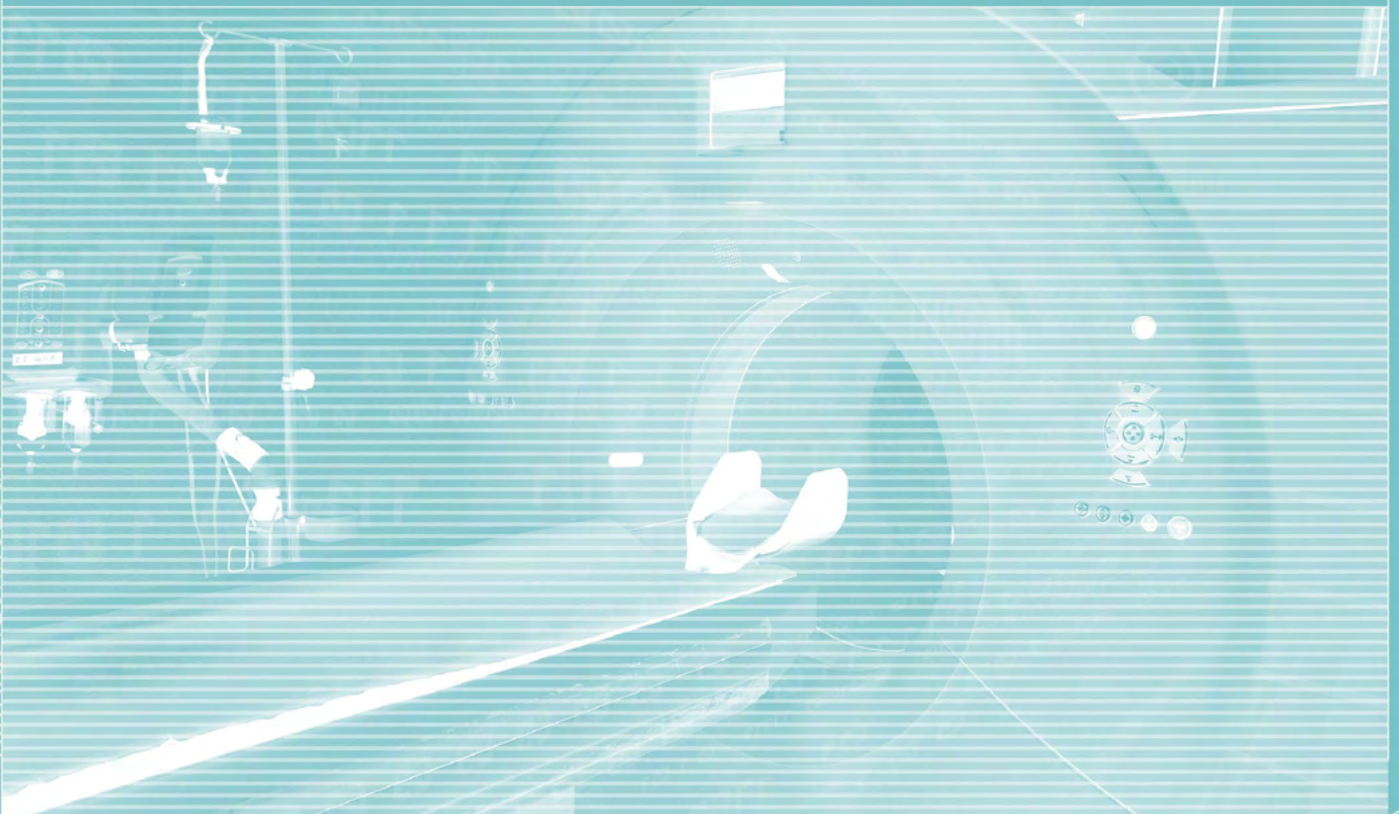


IEC 60601-1 APPROVED



2 X MOPP

MINMAX TECHNOLOGY



Medical Safety • DC-DC Converters



1-20W • SIP • SMD • DIP • 2"x1" PACKAGE



Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Isolation (VAC)	Efficiency	Operating Ambient Temp. Range ⁽¹⁾	Output Regulation	No Min. Load	OCP	OVP	SCP	Protection Level	ANSI/AAMI ES 60601-1	IEC/EN 60601-1 3 rd
1W • SIP Package														
MAU400	1W	4.5-5.5, 10.8-13.2	5, 12, 15, ±5, ±12, ±15	3000VAC Reinforced	75%	-25~+85°C						1xMOPP 2xMOOP	•	•
MAU01M	1W	4.5-5.5, 10.8-13.2, 21.6-26.4	5, 12, 15	4000VAC Reinforced	81%	-40~+95°C					•	2xMOPP	•	•
1-2W • SMD Package														
MSCU01M	1W	4.5-5.5, 10.8-13.2, 21.6-26.4	5, 12, 15, ±12, ±15	4000VAC Reinforced	84%	-40~+95°C					•	2xMOPP	•	•
MSHU100	2W	4.5-5.5, 10.8-13.2, 21.6-26.4	5, 12, 15, ±12, ±15	4000VAC Reinforced	75%	-25~+80°C						1xMOPP 2xMOOP	•	•
2-10W • DIP Package														
MDHU100	2W	4.5-5.5, 10.8-13.2, 21.6-26.4	5, 12, 15, ±12, ±15	4000VAC Reinforced	75%	-25~+80°C						1xMOPP 2xMOOP	•	•
MIHW2000	3W	9-40, 18-80, 36-160	5, 12, 15, ±12, ±15	4000VAC Reinforced	83%	-40~+85°	•		•		•	1xMOPP 2xMOOP	•	•
MIW03M	3.5W	4.5-9, 9-18, 18-36, 36-75	5, 5.8, 12, 15, ±12, ±15	5000VAC Reinforced	87%	-40~+96°C	•	•	•	•	•	2xMOPP	•	•
MIW06M	6W	9-18, 18-36, 36-75	5, 12, 15, ±12, ±15	5000VAC Reinforced	89%	-40~+95°C	•	•	•	•	•	2xMOPP	•	•
MIW10M	10W	9-18, 18-36, 36-75	3.3, 5, 5.1, 12, 15, 24, ±12, ±15	5000VAC Reinforced	88%	-40~+90°C	•	•	•	•	•	2xMOPP	•	•
15-20W • 2"x1" Package														
MKW15M	15W	9-18, 18-36, 36-75	5, 5.1, 12, 15, 24, ±12, ±15	4200VAC Reinforced	90%	-40~+85°C	•	•	•	•	•	2xMOPP	•	•
MKW20M	20W	9-18, 18-36, 36-75	5, 5.1, 12, 15, 24, ±12, ±15	4200VAC Reinforced	90%	-40~+80°C	•	•	•	•	•	2xMOPP	•	•

⁽¹⁾Please refer to derating curve information from datasheet



Medical Safety • AC-DC POWER SUPPLIES



24-60W • ENCAPSULATED PACKAGE



Series	Output Power	Input Voltage Range (VAC)	Output Voltage (VDC)	Isolation (VAC)	Efficiency	Operating Ambient Temp. Range ⁽¹⁾	Output Regulation	No Min. Load	Package	OCP/SCP	OVP	Protection Level	ANSI/AAMI ES 60601-1	IEC/EN 60601-1 3 rd
AJM-24	24W	85-264	5, 9, 12, 15, 24, ±12 ±15	4000VAC Reinforced	85%	-40~+80°C	•	•	PCB Chassis DIN-Rail	•	•	2xMOPP	•	•
APM-40	40W	85-264	5, 12, 15, 24, ±12 ±15	4000VAC Reinforced	85%	-40~+80°C	•	•	PCB Chassis DIN-Rail	•	•	2xMOPP	•	•
AYM-60	60W	85-264	5.1, 12, 15, 24, 48	4000VAC Reinforced	85%	-40~+80°C	•	•	PCB Chassis DIN-Rail	•	•	2xMOPP	•	•

⁽¹⁾Please refer to derating curve information from datasheet

MINMAX POWER SOLUTIONS

DC-DC CONVERTERS · AC-DC POWER SUPPLIES | 1-150W



GENERAL INDUSTRIAL

• DC-DC CONVERTERS

• AC-DC POWER SUPPLIES

SIP Package

1-10W

SMD Package

1-6W

DIP Package

1-20W

Encapsulated Package

3-60W

1"×1" Package

10-40W

2"×1" Package

40-80W

Chassis & DIN-Rail Mounting

6-60W



RAILWAY CERTIFIED

• DC-DC CONVERTERS

DIP Package

3W

2"×1" Package

10-40W

Quarter Brick

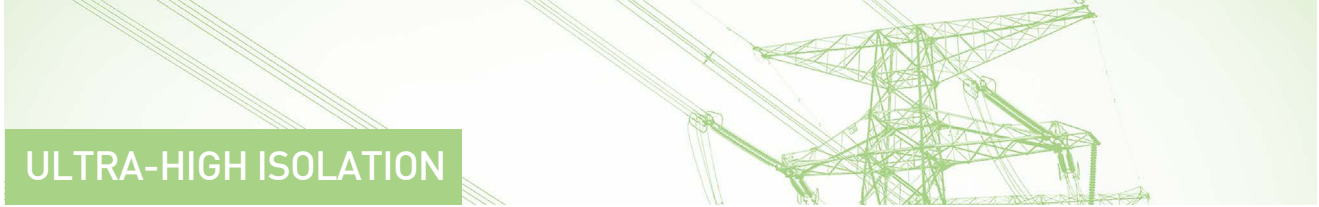
50-150W

Half Brick

150W

MINMAX POWER SOLUTIONS

DC-DC CONVERTERS · AC-DC POWER SUPPLIES | 1-150W



ULTRA-HIGH ISOLATION

• DC-DC CONVERTERS





<p>SIP Package</p>  <p>1-2W</p>	<p>SMD Package</p>  <p>1W</p>	<p>DIP Package</p>  <p>2-10W</p>
<p>2"x1" Package</p>  <p>15-20W</p>	<p>Chassis & DIN-Rail Mounting</p>  <p>6-60W</p>	



MEDICAL SAFETY

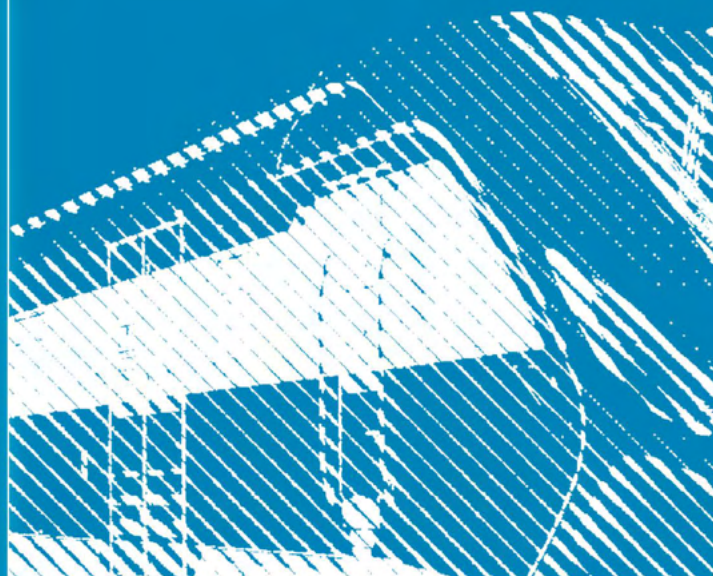
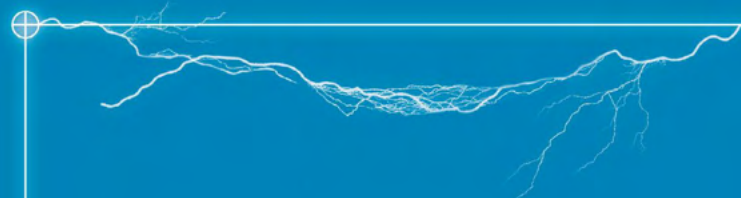
• DC-DC CONVERTERS

• AC-DC POWER SUPPLIES

<p>SIP Package</p>  <p>1W</p>	<p>SMD Package</p>  <p>1-2W</p>	<p>Encapsulated Package</p>  <p>24-60W</p>
<p>DIP Package</p>  <p>2-10W</p>	<p>2"x1" Package</p>  <p>15-20W</p>	

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A BETTER FUTURE**

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