

2024

# PRODUCT LINE PORTFOLIO

POWER FOR  
A BETTER FUTURE





Electronics

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.

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### MINMAX POWER SOLUTIONS

# GENERAL INDUSTRIAL POWER SOLUTIONS

**Power Density  
4x UP**

**75%  
Board Space**

**79%  
Weight**

MINMAX TECHNOLOGY

## GENERAL INDUSTRIAL • DC-DC CONVERTERS

### 1-5W SIP PACKAGE



Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Isolation (VDC)	Efficiency	Operating Ambient Temp. Range <sup>(1)</sup>	Output Regulation	No Min. Load	Package	OCP	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	•	•	•	•	•

<sup>(1)</sup>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 <sup>(1)</sup>	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	•	•	•	•	•	•	•	•
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	•	•	•	•	•	•	•	•
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

<sup>(1)</sup> Please refer to derating curve information from datasheet

## GENERAL INDUSTRIAL • DC-DC CONVERTERS

### 1-15W DIP PACKAGE



Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Isolation (VDC)	Efficiency	Operating Ambient Temp. Range <sup>(1)</sup>	Output Regulation	No Min. Load	Package	OCP/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			
MFPU01H	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	•		•
MDW15	15W	9-18, 18-36, 36-75	5.1, 12, 15, 24, ±12, ±15	1500	87%	-40~+85°C	•	•	DIP-16	•		•
MDWI15	15W	9-36, 18-75	5.1, 12, 15, 24, ±12, ±15	1500	87%	-40~+85°C	•	•	DIP-16	•		•

<sup>(1)</sup> Please refer to derating curve information from datasheet

## GENERAL INDUSTRIAL • DC-DC CONVERTERS

### 10-30W 1" x 1" PACKAGE



Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Isolation (VDC)	Efficiency	Operating Ambient Temp. Range <sup>(1)</sup>	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	•	•	•	•	•	•	•
MJW110	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	•	•	•	•	•	•	•
MJW115	15W	9-36, 18-75	3.3, 5, 12, 15, 24, ±12, ±15	1500	91%	-40~+90°C	•	•	•	•	•	•	•
MJW120	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	•	•	•	•	•	•	•
MJW125	25W	9-36, 18-75	3.3, 5, 12, 15, ±12, ±15	1500	90%	-40~+80°C	•	•	•	•	•	•	•
MJW130	30W	9-36, 18-75	3.3, 5, 12, 15, 24, ±12, ±15	1500	90%	-40~+80°C	•	•	•	•	•	•	•

### 40-50W 2" x 1" PACKAGE



Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Isolation (VDC)	Efficiency	Operating Ambient Temp. Range <sup>(1)</sup>	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" x 1"	•	•	•	•	•	•
MKW140	40W	9-36, 18-75	3.3, 5, 12, 15, 24, ±12, ±15	1500	91%	-40~+80°C	•	•	2" x 1"	•	•	•	•	•	•
MKW50	50W	9-18, 18-36, 36-75	3.3, 5, 12, 15, 24	1500	92%	-40~+80°C	•	•	2" x 1"	•	•	•	•	•	•
MKW150	50W	9-36, 18-75	3.3, 5, 12, 15, 24	1500	92%	-40~+80°C	•	•	2" x 1"	•	•	•	•	•	•

<sup>(1)</sup> 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 <sup>(1)</sup>	Output Regulation	No Min. Load	Package	OCP/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 <sup>(1)</sup>	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	•	•	•	•
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	•	•	•	•
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	•	•	•	•

<sup>(1)</sup> Please refer to derating curve information from datasheet



## GENERAL INDUSTRIAL • AC-DC POWER SUPPLIES



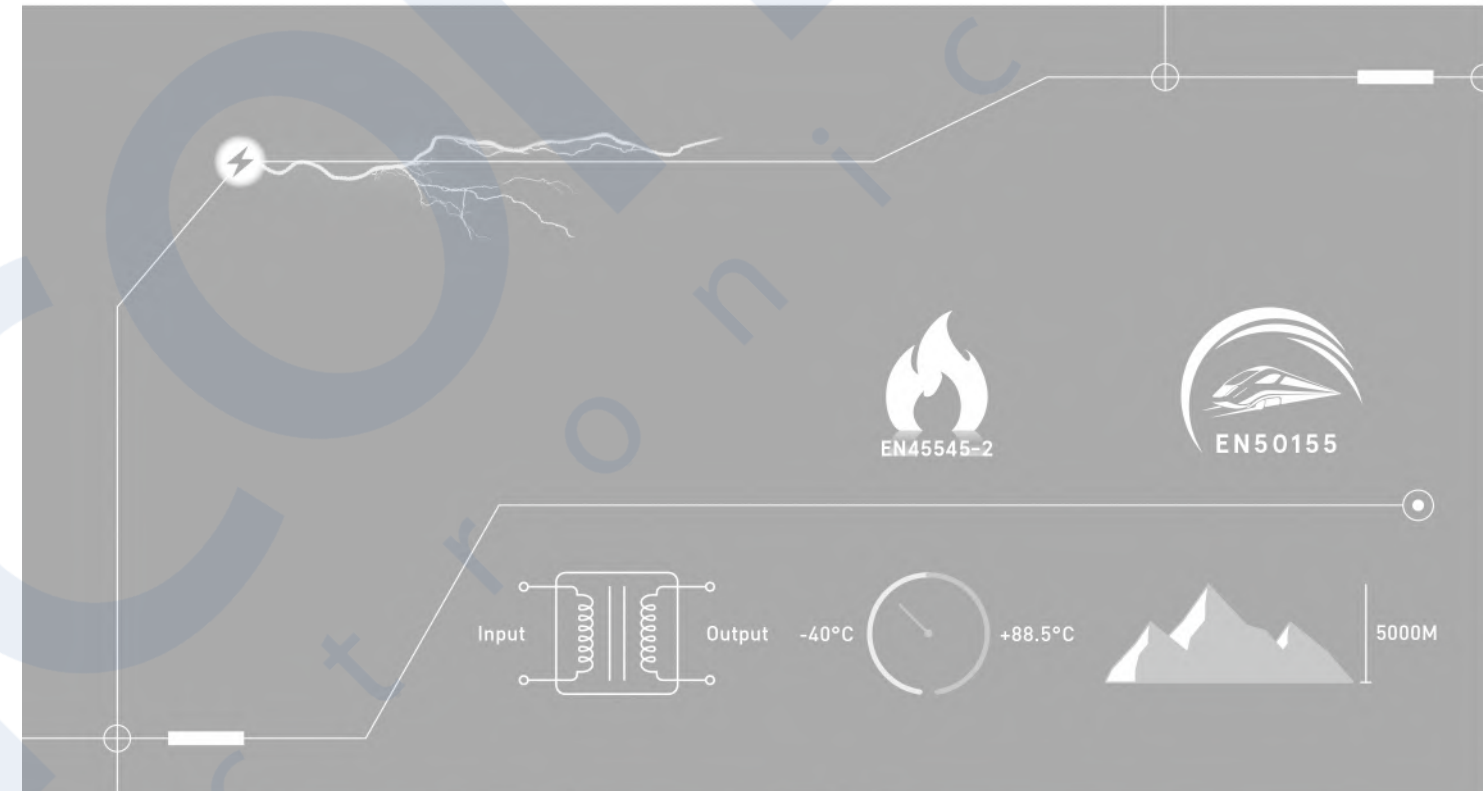
### 3-60W ENCAPSULATED PACKAGE



Series	Output Power	Input Voltage Range	Output Voltage (VDC)	Isolation (VDC)	Efficiency	Operating Ambient Temp. Range <sup>(1)</sup>	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"	•	•	•
<b>NEW</b> 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"	•	•	•
<b>NEW</b> 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"	•	•	•
<b>NEW</b> 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"	•	•	•
<b>NEW</b> 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"	•	•	•

<sup>(1)</sup> Please refer to derating curve information from datasheet

# RAILWAY CERTIFIED POWER SOLUTIONS



## RAILWAY CERTIFIED • DC-DC CONVERTERS



3-150W • DIP • 2"x1" PACKAGE • QUARTER BRICK



Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Isolation (VAC)	Efficiency	Operating Ambient Temp. Range <sup>(1)</sup>	No Min. Load	OCP/SCP	OVP	OTP	Remote ON/OFF Control	Output Voltage Trim	Output Sense	EN50155 (IEC60571)	UL/cUL/IEC/EN 62368-1
<b>3W • DIP Package</b>															
MIZI03	3W	9-36 18-75 40-160	5, 12, 15, ±12, ±15	3000VAC Reinforced	85%	-40~+92°C Ambient	•	•						•	•
<b>10-40W • 2"x1" Package</b>															
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	•	•	•					•	•
<b>50-150W • Quarter Brick</b>															
MTQZ50	50W	43-101 66-160	5, 12, 15, 24	3000VAC Reinforced	92%	-40~+85°C Ambient	•	•	•					•	•
<b>NEW</b> MRZI75	75W	36-160 <sup>(2)</sup>	5, 12, 15, 24, 54	2000VAC Reinforced	91%	-40~+105°C Base plate	•	•	•					•	•
MRZI100	100W	36-160 <sup>(2)</sup>	5, 12, 15, 24, 54	2000VAC Reinforced	91.5%	-40~+105°C Base plate	•	•	•					•	•
MRZI150	150W	36-160 <sup>(2)</sup>	5, 12, 15, 24, 54	2000VAC Reinforced	90%	-40~+105°C Base plate	•	•	•					•	•

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

# ULTRA-HIGH ISOLATION POWER SOLUTIONS

Isolation  
5K VAC / 60sec

Input →

Output →

Reinforced Insulation

MIE10-24S05H  
MINMAX  
INPUT 18-30VDC / 100mA  
OUTPUT 5VDC / 2000mA



## 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 <sup>(1)</sup>	Output Regulation	No Min. Load	OCP	OVP	SCP	UL/cUL/IEC/EN 62368-1
<b>1-2W • SIP Package</b>													
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						• •
<b>1W • SMD Package</b>													
MSEU01-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						• •
<b>2-10W • DIP Package</b>													
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	• •		• •	• •	• •	• •
<b>15-20W • 2 × 1 Package</b>													
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	• •		• •	• •	• •	• •
<b>6-60W • Chassis &amp; DIN-Rail Mounting</b>													
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	• •		• •	• •	• •	• •

<sup>(1)</sup> Please refer to derating curve information from datasheet

# MEDICAL SAFETY POWER SOLUTIONS



## Medical Safety • DC-DC Converters



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



Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Isolation (VAC)	Efficiency	Operating Ambient Temp. Range <sup>(1)</sup>	Output Regulation	No Min. Load	OCP	OVP	SCP	Protection Level	ANSI/AAMI ES 60601-1	IEC/EN 60601-1 3 <sup>rd</sup>
<b>1W • SIP Package</b>														
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	•	•
<b>1-2W • SMD Package</b>														
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	•	•
<b>2-10W • DIP Package</b>														
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	•	•
<b>15-20W • 2"×1" Package</b>														
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	•	•

<sup>(1)</sup> 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 <sup>(1)</sup>	Output Regulation	No Min. Load	Package	OCP/SCP	OVP	Protection Level	ANSI/AAMI ES 60601-1	IEC/EN 60601-1 3 <sup>rd</sup>
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	•	•

<sup>(1)</sup> 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

<p>SIP Package</p> <p>1-5W</p>	<p>SMD Package</p> <p>1-6W</p>	<p>DIP Package</p> <p>1-15W</p>
<p>1"×1" Package</p> <p>10-30W</p>	<p>2"×1" Package</p> <p>40-50W</p>	<p>Chassis &amp; DIN-Rail Mounting</p> <p>6-60W</p>

#### • AC-DC POWER SUPPLIES

<p>Encapsulated Package</p> <p>3-60W</p>
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## 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"×1" Package</p> <p>15-20W</p>	<p>Chassis &amp; DIN-Rail Mounting</p> <p>6-60W</p>	



### RAILWAY CERTIFIED

#### • DC-DC CONVERTERS

<p>DIP Package</p> <p>3W</p>	<p>2"×1" Package</p> <p>10-40W</p>	<p>Quarter Brick</p> <p>50-150W</p>
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### MEDICAL SAFETY

#### • DC-DC CONVERTERS

<p>SIP Package</p> <p>1W</p>	<p>SMD Package</p> <p>1-2W</p>
<p>DIP Package</p> <p>2-10W</p>	<p>2"×1" Package</p> <p>15-20W</p>

#### • AC-DC POWER SUPPLIES

<p>Encapsulated Package</p> <p>24-60W</p>
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**POWER FOR  
A BETTER FUTURE**

FOR MORE INFO, PLEASE GO TO  [www.minimaxpower.com](http://www.minimaxpower.com)

