



2017



Company Profile

MINMAX TECHNOLOGY CO., LTD.

Founded in 1990, has over 27 years experience as a specialist in the design and manufacturing of DC-DC converters & AC-DC power supplies for industrial, medical/health care, railway, transportation, smart grid, robot, etc. applications. The comprehensive standard range of products covers power ratings from 1 to 75W and sample stock delivery of most models.

MINMAX POWER INC., USA

Was incorporated in Hudson, MA in 2011 to bring the same level of superior support to customers and sales channels in North America.

| | |
|-----------------------------|---|
| Mission | Design, manufacture and sales of world class DC-DC and AC-DC converter products. Provide fast turnaround, superior quality, efficient service and competitive pricing to satisfy customer requirements. |
| Core Values | Honesty Service Innovation Growth Reliability |
| Leading Edge Product Design | <ul style="list-style-type: none">• High I/O-isolation Voltage• High Performance, High Power Density• Ultra-wide Input Voltage Ranges• SMT Products Qualified for Lead-free Reflow Soldering Process• ISO9001, ISO14001 and IECQ QC 080000 Certifications.• cUL/UL/IEC/EN 60950-1, IEC/EN 60601-1 3rd & ANSI/AAMI ES60601-1, EN50155 (IEC60571) Approved DC-DC Converters with CE Marking• cUL/UL/IEC/EN 60950-1, IEC/EN 60601-1 3rd & ANSI/AAMI ES60601-1, cUL/UL508, EN50155 (IEC60571) Approved AC-DC Power Supplies with CE Marking• TUV/IEC/EN60335-1• RoHS, Reach and Conflict Free Minerals Compliance |
| R & D | A staff of 40 engineers ensures talent for continuous new product development and custom/modified customer requests. |
| Quality Systems | High quality, tight process control and continuous improvement are keys to our quality philosophy. Our goal is to provide quality products at a competitive price, while adhering to the criteria of our ISO9001, ISO14001 and IECQ QC 080000 Certifications. All MINMAX products have a 3 year warranty. |
| Customer Service | Our sales and applications engineering personnel assist with each step of the customer's requirements, from product selection, design in, samples, production and inventory. We have no minimum order quantity, maintain worldwide inventories at our facilities and at our distributors. We commit to prompt response to all inquiries – within 24 hours ! |

SIP Package DC-DC Converters, 1-5W

| Series | Output Power | Input Range (VDC) | Output Voltage (VDC) | Regulation | I/O Isolation (VDC) | Package | Safety | Page |
|--------------------|--------------|-------------------------------|---|------------|---------------------|---------|--------|------|
| MBU100 | 1W | 3.3, 5, 12, 24 ($\pm 10\%$) | 3.3, 5, 9, 12, 15 | - | 1000 | SIP-4 | - | 5 |
| MAU100 | 1W | 5, 12, 15, 24 ($\pm 10\%$) | 3.3, 5, 9, 12, 15, $\pm 5, \pm 9, \pm 12, \pm 15$ | - | 1000 | SIP-7 | ● | 6 |
| MAU200 | 1W | 5, 12, 24 ($\pm 10\%$) | 3.3, 5, 9, 12, 15, $\pm 5, \pm 9, \pm 12, \pm 15$ | - | 3000 | SIP-7 | ● | 7 |
| MA01 | 1W | 5, 12, 24 ($\pm 10\%$) | 5, 9, 12, 15, $\pm 5, \pm 9, \pm 12, \pm 15$ | Semi | 1000 | SIP-7 | ● | 8 |
| NEW MAPU01H | 1W | 3.3, 5, 12, 24 ($\pm 10\%$) | 3.3, 5, 9, 12, 15, $\pm 5, \pm 12, \pm 15$ | - | 3000 | SIP-7 | ● | 9 |
| MAW01 | 1W | 4.5-9, 9-18, 18-36, 36-75 | 5, 12, 15, 24, $\pm 12, \pm 15$ | ● | 1500 | SIP-6 | ● | 10 |
| MAU300 | 2W | 5, 12, 24 ($\pm 10\%$) | 3.3, 5, 12, 15, $\pm 5, \pm 12, \pm 15$ | - | 1000 | SIP-7 | - | 11 |
| MCW1000 | 2W | 4.5-9, 9-18, 18-36, 36-75 | 3.3, 5, 12 | ● | 1000 | SIP-8 | ● | 12 |
| MCWI02 | 2W | 4.5-18, 9-36, 18-75 | 3.3, 5, 12, 15, $\pm 5, \pm 12, \pm 15$ | ● | 1500 | SIP-8 | ● | 13 |
| MA03 | 3W | 5, 12, 24 ($\pm 10\%$) | 5, 9, 12, 15 | Semi | 1000 | SIP-7 | ● | 14 |
| MCW03 | 3W | 4.5-9, 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, $\pm 5, \pm 12, \pm 15$ | ● | 1600 | SIP-8 | ● | 15 |
| MCWI03 | 3W | 4.5-18, 9-36, 18-75 | 3.3, 5, 12, 15, $\pm 5, \pm 12, \pm 15$ | ● | 1600 | SIP-8 | ● | 16 |
| MCWI05 | 5W | 4.5-18, 9-36, 18-75 | 3.3, 5, 12, 15, 24, $\pm 12, \pm 15$ | ● | 1500 | SIP-8 | ● | 17 |

SMD Package DC-DC Converters, 1-6W

| | | | | | | | | |
|---------------------|----|------------------------------|---|---|------|----------------|---|----|
| MSLU100 | 1W | 5, 12, 15, 24 ($\pm 10\%$) | 3.3, 5, 9, 12, 15, $\pm 5, \pm 12, \pm 15$ | - | 1500 | 13.7×11.0×7.2 | ● | 18 |
| MSLU300 | 1W | 5, 12, 24 ($\pm 10\%$) | 3.3, 5, 12, 15, $\pm 5, \pm 12, \pm 15$ | - | 3000 | 16.3×11.0×8.0 | - | 19 |
| MSAU100/ MSAU200 | 1W | 5, 12, 24 ($\pm 10\%$) | 3.3, 5, 9, 12, 15/ $\pm 5, \pm 9, \pm 12, \pm 15$ | - | 1000 | 12.7×11.2×7.1 | - | 20 |
| NEW MSPU01H | 1W | 3.3, 5, 12 ($\pm 10\%$) | 3.3, 5, 12, 15, $\pm 5, \pm 12, \pm 15$ | - | 3000 | 16.3×11.0×8.9 | ● | 21 |
| MSCW01 | 1W | 4.5-9, 9-18, 18-36, 36-75 | 5, 12, 15, $\pm 12, \pm 15$ | ● | 1500 | 18.9×17.2×8.7 | ● | 22 |
| MSAU400 | 2W | 5, 12, 24 ($\pm 10\%$) | 5, 12, $\pm 5, \pm 12, \pm 15$ | - | 1000 | 12.7×11.8×8.9 | - | 23 |
| MSLU400 | 2W | 5, 12, 24 ($\pm 10\%$) | 3.3, 5, 12, $\pm 5, \pm 12, \pm 15$ | - | 1500 | 13.7×12.3×8.9 | - | 24 |
| MSDW1000 | 2W | 4.5-9, 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, $\pm 5, \pm 12, \pm 15$ | ● | 1500 | 24.0×18.1×8.2 | ● | 25 |
| NEW MSCWI02 | 2W | 4.5-12, 9-36, 18-75 | 5, 12, 15, 24, $\pm 12, \pm 15$ | ● | 1500 | 19.0×17.0×8.7 | ● | 26 |
| MSDWI03 | 3W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, $\pm 5, \pm 12, \pm 15$ | ● | 1500 | 24.0×18.1×8.2 | ● | 27 |
| NEW MSCWI03 | 3W | 4.5-12, 9-36, 18-75 | 5, 12, 15, 24, $\pm 12, \pm 15$ | ● | 1500 | 19.0×17.0×8.7 | ● | 28 |
| MSKW2000 | 5W | 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, $\pm 5, \pm 12, \pm 15$ | ● | 1500 | 33.4×25.6×10.2 | ● | 29 |
| MSGWI06 | 6W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, $\pm 5, \pm 12, \pm 15$ | ● | 1500 | 22.0×25.4×10.2 | ● | 30 |

DIP Package DC-DC Converters, 1-10W

| | | | | | | | | |
|-------------------|-----|----------------------------------|---|---|------------|--------|---|----|
| MFU100 | 1W | 5, 12, 24 ($\pm 10\%$) | 5, 9, 12, 15 | - | 3000 | DIP-8 | ● | 31 |
| NEW MFP01H | 1W | 3.3, 5, 12 ($\pm 10\%$) | 3.3, 5, 12, 15, $\pm 5, \pm 12, \pm 15$ | - | 3000 | DIP-8 | ● | 32 |
| NEW MFW02 | 2W | 4.5-10, 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, $\pm 5, \pm 12, \pm 15$ | ● | 1500 | DIP-8 | ● | 33 |
| MIAR03 | 3W | 5, 12, 24 ($\pm 10\%$) | 5, 12, 15, $\pm 12, \pm 15$ | ● | 1500 | DIP-24 | ● | 34 |
| NEW MFW03 | 3W | 4.5-10, 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, $\pm 5, \pm 12, \pm 15$ | ● | 1500 | DIP-8 | ● | 35 |
| MIW03 | 3W | 4.5-9, 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, 24, $\pm 5, \pm 12, \pm 15$ | ● | 1500(3000) | DIP-24 | ● | 36 |
| MIW1100 | 3W | 4.5-9, 9-18, 18-36, 36-75, 10-30 | 5, 12, 15, $\pm 12, \pm 15$ | ● | 1500 | DIP-24 | ● | 37 |
| MDWI03 | 3W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, $\pm 5, \pm 12, \pm 15$ | ● | 1500 | DIP-16 | ● | 38 |
| MIWI03 | 3W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, $\pm 5, \pm 12, \pm 15$ | ● | 1500(3000) | DIP-24 | ● | 39 |
| MIW06 | 6W | 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, 24, $\pm 5, \pm 12, \pm 15$ | ● | 1500(3000) | DIP-24 | ● | 40 |
| MIWI06 | 6W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, $\pm 5, \pm 12, \pm 15$ | ● | 1500(3000) | DIP-24 | ● | 41 |
| NEW MDWI06 | 6W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, $\pm 12, \pm 15$ | ● | 1500 | DIP-16 | ● | 42 |
| NEW MDW08 | 8W | 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, 24, $\pm 12, \pm 15$ | ● | 1500 | DIP-16 | ● | 43 |
| NEW MDWI08 | 8W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, $\pm 12, \pm 15$ | ● | 1500 | DIP-16 | ● | 44 |
| MIW10 | 10W | 9-18, 18-36, 36-75 | 3.3, 5, 5.1, 12, 15, $\pm 12, \pm 15$ | ● | 1500 | DIP-24 | ● | 45 |
| MIWI10 | 10W | 9-36, 18-75 | 3.3, 5, 5.1, 12, 15, 24, $\pm 12, \pm 15$ | ● | 1500 | DIP-24 | ● | 46 |

Safety Status : Approved ●
Pending ▲

1"×1" Package DC-DC Converters, 10-25W

| Series | Output Power | Input Range (VDC) | Output Voltage (VDC) | Regulation | I/O Isolation (VDC) | Package | Safety | Page |
|------------------|--------------|--------------------|---------------------------------------|------------|---------------------|---------|--------|------|
| MJW10 | 10W | 9-18, 18-36, 36-75 | 3.3, 5, 5.1, 12, 15, ±5, ±12, ±15 | • | 1500 | 1"×1" | • | 47 |
| MJWI10 | 10W | 9-36, 18-75 | 3.3, 5, 5.1, 12, 15, 24, ±5, ±12, ±15 | • | 1500 | 1"×1" | • | 48 |
| NEW MJW15 | 15W | 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, 24, ±12, ±15 | • | 1500 | 1"×1" | • | 49 |
| MJWI15 | 15W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, ±12, ±15 | • | 1500 | 1"×1" | • | 50 |
| MJWI20 | 20W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, ±12, ±15 | • | 1500 | 1"×1" | • | 51 |
| MJW25 | 25W | 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, ±12, ±15 | • | 1500 | 1"×1" | • | 52 |
| MJWI25 | 25W | 9-36, 18-75 | 3.3, 5, 12, 15, ±12, ±15 | • | 1500 | 1"×1" | • | 53 |

2"×1" & 2"×1.6" Package DC-DC Converters, 30-50W

| | | | | | | | | |
|---------|-----|--------------------|------------------------------|---|------|---------|---|----|
| MKW5000 | 30W | 18-36, 36-75 | 2.5, 3.3, 5, 5.1, 12, 15 | • | 1500 | 2"×1" | • | 54 |
| MPW1000 | 30W | 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, ±12, ±15 | • | 1500 | 2"×1.6" | • | 55 |
| MPW2000 | 30W | 10-40, 18-75 | 3.3, 5, 12, 15, ±12, ±15 | • | 1500 | 2"×1.6" | • | 56 |
| MKW40 | 40W | 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, 24, ±12, ±15 | • | 1500 | 2"×1" | • | 57 |
| MKWI40 | 40W | 9-36, 18-75 | 3.3, 5, 12, 15, 24, ±12, ±15 | • | 1500 | 2"×1" | • | 58 |
| MKW50 | 50W | 9-18, 18-36, 36-75 | 3.3, 5, 12, 15, 24 | • | 1500 | 2"×1" | • | 59 |
| MKWI50 | 50W | 9-36, 18-75 | 3.3, 5, 12, 15, 24 | • | 1500 | 2"×1" | • | 60 |

Chassis and DIN-Rail Mounting Package DC-DC Converters, 20-60W

| | | | | | | | | |
|---------|-----|-------------|-----------------|---|------|------------------|---|----|
| MOWI20C | 20W | 9-36, 18-75 | 5.1, 12, 24, 48 | • | 2500 | Chassis/DIN-Rail | • | 61 |
| MQWI40C | 40W | 9-36, 18-75 | 5.1, 12, 24, 48 | • | 2500 | Chassis/DIN-Rail | • | 62 |
| MRWI60C | 60W | 9-36, 18-75 | 5.1, 12, 24, 48 | • | 2500 | Chassis/DIN-Rail | • | 63 |

Switching Regulators, 0.5-1A

| | | | | | | | | |
|--------------------|------|--------------------------|---------------------------------------|---|---|-------|---|----|
| M78AR-0.5 | 0.5A | (4.75/6.5/8/11/15/18)-32 | 1.5, 1.8, 2.5, 3.3, 5, 6.5, 9, 12, 15 | • | - | SIP-3 | - | 64 |
| M78SAR-0.5 | 0.5A | | | • | - | SMD | - | 65 |
| NEW M78AR-1 | 1A | (6.5/15)-32 | 3.3, 5, 12 | • | - | SIP-3 | - | 66 |

Safety Status : Approved ●
Pending ▲

| AC-DC Power Supplies, 2-60W | | | | | | | |
|-----------------------------|--------------|-------------------|---------------------|------------------------|--|--------|------|
| Series | Output Power | Input Range (VAC) | I/O Isolation (VAC) | Package | | Safety | Page |
| ABW-02 | 2W | 85-264(VAC) | 3000 | PCB | | ● | 67 |
| NEW AAF-03 | 3W | | 3000 | PCB | | ● | 68 |
| ABF-04 | 4W | | 3000 | PCB | | ● | 69 |
| NEW AAF-05 | 5W | | 3000 | PCB, Chassis | | ● | 70 |
| ADF-07 | 7W | | 3000 | PCB | | ● | 71 |
| AGF-10 | 10W | | 3000 | PCB | | ● | 72 |
| NEW ACF-10 | 10W | | 4000 | PCB | | ▲ | 73 |
| AKF-15 | 15W | | 3000 | PCB, Chassis, DIN-Rail | | ● | 74 |
| AQF-30 | 30W | | 3000 | PCB, Chassis, DIN-Rail | | ● | 75 |
| AZF-60 | 60W | | 3000 | PCB, Chassis, DIN-Rail | | ● | 76 |

| Ultra-high Isolation DC-DC Converters, 1-20W | | | | | | | |
|--|--------------|------------------------------|--|------------|---------------------|-----------------------|---------|
| Series | Output Power | Input Range (VDC) | Output Voltage (VDC) | Regulation | I/O Isolation (VDC) | Reinforced Insulation | Package |
| MA01-HI | 1W | 5, 12, 15, 24 ($\pm 10\%$) | 3.3, 5, 9, 12, 15, $\pm 5, \pm 9, \pm 12, \pm 15, +15/-9$ | - | 5200 | - | SIP-7 |
| MAEU02-HI | 2W | 5, 12, 15, 24 ($\pm 10\%$) | 3.3, 5, 9, 12, 15, $\pm 5, \pm 9, \pm 12, \pm 15, +15/-9$ | - | 5200 | - | SIP-7 |
| MDEU02-HI | 2W | 5, 12, 24 ($\pm 10\%$) | 5, 12, 15, $\pm 12, \pm 15$ | - | 8000 | Reinforced | DIP-16 |
| MIEI03-HI | 3W | 9-40, 18-80 | 5, 12, $\pm 12, \pm 15$ | ● | 8000 | Reinforced | DIP-24 |
| MIE03-HI | 3.5W | 4.5-9, 9-18, 18-36, 36-75 | 5, 5.8, 12, 15, $\pm 12, \pm 15$ | ● | 9000 | Reinforced | DIP-24 |
| MIE06-HI | 6W | 9-18, 18-36, 36-75 | 5, 12, 15, $\pm 12, \pm 15$ | ● | 9000 | Reinforced | DIP-24 |
| MKE10-HI | 10W | 9-18, 18-36, 36-75 | 5, 5.1, 12, $\pm 12, \pm 15$ | ● | 8000 | Reinforced | 2"×1" |
| NEW MKE15-HI | 15W | 9-18, 18-36, 36-75 | 5, 5.1, 12, 15, 24, $\pm 12, \pm 15$ | ● | 8000 | Reinforced | 2"×1" |
| NEW MKE20-HI | 20W | 9-18, 18-36, 36-75 | 5, 5.1, 12, 15, 24, $\pm 12, \pm 15$ | ● | 8000 | Reinforced | 2"×1" |

| Railway Certified DC-DC Converters, 3-75W (EN 50155 & IEC60571) | | | | | | | |
|---|--------------|---------------------|---------------------------------|------------|---------------------|---------------|------|
| Series | Output Power | Input Range (VDC) | Output Voltage (VDC) | Regulation | I/O Isolation (VAC) | Package | Page |
| NEW MIZI03 | 3W | 9-36, 18-75, 40-160 | 5, 12, 15, $\pm 12, \pm 15$ | ● | 3000 | DIP-24 | ▲ 86 |
| NEW MKZI10 | 10W | 9-36, 18-75, 40-160 | 5, 12, 15, 24, $\pm 12, \pm 15$ | ● | 3000 | 2"×1" | ● 87 |
| NEW MKZI20 | 20W | 9-36, 18-75, 40-160 | 5, 12, 15, 24, $\pm 12, \pm 15$ | ● | 3000 | 2"×1" | ● 88 |
| MTQZ50 | 50W | 43-101, 66-160 | 5, 12, 15, 24 | ● | 3000 | Quarter Brick | ● 89 |
| MTQZ75 | 75W | 43-101, 66-160 | 5, 12, 15, 24 | ● | 3000 | Quarter Brick | ● 90 |

Safety Status : Approved ●
Pending ▲

Medical Safety DC-DC Converters, 1-20W (ANSI/AAMI ES, IEC/EN 60601-1 3rd)

| Series | Output Power | Input Range (VDC) | Output Voltage (VDC) | Regulation | I/O Isolation (VAC) | Protection Level | Package | Safety | Page |
|-----------------------------|--------------|---------------------------|--|------------|---------------------|------------------|---------|--------|------|
| MAU400 | 1W | 5, 12 ($\pm 10\%$) | 5, 12, 15, ± 5 , ± 12 , ± 15 | - | 3000 | 2xMOOP | SIP-7 | ● | 91 |
| NEW MAU01M | 1W | 5, 12, 24 ($\pm 10\%$) | 5, 12, 15 | - | 4000 | 2xMOPP | SIP-7 | ● | 92 |
| NEW MSCU01M | 1W | 5, 12, 24 ($\pm 10\%$) | 5, 12, 15, ± 12 , ± 15 | - | 4000 | 2xMOPP | SMD | ● | 93 |
| MDHU100 | 2W | 5, 12, 24 ($\pm 10\%$) | 5, 12, 15, ± 12 , ± 15 | - | 4000 | 2xMOOP | DIP-16 | ● | 94 |
| MSHU100 | 2W | 5, 12, 24 ($\pm 10\%$) | 5, 12, 15, ± 12 , ± 15 | - | 4000 | 2xMOOP | SMD | ● | 95 |
| MIDR03M | 3W | 5, 12, 24 ($\pm 10\%$) | 5, 12, 15, ± 12 , ± 15 | ● | 3000 | 2xMOOP | DIP-24 | ● | 96 |
| MIHW1000 | 3W | 4.5-9, 9-18, 18-36, 36-75 | 5, 12, 24, ± 12 , ± 15 | ● | 4000 | 2xMOOP | DIP-24 | ● | 97 |
| MIHW2000 | 3W | 9-40, 18-80, 36-160 | 5, 12, ± 12 , ± 15 | ● | 4000 | 2xMOOP | DIP-24 | ● | 98 |
| NEW MIW03M | 3.5W | 4.5-9, 9-18, 18-36, 36-75 | 5, 5.8, 12, 15, ± 12 , ± 15 | ● | 5000 | 2xMOPP | DIP-24 | ● | 99 |
| MIHW3000 | 6W | 9-18, 18-36, 36-75 | 5, 12, ± 12 , ± 15 | ● | 4000 | 2xMOOP | DIP-24 | ● | 100 |
| NEW MIW06M | 6W | 9-18, 18-36, 36-75 | 5, 12, 15, ± 12 , ± 15 | ● | 5000 | 2xMOPP | DIP-24 | ● | 101 |
| MKW10M | 10W | 9-18, 18-36, 36-75 | 5, 5.1, 12, ± 12 , ± 15 | ● | 4200 | 2xMOOP | 2" x 1" | ● | 102 |
| NEW MKW15M | 15W | 9-18, 18-36, 36-75 | 5, 5.1, 12, 15, 24, ± 12 , ± 15 | ● | 4200 | 2xMOPP | 2" x 1" | ● | 103 |
| NEW MKW20M | 20W | 9-18, 18-36, 36-75 | 5, 5.1, 12, 15, 24, ± 12 , ± 15 | ● | 4200 | 2xMOPP | 2" x 1" | ● | 104 |

Medical Safety AC-DC Power Supplies, 24-60W (ANSI/AAMI ES, IEC/EN 60601-1 3rd)

| Series | Output Power | Input Range (VAC) | I/O Isolation (VAC) | Protection Level | Package | Safety | Page |
|--------|--------------|-------------------|---------------------|------------------|------------------------|--------|------|
| AJM-24 | 24W | | 4000 | 2xMOPP | PCB, Chassis, DIN-Rail | ● | 105 |
| APM-40 | 40W | 85-264(VAC) | 4000 | 2xMOPP | PCB, Chassis, DIN-Rail | ● | 106 |
| AYM-60 | 60W | | 4000 | 2xMOPP | PCB, Chassis, DIN-Rail | ● | 107 |

MBU100 Series • 1W

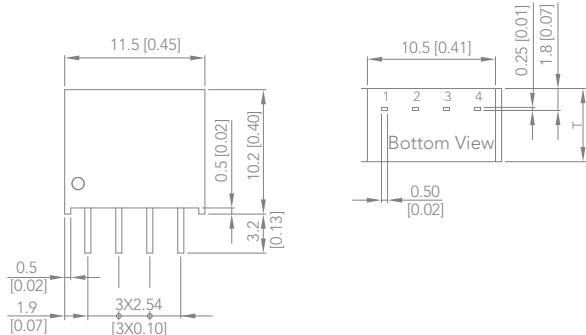
- Industrial Standard SIP-4 Package
- I/O Isolation 1000VDC
- Operating Ambient Temp. Range -40°C to +85°C



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-----------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MBU135 | 3.3 | 3.3 | 260 | 74% | | |
| MBU131 | (2.97 – 3.63) | 5 | 200 | 77% | | |
| MBU105 | | 3.3 | 260 | 72% | | |
| MBU101 | | 5 | 200 | 69% | | |
| MBU102 | 5 (4.5 – 5.5) | 9 | 110 | 76% | | |
| MBU103 | | 12 | 84 | 77% | | |
| MBU104 | | 15 | 67 | 78% | | |
| MBU111 | | 5 | 200 | 71% | | |
| MBU112 | 12 | 9 | 110 | 77% | | |
| MBU113 | (10.8 – 13.2) | 12 | 84 | 79% | | |
| MBU114 | | 15 | 67 | 80% | | |
| MBU121 | | 5 | 200 | 70% | | |
| MBU122 | 24 (21.6 – 26.4) | 9 | 110 | 76% | | |
| MBU123 | | 12 | 84 | 79% | | |
| MBU124 | | 15 | 67 | 79% | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Function |
|-----|----------|
| 1 | -Vin |
| 2 | +Vin |
| 3 | -Vout |
| 4 | +Vout |

T = 6.1 [0.24] for other input models
T = 7.1 [0.28] for 24V input models

MAU100 Series • 1W

- Industrial Standard SIP-7 Package
- I/O Isolation 1000VDC
- Operating Ambient Temp. Range -40°C to +85°C
- For Semi-regulated Type : MA01 Series on Page 08
- UL/cUL/IEC/EN 60950-1 Safety Approval

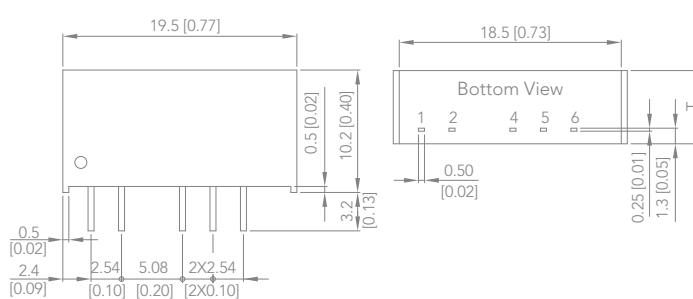


| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-----------------------|--------------------------------|-----------------------|------------|-----|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MAU101 | 5 (4.5 – 5.5) | 3.3 | 260 | 73% | |
| MAU102 | | 5 | 200 | 71% | |
| MAU103 | | 9 | 110 | 76% | |
| MAU104 | | 12 | 84 | 78% | |
| MAU105 | | 15 | 67 | 78% | |
| MAU106 | | ±5 | ±100 | 72% | |
| MAU107 | | ±9 | ±56 | 77% | |
| MAU108 | | ±12 | ±42 | 78% | |
| MAU109 | | ±15 | ±34 | 79% | |
| MAU111 | | 3.3 | 260 | 74% | |
| MAU112 | | 5 | 200 | 73% | |
| MAU113 | | 9 | 110 | 78% | |
| MAU114 | | 12 | 84 | 80% | |
| MAU115 | | 15 | 67 | 80% | |
| MAU116 | | (10.8 – 13.2) | ±5 | ±100 | 74% |
| MAU117 | | ±9 | ±56 | 79% | |
| MAU118 | | ±12 | ±42 | 81% | |
| MAU119 | | ±15 | ±34 | 81% | |
| MAU151 | 15 (13.5 – 16.5) | 5 | 200 | 72% | |
| MAU152 | | 12 | 84 | 79% | |
| MAU153 | | 15 | 67 | 79% | |
| MAU154 | | ±5 | ±100 | 72% | |
| MAU155 | | ±12 | ±42 | 80% | |
| MAU156 | | ±15 | ±34 | 80% | |
| MAU121 | 24 (21.6 – 26.4) | 3.3 | 260 | 73% | |
| MAU122 | | 5 | 200 | 71% | |
| MAU123 | | 9 | 110 | 76% | |
| MAU124 | | 12 | 84 | 78% | |
| MAU125 | | 15 | 67 | 79% | |
| MAU126 | | ±5 | ±100 | 72% | |
| MAU127 | | ±9 | ±56 | 76% | |
| MAU128 | | ±12 | ±42 | 79% | |
| MAU129 | | ±15 | ±34 | 80% | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | |
|--------------------------------|--------|--------------------------|--|
| Pin | Single | Dual | |
| 1 | +Vin | +Vin | |
| 2 | -Vin | -Vin | |
| 4 | -Vout | -Vout | |
| 5 | No Pin | Common | |
| 6 | +Vout | +Vout | |

T = 6.1 [0.24] for 5V & 12V input models
T = 7.1 [0.28] for 15V & 24V input models



MAU200 Series • 1W

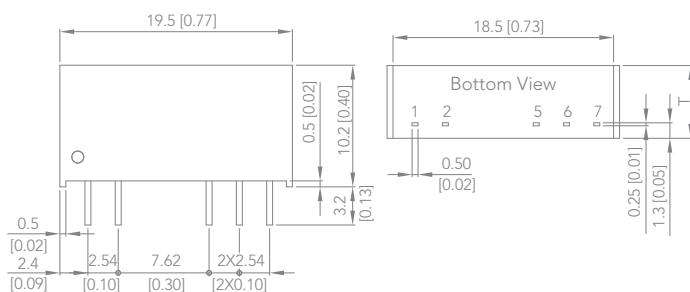
- Industrial Standard SIP-7 Package
- I/O Isolation 3000VDC
- Operating Ambient Temp. Range -40°C to +85°C
- UL/cUL/IEC/EN 60950-1 Safety Approval



| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-----------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MAU201 | 3.3 | 260 | 73% | | |
| MAU202 | 5 | 200 | 71% | | |
| MAU203 | 9 | 110 | 76% | | |
| MAU204 | 12 | 84 | 78% | | |
| MAU205 | 5 (4.5 – 5.5) | 15 | 67 | 78% | |
| MAU206 | ±5 | ±100 | 72% | | |
| MAU207 | ±9 | ±56 | 77% | | |
| MAU208 | ±12 | ±42 | 78% | | |
| MAU209 | ±15 | ±34 | 79% | | |
| MAU211 | 3.3 | 260 | 74% | | |
| MAU212 | 5 | 200 | 73% | | |
| MAU213 | 9 | 110 | 78% | | |
| MAU214 | 12 | 84 | 80% | | |
| MAU215 | 12 (10.8 – 13.2) | 15 | 67 | 80% | |
| MAU216 | ±5 | ±100 | 74% | | |
| MAU217 | ±9 | ±56 | 79% | | |
| MAU218 | ±12 | ±42 | 81% | | |
| MAU219 | ±15 | ±34 | 81% | | |
| MAU221 | 3.3 | 260 | 73% | | |
| MAU222 | 5 | 200 | 71% | | |
| MAU223 | 9 | 110 | 76% | | |
| MAU224 | 12 | 84 | 78% | | |
| MAU225 | 24 (21.6 – 26.4) | 15 | 67 | 79% | |
| MAU226 | ±5 | ±100 | 72% | | |
| MAU227 | ±9 | ±56 | 76% | | |
| MAU228 | ±12 | ±42 | 79% | | |
| MAU229 | ±15 | ±34 | 80% | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 5 | -Vout | -Vout |
| 6 | No Pin | Common |
| 7 | +Vout | +Vout |

T = 6.1 [0.24] for 5V & 12V input models

T = 7.1 [0.28] for 24V input models

MA01 Series • 1W

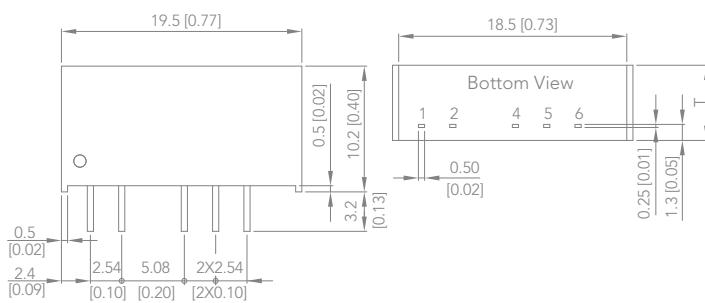
- Industrial Standard SIP-7 Package
- Semi-regulated Output Voltage
- Very High Efficiency up to 88.5%
- I/O Isolation 1000VDC
- Operating Ambient Temp. Range -40°C to +95°C
- UL/cUL/IEC/EN 60950-1 Safety Approval



| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-----------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MA01-05S05 | 5 | 200 | 84% | | |
| MA01-05S09 | 9 | 110 | 87% | | |
| MA01-05S12 | 12 | 84 | 87% | | |
| MA01-05S15 | 5 (4.5 – 5.5) | 15 | 67 | 87.5% | |
| MA01-05D05 | ±5 | ±100 | 84.5% | | |
| MA01-05D09 | ±9 | ±56 | 86% | | |
| MA01-05D12 | ±12 | ±42 | 86.5% | | |
| MA01-05D15 | ±15 | ±34 | 86.5% | | |
| MA01-12S05 | 5 | 200 | 84% | | |
| MA01-12S09 | 9 | 110 | 86.5% | | |
| MA01-12S12 | 12 | 84 | 88.5% | | |
| MA01-12S15 | 12 (10.8 – 13.2) | 15 | 67 | 88% | |
| MA01-12D05 | ±5 | ±100 | 84.5% | | |
| MA01-12D09 | ±9 | ±56 | 86% | | |
| MA01-12D12 | ±12 | ±42 | 88.5% | | |
| MA01-12D15 | ±15 | ±34 | 87.5% | | |
| MA01-24S05 | 5 | 200 | 84% | | |
| MA01-24S09 | 9 | 110 | 86.5% | | |
| MA01-24S12 | 12 | 84 | 87.5% | | |
| MA01-24S15 | 24 (21.6 – 26.4) | 15 | 67 | 87.5% | |
| MA01-24D05 | ±5 | ±100 | 83.5% | | |
| MA01-24D09 | ±9 | ±56 | 86% | | |
| MA01-24D12 | ±12 | ±42 | 87% | | |
| MA01-24D15 | ±15 | ±34 | 87% | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 4 | -Vout | -Vout |
| 5 | No Pin | Common |
| 6 | +Vout | +Vout |

T = 6.1 [0.24] for 5V & 12V input models
T = 7.1 [0.28] for 24V input models

MAPU01H Series • 1W

<NEW

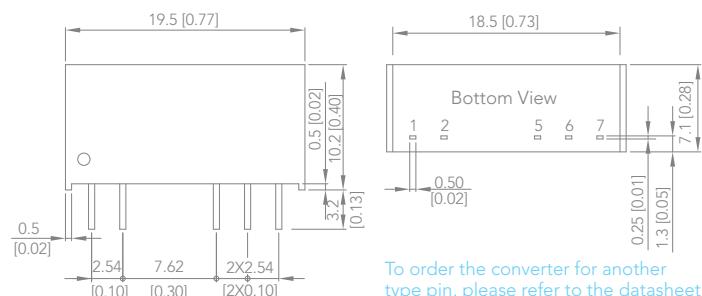
- Industrial Standard SIP-7 Package
- I/O Isolation 3000VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Overload and Short Circuit Protection
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MAPU01-03S03H | 3.3 | 300 | 77% | | | |
| MAPU01-03S05H | 5 | 200 | 77% | | | |
| MAPU01-03S09H | 9 | 110 | 78% | | | |
| MAPU01-03S12H | 3.3 | 12 | 84 | 80% | | |
| MAPU01-03S15H | (2.97 – 3.63) | 15 | 67 | 79% | | |
| MAPU01-03D05H | ±5 | ±100 | 77% | | | |
| MAPU01-03D12H | ±12 | ±42 | 79% | | | |
| MAPU01-03D15H | ±15 | ±33 | 79% | | | |
| MAPU01-05S03H | 3.3 | 300 | 76% | | | |
| MAPU01-05S05H | 5 | 200 | 78% | | | |
| MAPU01-05S09H | 9 | 110 | 81% | | | |
| MAPU01-05S12H | 5 | 12 | 84 | 82% | | |
| MAPU01-05S15H | (4.5 – 5.5) | 15 | 67 | 83% | | |
| MAPU01-05D05H | ±5 | ±100 | 81% | | | |
| MAPU01-05D12H | ±12 | ±42 | 81% | | | |
| MAPU01-05D15H | ±15 | ±33 | 81% | | | |
| MAPU01-12S03H | 3.3 | 300 | 79% | | | |
| MAPU01-12S05H | 5 | 200 | 80% | | | |
| MAPU01-12S09H | 9 | 110 | 82% | | | |
| MAPU01-12S12H | 12 | 12 | 84 | 84% | | |
| MAPU01-12S15H | (10.8 – 13.2) | 15 | 67 | 83% | | |
| MAPU01-12D05H | ±5 | ±100 | 81% | | | |
| MAPU01-12D12H | ±12 | ±42 | 82% | | | |
| MAPU01-12D15H | ±15 | ±33 | 82% | | | |
| MAPU01-24S03H | 3.3 | 300 | 76% | | | |
| MAPU01-24S05H | 5 | 200 | 81% | | | |
| MAPU01-24S09H | 9 | 110 | 79% | | | |
| MAPU01-24S12H | 24 | 12 | 84 | 82% | | |
| MAPU01-24S15H | (21.6 – 26.4) | 15 | 67 | 82% | | |
| MAPU01-24D05H | ±5 | ±100 | 80% | | | |
| MAPU01-24D12H | ±12 | ±42 | 81% | | | |
| MAPU01-24D15H | ±15 | ±33 | 80% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 5 | -Vout | -Vout |
| 6 | No Pin | Common |
| 7 | +Vout | +Vout |

MAW01 Series • 1W

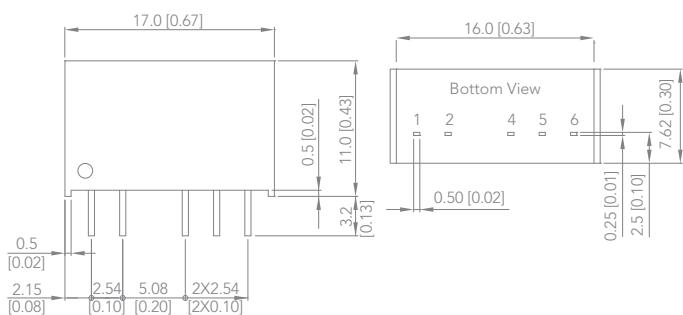
- Industrial Standard SIP-6 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +95°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- UL/cUL/IEC/EN 60950-1 Safety Approval



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MAW01-05S05 | 5 | 200 | 76% | | | |
| MAW01-05S12 | 12 | 83 | 77% | | | |
| MAW01-05S15 | 5 | 15 | 67 | 79% | | |
| MAW01-05S24 | (4.5 – 9) | 24 | 42 | 76% | | |
| MAW01-05D12 | ±12 | ±42 | 77% | | | |
| MAW01-05D15 | ±15 | ±33 | 78% | | | |
| MAW01-12S05 | 5 | 200 | 77% | | | |
| MAW01-12S12 | 12 | 83 | 77% | | | |
| MAW01-12S15 | 12 | 15 | 67 | 80% | | |
| MAW01-12S24 | (9 – 18) | 24 | 42 | 77% | | |
| MAW01-12D12 | ±12 | ±42 | 79% | | | |
| MAW01-12D15 | ±15 | ±33 | 78% | | | |
| MAW01-24S05 | 5 | 200 | 77% | | | |
| MAW01-24S12 | 12 | 83 | 80% | | | |
| MAW01-24S15 | 24 | 15 | 67 | 80% | | |
| MAW01-24S24 | (18 – 36) | 24 | 42 | 77% | | |
| MAW01-24D12 | ±12 | ±42 | 80% | | | |
| MAW01-24D15 | ±15 | ±33 | 80% | | | |
| MAW01-48S05 | 5 | 200 | 77% | | | |
| MAW01-48S12 | 12 | 83 | 78% | | | |
| MAW01-48S15 | 48 | 15 | 67 | 78% | | |
| MAW01-48S24 | (36 – 75) | 24 | 42 | 76% | | |
| MAW01-48D12 | ±12 | ±42 | 79% | | | |
| MAW01-48D15 | ±15 | ±33 | 79% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 4 | +Vout | +Vout |
| 5 | No Pin | Common |
| 6 | -Vout | -Vout |

MAU300 Series • 2W

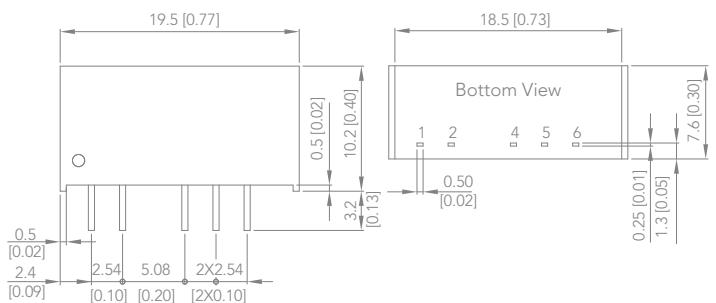
- Industrial Standard SIP-7 Package
- I/O Isolation 1000VDC
- Operating Ambient Temp. Range -40°C to +85°C
- For Semi-regulated Type : MA03 Series on Page 14



| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-----------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MAU301 | | 3.3 | 500 | 73% | |
| MAU302 | | 5 | 400 | 76% | |
| MAU303 | | 12 | 165 | 80% | |
| MAU304 | 5 (4.5 – 5.5) | 15 | 133 | 80% | |
| MAU305 | | ±5 | ±200 | 77% | |
| MAU306 | | ±12 | ±83 | 79% | |
| MAU307 | | ±15 | ±66 | 79% | |
| MAU311 | | 3.3 | 500 | 74% | |
| MAU312 | | 5 | 400 | 78% | |
| MAU313 | | 12 | 165 | 82% | |
| MAU314 | 12 (10.8 – 13.2) | 15 | 133 | 83% | |
| MAU315 | | ±5 | ±200 | 79% | |
| MAU316 | | ±12 | ±83 | 82% | |
| MAU317 | | ±15 | ±66 | 82% | |
| MAU321 | | 3.3 | 500 | 74% | |
| MAU322 | | 5 | 400 | 77% | |
| MAU323 | | 12 | 165 | 81% | |
| MAU324 | 24 (21.6 – 26.4) | 15 | 133 | 82% | |
| MAU325 | | ±5 | ±200 | 79% | |
| MAU326 | | ±12 | ±83 | 81% | |
| MAU327 | | ±15 | ±66 | 82% | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | |
|--------------------------------|--------|--------------------------|--------|
| Pin | Single | Dual | |
| 1 | +Vin | | +Vin |
| 2 | -Vin | | -Vin |
| 4 | -Vout | | -Vout |
| 5 | No Pin | | Common |
| 6 | +Vout | | +Vout |



MCW1000 Series • 2W

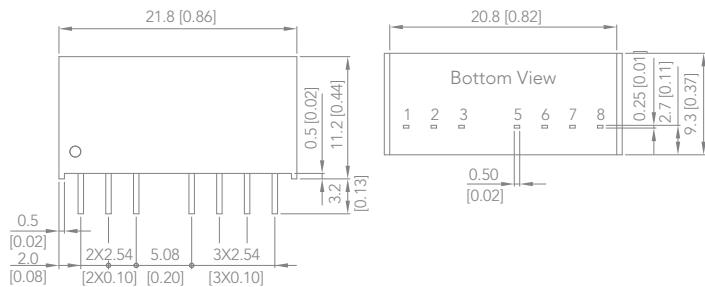
- Industrial Standard SIP-8 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1000VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Short Circuit Protection
- Remote On/Off Control
- UL/cUL/IEC/EN 60950-1 Safety Approval



| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MCW1011 | | 3.3 | 500 | 70% | |
| MCW1012 | 5 (4.5 – 9) | 5 | 400 | 73% | |
| MCW1013 | | 12 | 167 | 75% | |
| MCW1021 | | 3.3 | 500 | 73% | |
| MCW1022 | 12 (9 – 18) | 5 | 400 | 77% | |
| MCW1023 | | 12 | 167 | 80% | |
| MCW1031 | | 3.3 | 500 | 72% | |
| MCW1032 | 24 (18 – 36) | 5 | 400 | 77% | |
| MCW1033 | | 12 | 167 | 81% | |
| MCW1041 | | 3.3 | 500 | 71% | |
| MCW1042 | 48 (36 – 75) | 5 | 400 | 73% | |
| MCW1043 | | 12 | 167 | 79% | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Function |
|-----|---------------|
| 1 | -Vin |
| 2 | +Vin |
| 3 | Remote On/Off |
| 5 | NC |
| 6 | +Vout |
| 7 | -Vout |
| 8 | NC |

NC = No Connection

MCWI02 Series • 2W

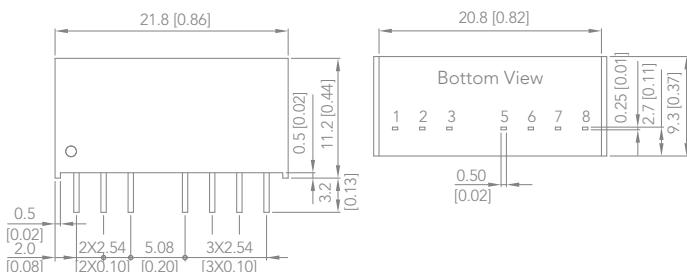
- Industrial Standard SIP-8 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +90°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Remote On/Off Control
- UL/cUL/IEC/EN 60950-1 Safety Approval



| ► Specifications | | ► Model Selection Guide | | | | |
|------------------|--------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MCWI02-12S033 | | 3.3 | 500 | 75% | | |
| MCWI02-12S05 | | 5 | 400 | 80% | | |
| MCWI02-12S12 | | 12 | 167 | 82% | | |
| MCWI02-12S15 | 12 (4.5 – 18) | 15 | 134 | 82% | | |
| MCWI02-12D05 | ±5 | ±200 | 80% | | | |
| MCWI02-12D12 | ±12 | ±83 | 82% | | | |
| MCWI02-12D15 | ±15 | ±67 | 82% | | | |
| MCWI02-24S033 | | 3.3 | 500 | 75% | | |
| MCWI02-24S05 | | 5 | 400 | 80% | | |
| MCWI02-24S12 | | 12 | 167 | 82% | | |
| MCWI02-24S15 | 24 (9 – 36) | 15 | 134 | 82% | | |
| MCWI02-24D05 | ±5 | ±200 | 80% | | | |
| MCWI02-24D12 | ±12 | ±83 | 82% | | | |
| MCWI02-24D15 | ±15 | ±67 | 82% | | | |
| MCWI02-48S033 | | 3.3 | 500 | 74% | | |
| MCWI02-48S05 | | 5 | 400 | 80% | | |
| MCWI02-48S12 | | 12 | 167 | 82% | | |
| MCWI02-48S15 | 48 (18 – 75) | 15 | 134 | 82% | | |
| MCWI02-48D05 | ±5 | ±200 | 80% | | | |
| MCWI02-48D12 | ±12 | ±83 | 82% | | | |
| MCWI02-48D15 | ±15 | ±67 | 82% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|---------------|--------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 3 | Remote On/Off | |
| 5 | NC | NC |
| 6 | +Vout | +Vout |
| 7 | -Vout | Common |
| 8 | NC | -Vout |

NC = No Connection

MA03 Series • 3W

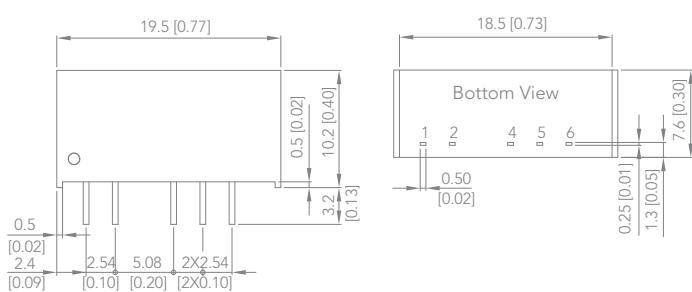
- Industrial Standard SIP-7 Package
- Semi-regulated Output Voltage
- Very High Efficiency up to 89%
- I/O Isolation 1000VDC
- Operating Ambient Temp. Range -40°C to +95°C
- UL/cUL/IEC/EN 60950-1 Safety Approval



| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MA03-05S05 | | 5 | 600 | 83% | |
| MA03-05S09 | 5 | 9 | 333 | 87% | |
| MA03-05S12 | (4.5 – 5.5) | 12 | 250 | 85.5% | |
| MA03-05S15 | | 15 | 200 | 87.5% | |
| MA03-12S05 | | 5 | 600 | 84% | |
| MA03-12S09 | 12 | 9 | 333 | 87.5% | |
| MA03-12S12 | (10.8 – 13.2) | 12 | 250 | 88% | |
| MA03-12S15 | | 15 | 200 | 89% | |
| MA03-24S05 | | 5 | 600 | 82% | |
| MA03-24S09 | 24 | 9 | 333 | 85% | |
| MA03-24S12 | (21.6 – 26.4) | 12 | 250 | 85.5% | |
| MA03-24S15 | | 15 | 200 | 85% | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | |
|--------------------------------|----------|--------------------------|----------|
| Pin | Function | Pin | Function |
| 1 | +Vin | | |
| 2 | -Vin | | |
| 4 | -Vout | | |
| 5 | No Pin | | |
| 6 | +Vout | | |



MCW03 Series • 3W

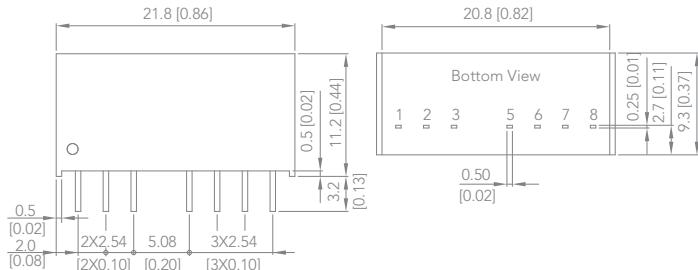
- Compact SIP-8 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1600VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Overload and Short Circuit Protection
- Remote On/Off Control
- UL/cUL/IEC/EN 60950-1 Safety Approval



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MCW03-05S033 | 3.3 | 700 | 71% | | | |
| MCW03-05S05 | 5 | 600 | 73% | | | |
| MCW03-05S12 | 12 | 250 | 79% | | | |
| MCW03-05S15 | 15 | 200 | 79% | | | |
| MCW03-05D05 | ±5 (4.5 – 9) | ±300 | 74% | | | |
| MCW03-05D12 | ±12 | ±125 | 79% | | | |
| MCW03-05D15 | ±15 | ±100 | 79% | | | |
| MCW03-12S033 | 3.3 | 700 | 75% | | | |
| MCW03-12S05 | 5 | 600 | 78% | | | |
| MCW03-12S12 | 12 | 250 | 83% | | | |
| MCW03-12S15 | 15 | 200 | 83% | | | |
| MCW03-12D05 | ±5 (9 – 18) | ±300 | 79% | | | |
| MCW03-12D12 | ±12 | ±125 | 83% | | | |
| MCW03-12D15 | ±15 | ±100 | 83% | | | |
| MCW03-24S033 | 3.3 | 700 | 75% | | | |
| MCW03-24S05 | 5 | 600 | 78% | | | |
| MCW03-24S12 | 12 | 250 | 83% | | | |
| MCW03-24S15 | 15 | 200 | 83% | | | |
| MCW03-24D05 | ±5 (18 – 36) | ±300 | 80% | | | |
| MCW03-24D12 | ±12 | ±125 | 83% | | | |
| MCW03-24D15 | ±15 | ±100 | 83% | | | |
| MCW03-48S033 | 3.3 | 700 | 75% | | | |
| MCW03-48S05 | 5 | 600 | 78% | | | |
| MCW03-48S12 | 12 | 250 | 83% | | | |
| MCW03-48S15 | 15 | 200 | 83% | | | |
| MCW03-48D05 | ±5 (36 – 75) | ±300 | 80% | | | |
| MCW03-48D12 | ±12 | ±125 | 83% | | | |
| MCW03-48D15 | ±15 | ±100 | 83% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|---------------|--------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 3 | Remote On/Off | |
| 5 | NC | NC |
| 6 | +Vout | +Vout |
| 7 | -Vout | Common |
| 8 | NC | -Vout |

NC = No Connection

MCWI03 Series • 3W

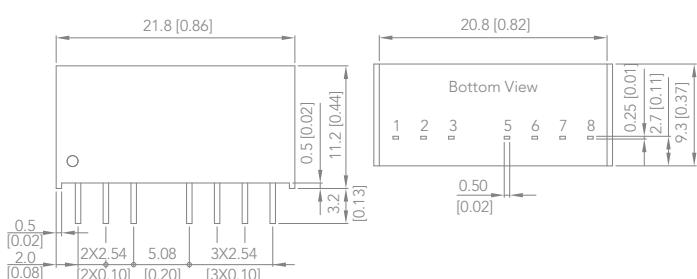
- Compact SIP-8 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1600VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Overload and Short Circuit Protection
- Remote On/Off Control
- UL/cUL/IEC/EN 60950-1 Safety Approval



| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|--------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MCWI03-12S033 | 3.3 | 700 | 74% | | |
| MCWI03-12S05 | 5 | 600 | 78% | | |
| MCWI03-12S12 | 12 | 250 | 80% | | |
| MCWI03-12S15 | 12 (4.5 – 18) | 15 | 200 | 80% | |
| MCWI03-12D05 | ±5 | ±300 | 80% | | |
| MCWI03-12D12 | ±12 | ±125 | 80% | | |
| MCWI03-12D15 | ±15 | ±100 | 80% | | |
| MCWI03-24S033 | 3.3 | 700 | 75% | | |
| MCWI03-24S05 | 5 | 600 | 80% | | |
| MCWI03-24S12 | 12 | 250 | 81% | | |
| MCWI03-24S15 | 24 (9 – 36) | 15 | 200 | 81% | |
| MCWI03-24D05 | ±5 | ±300 | 79% | | |
| MCWI03-24D12 | ±12 | ±125 | 80% | | |
| MCWI03-24D15 | ±15 | ±100 | 81% | | |
| MCWI03-48S033 | 3.3 | 700 | 74% | | |
| MCWI03-48S05 | 5 | 600 | 79% | | |
| MCWI03-48S12 | 12 | 250 | 79% | | |
| MCWI03-48S15 | 48 (18 – 75) | 15 | 200 | 79% | |
| MCWI03-48D05 | ±5 | ±300 | 79% | | |
| MCWI03-48D12 | ±12 | ±125 | 79% | | |
| MCWI03-48D15 | ±15 | ±100 | 80% | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|---------------|--------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 3 | Remote On/Off | |
| 5 | NC | NC |
| 6 | +Vout | +Vout |
| 7 | -Vout | Common |
| 8 | NC | -Vout |

NC = No Connection

MCWI05 Series • 5W

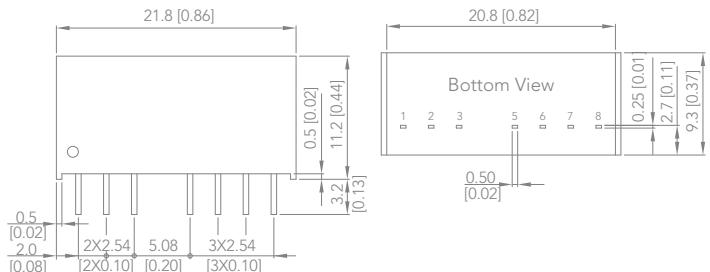
- Smallest Encapsulated 5W Converter
- Ultra-compact SIP-8 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +75°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Remote On/Off Control
- UL/cUL/IEC/EN 60950-1 Safety Approval



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|--------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MCWI05-12S033 | | 3.3 | 1075 | 76% | | |
| MCWI05-12S05 | | 5 | 1000 | 81% | | |
| MCWI05-12S12 | | 12 | 417 | 83% | | |
| MCWI05-12S15 | 12 (4.5 – 18) | 15 | 334 | 83% | | |
| MCWI05-12S24 | | 24 | 209 | 82% | | |
| MCWI05-12D12 | | ±12 | ±209 | 81% | | |
| MCWI05-12D15 | | ±15 | ±167 | 82% | | |
| MCWI05-24S033 | | 3.3 | 1075 | 76% | | |
| MCWI05-24S05 | | 5 | 1000 | 81% | | |
| MCWI05-24S12 | | 12 | 417 | 83% | | |
| MCWI05-24S15 | 24 (9 – 36) | 15 | 334 | 84% | | |
| MCWI05-24S24 | | 24 | 209 | 83% | | |
| MCWI05-24D12 | | ±12 | ±209 | 82% | | |
| MCWI05-24D15 | | ±15 | ±167 | 82% | | |
| MCWI05-48S033 | | 3.3 | 1075 | 76% | | |
| MCWI05-48S05 | | 5 | 1000 | 80% | | |
| MCWI05-48S12 | | 12 | 417 | 83% | | |
| MCWI05-48S15 | 48 (18 – 75) | 15 | 334 | 84% | | |
| MCWI05-48S24 | | 24 | 209 | 82% | | |
| MCWI05-48D12 | | ±12 | ±209 | 82% | | |
| MCWI05-48D15 | | ±15 | ±167 | 83% | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



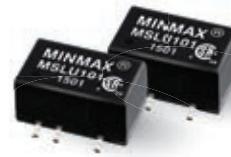
► Pin Connections

| Pin | Single | Dual |
|-----|--------|---------------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 3 | | Remote On/Off |
| 5 | NC | NC |
| 6 | +Vout | +Vout |
| 7 | -Vout | Common |
| 8 | NC | -Vout |

NC = No Connection

MSLU100 Series • 1W

- Industrial SMD Package
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Water-washable Process Available (option)
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
- UL/cUL/IEC/EN 60950-1 Safety Approval

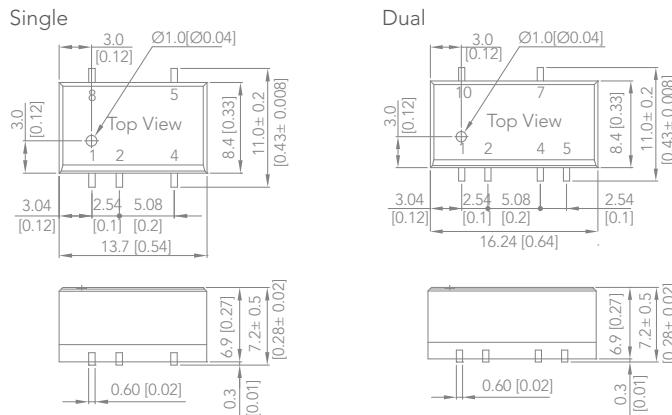


| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MSLU101 | 3.3 | 300 | 73% | | |
| MSLU102 | 5 | 200 | 78% | | |
| MSLU103 | 9 | 110 | 78% | | |
| MSLU104 | 12 | 84 | 78% | | |
| MSLU105 | (4.5 – 5.5) | 15 | 67 | 79% | |
| MSLU106 | ±5 | ±100 | 74% | | |
| MSLU108 | ±12 | ±42 | 78% | | |
| MSLU109 | ±15 | ±33 | 78% | | |
| MSLU111 | 3.3 | 300 | 74% | | |
| MSLU112 | 5 | 200 | 76% | | |
| MSLU113 | 9 | 110 | 78% | | |
| MSLU114 | 12 | 84 | 79% | | |
| MSLU115 | (10.8 – 13.2) | 15 | 67 | 80% | |
| MSLU116 | ±5 | ±100 | 74% | | |
| MSLU118 | ±12 | ±42 | 78% | | |
| MSLU119 | ±15 | ±33 | 79% | | |
| MSLU154 | 15 | 12 | 84 | 78% | |
| MSLU155 | (13.5 – 16.5) | 15 | 67 | 78% | |
| MSLU121 | 3.3 | 300 | 72% | | |
| MSLU122 | 5 | 200 | 78% | | |
| MSLU123 | 9 | 110 | 77% | | |
| MSLU124 | 24 | 12 | 84 | 77% | |
| MSLU125 | (21.6 – 26.4) | 15 | 67 | 79% | |
| MSLU126 | ±5 | ±100 | 73% | | |
| MSLU128 | ±12 | ±42 | 78% | | |
| MSLU129 | ±15 | ±33 | 78% | | |

*To order the converter for water-washable process, please add a suffix -W.

| ► Mechanical Dimensions | | ► Pin Connections | |
|--------------------------------|--------|--------------------------|--------|
| Pin | Single | Dual | |
| 1 | -Vin | -Vin | |
| 2 | +Vin | +Vin | |
| 3 | No Pin | No Pin | |
| 4 | -Vout | -Vout | Common |
| 5 | +Vout | +Vout | |
| 6 | No Pin | No Pin | |
| 7 | No Pin | No Pin | |
| 8 | NA | +Vout | |
| 9 | --- | No Pin | |
| 10 | --- | No Pin | |

NA = Not Available for Electrical Connection



MSLU300 Series • 1W

- Industrial SMD Package
- I/O Isolation 3000VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Water-washable Process Available (option)
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available



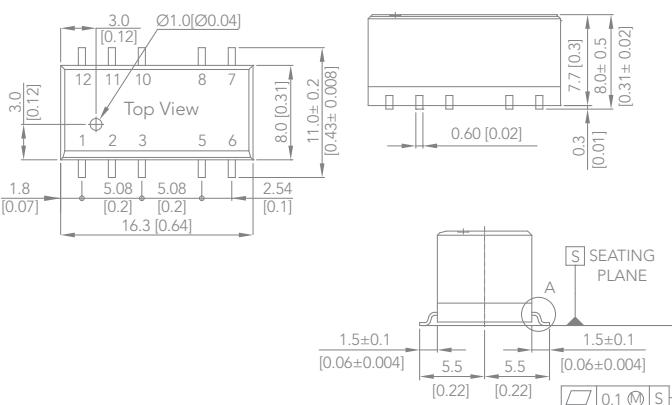
| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-----------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MSLU301 | 3.3 | 260 | 72% | | |
| MSLU302 | 5 | 200 | 75% | | |
| MSLU304 | 12 | 84 | 79% | | |
| MSLU305 | 5 (4.5 – 5.5) | 15 | 67 | 80% | |
| MSLU306 | ±5 | ±100 | 75% | | |
| MSLU308 | ±12 | ±42 | 79% | | |
| MSLU309 | ±15 | ±34 | 80% | | |
| MSLU311 | 3.3 | 260 | 73% | | |
| MSLU312 | 5 | 200 | 76% | | |
| MSLU314 | 12 | 84 | 80% | | |
| MSLU315 | 12 (10.8 – 13.2) | 15 | 67 | 81% | |
| MSLU316 | ±5 | ±100 | 76% | | |
| MSLU318 | ±12 | ±42 | 80% | | |
| MSLU319 | ±15 | ±34 | 80% | | |
| MSLU321 | 3.3 | 260 | 70% | | |
| MSLU322 | 5 | 200 | 73% | | |
| MSLU324 | 12 | 84 | 79% | | |
| MSLU325 | 24 (21.6 – 26.4) | 15 | 67 | 79% | |
| MSLU326 | ±5 | ±100 | 73% | | |
| MSLU328 | ±12 | ±42 | 79% | | |
| MSLU329 | ±15 | ±34 | 79% | | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter for water-washable process, please add a suffix -W.

| ► Mechanical Dimensions | | | ► Pin Connections | | |
|--------------------------------|--------|--------|--------------------------|--------|-------|
| Pin | Single | Dual | Pin | Single | Dual |
| 1 | -Vin | -Vin | 1 | -Vin | -Vin |
| 2 | +Vin | +Vin | 2 | +Vin | +Vin |
| 3 | NA | NA | 3 | NA | NA |
| 5 | -Vout | Common | 5 | -Vout | -Vout |
| 6 | NA | | 6 | NA | NA |
| 7 | NA | | 7 | NA | NA |
| 8 | +Vout | | 8 | +Vout | +Vout |
| 10, 11, 12 | NA | | 10, 11, 12 | NA | NA |

NA = Not Available for Electrical Connection



MSAU100/200 Series • 1W

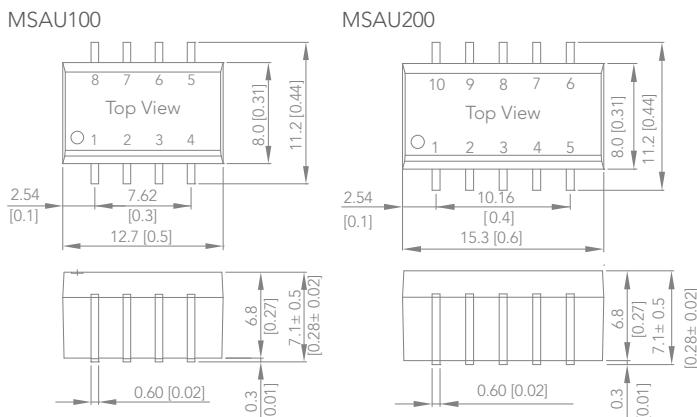
- Industrial SMD Package
- I/O Isolation 1000VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Water-washable Process Available
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-----------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MSAU105 | 3.3 | 300 | 75% | | | |
| MSAU101 | 5 | 200 | 80% | | | |
| MSAU102 | 9 | 110 | 78% | | | |
| MSAU103 | 12 | 84 | 80% | | | |
| MSAU104 | 15 (4.5 – 5.5) | 67 | 81% | | | |
| MSAU201 | ±5 | ±100 | 75% | | | |
| MSAU202 | ±9 | ±55 | 76% | | | |
| MSAU203 | ±12 | ±42 | 79% | | | |
| MSAU204 | ±15 | ±33 | 79% | | | |
| MSAU115 | 3.3 | 300 | 75% | | | |
| MSAU111 | 5 | 200 | 81% | | | |
| MSAU112 | 9 | 110 | 78% | | | |
| MSAU113 | 12 (10.8 – 13.2) | 84 | 81% | | | |
| MSAU114 | 15 | 67 | 82% | | | |
| MSAU211 | ±5 | ±100 | 75% | | | |
| MSAU212 | ±9 | ±55 | 76% | | | |
| MSAU213 | ±12 | ±42 | 80% | | | |
| MSAU214 | ±15 | ±33 | 80% | | | |
| MSAU125 | 3.3 | 300 | 73% | | | |
| MSAU121 | 5 | 200 | 79% | | | |
| MSAU122 | 9 | 110 | 77% | | | |
| MSAU123 | 12 | 84 | 80% | | | |
| MSAU124 | 15 (21.6 – 26.4) | 67 | 80% | | | |
| MSAU221 | ±5 | ±100 | 74% | | | |
| MSAU222 | ±9 | ±55 | 75% | | | |
| MSAU223 | ±12 | ±42 | 79% | | | |
| MSAU224 | ±15 | ±33 | 79% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | MSAU100 | MSAU200 |
|-----|---------|---------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 3 | NA | NA |
| 4 | -Vout | Common |
| 5 | +Vout | -Vout |
| 6 | NA | NA |
| 7 | NA | +Vout |
| 8 | NA | NA |
| 9 | --- | NA |
| 10 | --- | NA |

NA = Not Available for Electrical Connection

MSPU01H Series • 1W

<NEW

- Industrial SMD Package
- I/O Isolation 3000VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Overload and Short Circuit Protection
- Water-washable Process Available (option)
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking



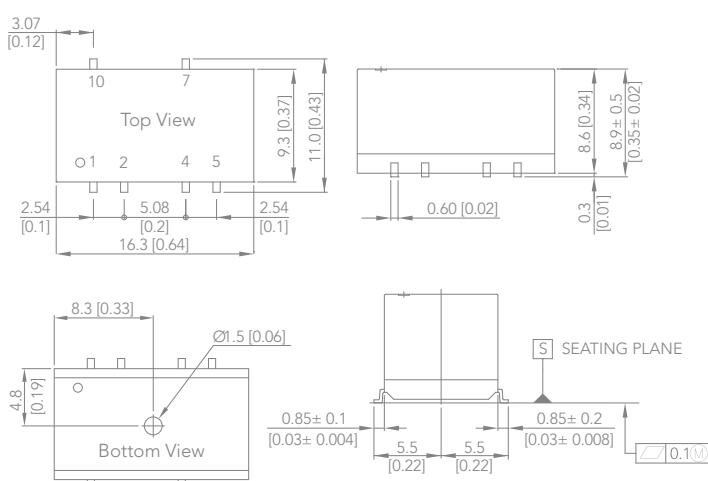
UL 62368-1
UL 60950-1
CB Scheme
CE
3 YEAR WARRANTY

| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|----------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MSPU01-033S03H | 3.3 | 300 | 77% | | |
| MSPU01-033S05H | 5 | 200 | 79% | | |
| MSPU01-033S12H | 12 | 84 | 81% | | |
| MSPU01-033S15H | 3.3 (2.97 – 3.63) | 15 | 67 | 80% | |
| MSPU01-033D05H | ±5 | ±100 | 79% | | |
| MSPU01-033D12H | ±12 | ±42 | 81% | | |
| MSPU01-033D15H | ±15 | ±33 | 80% | | |
| MSPU01-05S03H | 3.3 | 300 | 79% | | |
| MSPU01-05S05H | 5 | 200 | 82% | | |
| MSPU01-05S12H | 12 | 84 | 84% | | |
| MSPU01-05S15H | 5 (4.5 – 5.5) | 15 | 67 | 85% | |
| MSPU01-05D05H | ±5 | ±100 | 82% | | |
| MSPU01-05D12H | ±12 | ±42 | 84% | | |
| MSPU01-05D15H | ±15 | ±33 | 84% | | |
| MSPU01-12S03H | 3.3 | 300 | 78% | | |
| MSPU01-12S05H | 5 | 200 | 81% | | |
| MSPU01-12S12H | 12 | 84 | 83% | | |
| MSPU01-12S15H | 12 (10.8 – 13.2) | 15 | 67 | 83% | |
| MSPU01-12D05H | ±5 | ±100 | 82% | | |
| MSPU01-12D12H | ±12 | ±42 | 83% | | |
| MSPU01-12D15H | ±15 | ±33 | 83% | | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter for water-washable process,
please add a suffix -W.

► Mechanical Dimensions



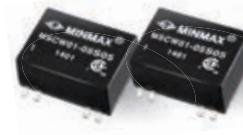
► Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 3 | No Pin | No Pin |
| 4 | -Vout | Common |
| 5 | No Pin | -Vout |
| 6 | No Pin | No Pin |
| 7 | +Vout | +Vout |
| 8 | No Pin | No Pin |
| 9 | No Pin | No Pin |
| 10 | NC | NC |

NC = No Connection

MSCW01 Series • 1W

- Industrial SMD Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Remote On/Off Control
- Water-washable Process Available (option)
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
- UL/cUL/IEC/EN 60950-1 Safety Approval



CSA 60950-1

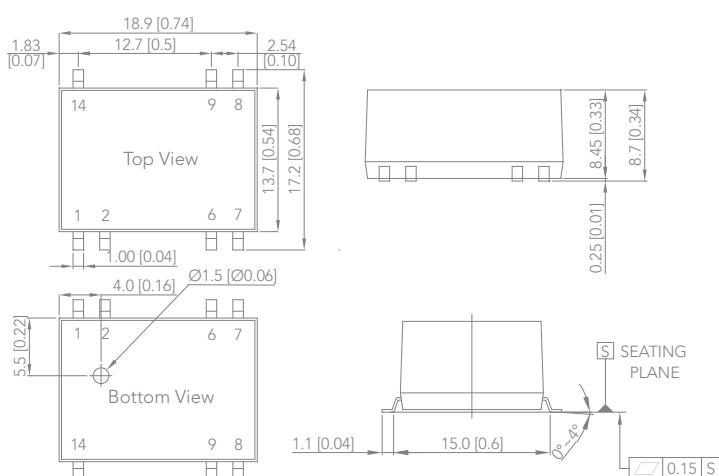
| Specifications | | Model Selection Guide | | | |
|-----------------------|-------------------|------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MSCW01-05S05 | 5 (4.5 – 9) | 5 | 200 | 78% | |
| MSCW01-05S12 | | 12 | 83 | 79% | |
| MSCW01-05S15 | | 15 | 67 | 81% | |
| MSCW01-05D12 | | ±12 | ±42 | 79% | |
| MSCW01-05D15 | | ±15 | ±33 | 80% | |
| MSCW01-12S05 | | 5 | 200 | 79% | |
| MSCW01-12S12 | | 12 | 83 | 79% | |
| MSCW01-12S15 | | 15 | 67 | 82% | |
| MSCW01-12D12 | | ±12 | ±42 | 81% | |
| MSCW01-12D15 | | ±15 | ±33 | 80% | |
| MSCW01-24S05 | 24 (18 – 36) | 5 | 200 | 79% | |
| MSCW01-24S12 | | 12 | 83 | 82% | |
| MSCW01-24S15 | | 15 | 67 | 82% | |
| MSCW01-24D12 | | ±12 | ±42 | 82% | |
| MSCW01-24D15 | | ±15 | ±33 | 82% | |
| MSCW01-48S05 | 48 (36 – 75) | 5 | 200 | 79% | |
| MSCW01-48S12 | | 12 | 83 | 80% | |
| MSCW01-48S15 | | 15 | 67 | 80% | |
| MSCW01-48D12 | | ±12 | ±42 | 81% | |
| MSCW01-48D15 | | ±15 | ±33 | 81% | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter for water-washable process,
please add a suffix -W.

| Mechanical Dimensions | | Pin Connections | |
|------------------------------|--------|------------------------|--|
| Pin | Single | Dual | |
| 1 | -Vin | -Vin Remote On/Off | |
| 2 | | NC Common | |
| 6 | NC | -Vout +Vout | |
| 7 | NC | +Vout -Vout | |
| 8 | +Vout | +Vout Common | |
| 9 | -Vout | Common +Vin | |
| 14 | +Vin | | |

NC = No Connection



MSAU400 Series • 2W

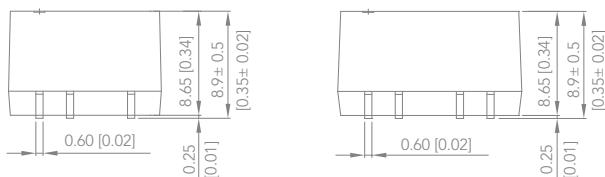
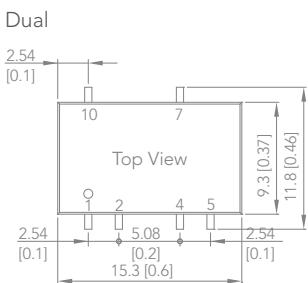
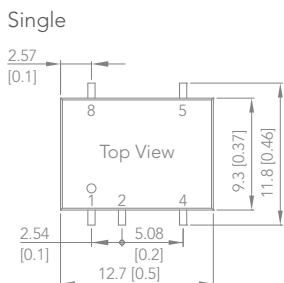
- Industrial SMD Package
- I/O Isolation 1000VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Water-washable Process Available
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available



| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|---------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MSAU401 | 5 | 5 | 400 | 77% | |
| MSAU403 | 12 | 12 | 165 | 81% | |
| MSAU406 | 5 (4.5 – 5.5) | ±5 | ±200 | 77% | |
| MSAU408 | 12 (10.8 – 13.2) | ±12 | ±83 | 79% | |
| MSAU409 | 24 (21.6 – 26.4) | ±15 | ±66 | 79% | |
| MSAU411 | 5 | 400 | 78% | | |
| MSAU413 | 12 | 165 | 82% | | |
| MSAU418 | ±12 | ±83 | 82% | | |
| MSAU419 | ±15 | ±66 | 82% | | |
| MSAU421 | 5 | 400 | 78% | | |
| MSAU423 | 12 | 165 | 81% | | |
| MSAU428 | 24 (21.6 – 26.4) | ±12 | ±83 | 81% | |
| MSAU429 | ±15 | ±66 | 82% | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 2 | +Vin | +Vin |
| 4 | -Vout | Common |
| 5 | +Vout | -Vout |
| 7 | No Pin | +Vout |
| 8 | NA | No Pin |
| 10 | No Pin | NA |

NA = Not Available for Electrical Connection

MSLU400 Series • 2W

- Industrial SMD Package
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Water-washable Process Available (option)
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available



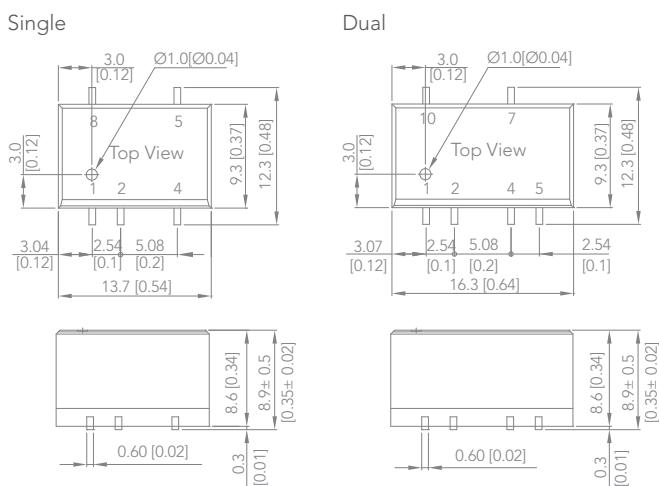
| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MSLU401 | 3.3 | 500 | 70% | | | |
| MSLU402 | 5 | 400 | 73% | | | |
| MSLU404 | 12 | 165 | 77% | | | |
| MSLU406 | (4.5 – 5.5) | ±5 | ±200 | 74% | | |
| MSLU408 | ±12 | ±83 | 76% | | | |
| MSLU409 | ±15 | ±66 | 76% | | | |
| MSLU411 | 3.3 | 500 | 72% | | | |
| MSLU412 | 5 | 400 | 75% | | | |
| MSLU414 | 12 | 165 | 79% | | | |
| MSLU418 | (10.8 – 13.2) | ±12 | ±83 | 80% | | |
| MSLU419 | ±15 | ±66 | 80% | | | |
| MSLU421 | 3.3 | 500 | 72% | | | |
| MSLU422 | 5 | 400 | 75% | | | |
| MSLU424 | 24 | 12 | 165 | 79% | | |
| MSLU428 | (21.6 – 26.4) | ±12 | ±83 | 79% | | |
| MSLU429 | ±15 | ±66 | 79% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter for water-washable process, please add a suffix -W.

| ► Mechanical Dimensions | | | ► Pin Connections | | |
|--------------------------------|--------|------|--------------------------|--------|--------|
| Pin | Single | Dual | Pin | Single | Dual |
| 1 | -Vin | | 1 | -Vin | -Vin |
| 2 | +Vin | | 2 | +Vin | +Vin |
| 4 | -Vout | | 4 | -Vout | Common |
| 5 | +Vout | | 5 | +Vout | -Vout |
| 7 | No Pin | | 7 | No Pin | +Vout |
| 8 | NA | | 8 | NA | No Pin |
| 10 | No Pin | | 10 | No Pin | NA |

NA = Not Available for Electrical Connection



MSDW1000 Series • 2W

- Industrial SMD Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Overload and Short Circuit Protection
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- Water-washable Process Available (option)
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
- UL/cUL/IEC/EN 60950-1 Safety Approval

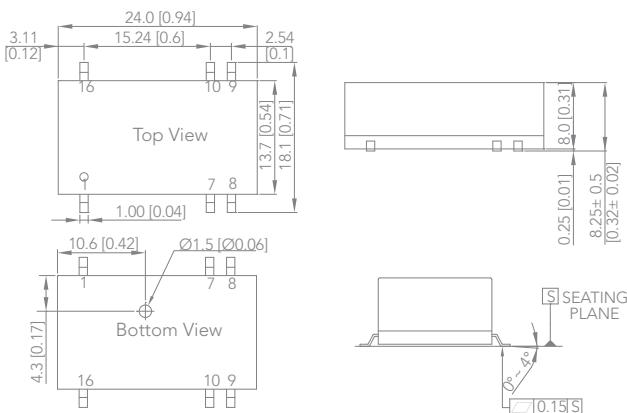


| ► Specifications | | ► Model Selection Guide | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MSDW1011 | 5 (4.5 – 9) | 3.3 | 500 | 70% | |
| MSDW1012 | | 5 | 400 | 73% | |
| MSDW1013 | | 12 | 167 | 75% | |
| MSDW1014 | | 15 | 134 | 73% | |
| MSDW1015 | | ±5 | ±200 | 64% | |
| MSDW1016 | | ±12 | ±83 | 69% | |
| MSDW1017 | | ±15 | ±67 | 71% | |
| MSDW1021 | | 3.3 | 500 | 73% | |
| MSDW1022 | | 5 | 400 | 77% | |
| MSDW1023 | | 12 | 167 | 80% | |
| MSDW1024 | | 15 | 134 | 80% | |
| MSDW1025 | | ±5 | ±200 | 73% | |
| MSDW1026 | | ±12 | ±83 | 78% | |
| MSDW1027 | | ±15 | ±67 | 78% | |
| MSDW1031 | 12 (9 – 18) | 3.3 | 500 | 72% | |
| MSDW1032 | | 5 | 400 | 77% | |
| MSDW1033 | | 12 | 167 | 80% | |
| MSDW1034 | | 15 | 134 | 81% | |
| MSDW1035 | | ±5 | ±200 | 74% | |
| MSDW1036 | | ±12 | ±83 | 78% | |
| MSDW1037 | | ±15 | ±67 | 80% | |
| MSDW1041 | 24 (36 – 75) | 3.3 | 500 | 71% | |
| MSDW1042 | | 5 | 400 | 73% | |
| MSDW1043 | | 12 | 167 | 79% | |
| MSDW1044 | | 15 | 134 | 79% | |
| MSDW1045 | | ±5 | ±200 | 71% | |
| MSDW1046 | | ±12 | ±83 | 77% | |
| MSDW1047 | | ±15 | ±67 | 77% | |

*To order the converter for water-washable process, please add a suffix -W.

| ► Mechanical Dimensions | | ► Pin Connections | |
|-------------------------|--------|-------------------|--|
| Pin | Single | Dual | |
| 1 | -Vin | -Vin | |
| 7 | NC | NC | |
| 8 | NC | Common | |
| 9 | +Vout | +Vout | |
| 10 | -Vout | -Vout | |
| 16 | +Vin | +Vin | |

NC = No Connection



MSCWI02 Series • 2W

<NEW

- Very Compact SMD Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Remote On/Off Control
- Designed-in EMI Emission meets EN55032/22 Class A & FCC Level A
- Water-washable Process Available (option)
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking



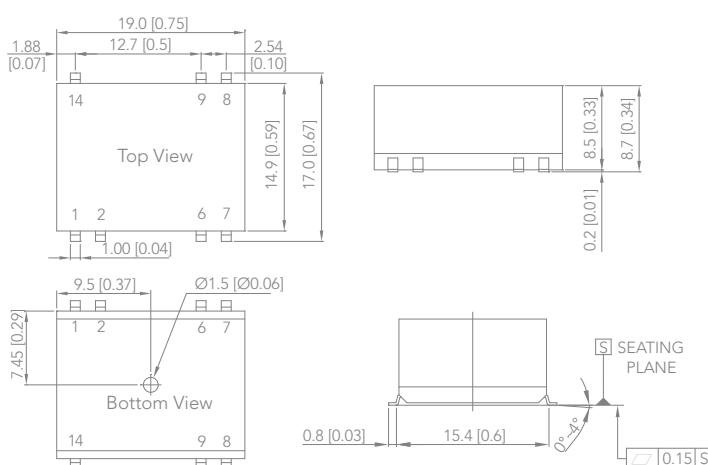
| ► Specifications | | ► Model Selection Guide | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MSCWI02-05S05 | 5 | 400 | 80% | | |
| MSCWI02-05S12 | 12 | 167 | 84% | | |
| MSCWI02-05S15 | 5 | 15 | 134 | 83% | |
| MSCWI02-05S24 | (4.5 – 12) | 24 | 83 | 84% | |
| MSCWI02-05D12 | | ±12 | ±83 | 83% | |
| MSCWI02-05D15 | | ±15 | ±67 | 82% | |
| MSCWI02-24S05 | 5 | 400 | 80% | | |
| MSCWI02-24S12 | 12 | 167 | 84% | | |
| MSCWI02-24S15 | 24 | 15 | 134 | 85% | |
| MSCWI02-24S24 | (9 – 36) | 24 | 83 | 85% | |
| MSCWI02-24D12 | | ±12 | ±83 | 83% | |
| MSCWI02-24D15 | | ±15 | ±67 | 83% | |
| MSCWI02-48S05 | 5 | 400 | 78% | | |
| MSCWI02-48S12 | 12 | 167 | 82% | | |
| MSCWI02-48S15 | 48 | 15 | 134 | 83% | |
| MSCWI02-48S24 | (18 – 75) | 24 | 83 | 84% | |
| MSCWI02-48D12 | | ±12 | ±83 | 82% | |
| MSCWI02-48D15 | | ±15 | ±67 | 82% | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter for water-washable process, please add a suffix -W.

| ► Mechanical Dimensions | | ► Pin Connections | |
|-------------------------|--------|-------------------|--|
| Pin | Single | Dual | |
| 1 | -Vin | -Vin | |
| 2 | | Remote On/Off | |
| 6 | NC | Common | |
| 7 | NC | -Vout | |
| 8 | +Vout | +Vout | |
| 9 | -Vout | Common | |
| 14 | +Vin | +Vin | |

NC = No Connection



MSDWI03 Series • 3W

- Compact SMD Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- Overload and Short Circuit Protection
- Remote On/Off Control
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- Water-washable Process Available (option)
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
- UL/cUL/IEC/EN 60950-1 Safety Approval



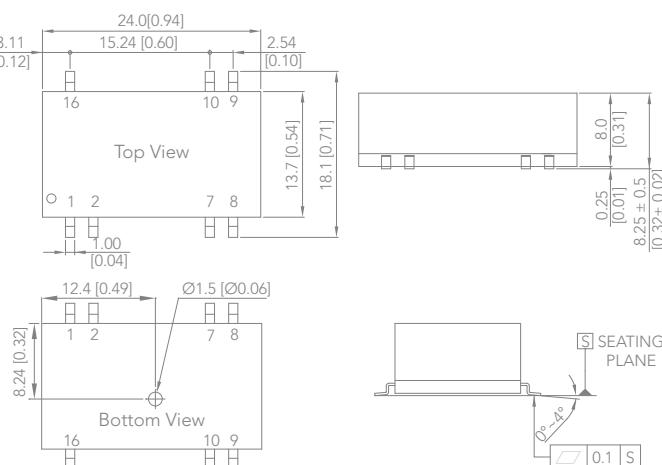
| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MSDWI03-24S033 | 3.3 | 600 | 75% | | |
| MSDWI03-24S05 | 5 | 600 | 78% | | |
| MSDWI03-24S12 | 12 | 250 | 80% | | |
| MSDWI03-24S15 | 15 | 200 | 80% | | |
| MSDWI03-24S24 | 24 (9 – 36) | 125 | 80% | | |
| MSDWI03-24D05 | ±5 | ±300 | 77% | | |
| MSDWI03-24D12 | ±12 | ±125 | 80% | | |
| MSDWI03-24D15 | ±15 | ±100 | 80% | | |
| MSDWI03-48S033 | 3.3 | 600 | 75% | | |
| MSDWI03-48S05 | 5 | 600 | 78% | | |
| MSDWI03-48S12 | 12 | 250 | 80% | | |
| MSDWI03-48S15 | 15 | 200 | 80% | | |
| MSDWI03-48S24 | 24 (18 – 75) | 125 | 80% | | |
| MSDWI03-48D05 | ±5 | ±300 | 77% | | |
| MSDWI03-48D12 | ±12 | ±125 | 80% | | |
| MSDWI03-48D15 | ±15 | ±100 | 80% | | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter for water-washable process, please add a suffix -W.

| ► Mechanical Dimensions | | | ► Pin Connections | | |
|--------------------------------|--------|---------------|--------------------------|--------|------|
| Pin | Single | Dual | Pin | Single | Dual |
| 1 | -Vin | | 1 | -Vin | |
| 2 | | Remote On/Off | 2 | | |
| 7 | NC | | 7 | NC | |
| 8 | NC | | 8 | Common | |
| 9 | +Vout | | 9 | +Vout | |
| 10 | -Vout | | 10 | -Vout | |
| 16 | +Vin | | 16 | +Vin | |

NC = No Connection



MSCWI03 Series • 3W

NEW

- Very Compact SMD Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Remote On/Off Control
- Designed-in EMI Emission meets EN55032/22 Class A & FCC Level A
- Water-washable Process Available (option)
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking



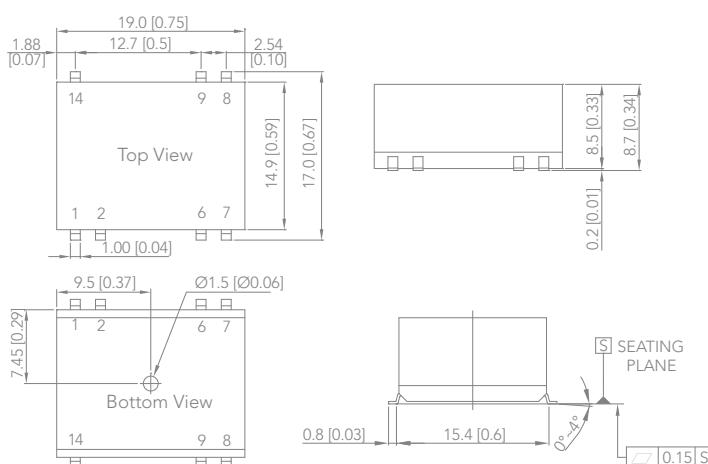
| ► Specifications | | ► Model Selection Guide | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MSCWI03-05S05 | 5 | 600 | 81% | | |
| MSCWI03-05S12 | 12 | 250 | 84% | | |
| MSCWI03-05S15 | 5 | 15 | 200 | 84% | |
| MSCWI03-05S24 | (4.5 – 12) | 24 | 125 | 84% | |
| MSCWI03-05D12 | | ±12 | ±125 | 83% | |
| MSCWI03-05D15 | | ±15 | ±100 | 83% | |
| MSCWI03-24S05 | 5 | 600 | 80% | | |
| MSCWI03-24S12 | 12 | 250 | 85% | | |
| MSCWI03-24S15 | 24 | 15 | 200 | 85% | |
| MSCWI03-24S24 | (9 – 36) | 24 | 125 | 85% | |
| MSCWI03-24D12 | | ±12 | ±125 | 84% | |
| MSCWI03-24D15 | | ±15 | ±100 | 84% | |
| MSCWI03-48S05 | 5 | 600 | 80% | | |
| MSCWI03-48S12 | 12 | 250 | 84% | | |
| MSCWI03-48S15 | 48 | 15 | 200 | 84% | |
| MSCWI03-48S24 | (18 – 75) | 24 | 125 | 85% | |
| MSCWI03-48D12 | | ±12 | ±125 | 83% | |
| MSCWI03-48D15 | | ±15 | ±100 | 82% | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter for water-washable process, please add a suffix -W.

| ► Mechanical Dimensions | | ► Pin Connections | |
|-------------------------|--------|-----------------------|--|
| Pin | Single | Dual | |
| 1 | -Vin | -Vin Remote On/Off | |
| 2 | | | |
| 6 | NC | Common | |
| 7 | NC | -Vout | |
| 8 | +Vout | +Vout | |
| 9 | -Vout | Common | |
| 14 | +Vin | +Vin | |

NC = No Connection



MSKW2000 Series • 5W

- Industrial SMD Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Overload and Short Circuit Protection
- Remote On/Off Control
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
- UL/cUL/IEC/EN 60950-1 Safety Approval

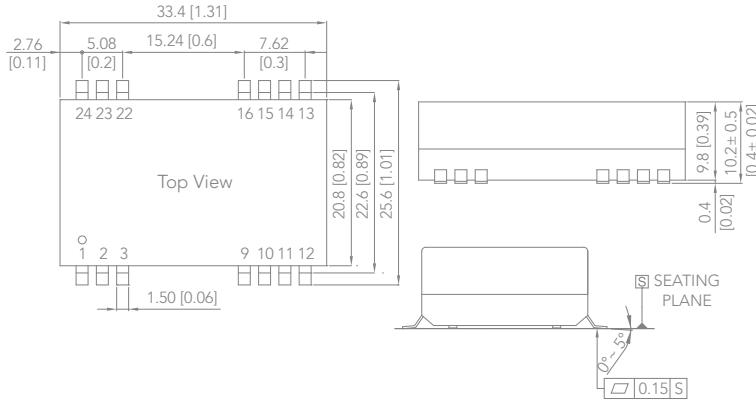


| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MSKW2021 | 3.3 | 1200 | 76% | | |
| MSKW2022 | 5 | 1000 | 80% | | |
| MSKW2023 | 12 | 417 | 83% | | |
| MSKW2024 | 15 (9 – 18) | 333 | 83% | | |
| MSKW2025 | ±5 | ±500 | 80% | | |
| MSKW2026 | ±12 | ±208 | 83% | | |
| MSKW2027 | ±15 | ±167 | 83% | | |
| MSKW2031 | 3.3 | 1200 | 78% | | |
| MSKW2032 | 5 | 1000 | 82% | | |
| MSKW2033 | 12 | 417 | 85% | | |
| MSKW2034 | 15 (18 – 36) | 333 | 85% | | |
| MSKW2035 | ±5 | ±500 | 82% | | |
| MSKW2036 | ±12 | ±208 | 85% | | |
| MSKW2037 | ±15 | ±167 | 85% | | |
| MSKW2041 | 3.3 | 1200 | 78% | | |
| MSKW2042 | 5 | 1000 | 82% | | |
| MSKW2043 | 12 | 417 | 85% | | |
| MSKW2044 | 15 (36 – 75) | 333 | 85% | | |
| MSKW2045 | ±5 | ±500 | 82% | | |
| MSKW2046 | ±12 | ±208 | 85% | | |
| MSKW2047 | ±15 | ±167 | 85% | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | |
|--------------------------------|---------------|--------------------------|--|
| Pin | Single | Dual | |
| 1 | Remote On/Off | | |
| 2, 3 | -Vin | -Vin | |
| 9 | NC | Common | |
| 10, 15 | NC | NC | |
| 11 | NC | -Vout | |
| 12, 13 | NC | NC | |
| 14 | +Vout | +Vout | |
| 16 | -Vout | +Vout | |
| 22, 23 | +Vin | Common | |
| 24 | NC | +Vin | |

NC = No Connection



MSGWI06 Series • 6W

- Industrial SMD Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- Overload and Short Circuit Protection
- Remote On/Off Control
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- Water-washable Process Available (option)
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
- UL/cUL/IEC/EN 60950-1 Safety Approval



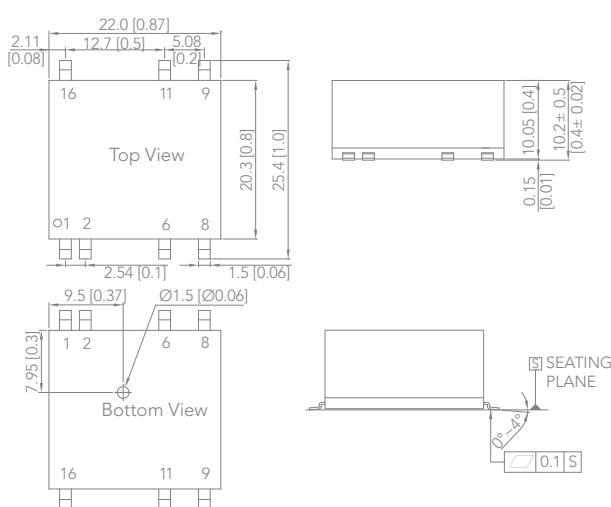
| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MSGWI06-24S033 | | 3.3 | 1450 | 76% | | |
| MSGWI06-24S05 | | 5 | 1200 | 79% | | |
| MSGWI06-24S12 | | 12 | 500 | 83% | | |
| MSGWI06-24S15 | 24 | 15 | 400 | 83% | | |
| MSGWI06-24S24 | (9 – 36) | 24 | 250 | 83% | | |
| MSGWI06-24D05 | | ±5 | ±600 | 82% | | |
| MSGWI06-24D12 | | ±12 | ±250 | 83% | | |
| MSGWI06-24D15 | | ±15 | ±200 | 83% | | |
| MSGWI06-48S033 | | 3.3 | 1450 | 76% | | |
| MSGWI06-48S05 | | 5 | 1200 | 79% | | |
| MSGWI06-48S12 | | 12 | 500 | 83% | | |
| MSGWI06-48S15 | 48 | 15 | 400 | 83% | | |
| MSGWI06-48S24 | (18 – 75) | 24 | 250 | 83% | | |
| MSGWI06-48D05 | | ±5 | ±600 | 82% | | |
| MSGWI06-48D12 | | ±12 | ±250 | 83% | | |
| MSGWI06-48D15 | | ±15 | ±200 | 83% | | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter for water-washable process, please add a suffix -W.

| ► Mechanical Dimensions | | |
|--------------------------------|---------------|--------|
| Pin | Single | Dual |
| 1 | Remote On/Off | |
| 2 | -Vin | -Vin |
| 6 | NC | Common |
| 8 | NC | -Vout |
| 9 | +Vout | +Vout |
| 11 | -Vout | Common |
| 16 | +Vin | +Vin |

NC = No Connection



MFU100 Series • 1W

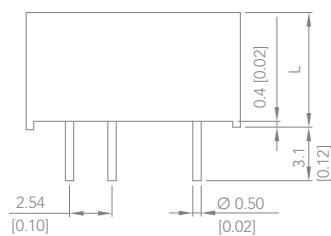
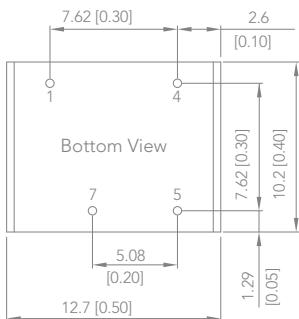
- Industrial Standard DIP-8 Package
- I/O Isolation 3000VDC
- Operating Ambient Temp. Range -40°C to +85°C
- UL/cUL/IEC/EN 60950-1 Safety Approval



| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MFU102 | | 5 | 200 | 69% | |
| MFU103 | 5 | 9 | 110 | 76% | |
| MFU104 | (4.5 – 5.5) | 12 | 84 | 77% | |
| MFU105 | | 15 | 67 | 78% | |
| MFU112 | | 5 | 200 | 71% | |
| MFU113 | 12 | 9 | 110 | 77% | |
| MFU114 | (10.8 – 13.2) | 12 | 84 | 79% | |
| MFU115 | | 15 | 67 | 79% | |
| MFU122 | | 5 | 200 | 70% | |
| MFU123 | 24 | 9 | 110 | 76% | |
| MFU124 | (21.6 – 26.4) | 12 | 84 | 79% | |
| MFU125 | | 15 | 67 | 79% | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | |
|--------------------------------|----------|--------------------------|----------|
| Pin | Function | Pin | Function |
| 1 | -Vin | | |
| 4 | +Vin | | |
| 5 | +Vout | | |
| 7 | -Vout | | |



L = 7.0 [0.28] for 5V & 12V input models
L = 8.0 [0.31] for 24V input models

MFPU01H Series • 1W

NEW

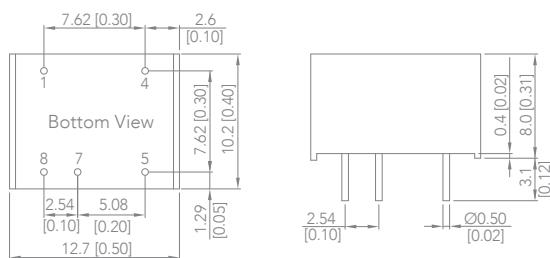
- Industrial Standard DIP-8 Package
- I/O Isolation 3000VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Overload and Short Circuit Protection
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|------------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MFPU01-033S03H | 3.3 | 300 | 75% | | | |
| MFPU01-033S05H | 5 | 200 | 79% | | | |
| MFPU01-033S12H | 12 | 84 | 80% | | | |
| MFPU01-033S15H | 3.3 (2.97 – 3.63) | 15 | 67 | 81% | | |
| MFPU01-033D05H | ±5 | ±100 | 78% | | | |
| MFPU01-033D12H | ±12 | ±42 | 80% | | | |
| MFPU01-033D15H | ±15 | ±33 | 81% | | | |
| MFPU01-05S03H | 3.3 | 300 | 77% | | | |
| MFPU01-05S05H | 5 | 200 | 80% | | | |
| MFPU01-05S12H | 12 | 84 | 82% | | | |
| MFPU01-05S15H | 5 (4.5 – 5.5) | 15 | 67 | 83% | | |
| MFPU01-05D05H | ±5 | ±100 | 80% | | | |
| MFPU01-05D12H | ±12 | ±42 | 83% | | | |
| MFPU01-05D15H | ±15 | ±33 | 83% | | | |
| MFPU01-12S03H | 3.3 | 300 | 77% | | | |
| MFPU01-12S05H | 5 | 200 | 79% | | | |
| MFPU01-12S12H | 12 | 84 | 81% | | | |
| MFPU01-12S15H | 12 (10.8 – 13.2) | 15 | 67 | 82% | | |
| MFPU01-12D05H | ±5 | ±100 | 80% | | | |
| MFPU01-12D12H | ±12 | ±42 | 82% | | | |
| MFPU01-12D15H | ±15 | ±33 | 82% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | |
|--------------------------------|--------|--------------------------|--------|
| Pin | Single | Dual | |
| 1 | -Vin | | -Vin |
| 4 | +Vin | | +Vin |
| 5 | +Vout | | +Vout |
| 7 | -Vout | | Common |
| 8 | No Pin | | -Vout |



MFW02 Series • 2W

<NEW

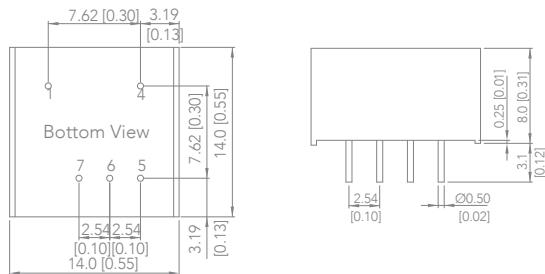
- Smallest Encapsulated 2W Converter
- Ultra-compact DIP-8 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MFW02-05S033 | 3.3 | 400 | 79% | | | |
| MFW02-05S05 | 5 | 400 | 81% | | | |
| MFW02-05S12 | 12 | 167 | 85% | | | |
| MFW02-05S15 | 15 | 134 | 87% | | | |
| MFW02-05D05 | (4.5 – 10) | ±5 | ±200 | 83% | | |
| MFW02-05D12 | ±12 | ±83 | 85% | | | |
| MFW02-05D15 | ±15 | ±67 | 85% | | | |
| MFW02-12S033 | 3.3 | 400 | 80% | | | |
| MFW02-12S05 | 5 | 400 | 83% | | | |
| MFW02-12S12 | 12 | 167 | 87% | | | |
| MFW02-12S15 | 15 | 134 | 87% | | | |
| MFW02-12D05 | (9 – 18) | ±5 | ±200 | 84% | | |
| MFW02-12D12 | ±12 | ±83 | 86% | | | |
| MFW02-12D15 | ±15 | ±67 | 86% | | | |
| MFW02-24S033 | 3.3 | 400 | 79% | | | |
| MFW02-24S05 | 5 | 400 | 84% | | | |
| MFW02-24S12 | 12 | 167 | 86% | | | |
| MFW02-24S15 | 15 | 134 | 87% | | | |
| MFW02-24D05 | (18 – 36) | ±5 | ±200 | 84% | | |
| MFW02-24D12 | ±12 | ±83 | 86% | | | |
| MFW02-24D15 | ±15 | ±67 | 86% | | | |
| MFW02-48S033 | 3.3 | 400 | 79% | | | |
| MFW02-48S05 | 5 | 400 | 83% | | | |
| MFW02-48S12 | 12 | 167 | 85% | | | |
| MFW02-48S15 | 15 | 134 | 86% | | | |
| MFW02-48D05 | (36 – 75) | ±5 | ±200 | 82% | | |
| MFW02-48D12 | ±12 | ±83 | 84% | | | |
| MFW02-48D15 | ±15 | ±67 | 84% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 4 | +Vin | +Vin |
| 5 | +Vout | +Vout |
| 6 | No Pin | Common |
| 7 | -Vout | -Vout |

MIAR03 Series • 3W

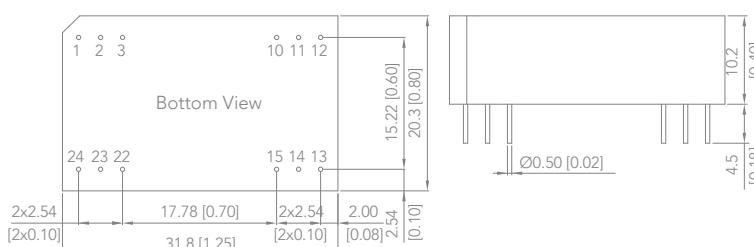
- Industrial Standard DIP-24 Package
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Short Circuit Protection
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MIAR03-05S05 | | 5 | 600 | 70% | | |
| MIAR03-05S12 | | 12 | 250 | 78% | | |
| MIAR03-05S15 | 4.5 – 5.5 | 15 | 200 | 78% | | |
| MIAR03-05D12 | | ±12 | ±125 | 78% | | |
| MIAR03-05D15 | | ±15 | ±100 | 78% | | |
| MIAR03-12S05 | | 5 | 600 | 74% | | |
| MIAR03-12S12 | | 12 | 250 | 80% | | |
| MIAR03-12S15 | 10.8 – 13.2 | 15 | 200 | 80% | | |
| MIAR03-12D12 | | ±12 | ±125 | 81% | | |
| MIAR03-12D15 | | ±15 | ±100 | 82% | | |
| MIAR03-24S05 | | 5 | 600 | 75% | | |
| MIAR03-24S12 | | 12 | 250 | 80% | | |
| MIAR03-24S15 | 21.6 – 26.4 | 15 | 200 | 80% | | |
| MIAR03-24D12 | | ±12 | ±125 | 81% | | |
| MIAR03-24D15 | | ±15 | ±100 | 82% | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | | |
|-----------------------------------|--------|--------------------------|--|--|
| Pin | Single | Dual | | |
| 1,24 | +Vin | | | |
| 2,23 | NC | | | |
| 3,22 | NC | | | |
| 10,15 | -Vout | | | |
| 11,14 | +Vout | | | |
| 12,13 | -Vin | | | |
| Common Common +Vout -Vin | | | | |



NC = No Connection

MFW03 Series • 3W

<NEW

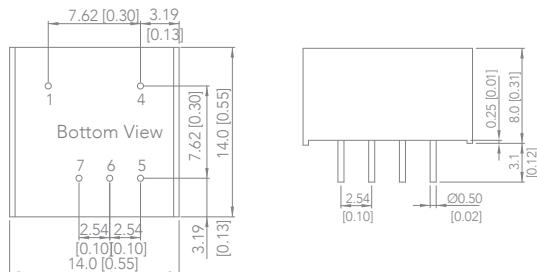
- Smallest Encapsulated 3W Converter
- Ultra-compact DIP-8 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|--------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MFW03-05S033 | 3.3 | 600 | 79% | | | |
| MFW03-05S05 | 5 | 600 | 81% | | | |
| MFW03-05S12 | 12 | 250 | 85% | | | |
| MFW03-05S15 | 15 | 200 | 85% | | | |
| MFW03-05D05 | ±5 (4.5 – 10) | ±300 | 82% | | | |
| MFW03-05D12 | ±12 | ±125 | 84% | | | |
| MFW03-05D15 | ±15 | ±100 | 85% | | | |
| MFW03-12S033 | 3.3 | 600 | 80% | | | |
| MFW03-12S05 | 5 | 600 | 83% | | | |
| MFW03-12S12 | 12 | 250 | 87% | | | |
| MFW03-12S15 | 15 | 200 | 87% | | | |
| MFW03-12D05 | ±5 (9 – 18) | ±300 | 84% | | | |
| MFW03-12D12 | ±12 | ±125 | 86% | | | |
| MFW03-12D15 | ±15 | ±100 | 87% | | | |
| MFW03-24S033 | 3.3 | 600 | 80% | | | |
| MFW03-24S05 | 5 | 600 | 83% | | | |
| MFW03-24S12 | 12 | 250 | 87% | | | |
| MFW03-24S15 | 15 | 200 | 87% | | | |
| MFW03-24D05 | ±5 (18 – 36) | ±300 | 84% | | | |
| MFW03-24D12 | ±12 | ±125 | 86% | | | |
| MFW03-24D15 | ±15 | ±100 | 87% | | | |
| MFW03-48S033 | 3.3 | 600 | 79% | | | |
| MFW03-48S05 | 5 | 600 | 82% | | | |
| MFW03-48S12 | 12 | 250 | 86% | | | |
| MFW03-48S15 | 15 | 200 | 86% | | | |
| MFW03-48D05 | ±5 (36 – 75) | ±300 | 82% | | | |
| MFW03-48D12 | ±12 | ±125 | 85% | | | |
| MFW03-48D15 | ±15 | ±100 | 85% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 4 | +Vin | +Vin |
| 5 | +Vout | +Vout |
| 6 | No Pin | Common |
| 7 | -Vout | -Vout |

MIW03 Series • 3W

- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC (opt. 3000VDC)
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Designed-in EMI Emission meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



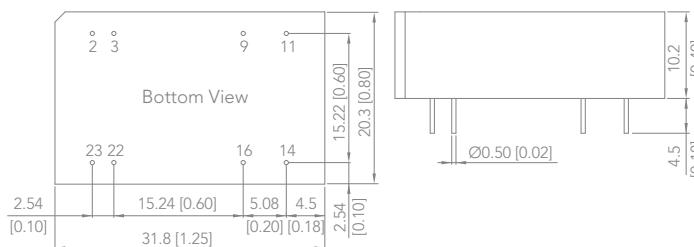
| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MIW03-05S033 | 3.3 | 750 | 77% | | | |
| MIW03-05S05 | 5 | 600 | 80% | | | |
| MIW03-05S12 | 12 | 250 | 82% | | | |
| MIW03-05S15 | 15 | 200 | 82% | | | |
| MIW03-05S24 | (4.5 - 9) | 24 | 125 | 81% | | |
| MIW03-05D05 | ±5 | ±250 | 80% | | | |
| MIW03-05D12 | ±12 | ±125 | 82% | | | |
| MIW03-05D15 | ±15 | ±100 | 82% | | | |
| MIW03-12S033 | 3.3 | 750 | 79% | | | |
| MIW03-12S05 | 5 | 600 | 81% | | | |
| MIW03-12S12 | 12 | 250 | 85% | | | |
| MIW03-12S15 | 15 | 200 | 85% | | | |
| MIW03-12S24 | (9 - 18) | 24 | 125 | 84% | | |
| MIW03-12D05 | ±5 | ±250 | 80% | | | |
| MIW03-12D12 | ±12 | ±125 | 84% | | | |
| MIW03-12D15 | ±15 | ±100 | 84% | | | |
| MIW03-24S033 | 3.3 | 750 | 79% | | | |
| MIW03-24S05 | 5 | 600 | 81% | | | |
| MIW03-24S12 | 12 | 250 | 85% | | | |
| MIW03-24S15 | 15 | 200 | 85% | | | |
| MIW03-24S24 | (18 - 36) | 24 | 125 | 84% | | |
| MIW03-24D05 | ±5 | ±250 | 80% | | | |
| MIW03-24D12 | ±12 | ±125 | 84% | | | |
| MIW03-24D15 | ±15 | ±100 | 84% | | | |
| MIW03-48S033 | 3.3 | 750 | 79% | | | |
| MIW03-48S05 | 5 | 600 | 81% | | | |
| MIW03-48S12 | 12 | 250 | 85% | | | |
| MIW03-48S15 | 15 | 200 | 85% | | | |
| MIW03-48S24 | (36 - 75) | 24 | 125 | 84% | | |
| MIW03-48D05 | ±5 | ±250 | 80% | | | |
| MIW03-48D12 | ±12 | ±125 | 84% | | | |
| MIW03-48D15 | ±15 | ±100 | 84% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter with 3000VDC isolation, please add a suffix H.

| ► Mechanical Dimensions | | ► Pin Connections | |
|--------------------------------|--------|--------------------------|--|
| Pin | Single | Dual | |
| 2,3 | -Vin | -Vin | |
| 9 | No Pin | Common | |
| 11 | NC | -Vout | |
| 14 | +Vout | +Vout | |
| 16 | -Vout | Common | |
| 22,23 | +Vin | +Vin | |

NC = No Connection



MIW1100 Series • 3W

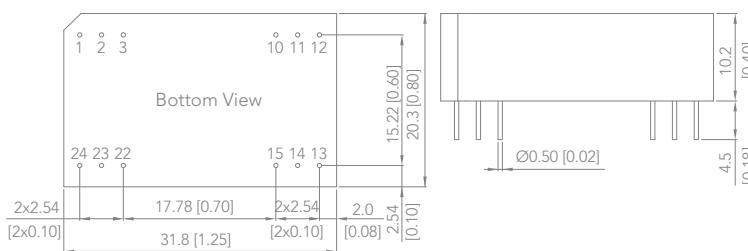
- Industrial Standard DIP-24 Package
- Wide 2:1 & 3:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Overload and Short Circuit Protection
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MIW1111 | | 5 | 600 | 70% | | |
| MIW1112 | 5 | 12 | 250 | 74% | | |
| MIW1113 | (4.5 – 9) | 15 | 200 | 74% | | |
| MIW1114 | | ±12 | ±125 | 74% | | |
| MIW1115 | | ±15 | ±100 | 74% | | |
| MIW1121 | | 5 | 600 | 76% | | |
| MIW1122 | | 12 | 250 | 80% | | |
| MIW1123 | 12 (9 – 18) | 15 | 200 | 80% | | |
| MIW1124 | | ±12 | ±125 | 80% | | |
| MIW1125 | | ±15 | ±100 | 80% | | |
| MIW1131 | | 5 | 600 | 77% | | |
| MIW1132 | | 12 | 250 | 81% | | |
| MIW1133 | 24 (18 – 36) | 15 | 200 | 81% | | |
| MIW1134 | | ±12 | ±125 | 81% | | |
| MIW1135 | | ±15 | ±100 | 81% | | |
| MIW1141 | | 5 | 600 | 77% | | |
| MIW1142 | | 12 | 250 | 81% | | |
| MIW1143 | 48 (36 – 75) | 15 | 200 | 81% | | |
| MIW1144 | | ±12 | ±125 | 81% | | |
| MIW1145 | | ±15 | ±100 | 81% | | |
| MIW1151 | | 5 | 600 | 80% | | |
| MIW1152 | | 12 | 250 | 80% | | |
| MIW1153 | 20 (10 – 30) | 15 | 200 | 80% | | |
| MIW1154 | | ±12 | ±125 | 80% | | |
| MIW1155 | | ±15 | ±100 | 80% | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | | |
|--------------------------------|--------|--------------------------|--|--|
| Pin | Single | Dual | | |
| 1,24 | +Vin | +Vin | | |
| 2,23 | NC | -Vout | | |
| 3,22 | NC | Common | | |
| 10,15 | -Vout | Common | | |
| 11,14 | +Vout | +Vout | | |
| 12,13 | -Vin | -Vin | | |
| NC = No Connection | | | | |



NC = No Connection

MDWI03 Series • 3W

- Compact DIP-16 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Overload and Short Circuit Protection
- Remote On/Off Control
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval

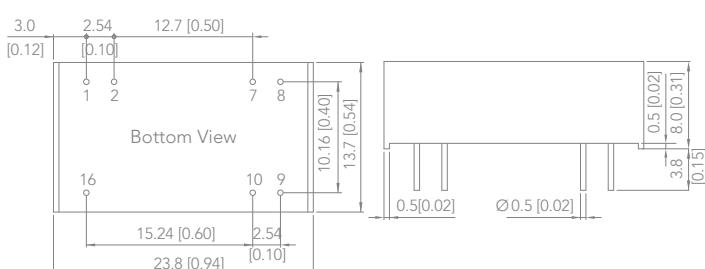


| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MDWI03-24S033 | | 3.3 | 600 | 75% | | |
| MDWI03-24S05 | | 5 | 600 | 78% | | |
| MDWI03-24S12 | | 12 | 250 | 80% | | |
| MDWI03-24S15 | 24 | 15 | 200 | 80% | | |
| MDWI03-24S24 | (9 – 36) | 24 | 125 | 80% | | |
| MDWI03-24D05 | | ±5 | ±300 | 77% | | |
| MDWI03-24D12 | | ±12 | ±125 | 80% | | |
| MDWI03-24D15 | | ±15 | ±100 | 80% | | |
| MDWI03-48S033 | | 3.3 | 600 | 75% | | |
| MDWI03-48S05 | | 5 | 600 | 78% | | |
| MDWI03-48S12 | | 12 | 250 | 80% | | |
| MDWI03-48S15 | 48 | 15 | 200 | 80% | | |
| MDWI03-48S24 | (18 – 75) | 24 | 125 | 80% | | |
| MDWI03-48D05 | | ±5 | ±300 | 77% | | |
| MDWI03-48D12 | | ±12 | ±125 | 80% | | |
| MDWI03-48D15 | | ±15 | ±100 | 80% | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | |
|--------------------------------|--------|--------------------------|--|
| Pin | Single | Dual | |
| 1 | -Vin | -Vin | |
| 2 | | Remote On/Off | |
| 7 | NC | NC | |
| 8 | NC | Common | |
| 9 | +Vout | +Vout | |
| 10 | -Vout | -Vout | |
| 16 | +Vin | +Vin | |

NC = No Connection



MIWI03 Series • 3W

- Industrial Standard DIP-24 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC (opt. 3000VDC)
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Designed-in EMI Emission meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



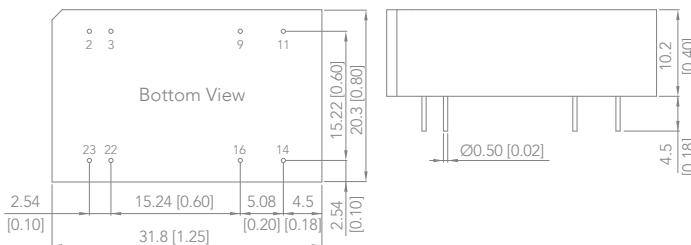
| ■ Specifications | | ■ Model Selection Guide | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MIWI03-24S033 | | 3.3 | 750 | 77% | |
| MIWI03-24S05 | | 5 | 600 | 79% | |
| MIWI03-24S12 | | 12 | 250 | 82% | |
| MIWI03-24S15 | 24 | 15 | 200 | 83% | |
| MIWI03-24S24 | (9 - 36) | 24 | 125 | 81% | |
| MIWI03-24D05 | | ±5 | ±250 | 80% | |
| MIWI03-24D12 | | ±12 | ±125 | 82% | |
| MIWI03-24D15 | | ±15 | ±100 | 82% | |
| MIWI03-48S033 | | 3.3 | 750 | 77% | |
| MIWI03-48S05 | | 5 | 600 | 80% | |
| MIWI03-48S12 | | 12 | 250 | 83% | |
| MIWI03-48S15 | 48 | 15 | 200 | 84% | |
| MIWI03-48S24 | (18 - 75) | 24 | 125 | 82% | |
| MIWI03-48D05 | | ±5 | ±250 | 80% | |
| MIWI03-48D12 | | ±12 | ±125 | 82% | |
| MIWI03-48D15 | | ±15 | ±100 | 82% | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter with 3000VDC isolation, please add a suffix H.

| ■ Mechanical Dimensions | | ■ Pin Connections | |
|-------------------------|--------|-------------------|--|
| Pin | Single | Dual | |
| 2,3 | -Vin | -Vin | |
| 9 | No Pin | Common | |
| 11 | NC | -Vout | |
| 14 | +Vout | +Vout | |
| 16 | -Vout | Common | |
| 22,23 | +Vin | +Vin | |

NC = No Connection



MIW06 Series • 6W

- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC (opt. 3000VDC)
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval

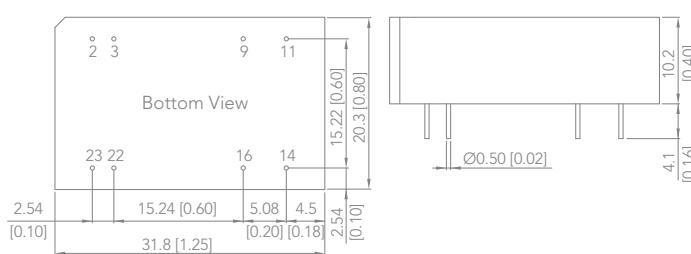


| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MIW06-12S033 | 3.3 | 1200 | 75% | | |
| MIW06-12S05 | 5 | 1200 | 78% | | |
| MIW06-12S12 | 12 | 500 | 82% | | |
| MIW06-12S15 | 15 | 400 | 82% | | |
| MIW06-12S24 | (9 – 18) | 24 | 250 | 84% | |
| MIW06-12D05 | ±5 | ±500 | 78% | | |
| MIW06-12D12 | ±12 | ±250 | 82% | | |
| MIW06-12D15 | ±15 | ±200 | 82% | | |
| MIW06-24S033 | 3.3 | 1200 | 77% | | |
| MIW06-24S05 | 5 | 1200 | 80% | | |
| MIW06-24S12 | 12 | 500 | 84% | | |
| MIW06-24S15 | 15 | 400 | 84% | | |
| MIW06-24S24 | (18 – 36) | 24 | 250 | 84% | |
| MIW06-24D05 | ±5 | ±500 | 80% | | |
| MIW06-24D12 | ±12 | ±250 | 84% | | |
| MIW06-24D15 | ±15 | ±200 | 84% | | |
| MIW06-48S033 | 3.3 | 1200 | 77% | | |
| MIW06-48S05 | 5 | 1200 | 80% | | |
| MIW06-48S12 | 12 | 500 | 84% | | |
| MIW06-48S15 | 15 | 400 | 84% | | |
| MIW06-48S24 | (36 – 75) | 24 | 250 | 84% | |
| MIW06-48D05 | ±5 | ±500 | 80% | | |
| MIW06-48D12 | ±12 | ±250 | 84% | | |
| MIW06-48D15 | ±15 | ±200 | 84% | | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter with 3000VDC isolation, please add a suffix H.

► Mechanical Dimensions



NC = No Connection

► Pin Connections

| Pin | Single | Dual |
|-------|--------|--------|
| 2,3 | -Vin | -Vin |
| 9 | No Pin | Common |
| 11 | NC | -Vout |
| 14 | +Vout | +Vout |
| 16 | -Vout | Common |
| 22,23 | +Vin | +Vin |

MIWI06 Series • 6W

- Industrial Standard DIP-24 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC (opt. 3000VDC)
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval



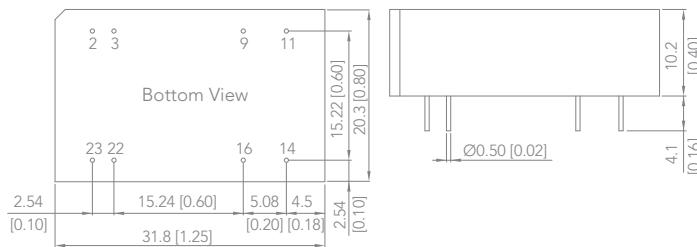
| Specifications | | Model Selection Guide | | | | |
|-----------------------|-------------------|------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MIWI06-24S033 | | 3.3 | 1200 | 77% | | |
| MIWI06-24S05 | | 5 | 1200 | 80% | | |
| MIWI06-24S12 | | 12 | 500 | 84% | | |
| MIWI06-24S15 | 24 | 15 | 400 | 84% | | |
| MIWI06-24S24 | (9 – 36) | 24 | 250 | 84% | | |
| MIWI06-24D05 | | ±5 | ±500 | 80% | | |
| MIWI06-24D12 | | ±12 | ±250 | 84% | | |
| MIWI06-24D15 | | ±15 | ±200 | 84% | | |
| MIWI06-48S033 | | 3.3 | 1200 | 77% | | |
| MIWI06-48S05 | | 5 | 1200 | 80% | | |
| MIWI06-48S12 | | 12 | 500 | 84% | | |
| MIWI06-48S15 | 48 | 15 | 400 | 84% | | |
| MIWI06-48S24 | (18 – 75) | 24 | 250 | 84% | | |
| MIWI06-48D05 | | ±5 | ±500 | 80% | | |
| MIWI06-48D12 | | ±12 | ±250 | 84% | | |
| MIWI06-48D15 | | ±15 | ±200 | 84% | | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter with 3000VDC isolation, please add a suffix H.

| Mechanical Dimensions | | Pin Connections | | |
|------------------------------|--------|------------------------|--|--|
| Pin | Single | Dual | | |
| 2,3 | -Vin | | | |
| 9 | No Pin | | | |
| 11 | NC | | | |
| 14 | +Vout | | | |
| 16 | -Vout | | | |
| 22,23 | +Vin | | | |

NC = No Connection



MDWI06 Series • 6W

NEW

- Smallest Encapsulated 6W Converter
- Industrial Standard DIP-16 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Shielded metal Case with Insulated Baseplate
- Designed-in Conducted EMI meets EN55032/22 Class A & FCC Level A
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

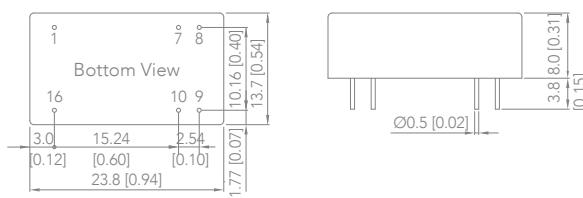


| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MDWI06-24S033 | | 3.3 | 1500 | 78% | | |
| MDWI06-24S05 | | 5 | 1200 | 82% | | |
| MDWI06-24S12 | | 12 | 500 | 85% | | |
| MDWI06-24S15 | 24 (9 - 36) | 15 | 400 | 85% | | |
| MDWI06-24S24 | | 24 | 250 | 86% | | |
| MDWI06-24D12 | | ±12 | ±250 | 85% | | |
| MDWI06-24D15 | | ±15 | ±200 | 86% | | |
| MDWI06-48S033 | | 3.3 | 1500 | 78% | | |
| MDWI06-48S05 | | 5 | 1200 | 81% | | |
| MDWI06-48S12 | | 12 | 500 | 85% | | |
| MDWI06-48S15 | 48 (18 - 75) | 15 | 400 | 85% | | |
| MDWI06-48S24 | | 24 | 250 | 86% | | |
| MDWI06-48D12 | | ±12 | ±250 | 86% | | |
| MDWI06-48D15 | | ±15 | ±200 | 86% | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | |
|--------------------------------|--------|--------------------------|--|
| Pin | Single | Dual | |
| 1 | -Vin | -Vin | |
| 7 | NC | NC | |
| 8 | NC | Common | |
| 9 | +Vout | +Vout | |
| 10 | -Vout | -Vout | |
| 16 | +Vin | +Vin | |

NC = No Connection



MDW08 Series • 8W

<NEW



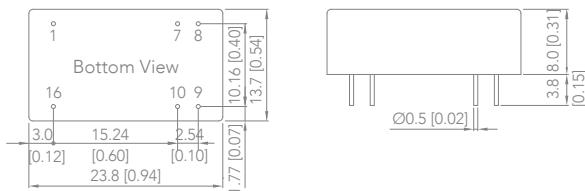
- Smallest Encapsulated 8W Converter
- Industrial Standard DIP-16 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Shielded Metal Case with Insulated Baseplate
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MDW08-12S033 | | 3.3 | 1600 | 78% | | |
| MDW08-12S05 | | 5 | 1600 | 81% | | |
| MDW08-12S12 | | 12 | 665 | 84% | | |
| MDW08-12S15 | 12 (9 – 18) | 15 | 535 | 84% | | |
| MDW08-12S24 | | 24 | 335 | 85% | | |
| MDW08-12D12 | | ±12 | ±335 | 85% | | |
| MDW08-12D15 | | ±15 | ±265 | 84% | | |
| MDW08-24S033 | | 3.3 | 1600 | 78% | | |
| MDW08-24S05 | | 5 | 1600 | 82% | | |
| MDW08-24S12 | | 12 | 665 | 85% | | |
| MDW08-24S15 | 24 (18 – 36) | 15 | 535 | 85% | | |
| MDW08-24S24 | | 24 | 335 | 86% | | |
| MDW08-24D12 | | ±12 | ±335 | 85% | | |
| MDW08-24D15 | | ±15 | ±265 | 86% | | |
| MDW08-48S033 | | 3.3 | 1600 | 78% | | |
| MDW08-48S05 | | 5 | 1600 | 81% | | |
| MDW08-48S12 | | 12 | 665 | 85% | | |
| MDW08-48S15 | 48 (36 – 75) | 15 | 535 | 85% | | |
| MDW08-48S24 | | 24 | 335 | 86% | | |
| MDW08-48D12 | | ±12 | ±335 | 86% | | |
| MDW08-48D15 | | ±15 | ±265 | 86% | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | -Vin | -Vin |
| 7 | NC | NC |
| 8 | NC | Common |
| 9 | +Vout | +Vout |
| 10 | -Vout | -Vout |
| 16 | +Vin | +Vin |

NC = No Connection

MDWI08 Series • 8W



- Smallest Encapsulated 8W Converter
- Industrial Standard DIP-16 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Shielded Metal Case with Insulated Baseplate
- Designed-in Conducted EMI meets EN55032/22 Class A & FCC Level A
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

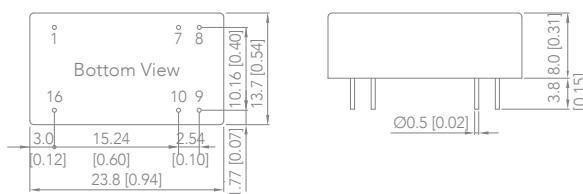


| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MDWI08-24S033 | | 3.3 | 2000 | 78% | | |
| MDWI08-24S05 | | 5 | 1600 | 82% | | |
| MDWI08-24S12 | | 12 | 665 | 85% | | |
| MDWI08-24S15 | 24 (9 – 36) | 15 | 535 | 85% | | |
| MDWI08-24S24 | | 24 | 335 | 86% | | |
| MDWI08-24D12 | | ±12 | ±335 | 85% | | |
| MDWI08-24D15 | | ±15 | ±265 | 86% | | |
| MDWI08-48S033 | | 3.3 | 2000 | 78% | | |
| MDWI08-48S05 | | 5 | 1600 | 81% | | |
| MDWI08-48S12 | | 12 | 665 | 85% | | |
| MDWI08-48S15 | 48 (18 – 75) | 15 | 535 | 85% | | |
| MDWI08-48S24 | | 24 | 335 | 86% | | |
| MDWI08-48D12 | | ±12 | ±335 | 86% | | |
| MDWI08-48D15 | | ±15 | ±265 | 86% | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | | ► Pin Connections | | |
|--------------------------------|--------|------|--------------------------|--|--|
| Pin | Single | Dual | | | |
| 1 | -Vin | | | | |
| 7 | NC | | | | |
| 8 | NC | | | | |
| 9 | +Vout | | | | |
| 10 | -Vout | | | | |
| 16 | +Vin | | | | |

NC = No Connection



MIW10 Series • 10W

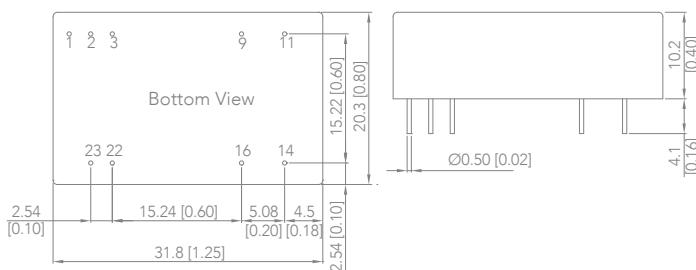
- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Remote On/Off Control
- Shielded Metal Case with Insulated Baseplate
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MIW10-12S033 | | 3.3 | 2700 | 86% | | |
| MIW10-12S05 | | 5 | 2000 | 85% | | |
| MIW10-12S051 | | 5.1 | 2000 | 85% | | |
| MIW10-12S12 | 12 (9 – 18) | 12 | 833 | 88% | | |
| MIW10-12S15 | | 15 | 666 | 89% | | |
| MIW10-12D12 | | ±12 | ±416 | 88% | | |
| MIW10-12D15 | | ±15 | ±333 | 89% | | |
| MIW10-24S033 | | 3.3 | 2700 | 86% | | |
| MIW10-24S05 | | 5 | 2000 | 85% | | |
| MIW10-24S051 | | 5.1 | 2000 | 85% | | |
| MIW10-24S12 | 24 (18 – 36) | 12 | 833 | 89% | | |
| MIW10-24S15 | | 15 | 666 | 89% | | |
| MIW10-24D12 | | ±12 | ±416 | 88% | | |
| MIW10-24D15 | | ±15 | ±333 | 89% | | |
| MIW10-48S033 | | 3.3 | 2700 | 86% | | |
| MIW10-48S05 | | 5 | 2000 | 85% | | |
| MIW10-48S051 | | 5.1 | 2000 | 85% | | |
| MIW10-48S12 | 48 (36 – 75) | 12 | 833 | 87% | | |
| MIW10-48S15 | | 15 | 666 | 88% | | |
| MIW10-48D12 | | ±12 | ±416 | 87% | | |
| MIW10-48D15 | | ±15 | ±333 | 88% | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-------|---------------|--------|
| 1 | Remote On/Off | |
| 2,3 | -Vin | -Vin |
| 9 | No Pin | Common |
| 11 | NC | -Vout |
| 14 | +Vout | +Vout |
| 16 | -Vout | Common |
| 22,23 | +Vin | +Vin |

NC = No Connection

MIWI10 Series • 10W

- Industrial Standard DIP-24 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- High Efficiency up to 87%
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Remote On/Off Control
- Shielded Metal Case with Insulated Baseplate
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval

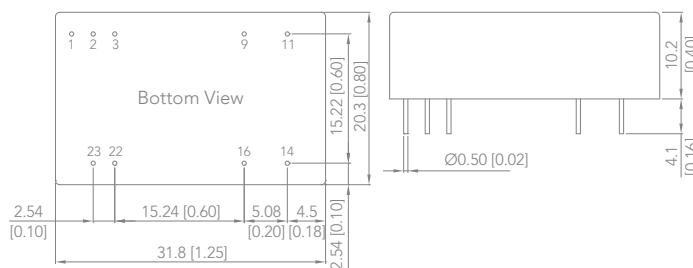


| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MIWI10-24S033 | | 3.3 | 2700 | 86% | |
| MIWI10-24S05 | | 5 | 2000 | 85% | |
| MIWI10-24S051 | | 5.1 | 2000 | 85% | |
| MIWI10-24S12 | 24 | 12 | 833 | 87% | |
| MIWI10-24S15 | (9 – 36) | 15 | 666 | 87% | |
| MIWI10-24S24 | | 24 | 416 | 87% | |
| MIWI10-24D12 | | ±12 | ±416 | 87% | |
| MIWI10-24D15 | | ±15 | ±333 | 87% | |
| MIWI10-48S033 | | 3.3 | 2700 | 86% | |
| MIWI10-48S05 | | 5 | 2000 | 85% | |
| MIWI10-48S051 | | 5.1 | 2000 | 85% | |
| MIWI10-48S12 | 48 | 12 | 833 | 87% | |
| MIWI10-48S15 | (18 – 75) | 15 | 666 | 87% | |
| MIWI10-48S24 | | 24 | 416 | 87% | |
| MIWI10-48D12 | | ±12 | ±416 | 87% | |
| MIWI10-48D15 | | ±15 | ±333 | 87% | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | |
|--------------------------------|--------|--------------------------|--|
| Pin | Single | Dual | |
| 1 | | Remote On/Off | |
| 2,3 | -Vin | -Vin | |
| 9 | No Pin | Common | |
| 11 | NC | -Vout | |
| 14 | +Vout | +Vout | |
| 16 | -Vout | Common | |
| 22,23 | +Vin | +Vin | |

NC = No Connection



MJW10 Series • 10W

- Industrial Standard 1"×1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Remote On/Off Control (option)
- Shielded Metal Case with Insulated Baseplate
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking

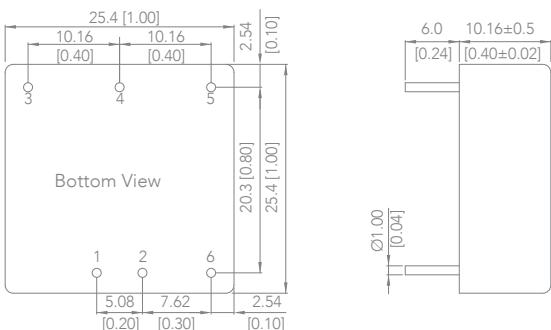


| ► Specifications | | ► Model Selection Guide | | | | |
|----------------------------------|--------|--|-------------------|--------------------|-----------------------|------------|
| | | Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency |
| Output Voltage Accuracy | | ±2.0% max. | | | | |
| Line Regulation | | ±1.0% max. | | | | |
| Load Regulation | Single | ±0.5% max. | | | | |
| | Dual | ±1.0% max. | | | | |
| Ripple & Noise (20MHz) 3.3V & 5V | | 80mVp-p typ. | | | | |
| | Others | 100mVp-p typ. | | | | |
| Efficiency | | Up to 89% | | | | |
| I/O Isolation Voltage | | 1500VDC min. | | | | |
| I/O Isolation Capacitance | | 2000pF max. | | | | |
| Operating Ambient Temp. Range | | -40°C to +80°C (See Derating Curve) | | | | |
| Short Circuit Protection | | Continuous (Auto. Recovery) | | | | |
| Remote ON/OFF | | Enable High | | | | |
| Case Material | | Metal (6 side shielded with insulated baseplate) | | | | |
| Safety Approval | | UL/cUL/IEC/EN 60950-1, CB-Report, CE Marking | | | | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter with heatsink, please add a suffix -HS.

| ► Mechanical Dimensions | | | ► Pin Connections | | |
|--------------------------------|--------------------------|------|--------------------------|--------------------------|--------|
| Pin | Single | Dual | Pin | Single | Dual |
| 1 | +Vin | | 1 | +Vin | +Vin |
| 2 | -Vin | | 2 | -Vin | -Vin |
| 3 | +Vout | | 3 | +Vout | +Vout |
| 4 | No Pin | | 4 | No Pin | Common |
| 5 | -Vout | | 5 | -Vout | -Vout |
| 6 | Remote On/Off (Optional) | | 6 | Remote On/Off (Optional) | |



MJWI10 Series • 10W

- Industrial Standard 1"×1" Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- High Efficiency up to 87%
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- Overload and Short Circuit Protection
- Remote On/Off Control
- Shielded Metal Case with Insulated Baseplate
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking

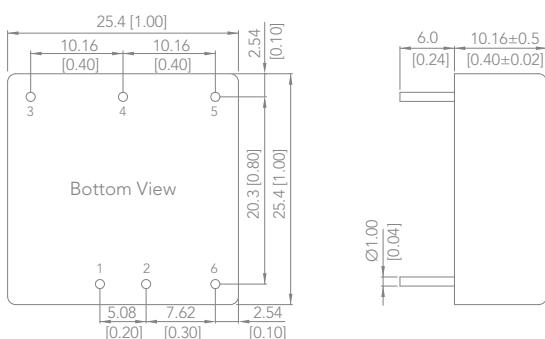


| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MJWI10-24S033 | 3.3 | 2200 | 86% | | | |
| MJWI10-24S05 | 5 | 2000 | 84% | | | |
| MJWI10-24S051 | 5.1 | 2000 | 84% | | | |
| MJWI10-24S12 | 12 | 830 | 86% | | | |
| MJWI10-24S15 | 24 (9 - 36) | 15 | 660 | 87% | | |
| MJWI10-24S24 | 24 | 410 | 86% | | | |
| MJWI10-24D05 | ±5 | ±1000 | 84% | | | |
| MJWI10-24D12 | ±12 | ±410 | 86% | | | |
| MJWI10-24D15 | ±15 | ±330 | 87% | | | |
| MJWI10-48S033 | 3.3 | 2200 | 85% | | | |
| MJWI10-48S05 | 5 | 2000 | 84% | | | |
| MJWI10-48S051 | 5.1 | 2000 | 84% | | | |
| MJWI10-48S12 | 12 | 830 | 86% | | | |
| MJWI10-48S15 | 48 (18 - 75) | 15 | 660 | 87% | | |
| MJWI10-48S24 | 24 | 410 | 86% | | | |
| MJWI10-48D05 | ±5 | ±1000 | 84% | | | |
| MJWI10-48D12 | ±12 | ±410 | 86% | | | |
| MJWI10-48D15 | ±15 | ±330 | 87% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter with heatsink, please add a suffix -HS.

| ► Mechanical Dimensions | | | ► Pin Connections | | |
|--------------------------------|---------------|--------|--------------------------|---------------|--------|
| Pin | Single | Dual | Pin | Single | Dual |
| 1 | +Vin | +Vin | 1 | +Vin | +Vin |
| 2 | -Vin | -Vin | 2 | -Vin | -Vin |
| 3 | +Vout | +Vout | 3 | +Vout | +Vout |
| 4 | No Pin | Common | 4 | No Pin | Common |
| 5 | -Vout | -Vout | 5 | -Vout | -Vout |
| 6 | Remote On/Off | | 6 | Remote On/Off | |



MJW15 Series • 15W

<NEW

- Industrial Standard 1"×1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- Designed-in Conducted EMI meets EN55032/22 Class A & FCC Level A
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking

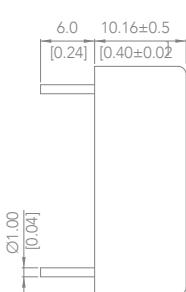
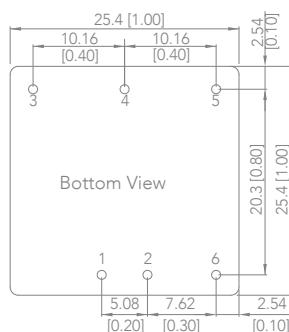


| ► Specifications | | ► Model Selection Guide | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MJW15-12S033 | 3.3 | 3400 | 86% | | |
| MJW15-12S05 | 5 | 3000 | 89% | | |
| MJW15-12S12 | 12 | 1250 | 89% | | |
| MJW15-12S15 | 12 (9 – 18) | 15 | 1000 | 89% | |
| MJW15-12S24 | 24 | 625 | 90% | | |
| MJW15-12D12 | ±12 | ±625 | 89% | | |
| MJW15-12D15 | ±15 | ±500 | 90% | | |
| MJW15-24S033 | 3.3 | 3400 | 86% | | |
| MJW15-24S05 | 5 | 3000 | 88% | | |
| MJW15-24S12 | 12 | 1250 | 90% | | |
| MJW15-24S15 | 24 (18 – 36) | 15 | 1000 | 90% | |
| MJW15-24S24 | 24 | 625 | 91% | | |
| MJW15-24D12 | ±12 | ±625 | 90% | | |
| MJW15-24D15 | ±15 | ±500 | 90% | | |
| MJW15-48S033 | 3.3 | 3400 | 87% | | |
| MJW15-48S05 | 5 | 3000 | 88% | | |
| MJW15-48S12 | 12 | 1250 | 90% | | |
| MJW15-48S15 | 48 (36 – 75) | 15 | 1000 | 90% | |
| MJW15-48S24 | 24 | 625 | 91% | | |
| MJW15-48D12 | ±12 | ±625 | 89% | | |
| MJW15-48D15 | ±15 | ±500 | 90% | | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter with heatsink, please add a suffix -HS.

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|---------------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | Trim | Common |
| 5 | -Vout | -Vout |
| 6 | Remote On/Off | |

MJWI15 Series • 15W

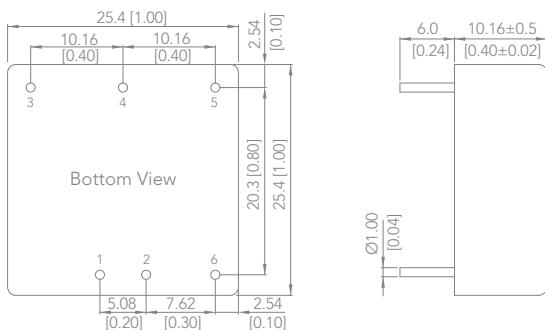
- Industrial Standard 1"×1" Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 91%
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- Designed-in Conducted EMI meets EN55032/22 Class A & FCC Level A
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|---------------------------------|---|---|-------------------|--------------------|-----------------------|------------|
| | | Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency |
| Output Voltage Accuracy | ±1.0% max. | MJWI15-24S033 | 3.3 | 3400 | 86% | |
| Line Regulation Single | ±0.2% max. | MJWI15-24S05 | 5 | 3000 | 88% | |
| Dual | ±0.5% max. | MJWI15-24S12 | 12 | 1250 | 88% | |
| Load Regulation 3.3V, 5V | ±0.5% max. | MJWI15-24S15 | 24 (9 - 36) | 15 | 1000 | 89% |
| 12V, 15V, 24V | ±0.2% max. | MJWI15-24S24 | 24 | 625 | 91% | |
| Dual | ±1.0% max. | MJWI15-24D12 | ±12 | ±625 | 89% | |
| Ripple & Noise (20MHz) 3.3V, 5V | 75mVp-p max. | MJWI15-24D15 | ±15 | ±500 | 89% | |
| 12V, 15V, Dual | 100mVp-p max | MJWI15-48S033 | 3.3 | 3400 | 86% | |
| 24V | 150mVp-p max. | MJWI15-48S05 | 5 | 3000 | 88% | |
| Efficiency | Up to 91% | MJWI15-48S12 | 12 | 1250 | 89% | |
| I/O Isolation Voltage | 1500VDC min. | MJWI15-48S15 | 48 (18 - 75) | 15 | 1000 | 89% |
| I/O Isolation Capacitance | 1500pF max. | MJWI15-48S24 | 24 | 625 | 91% | |
| Operating Ambient Temp. Range | -40°C to +90°C (See Derating Curve) | MJWI15-48D12 | ±12 | ±625 | 90% | |
| Short Circuit Protection | Continuous (Auto. Recovery) | MJWI15-48D15 | ±15 | ±500 | 89% | |
| Output Voltage Trim | ±10% max. | *To order the converter with heatsink, please add a suffix -HS. | | | | |
| Remote ON/OFF | Enable High | | | | | |
| Case Material | Metal (6 side shielded with insulated baseplate) | | | | | |
| Safety Approval | UL/cUL/IEC/EN 62368-1(60950-1), CB-Report, CE Marking | | | | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | | ► Pin Connections | | |
|-------------------------|---------------|--------|-------------------|---------------|--------|
| Pin | Single | Dual | Pin | Single | Dual |
| 1 | +Vin | +Vin | 1 | +Vin | +Vin |
| 2 | -Vin | -Vin | 2 | -Vin | -Vin |
| 3 | +Vout | +Vout | 3 | +Vout | +Vout |
| 4 | Trim | Common | 4 | Trim | Common |
| 5 | -Vout | -Vout | 5 | -Vout | -Vout |
| 6 | Remote On/Off | | 6 | Remote On/Off | |



MJWI20 Series • 20W

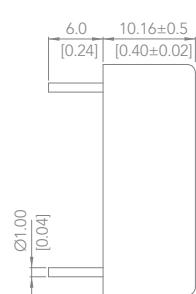
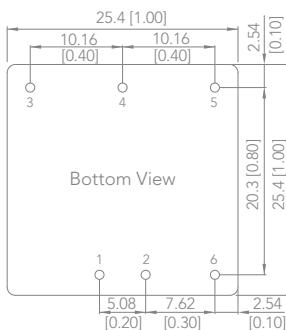
- Smallest Encapsulated 20W Converter
- Ultra-compact 1"×1" Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 89%
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|---|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MJWI20-24S033 | 3.3 | 4500 | 87% | | | |
| MJWI20-24S05 | 5 | 4000 | 89% | | | |
| MJWI20-24S12 | 12 | 1670 | 89% | | | |
| MJWI20-24S15 | 24 (9 - 36) | 15 | 1340 | 89% | | |
| MJWI20-24S24 | 24 | 835 | 88% | | | |
| MJWI20-24D12 | ±12 | ±835 | 89% | | | |
| MJWI20-24D15 | ±15 | ±670 | 89% | | | |
| MJWI20-48S033 | 3.3 | 4500 | 88% | | | |
| MJWI20-48S05 | 5 | 4000 | 89% | | | |
| MJWI20-48S12 | 12 | 1670 | 89% | | | |
| MJWI20-48S15 | 48 (18 - 75) | 15 | 1340 | 89% | | |
| MJWI20-48S24 | 24 | 835 | 88% | | | |
| MJWI20-48D12 | ±12 | ±835 | 89% | | | |
| MJWI20-48D15 | ±15 | ±670 | 89% | | | |
| *To order the converter with heatsink, please add a suffix -HS. | | | | | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | | ► Pin Connections | | |
|-------------------------|---------------|--------|-------------------|---------------|--------|
| Pin | Single | Dual | Pin | Single | Dual |
| 1 | +Vin | +Vin | 1 | +Vin | +Vin |
| 2 | -Vin | -Vin | 2 | -Vin | -Vin |
| 3 | +Vout | +Vout | 3 | +Vout | +Vout |
| 4 | Trim | Common | 4 | Trim | Common |
| 5 | -Vout | -Vout | 5 | -Vout | -Vout |
| 6 | Remote On/Off | | 6 | Remote On/Off | |



MJW25 Series • 25W

- Smallest Encapsulated 25W Converter
- Ultra-compact 1"×1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 90%
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking

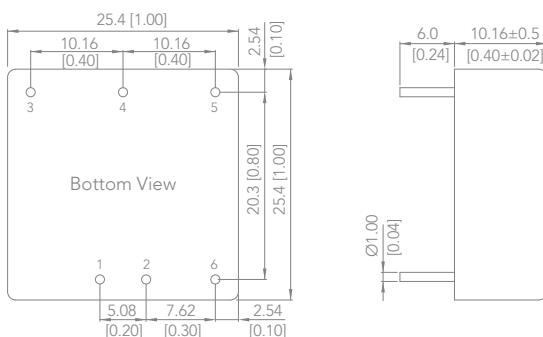


| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MJW25-12S033 | 3.3 | 6000 | 87% | | | |
| MJW25-12S05 | 5 | 5000 | 89% | | | |
| MJW25-12S12 | 12 | 12 | 2090 | 89% | | |
| MJW25-12S15 | (9 – 18) | 15 | 1670 | 89% | | |
| MJW25-12D12 | ±12 | ±1040 | 89% | | | |
| MJW25-12D15 | ±15 | ±840 | 89% | | | |
| MJW25-24S033 | 3.3 | 6000 | 88% | | | |
| MJW25-24S05 | 5 | 5000 | 90% | | | |
| MJW25-24S12 | 24 | 12 | 2090 | 90% | | |
| MJW25-24S15 | (18 – 36) | 15 | 1670 | 90% | | |
| MJW25-24D12 | ±12 | ±1040 | 89% | | | |
| MJW25-24D15 | ±15 | ±840 | 89% | | | |
| MJW25-48S033 | 3.3 | 6000 | 88% | | | |
| MJW25-48S05 | 5 | 5000 | 90% | | | |
| MJW25-48S12 | 48 | 12 | 2090 | 90% | | |
| MJW25-48S15 | (36 – 75) | 15 | 1670 | 90% | | |
| MJW25-48D12 | ±12 | ±1040 | 89% | | | |
| MJW25-48D15 | ±15 | ±840 | 89% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

| Pin | Single | Dual |
|-----|---------------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | Trim | Common |
| 5 | -Vout | -Vout |
| 6 | Remote On/Off | |

► Mechanical Dimensions



MJWI25 Series • 25W

- Smallest Encapsulated 25W Converter
- Ultra-compact 1"×1" Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 90%
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking

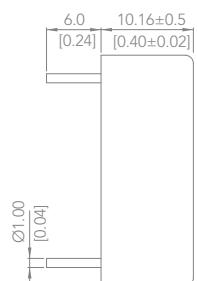
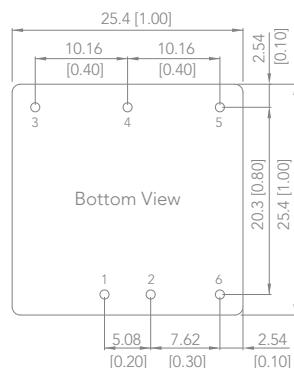


| ► Specifications | | ► Model Selection Guide | | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MJWI25-24S033 | | 3.3 | 6000 | 87% | | |
| MJWI25-24S05 | | 5 | 5000 | 89% | | |
| MJWI25-24S12 | 24 | 12 | 2090 | 89% | | |
| MJWI25-24S15 | (9 - 36) | 15 | 1670 | 90% | | |
| MJWI25-24D12 | | ±12 | ±1040 | 89% | | |
| MJWI25-24D15 | | ±15 | ±840 | 89% | | |
| MJWI25-48S033 | | 3.3 | 6000 | 88% | | |
| MJWI25-48S05 | | 5 | 5000 | 90% | | |
| MJWI25-48S12 | 48 | 12 | 2090 | 90% | | |
| MJWI25-48S15 | (18 - 75) | 15 | 1670 | 90% | | |
| MJWI25-48D12 | | ±12 | ±1040 | 89% | | |
| MJWI25-48D15 | | ±15 | ±840 | 89% | | |

*To order the converter with heatsink, please add a suffix -HS.

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|---------------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | Trim | Common |
| 5 | -Vout | -Vout |
| 6 | Remote On/Off | |

MKW5000 Series • 30W

- Industrial Standard 2"×1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- High Efficiency up to 88%
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Overload and Short Circuit Protection
- Remote On/Off Control (option), Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval

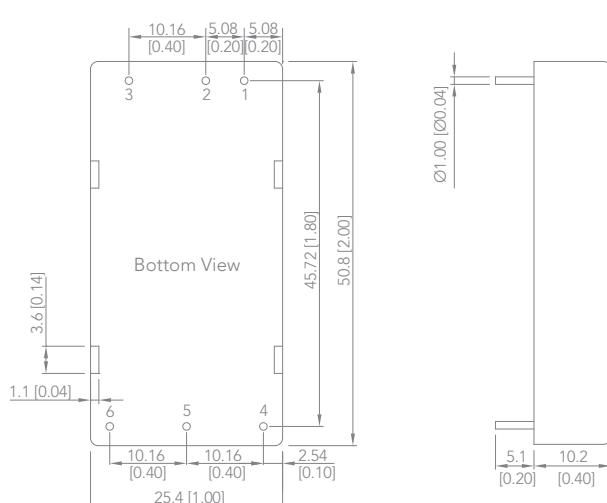


| ► Specifications | | ► Model Selection Guide | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MKW5030 | | 2.5 | 6000 | 84% | |
| MKW5031 | | 3.3 | 6000 | 86% | |
| MKW5032 | 24 | 5 | 5000 | 88% | |
| MKW5039 | (18 – 36) | 5.1 | 5000 | 88% | |
| MKW5033 | | 12 | 2500 | 88% | |
| MKW5034 | | 15 | 2000 | 88% | |
| MKW5040 | | 2.5 | 6000 | 84% | |
| MKW5041 | | 3.3 | 6000 | 86% | |
| MKW5042 | 48 | 5 | 5000 | 88% | |
| MKW5049 | (36 – 75) | 5.1 | 5000 | 88% | |
| MKW5043 | | 12 | 2500 | 88% | |
| MKW5044 | | 15 | 2000 | 88% | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter with heatsink, please add a suffix H.

| ► Mechanical Dimensions | | ► Pin Connections | |
|-------------------------|---------------|-------------------|----------|
| Pin | Function | Pin | Function |
| 1 | +Vin | | |
| 2 | -Vin | | |
| 3 | Remote On/Off | | |
| 4 | +Vout | | |
| 5 | -Vout | | |
| 6 | Trim | | |



MPW1000 Series • 30W

- Industrial Standard 2" x 1.6" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- Overload and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval

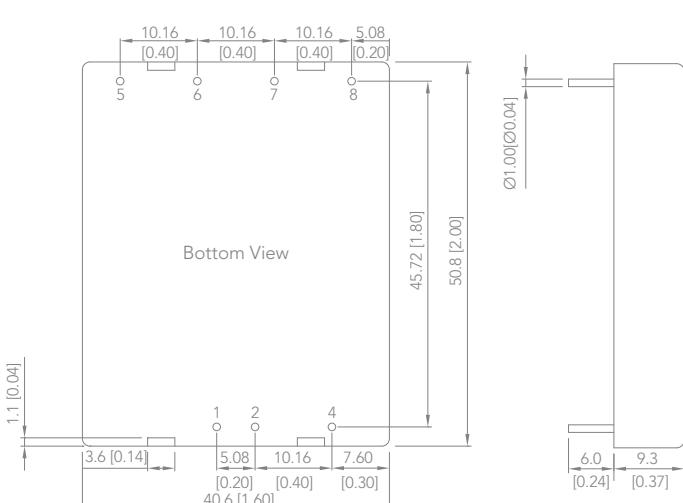


| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MPW1021 | | 3.3 | 5500 | 81% | |
| MPW1022 | | 5 | 5000 | 84% | |
| MPW1023 | 12 | 12 | 2500 | 88% | |
| MPW1024 | (9 - 18) | 15 | 2000 | 88% | |
| MPW1026 | | ±12 | ±1250 | 88% | |
| MPW1027 | | ±15 | ±1000 | 88% | |
| MPW1031 | | 3.3 | 5500 | 82% | |
| MPW1032 | | 5 | 5000 | 85% | |
| MPW1033 | 24 | 12 | 2500 | 89% | |
| MPW1034 | (18 - 36) | 15 | 2000 | 89% | |
| MPW1036 | | ±12 | ±1250 | 89% | |
| MPW1037 | | ±15 | ±1000 | 89% | |
| MPW1041 | | 3.3 | 5500 | 82% | |
| MPW1042 | | 5 | 5000 | 85% | |
| MPW1043 | 48 | 12 | 2500 | 89% | |
| MPW1044 | (36 - 75) | 15 | 2000 | 89% | |
| MPW1046 | | ±12 | ±1250 | 89% | |
| MPW1047 | | ±15 | ±1000 | 89% | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter with heatsink, please add a suffix H.

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|--------|---------------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 4 | | Remote On/Off |
| 5 | No Pin | +Vout |
| 6 | +Vout | Common |
| 7 | -Vout | -Vout |
| 8 | Trim | Trim |

MPW2000 Series • 30W

- Industrial Standard 2" ×1.6" Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- Overload and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval



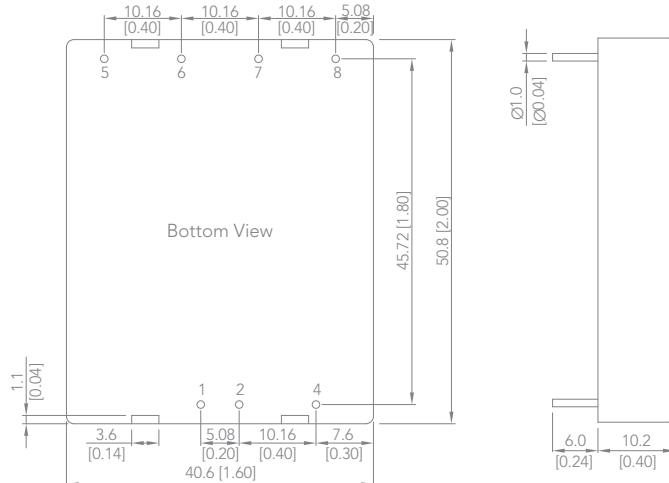
cUL US CB Scheme
UL 60950-1 3 YEAR WARRANTY

| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MPW2031 | | 3.3 | 5500 | 82% | |
| MPW2032 | | 5 | 5000 | 85% | |
| MPW2033 | 24 | 12 | 2500 | 89% | |
| MPW2034 | (10 – 40) | 15 | 2000 | 89% | |
| MPW2036 | | ±12 | ±1250 | 89% | |
| MPW2037 | | ±15 | ±1000 | 89% | |
| MPW2041 | | 3.3 | 5500 | 82% | |
| MPW2042 | | 5 | 5000 | 85% | |
| MPW2043 | 48 | 12 | 2500 | 89% | |
| MPW2044 | (18 – 75) | 15 | 2000 | 89% | |
| MPW2046 | | ±12 | ±1250 | 89% | |
| MPW2047 | | ±15 | ±1000 | 89% | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Pin Connections | | |
|--------------------------|--------|---------------|
| Pin | Single | Dual |
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 4 | | Remote On/Off |
| 5 | No Pin | +Vout |
| 6 | +Vout | Common |
| 7 | -Vout | -Vout |
| 8 | Trim | Trim |

► Mechanical Dimensions



MKW40 Series • 40W

- Smallest Encapsulated 40W Converter
- Ultra-compact 2"×1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 92%
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload/Voltage/Temp. and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 60950-1 Safety Approval



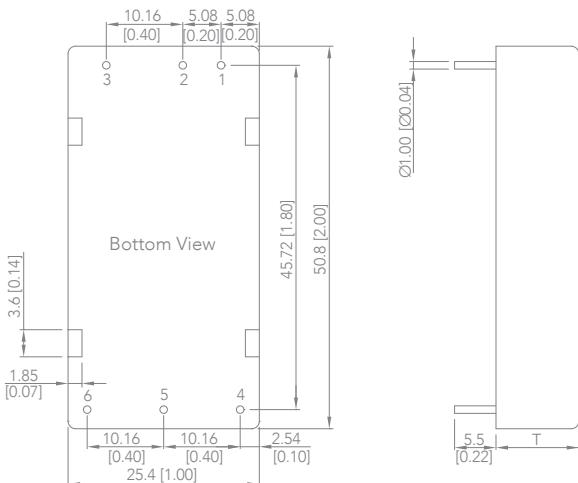
| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MKW40-12S033 | 3.3 | 8000 | 89% | | |
| MKW40-12S05 | 5 | 8000 | 89% | | |
| MKW40-12S12 | 12 | 3330 | 89% | | |
| MKW40-12S15 | 15 | 2670 | 90% | | |
| MKW40-12S24 | 24 | 1670 | 91% | | |
| MKW40-12D12 | ±12 | ±1670 | 88% | | |
| MKW40-12D15 | ±15 | ±1330 | 88% | | |
| MKW40-24S033 | 3.3 | 8000 | 90% | | |
| MKW40-24S05 | 5 | 8000 | 91% | | |
| MKW40-24S12 | 12 | 3330 | 91% | | |
| MKW40-24S15 | 15 | 2670 | 91% | | |
| MKW40-24S24 | 24 | 1670 | 91% | | |
| MKW40-24D12 | ±12 | ±1670 | 89% | | |
| MKW40-24D15 | ±15 | ±1330 | 89% | | |
| MKW40-48S033 | 3.3 | 8000 | 90% | | |
| MKW40-48S05 | 5 | 8000 | 91% | | |
| MKW40-48S12 | 12 | 3330 | 92% | | |
| MKW40-48S15 | 15 | 2670 | 92% | | |
| MKW40-48S24 | 24 | 1670 | 91% | | |
| MKW40-48D12 | ±12 | ±1670 | 89% | | |
| MKW40-48D15 | ±15 | ±1330 | 89% | | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter with heatsink, please add a suffix -HS.

| ► Mechanical Dimensions | | ► Pin Connections | |
|--------------------------------|--------|--------------------------|--|
| Pin | Single | Dual | |
| 1 | +Vin | +Vin | |
| 2 | -Vin | -Vin | |
| 3 | | Remote On/Off | |
| 4 | +Vout | +Vout | |
| 5 | -Vout | Common | |
| 6 | Trim | -Vout | |

T : 10.2 [0.40] for other output models
T : 11.0 [0.43] for 24V output models



MKW140 Series • 40W

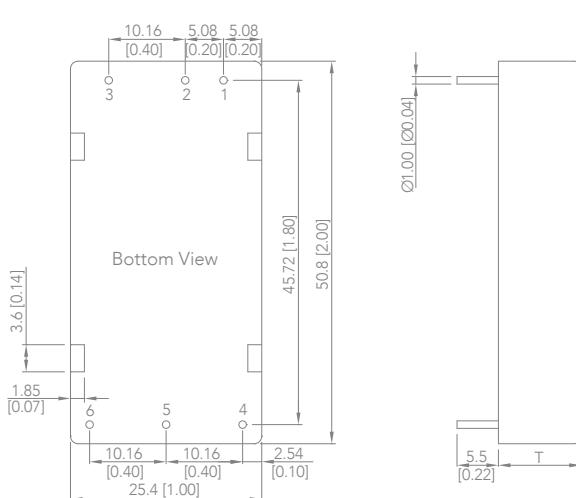
- Smallest Encapsulated 40W Converter
- Ultra-compact 2"×1" Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 91%
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload/Voltage/Temp. and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | | |
|-------------------------------|------------|--|---|--------------------|-----------------------|------------|-----|
| | | Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| Output Voltage Accuracy | ±1.0% max. | MKW140-24S033 | 3.3 | 8000 | 89% | | |
| Line Regulation | ±0.5% max. | MKW140-24S05 | 5 | 8000 | 90% | | |
| Load Regulation | Single | ±0.5% max. | MKW140-24S12 | 12 | 3330 | 89% | |
| | Dual | ±1.0% max. | MKW140-24S15 | 24 (9 – 36) | 15 | 2670 | 89% |
| Ripple & Noise (20MHz) | 3.3V & 5V | 100mVp-p max. | MKW140-24S24 | 24 | 1670 | 91% | |
| | others | 150mVp-p max. | MKW140-24D12 | ±12 | ±1670 | 88% | |
| Efficiency | | Up to 91% | MKW140-24D15 | ±15 | ±1330 | 88% | |
| I/O Isolation Voltage | | 1500VDC min. | MKW140-48S033 | 3.3 | 8000 | 89% | |
| I/O Isolation Capacitance | | 1500pF max. | MKW140-48S05 | 5 | 8000 | 90% | |
| Operating Ambient Temp. Range | | -40°C to +80°C (See Derating Curve) | MKW140-48S12 | 12 | 3330 | 90% | |
| Short Circuit Protection | | Continuous (Auto. Recovery) | MKW140-48S15 | 48 (18 – 75) | 15 | 2670 | 90% |
| Output Voltage Trim | 24V | +20% / -10% max. | MKW140-48S24 | 24 | 1670 | 91% | |
| | others | ±10% max. | MKW140-48D12 | ±12 | ±1670 | 88% | |
| Remote ON/OFF | | Enable High | MKW140-48D15 | ±15 | ±1330 | 88% | |
| Case Material | | Metal (6 side shielded with insulated baseplate) | *To order the converter with heatsink, please add a suffix -HS. | | | | |
| Safety Approval | | UL/cUL/IEC/EN 60950-1, CB-Report, CE Marking | | | | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|---------------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | Remote On/Off | |
| 4 | +Vout | +Vout |
| 5 | -Vout | Common |
| 6 | Trim | -Vout |

T : 10.2 [0.40] for other output models

T : 11.0 [0.43] for 24V output models

MKW50 Series • 50W

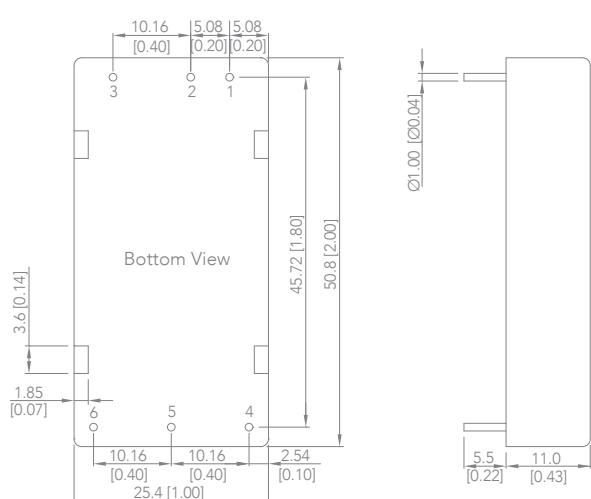
- Smallest Encapsulated 50W Converter
- Ultra-compact 2"x1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 92%
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload/Voltage/Temp. and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|---|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MKW50-12S033 | 3.3 | 10000 | 89% | | | |
| MKW50-12S05 | 5 | 10000 | 90% | | | |
| MKW50-12S12 | 12 (9 – 18) | 12 | 4170 | 91% | | |
| MKW50-12S15 | 15 | 3330 | 91% | | | |
| MKW50-12S24 | 24 | 2080 | 91% | | | |
| MKW50-24S033 | 3.3 | 10000 | 89% | | | |
| MKW50-24S05 | 5 | 10000 | 92% | | | |
| MKW50-24S12 | 24 (18 – 36) | 12 | 4170 | 92% | | |
| MKW50-24S15 | 15 | 3330 | 92% | | | |
| MKW50-24S24 | 24 | 2080 | 91% | | | |
| MKW50-48S033 | 3.3 | 10000 | 89% | | | |
| MKW50-48S05 | 5 | 10000 | 92% | | | |
| MKW50-48S12 | 48 (36 – 75) | 12 | 4170 | 92% | | |
| MKW50-48S15 | 15 | 3330 | 92% | | | |
| MKW50-48S24 | 24 | 2080 | 91% | | | |
| *To order the converter with heatsink, please add a suffix -HS. | | | | | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Function |
|-----|---------------|
| 1 | +Vin |
| 2 | -Vin |
| 3 | Remote On/Off |
| 4 | +Vout |
| 5 | -Vout |
| 6 | Trim |

MKW150 Series • 50W

- Smallest Encapsulated 50W Converter
- Ultra-compact 2"×1" Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 92%
- I/O Isolation 1500VDC
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload/Voltage/Temp. and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Shielded Metal Case with Insulated Baseplate
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking

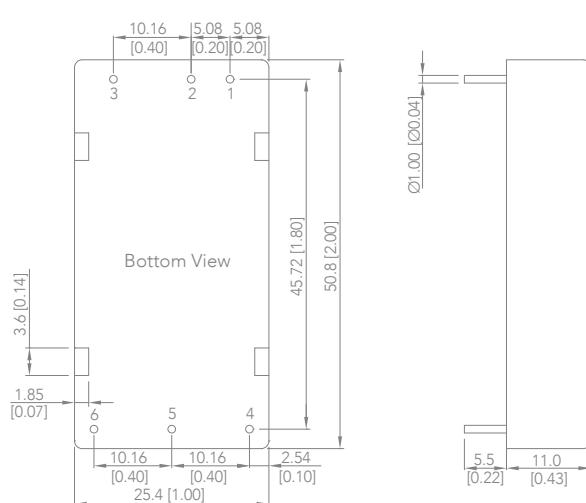


| ► Specifications | | ► Model Selection Guide | | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MKW150-24S033 | 3.3 | 10000 | 90% | | | |
| MKW150-24S05 | 5 | 10000 | 91% | | | |
| MKW150-24S12 | 24 (9 - 36) | 12 | 4170 | 92% | | |
| MKW150-24S15 | 15 | 3330 | 92% | | | |
| MKW150-24S24 | 24 | 2080 | 91% | | | |
| MKW150-48S033 | 3.3 | 10000 | 90% | | | |
| MKW150-48S05 | 5 | 10000 | 91% | | | |
| MKW150-48S12 | 48 (18 - 75) | 12 | 4170 | 92% | | |
| MKW150-48S15 | 15 | 3330 | 92% | | | |
| MKW150-48S24 | 24 | 2080 | 91% | | | |

*To order the converter with heatsink, please add a suffix -HS.

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Function |
|-----|---------------|
| 1 | +Vin |
| 2 | -Vin |
| 3 | Remote On/Off |
| 4 | +Vout |
| 5 | -Vout |
| 6 | Trim |

MOWI20C Series • 20W

- Fully Encapsulated Plastic Case for Chassis and DIN-Rail Mounting Version
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 91%
- I/O Isolation 2500VDC
- Operating Ambient Temp. Range -40°C to +90°C
- Overload/Voltage and Short Circuit Protection
- Remote On/Off Control
- Designed-in Conducted EMI meet EN55022 Class A & FCC Level A
- Designed-in EMC Immunity meet EN61000-4-2,3,4,5,6,8
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



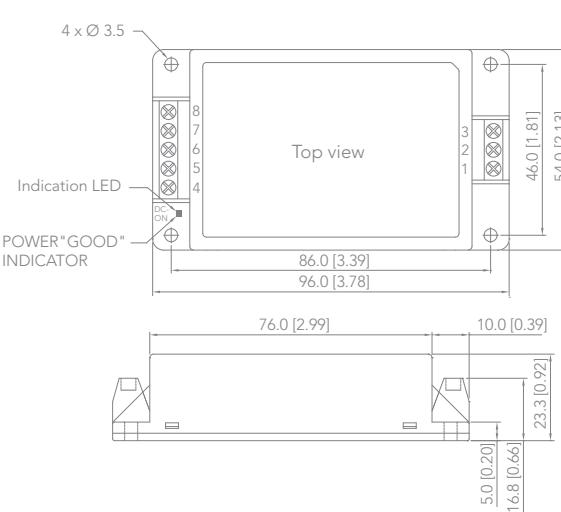
cUL us CB CE **3** YEAR WARRANTY

| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MOWI20-24S051C | | 5.1 | 4000 | 90% | | |
| MOWI20-24S12C | 24 | 12 | 1670 | 91% | | |
| MOWI20-24S24C | (9 - 36) | 24 | 835 | 91% | | |
| MOWI20-24S48C | 48 | 48 | 420 | 89% | | |
| MOWI20-48S051C | | 5.1 | 4000 | 90% | | |
| MOWI20-48S12C | 48 | 12 | 1670 | 91% | | |
| MOWI20-48S24C | (18 - 75) | 24 | 835 | 91% | | |
| MOWI20-48S48C | 48 | 48 | 420 | 89% | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | |
|--------------------------------|---------------|--------------------------|----------|
| Pin | Function | Pin | Function |
| 1 | Remote On/Off | | |
| 2 | -Vin | | |
| 3 | +Vin | | |
| 4 | NC | | |
| 5 | -Vout | | |
| 6 | NC | | |
| 7 | +Vout | | |
| 8 | NC | | |

NC = No Connection



MQWI40C Series • 40W

- Fully Encapsulated Plastic Case for Chassis and DIN-Rail Mounting Version
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 92%
- I/O Isolation 2500VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Overload/Voltage and Short Circuit Protection
- Remote On/Off Control
- Designed-in Conducted EMI meet EN55022 Class A & FCC Level A
- Designed-in EMC Immunity meet EN61000-4-2,3,4,5,6,8
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



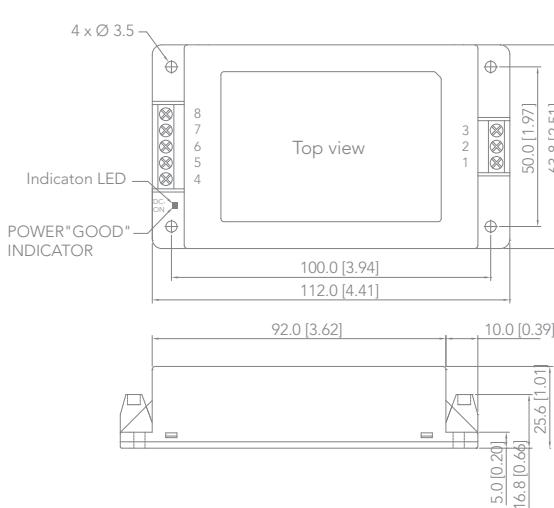
cUL[®] US CB CE
UL 60950-1 Scheme
YEAR WARRANTY

| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MQWI40-24S051C | | 5.1 | 8000 | 90% | | |
| MQWI40-24S12C | 24 | 12 | 3330 | 90% | | |
| MQWI40-24S24C | (9 - 36) | 24 | 1670 | 90% | | |
| MQWI40-24S48C | | 48 | 835 | 89% | | |
| MQWI40-48S051C | | 5.1 | 8000 | 89% | | |
| MQWI40-48S12C | 48 | 12 | 3330 | 91% | | |
| MQWI40-48S24C | (18 - 75) | 24 | 1670 | 92% | | |
| MQWI40-48S48C | | 48 | 835 | 90% | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | |
|--------------------------------|---------------|--------------------------|----------|
| Pin | Function | Pin | Function |
| 1 | Remote On/Off | | |
| 2 | -Vin | | |
| 3 | +Vin | | |
| 4 | +Vout | | |
| 5 | NC | | |
| 6 | -Vout | | |
| 7 | NC | | |
| 8 | NC | | |

NC = No Connection



MRWI60C Series • 60W

- Fully Encapsulated Plastic Case for Chassis and DIN-Rail Mounting Version
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Excellent Efficiency up to 92%
- I/O Isolation 2500VDC
- Operating Ambient Temp. Range -40°C to +85°C
- Overload/Voltage and Short Circuit Protection
- Remote On/Off Control
- Designed-in Conducted EMI meet EN55022 Class A & FCC Level A
- Designed-in EMC Immunity meet EN61000-4-2,3,4,5,6,8
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



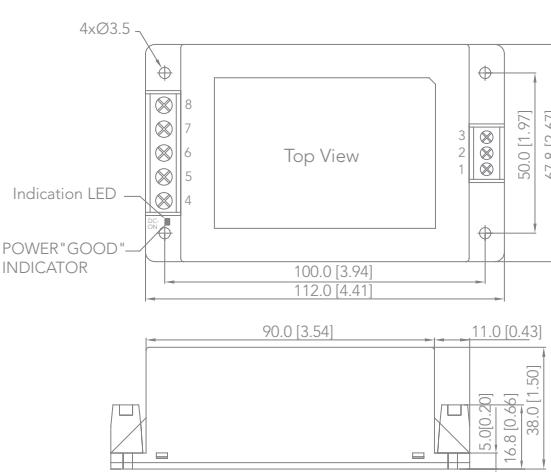
cUL us CB CE **3** YEAR WARRANTY

| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MRWI60-24S051C | | 5.1 | 12000 | 90% | | |
| MRWI60-24S12C | 24 | 12 | 5000 | 91% | | |
| MRWI60-24S24C | (9 - 36) | 24 | 2500 | 91% | | |
| MRWI60-24S48C | 48 | 1250 | 91% | | | |
| MRWI60-48S051C | | 5.1 | 12000 | 91% | | |
| MRWI60-48S12C | 48 | 12 | 5000 | 92% | | |
| MRWI60-48S24C | (18 - 75) | 24 | 2500 | 91% | | |
| MRWI60-48S48C | 48 | 1250 | 91% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | |
|--------------------------------|---------------|--------------------------|----------|
| Pin | Function | Pin | Function |
| 1 | Remote On/Off | | |
| 2 | -Vin | | |
| 3 | +Vin | | |
| 4 | NC | | |
| 5 | +Vout | | |
| 6 | NC | | |
| 7 | -Vout | | |
| 8 | NC | | |

NC = No Connection



M78AR-0.5 Series • 0.5A • Switching Regulators

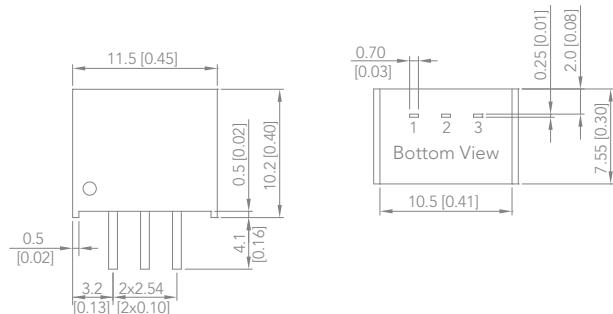
- Industrial Standard SIP-3 Package
- Pin-out compatible with LM78xx Linear Regulator
- Fully Regulated Output Voltage
- Low Ripple & Noise
- Excellent Efficiency up to 97%
- Operating Ambient Temp. Range -40°C to +90°C
- No Min. Load Requirement
- Over Temp. and Short Circuit Protection



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|-----------------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency @ Min. Vin | | |
| M78AR015-0.5 | 1.5 – 32 | 1.5 | 500 | 73% | | |
| M78AR018-0.5 | | 1.8 | 500 | 82% | | |
| M78AR025-0.5 | 4.75 – 32 | 2.5 | 500 | 87% | | |
| M78AR033-0.5 | | 3.3 | 500 | 91% | | |
| M78AR05-0.5 | 6.5 – 32 | 5 | 500 | 94% | | |
| M78AR065-0.5 | 8 – 32 | 6.5 | 500 | 95% | | |
| M78AR09-0.5 | 11 – 32 | 9 | 500 | 96% | | |
| M78AR12-0.5 | 15 – 32 | 12 | 500 | 97% | | |
| M78AR15-0.5 | 18 – 32 | 15 | 500 | 97% | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions

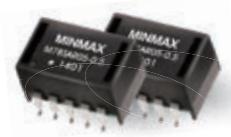


► Pin Connections

| Pin | Function |
|-----|----------|
| 1 | +Vin |
| 2 | GND |
| 3 | +Vout |

M78SAR-0.5 Series • 0.5A • Switching Regulators

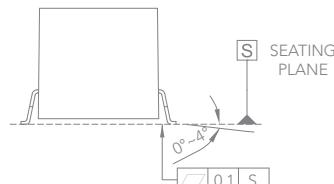
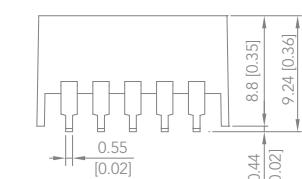
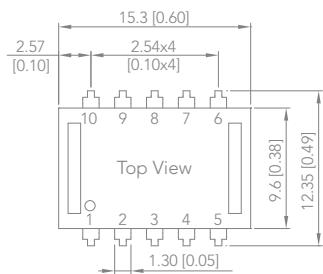
- Industrial SMD Package
- Fully Regulated Output Voltage
- Low Ripple & Noise
- Excellent Efficiency up to 97%
- Operating Ambient Temp. Range -40°C to +90°C
- No Min. Load Requirement
- Over Temp. and Short Circuit Protection
- Remote ON/OFF Control, Output Voltage Trim
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|-----------------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency @ Min. Vin | | |
| M78SAR015-0.5 | 1.5 – 32 | 1.5 | 500 | 73% | | |
| M78SAR018-0.5 | 4.75 – 32 | 1.8 | 500 | 82% | | |
| M78SAR025-0.5 | 4.75 – 32 | 2.5 | 500 | 87% | | |
| M78SAR033-0.5 | 4.75 – 32 | 3.3 | 500 | 91% | | |
| M78SAR05-0.5 | 6.5 – 32 | 5 | 500 | 94% | | |
| M78SAR065-0.5 | 8 – 32 | 6.5 | 500 | 95% | | |
| M78SAR09-0.5 | 11 – 32 | 9 | 500 | 96% | | |
| M78SAR12-0.5 | 15 – 32 | 12 | 500 | 97% | | |
| M78SAR15-0.5 | 18 – 32 | 15 | 500 | 97% | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Function |
|-----|---------------|
| 1 | +Vin |
| 2 | +Vin |
| 3 | GND |
| 4 | +Vout |
| 5 | +Vout |
| 6 | V adj |
| 7 | GND |
| 8 | GND |
| 9 | GND |
| 10 | Remote On/Off |

M78AR-1 Series • 1A • Switching Regulators



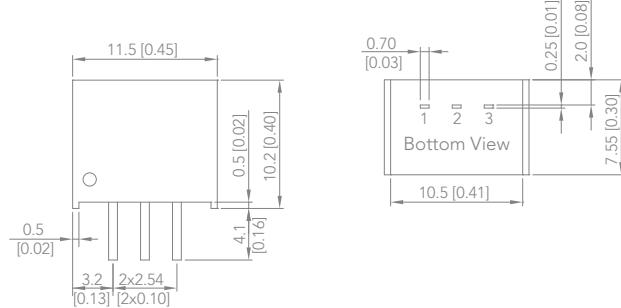
- Industrial Standard SIP-3 Package
- Pin-out compatible with LM78xx Linear Regulators
- Fully Regulated Output Voltage
- Low Ripple & Noise
- Excellent Efficiency up to 96%
- Operating Ambient Temp. Range -40°C to +85°C
- Low No Load Power Consumption
- No Min. Load Requirement
- Over Temp. and Short Circuit Protection



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|-----------------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency @ Min. Vin | | |
| M78AR033-1 | 6.5 – 32 | 3.3 | 1000 | 93% | | |
| M78AR05-1 | 6.5 – 32 | 5 | 1000 | 94% | | |
| M78AR12-1 | 15 – 32 | 12 | 1000 | 96% | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections |
|--------------------------------|----------|--------------------------|
| Pin | Function | |
| 1 | +Vin | |
| 2 | GND | |
| 3 | +Vout | |



ABW-02 Series • 2W

- Fully Encapsulated Plastic Case for PCB Mounting
- Universal Input 85-264VAC, 47-440Hz
- Constant Power Mode, No Output Current Limit
- Protection Class II as per IEC/EN 60536
- Operating Ambient Temp. Range -30°C to +70°C
- Short Circuit Protection
- Designed-in EMI Emission meets EN55011/22/14-1 Class B & FCC Level B
- Designed-in EMC Immunity meets EN61000-4-2,3,4,5,6,8,11
- Eco Design, Low No Load Power Consumption<150mW
- UL/cUL/IEC/EN 60950-1, TUV/IEC/EN 60335-1 Safety Approval & CE Marking

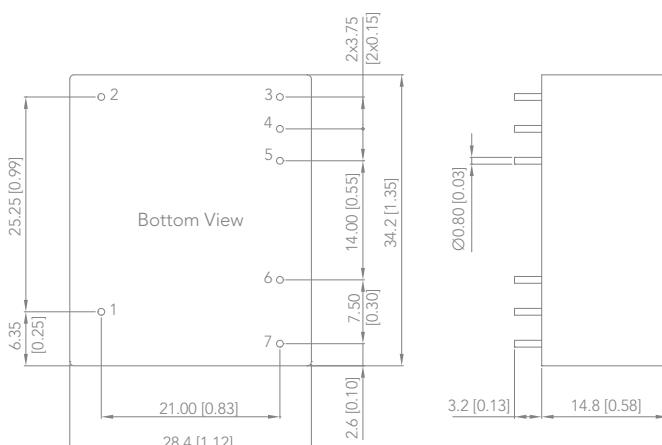


| ► Specifications | | ► Model Selection Guide | | | | | |
|------------------|-------------------|-------------------------|-----------------|-------------|-----------------|------------|--|
| Model Number | Input Voltage VAC | Output 1 | | Output 2 | | Efficiency | |
| | | Voltage VDC | Current mA Max. | Voltage VDC | Current mA Max. | | |
| ABW-02S08 | | 8 | 250 | --- | --- | 72% | |
| ABW-02S14 | | 14 | 143 | --- | --- | 74% | |
| ABW-02S24 | | 24 | 83 | --- | --- | 76% | |
| ABW-02D83 *** | 85-264 | 8 | * | 3.3 | 160 | 69% | |
| ABW-02D85 *** | | 8 | * | 5 | 250 | 69% | |
| ABW-02D143 *** | | 14 | ** | 3.3 | 70 | 70% | |
| ABW-02D145 *** | | 14 | ** | 5 | 83 | 70% | |

*For full series datasheet, please refer to www.minmax.com.tw

* $I_{o1}+I_{o2}\leq 250\text{mA}$
 ** $I_{o1}+I_{o2}\leq 143\text{mA}$
 ***The definition of output power (P_o) for dual-output modules :
 $P_o=V_{o1} \times (I_{o1} + I_{o2})$

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|--------|------------|
| 1 | | NC |
| 2 | | NC |
| 3 | +Vout | +Vout1 |
| 4 | -Vout | Common |
| 5 | NP | +Vout2 |
| 6 | | AC Neutral |
| 7 | | AC Line |

NC = No Connection

AAF-03 Series • 3W



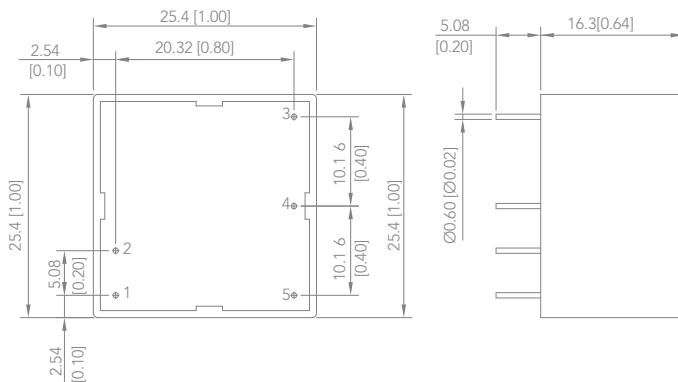
- Ultra Compact Size 1.0"×1.0"×0.64"
- Fully Encapsulated Plastic Case for PCB Mounting
- Universal Input 85-264VAC
- Protection Class II as per IEC/EN 60536
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -25°C to +70°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Designed-in EMI Emission meets EN55011/22/14-1 Class B & FCC Level B
- Designed-in EMC Immunity meets EN61000-4-2,3,4,5,6,8,11
- Eco Design, Low No Load Power Consumption<150mW
- UL/cUL/IEC/EN 60950-1, TUV/IEC/EN 60335-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VAC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| AAF-03S03 | 85 – 264 | 3.3 | 900 | 70% | | |
| AAF-03S05 | | 5 | 600 | 72% | | |
| AAF-03S09 | | 9 | 333 | 77% | | |
| AAF-03S12 | | 12 | 250 | 78% | | |
| AAF-03S15 | | 15 | 200 | 78% | | |
| AAF-03S24 | | 24 | 125 | 78% | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Function |
|-----|------------|
| 1 | AC Neutral |
| 2 | AC Line |
| 3 | NC |
| 4 | -Vout |
| 5 | +Vout |

NC = No Connection

ABF-04 Series • 4W

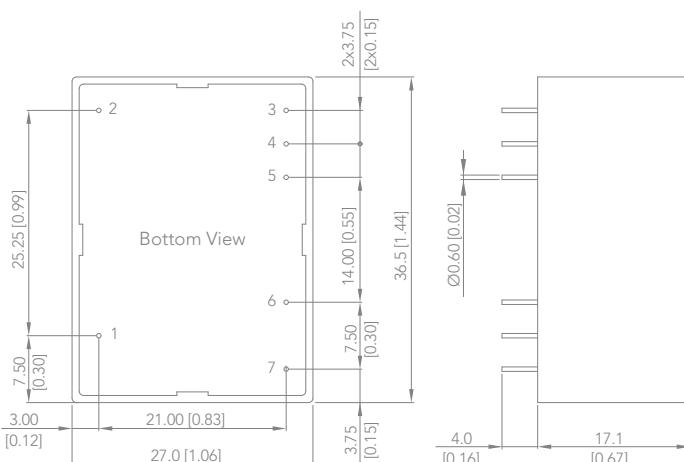
- Fully Encapsulated Plastic Case for PCB Mounting
- Universal Input 85-264VAC, 47-440Hz
- Protection Class II as per IEC/EN 60536
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -25°C to +60°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Designed-in EMI Emission meets EN55011/22 Class B & FCC Level B
- Designed-in EMC Immunity meets EN61000-4-2,3,4,5,6,8,11
- Eco Design, Compliant to Energy Star Specification and ErP Directive 2009/125/EC
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|--|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VAC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| ABF-04S03 | 85 – 264 | 3.3 | 1200 | 70% | | |
| ABF-04S05 | | 5 | 800 | 72% | | |
| ABF-04S09 | | 9 | 444 | 75% | | |
| ABF-04S12 | | 12 | 333 | 76% | | |
| ABF-04S15 | | 15 | 267 | 76% | | |
| ABF-04S24 | | 24 | 167 | 77% | | |
| ABF-04D53 | | +5 +3.3 | 600 150 | 72% | | |
| ABF-04D125 | | +12 +5 | 250 120 | 75% | | |
| ABF-04D12 | | ±12 | ±166 | 77% | | |
| ABF-04D15 | | ±15 | ±133 | 77% | | |
| Others = ABF-04D53 & ABF-04D125 | | | | | | |
| *For full series datasheet, please refer to www.minmax.com.tw | | | | | | |

| ► Mechanical Dimensions | | ► Pin Connections | |
|--------------------------------|--------|--------------------------|----------|
| Pin | Single | D12/D15 | D53/D125 |
| 1,2 | | NC | |
| 3 | +Vout | +Vout | +Vout 1 |
| 4 | -Vout | Common | Common |
| 5 | No Pin | -Vout | +Vout 2 |
| 6 | | AC Neutral | |
| 7 | | AC Line | |

NC = No Connection



AAF-05 Series • 5W

<NEW

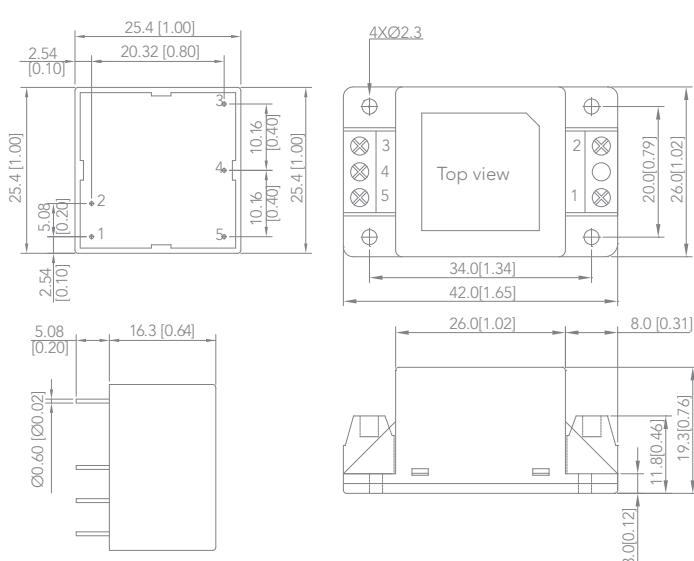
- Ultra Compact Size 1.0×1.0×0.64"
- Fully Encapsulated Plastic Case for PCB and Chassis Mounting Version
- Universal Input 85-264VAC
- Protection Class II as per IEC/EN 60536
- I/O Isolation 3000VAC with Reinforced Insulation
- No Min. Load Requirement
- Operating Ambient Temp. Range -25°C to +70°C
- Overload/Voltage and Short Circuit Protection
- Designed-in EMI Emission meets EN55011/22/14-1 Class B & FCC Level B
- Designed-in EMC Immunity meets EN61000-4-2,3,4,5,6,8,11
- Eco Design, Low No Load Power Consumption 300mW max.
- Safety Approval to UL/cUL/IEC/EN 60950-1, TUV IEC/EN 60335-1 & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VAC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| AAF-05S03 | 85 – 264 | 3.3 | 1515 | 74% | | |
| AAF-05S05 | | 5 | 1000 | 80% | | |
| AAF-05S09 | | 9 | 555 | 82% | | |
| AAF-05S12 | | 12 | 416 | 82% | | |
| AAF-05S15 | | 15 | 333 | 83% | | |
| AAF-05S24 | | 24 | 208 | 83% | | |
| AAF-05S48 | | 48 | 104 | 85% | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections (PCB & Chassis)

| Pin | Function |
|-----|------------|
| 1 | AC Neutral |
| 2 | AC Line |
| 3 | NC |
| 4 | -Vout |
| 5 | +Vout |

NC = No Connection

ADF-07 Series • 7W

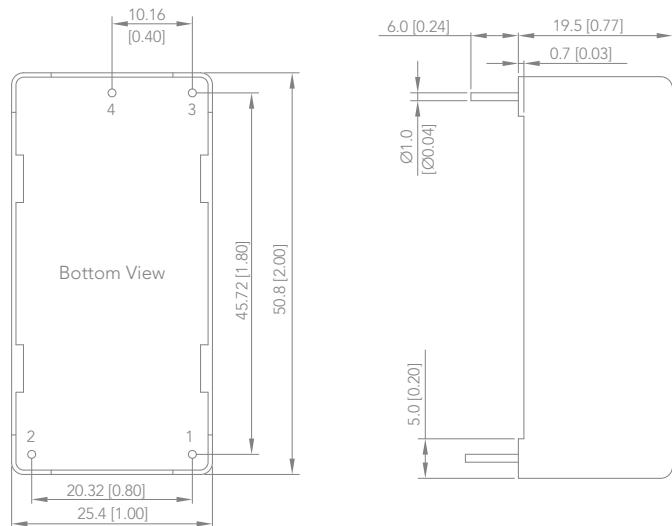
- Fully Encapsulated Plastic Case for PCB Mounting
- Universal Input 85-264VAC, 47-440Hz
- Protection Class II as per IEC/EN 60536
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -25°C to +70°C
- Overload/Voltage and Short Circuit Protection
- Designed-in EMI Emission meets EN55011/22 Class B & FCC Level B
- Designed-in EMC Immunity meets EN61000-4-2,3,4,5,6,8,11
- Eco Design, Compliant to Energy Star Specification and ErP Directive 2009/125/EC
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VAC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| ADF-07S03 | | 3.3 | 1400 | 70% | | |
| ADF-07S05 | | 5 | 1400 | 73% | | |
| ADF-07S12 | 85 – 264 | 12 | 583 | 78% | | |
| ADF-07S15 | | 15 | 466 | 78% | | |
| ADF-07S24 | | 24 | 291 | 78% | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Function |
|-----|------------|
| 1 | AC Neutral |
| 2 | AC Line |
| 3 | +Vout |
| 4 | -Vout |

AGF-10 Series • 10W

- Fully Encapsulated Plastic Case for PCB Mounting
- Universal Input 85-264VAC, 47-440Hz
- Protection Class II as per IEC/EN 60536
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -25°C to +70°C
- Overload/Voltage and Short Circuit Protection
- Designed-in EMI Emission meets EN55011/22 Class B & FCC Level B
- Designed-in EMC Immunity meets EN61000-4-2,3,4,5,6,8,11
- Eco Design, Compliant to Energy Star Specification and ErP Directive 2009/125/EC
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking

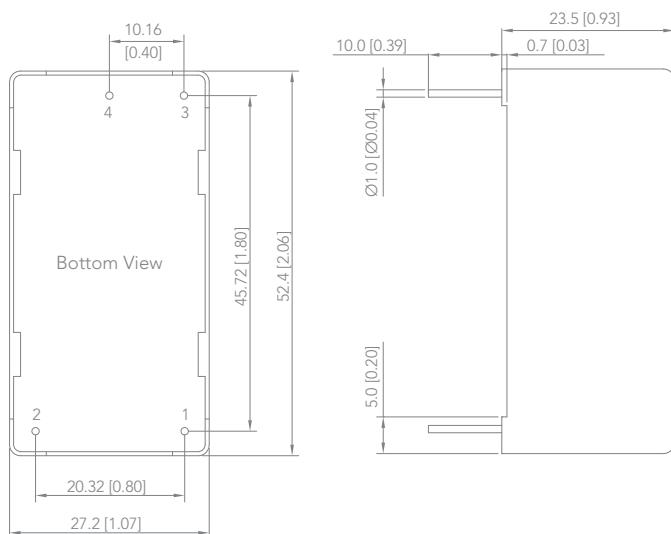


UL 60950-1 Scheme

| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VAC | Output Voltage VDC | Output Current mA max | Efficiency | |
| AGF-10S03 | 85 – 264 | 3.3 | 2500 | 70% | |
| AGF-10S05 | | 5 | 2000 | 72% | |
| AGF-10S12 | | 12 | 833 | 76% | |
| AGF-10S15 | | 15 | 667 | 75% | |
| AGF-10S24 | | 24 | 417 | 72% | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections |
|--------------------------------|------------|--------------------------|
| Pin | Function | |
| 1 | AC Neutral | |
| 2 | AC Line | |
| 3 | +Vout | |
| 4 | -Vout | |



ACF-10 Series • 10W

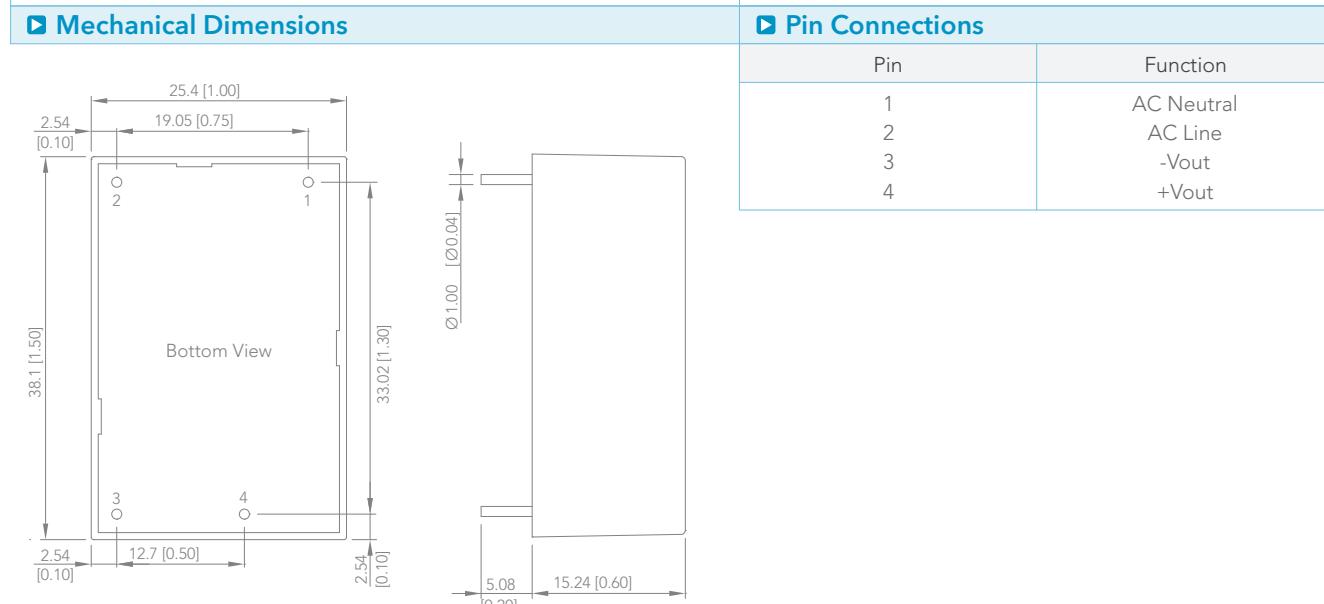
<NEW

- Ultra Compact Size 1.5x1.0x 0.6"
- Fully Encapsulated Module for PCB Mounting
- Universal Input 85-264VAC, 47-440Hz
- Protection Class II as per IEC/EN 60536
- I/O Isolation 4000VAC with Reinforced Insulation
- No Min. Load Requirement
- Operating Ambient Temp. Range -25°C to +70°C
- Overload/Voltage and Short Circuit Protection
- Designed-in EMI Emission meets EN55032/22/14-1 Class B & FCC Level B
- Designed-in EMC Immunity meets EN61000-4-2,3,4,5,6,8,11
- Safety Approval to UL/cUL/IEC/EN 62368-1(60950-1), TUV IEC/EN 60335-1 (Pending) & CE Marking



| ► Specifications | | ► Model Selection Guide | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VAC | Output Voltage VDC | Output Current mA max | Efficiency | |
| ACF-10S03 | 85 – 264 | 3.3 | 2600 | 77% | |
| ACF-10S05 | | 5 | 2000 | 80% | |
| ACF-10S09 | | 9 | 1100 | 82% | |
| ACF-10S12 | | 12 | 830 | 83% | |
| ACF-10S15 | | 15 | 660 | 83% | |
| ACF-10S24 | | 24 | 410 | 83% | |
| ACF-10S48 | | 48 | 210 | 83% | |

*For full series datasheet, please refer to www.minmax.com.tw



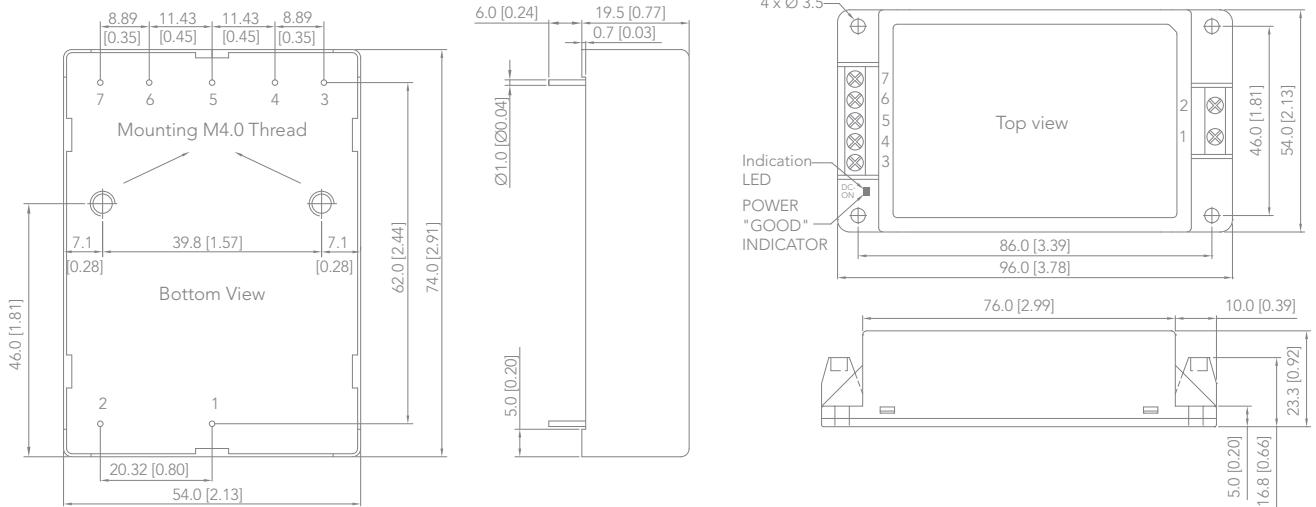
AKF-15 Series • 15W • ITE & Industrial Safety

- Fully Encapsulated Plastic Case for PCB, Chassis and DIN-Rail Mounting Version
- Universal Input 85-264VAC, 47-440Hz
- Single, Dual and Triple Outputs
- Protection Class II as per IEC/EN 60536
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -25°C to +70°C
- Overload/Voltage and Short Circuit Protection
- Designed-in EMI Emission meets EN55011/22 Class B & FCC Level B
- Designed-in EMC Immunity meets EN61000-4-2,3,4,5,6,8,11
- UL508 Safety Approval (Option) Specifically for Industrial Application
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ■ Specifications | | ■ Model Selection Guide | | | | | | | | | | | |
|--|-------------------|-------------------------|-----------------|-------------|-----------------|-------------|-----------------|------------|--|--|--|--|--|
| Model Number | Input Voltage VAC | Output 1 | | Output 2 | | Output 3 | | Efficiency | | | | | |
| | | Voltage VDC | Current mA Max. | Voltage VDC | Current mA Max. | Voltage VDC | Current mA Max. | | | | | | |
| 85-264 | AKF-15S05 | 5 | 3000 | | | | | 75% | | | | | |
| | AKF-15S12 | 12 | 1250 | | | | | 79% | | | | | |
| | AKF-15S15 | 15 | 1000 | | | | | 79% | | | | | |
| | AKF-15S24 | 24 | 625 | | | | | 79% | | | | | |
| | AKF-15S48 | 48 | 310 | | | | | 79% | | | | | |
| | AKF-15D12 | ±12 | ±650 | | | | | 79% | | | | | |
| | AKF-15D15 | ±15 | ±500 | | | | | 79% | | | | | |
| | AKF-15D512 | 5 | 1500 | 12 | 625 | | | 72% | | | | | |
| | AKF-15T512 | 5 | 2000 | +12 | 200 | -12 | -200 | 74% | | | | | |
| | AKF-15T515 | 5 | 2000 | +15 | 150 | -15 | -150 | 74% | | | | | |
| ■ Pin Connections (PCB & Chassis) | | | | | | | | | | | | | |
| Pin | Single | D12/D15 | | D512 | | T512/T515 | | | | | | | |
| 1 | | AC Neutral | | | | | | | | | | | |
| 2 | | AC Line | | | | | | | | | | | |
| 3 | No Pin | No Pin | | No Pin | | -Vout3 | | | | | | | |
| 4 | -Vout | -Vout | | -Vout2 | | Common | | | | | | | |
| 5 | No Pin | Common | | +Vout2 | | +Vout2 | | | | | | | |
| 6 | +Vout | +Vout | | -Vout1 | | -Vout1 | | | | | | | |
| 7 | No Pin | No Pin | | +Vout1 | | +Vout1 | | | | | | | |
| No Pin = NC (No Connection) in Chassis Package | | | | | | | | | | | | | |

■ Mechanical Dimensions



AQF-30 Series • 30W • ITE & Industrial Safety

- Fully Encapsulated Plastic Case for PCB, Chassis and DIN-Rail Mounting Version
- Universal Input 85-264VAC, 47-440Hz
- Single, Dual and Triple Outputs
- Protection Class II as per IEC/EN 60536
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -25°C to +70°C
- Overload/Voltage and Short Circuit Protection
- Designed-in EMI Emission meets EN55011/22 Class B & FCC Level B
- Designed-in EMC Immunity meets EN61000-4-2,3,4,5,6,8,11
- UL508 Safety Approval (Option) Specifically for Industrial Application
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | | | |
|------------------|-------------------|-------------------------|----------|----------|------|-----|------|-----|
| Model Number | Input Voltage VAC | Output 1 | Output 2 | Output 3 | | | | |
| AQF-30S05 | 5 | 6000 | | | | | | 78% |
| | 12 | 2500 | | | | | | 80% |
| | 15 | 2000 | | | | | | 80% |
| | 24 | 1250 | | | | | | 80% |
| | 48 | 625 | | | | | | 80% |
| | ±12 | ±1300 | | | | | | 80% |
| | 85-264 | ±15 | ±1000 | | | | | 80% |
| | | *5 | 3000 | *12 | 1250 | | | 76% |
| | | *5 | 3000 | 12 | 600 | -12 | -600 | 76% |
| | | *5 | 3000 | 12 | 1000 | -12 | -250 | 76% |
| | | *5 | 3000 | 15 | 500 | -15 | -500 | 76% |
| | | *5 | 4500 | 3.3 | 1000 | 12 | 250 | 71% |
| | | *3.3 | 4000 | 5 | 1500 | 12 | 250 | 71% |

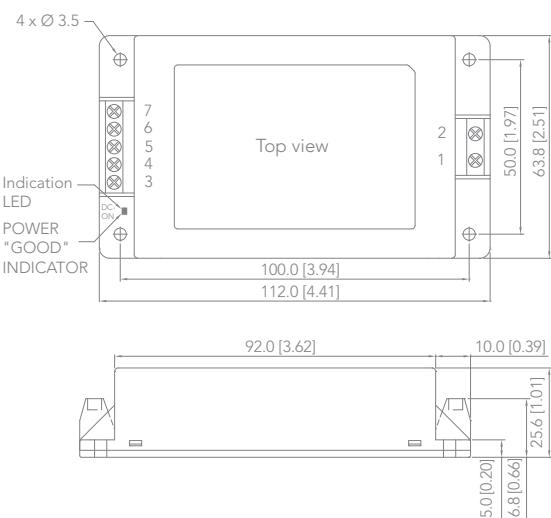
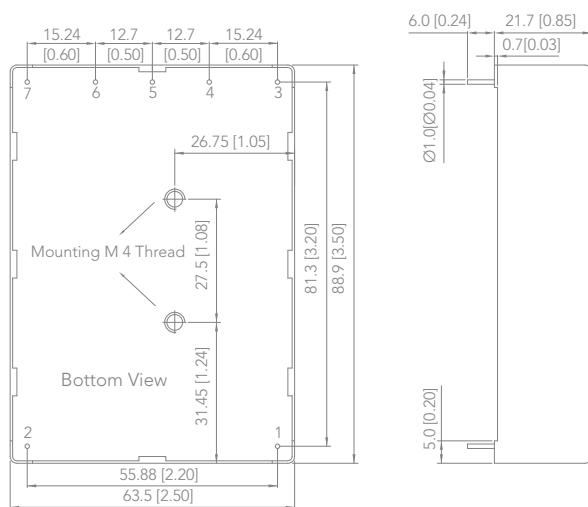
* Output floating

| ► Pin Connections (PCB & Chassis) | | | | | | |
|--|------------|---------|--------|-----------------|---------------|--|
| Pin | Single | D12/D15 | D512 | T512/T512A/T515 | T5312P/T3512P | |
| 1 | AC Neutral | | | | | |
| 2 | AC Line | | | | | |
| 3 | +Vout | +Vout | +Vout2 | +Vout2 | +Vout2 | |
| 4 | No Pin | No Pin | +Vout1 | +Vout1 | +Vout1 | |
| 5 | -Vout | Common | -Vout2 | Common 2/3 | Common 2/3 | |
| 6 | No Pin | No Pin | -Vout1 | -Vout1 | -Vout1 | |
| 7 | NC | -Vout | NC | -Vout3 | +Vout3 | |
| No Pin = NC (No Connection) in Chassis Package | | | | | | |

*Others = AQF-30D512 & Triple Output

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



AZF-60 Series • 60W • ITE & Industrial Safety

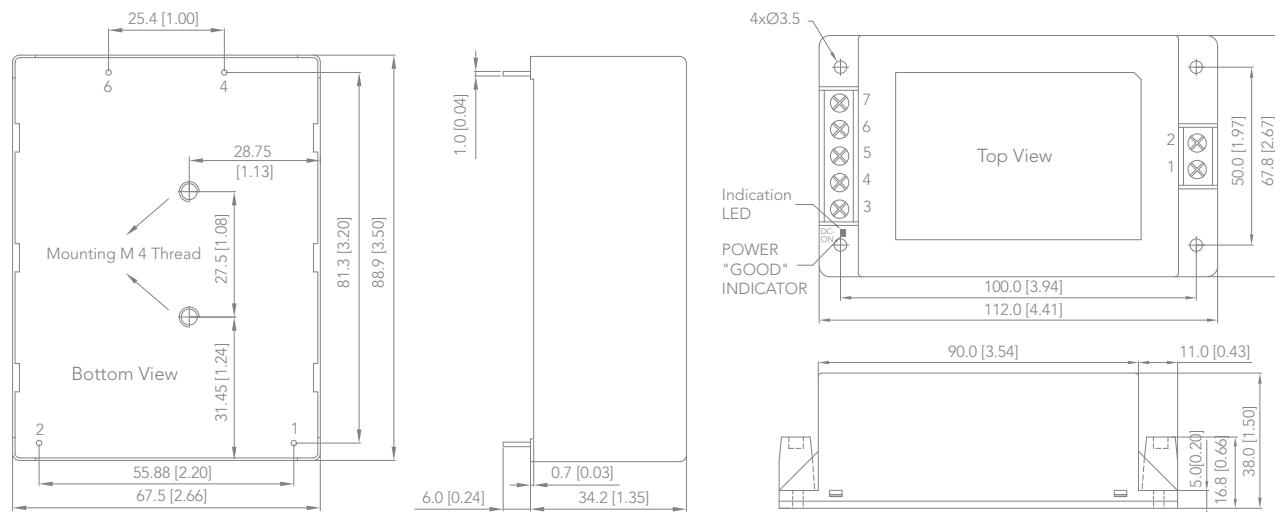
- Fully Encapsulated Plastic Case for PCB, Chassis and DIN-Rail Mounting Version
- Universal Input 85-264VAC
- Protection Class II as per IEC/EN 60536
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -10°C to +70°C
- Overload/Voltage and Short Circuit Protection
- Designed-in EMI Emission meets EN55011/22 Class B & FCC Level B
- Designed-in EMC Immunity meets EN61000-4-2,3,4,5,6,8,11
- UL508 Safety Approval (Option) Specifically for Industrial Application
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ■ Specifications | | ■ Model Selection Guide | | | | |
|-----------------------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VAC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| AZF-60S051 | 85 – 264 | 5.1 | 10000 | 79% | | |
| AZF-60S12 | | 12 | 5000 | 82% | | |
| AZF-60S15 | | 15 | 4000 | 83% | | |
| AZF-60S24 | | 24 | 2500 | 84% | | |
| AZF-60S36 | | 36 | 1666 | 84% | | |
| AZF-60S48 | | 48 | 1250 | 84% | | |
| ■ Pin Connections (PCB & Chassis) | | | | | | |
| Pin | PCB | Chassis | | | | |
| 1 | AC Neutral | AC Neutral | | | | |
| 2 | AC Line | AC Line | | | | |
| 3 | - | - | | | | |
| 4 | +Vout | +Vout | | | | |
| 5 | - | - | | | | |
| 6 | -Vout | -Vout | | | | |
| 7 | - | - | | | | |
| NC = No Connection | | | | | | |

*For full series datasheet, please refer to www.minmax.com.tw

■ Mechanical Dimensions



MA01-HI Series • 1W • Ultra-high Isolation

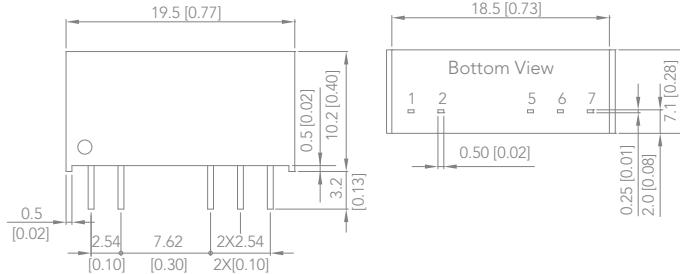


- Industrial Standard SIP-7 Package
- Ultra-high I/O Isolation 5200VDC
- Common Mode Transient Immunity : 15KV/μs
- Qualified for IGBT and High Isolation Applications
- Operating Ambient Temp. Range -40°C to +90°C
- Short Circuit Protection
- UL/cUL/IEC/EN 60950-1 Safety Approval



| ► Specifications | | ► Model Selection Guide | | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MA01-05S03HI | 5±10% | 3.3 | 303 | 70% | | |
| MA01-05S05HI | | 5 | 200 | 70% | | |
| MA01-05S09HI | | 9 | 111 | 75% | | |
| MA01-05S12HI | | 12 | 84 | 77% | | |
| MA01-05S15HI | | 15 | 66 | 78% | | |
| MA01-05D05HI | | ±5 | ±100 | 71% | | |
| MA01-05D09HI | | ±9 | ±56 | 75% | | |
| MA01-05D12HI | | ±12 | ±42 | 77% | | |
| MA01-05D15HI | | ±15 | ±33 | 78% | | |
| MA01-05A1509HI | | 15 -9 | +33 -55 | 76% | | |
| MA01-12S03HI | 12±10% | 3.3 | 303 | 71% | | |
| MA01-12S05HI | | 5 | 200 | 71% | | |
| MA01-12S09HI | | 9 | 111 | 76% | | |
| MA01-12S12HI | | 12 | 84 | 78% | | |
| MA01-12S15HI | | 15 | 66 | 79% | | |
| MA01-12D05HI | | ±5 | ±100 | 72% | | |
| MA01-12D09HI | | ±9 | ±56 | 76% | | |
| MA01-12D12HI | | ±12 | ±42 | 78% | | |
| MA01-12D15HI | | ±15 | ±33 | 79% | | |
| MA01-12A1509HI | | 15 -9 | +33 -55 | 77% | | |
| MA01-15S03HI | 15±10% | 3.3 | 303 | 70% | | |
| MA01-15S05HI | | 5 | 200 | 70% | | |
| MA01-15S09HI | | 9 | 111 | 75% | | |
| MA01-15S12HI | | 12 | 84 | 75% | | |
| MA01-15S15HI | | 15 | 66 | 79% | | |
| MA01-15D05HI | | ±5 | ±100 | 71% | | |
| MA01-15D09HI | | ±9 | ±56 | 75% | | |
| MA01-15D12HI | | ±12 | ±42 | 78% | | |
| MA01-15D15HI | | ±15 | ±33 | 79% | | |
| MA01-15A1509HI | | 15 -9 | +33 -55 | 76% | | |
| MA01-24S03HI | 24±10% | 3.3 | 303 | 70% | | |
| MA01-24S05HI | | 5 | 200 | 70% | | |
| MA01-24S09HI | | 9 | 111 | 75% | | |
| MA01-24S12HI | | 12 | 84 | 78% | | |
| MA01-24S15HI | | 15 | 66 | 80% | | |
| MA01-24D05HI | | ±5 | ±100 | 71% | | |
| MA01-24D09HI | | ±9 | ±56 | 75% | | |
| MA01-24D12HI | | ±12 | ±42 | 77% | | |
| MA01-24D15HI | | ±15 | ±33 | 78% | | |
| MA01-24A1509HI | | 15 -9 | +33 -55 | 75% | | |

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 5 | -Vout | -Vout |
| 6 | No Pin | Common |
| 7 | +Vout | +Vout |

MAEU02-HI Series • 2W • Ultra-high Isolation



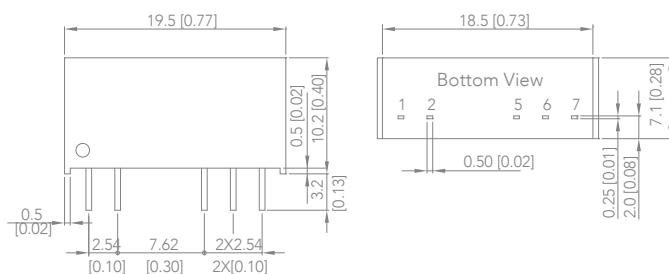
- Industrial Standard SIP-7 Package
- Ultra-high I/O Isolation 5200VDC
- Common Mode Transient Immunity : 15KV/ μ s
- Qualified for IGBT and High Isolation Applications
- Operating Ambient Temp. Range -40°C to +85°C
- Short Circuit Protection
- UL/cUL/IEC/EN 60950-1 Safety Approval



| ■ Specifications | | ■ Model Selection Guide | | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MAEU02-05S033HI | 5±10% | 3.3 | 500 | 74% | | |
| MAEU02-05S05HI | | 5 | 400 | 80% | | |
| MAEU02-05S09HI | | 9 | 222 | 81% | | |
| MAEU02-05S12HI | | 12 | 168 | 82% | | |
| MAEU02-05S15HI | | 15 | 132 | 79% | | |
| MAEU02-05D05HI | | ±5 | ±200 | 78% | | |
| MAEU02-05D09HI | | ±9 | ±112 | 80% | | |
| MAEU02-05D12HI | | ±12 | ±84 | 80% | | |
| MAEU02-05D15HI | | ±15 | ±66 | 79% | | |
| MAEU02-05A1509HI | | 15 -9 | 66 -110 | 80% | | |
| MAEU02-12S033HI | 12±10% | 3.3 | 500 | 76% | | |
| MAEU02-12S05HI | | 5 | 400 | 79% | | |
| MAEU02-12S09HI | | 9 | 222 | 81% | | |
| MAEU02-12S12HI | | 12 | 168 | 83% | | |
| MAEU02-12S15HI | | 15 | 132 | 82% | | |
| MAEU02-12D05HI | | ±5 | ±200 | 79% | | |
| MAEU02-12D09HI | | ±9 | ±112 | 81% | | |
| MAEU02-12D12HI | | ±12 | ±84 | 82% | | |
| MAEU02-12D15HI | | ±15 | ±66 | 83% | | |
| MAEU02-12A1509HI | | 15 -9 | 66 -110 | 81% | | |
| MAEU02-15S033HI | 15±10% | 3.3 | 500 | 77% | | |
| MAEU02-15S05HI | | 5 | 400 | 79% | | |
| MAEU02-15S09HI | | 9 | 222 | 83% | | |
| MAEU02-15S12HI | | 12 | 168 | 83% | | |
| MAEU02-15S15HI | | 15 | 132 | 85% | | |
| MAEU02-15D05HI | | ±5 | ±200 | 81% | | |
| MAEU02-15D09HI | | ±9 | ±112 | 84% | | |
| MAEU02-15D12HI | | ±12 | ±84 | 82% | | |
| MAEU02-15D15HI | | ±15 | ±66 | 82% | | |
| MAEU02-15A1509HI | | 15 -9 | 66 -110 | 83% | | |
| MAEU02-24S033HI | 24±10% | 3.3 | 500 | 76% | | |
| MAEU02-24S05HI | | 5 | 400 | 77% | | |
| MAEU02-24S09HI | | 9 | 222 | 81% | | |
| MAEU02-24S12HI | | 12 | 168 | 82% | | |
| MAEU02-24S15HI | | 15 | 132 | 82% | | |
| MAEU02-24D05HI | | ±5 | ±200 | 77% | | |
| MAEU02-24D09HI | | ±9 | ±112 | 81% | | |
| MAEU02-24D12HI | | ±12 | ±84 | 81% | | |
| MAEU02-24D15HI | | ±15 | ±66 | 80% | | |
| MAEU02-24A1509HI | | 15 -9 | 66 -110 | 81% | | |

*For full series datasheet, please refer to www.minmax.com.tw

■ Mechanical Dimensions



■ Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 5 | -Vout | -Vout |
| 6 | No Pin | Common |
| 7 | +Vout | +Vout |

MDEU02-HI Series • 2W • Ultra-high Isolation



- Industrial Standard DIP-16 Package
- Ultra-high I/O Isolation 8000VDC with Reinforced Insulation, rated for 300Vrms Working Voltage
- Common Mode Transient Immunity : 15KV/μs
- Qualified for IGBT and High Isolation Applications
- Operating Ambient Temp. Range -25°C to +80°C
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking

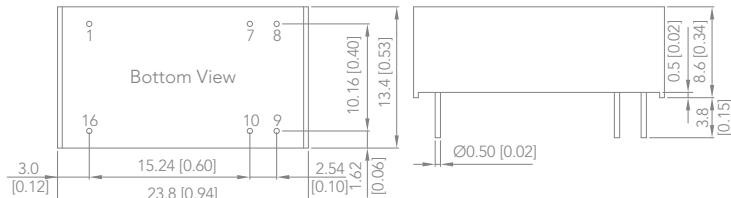


| ► Specifications | | ► Model Selection Guide | | | |
|-------------------------|---------------------|--------------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MDEU02-05S05HI | | 5 | 400 | 65% | |
| MDEU02-05S12HI | | 12 | 165 | 65% | |
| MDEU02-05S15HI | 5 (4.5 – 5.5) | 15 | 133 | 66% | |
| MDEU02-05D12HI | | ±12 | ±83 | 72% | |
| MDEU02-05D15HI | | ±15 | ±66 | 73% | |
| MDEU02-12S05HI | | 5 | 400 | 65% | |
| MDEU02-12S12HI | | 12 | 165 | 65% | |
| MDEU02-12S15HI | 12 (10.8 – 13.2) | 15 | 133 | 66% | |
| MDEU02-12D12HI | | ±12 | ±83 | 74% | |
| MDEU02-12D15HI | | ±15 | ±66 | 75% | |
| MDEU02-24S05HI | | 5 | 400 | 65% | |
| MDEU02-24S12HI | | 12 | 165 | 65% | |
| MDEU02-24S15HI | 24 (21.6 – 26.4) | 15 | 133 | 66% | |
| MDEU02-24D12HI | | ±12 | ±83 | 74% | |
| MDEU02-24D15HI | | ±15 | ±66 | 75% | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | | |
|--------------------------------|--------|--------------------------|--------|--|
| Pin | Single | Dual | | |
| 1 | -Vin | | -Vin | |
| 7 | NC | | NC | |
| 8 | NC | | Common | |
| 9 | +Vout | | +Vout | |
| 10 | -Vout | | -Vout | |
| 16 | +Vin | | +Vin | |

NC = No Connection



MIEI03-HI Series • 3W • Ultra-high Isolation

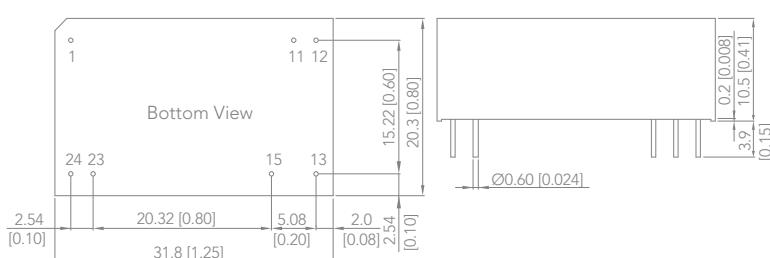


- Industrial Standard DIP-24 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- Ultra-high I/O Isolation 8000VDC with Reinforced Insulation, rated for 1000Vrms Working Voltage
- Common Mode Transient Immunity : 15KV/μs
- Qualified for IGBT and High Isolation Applications
- Operating Ambient Temp. Range -40°C to +85°C
- Overload and Short Circuit Protection
- Designed-in Conducted EMI meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|--|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MIEI03-24S05HI | | 5 | 600 | 77% | | |
| MIEI03-24S12HI | 24 (9 – 40) | 12 | 250 | 82% | | |
| MIEI03-24D12HI | | ±12 | ±125 | 83% | | |
| MIEI03-24D15HI | | ±15 | ±100 | 83% | | |
| MIEI03-48S05HI | | 5 | 600 | 77% | | |
| MIEI03-48S12HI | 48 (18 – 80) | 12 | 250 | 82% | | |
| MIEI03-48D12HI | | ±12 | ±125 | 83% | | |
| MIEI03-48D15HI | | ±15 | ±100 | 83% | | |
| *For full series datasheet, please refer to www.minmax.com.tw | | | | | | |

| ► Mechanical Dimensions | | ► Pin Connections | | |
|-------------------------|--------|-------------------|--------|--------|
| Pin | Single | Dual | | |
| 1 | +Vin | | +Vin | |
| 11 | No Pin | | No Pin | Common |
| 12 | -Vout | | -Vout | |
| 13 | +Vout | | +Vout | |
| 15 | No Pin | | No Pin | |
| 23 | -Vin | | -Vin | |
| 24 | -Vin | | -Vin | |



MIE03-HI Series • 3.5W • Ultra-high Isolation



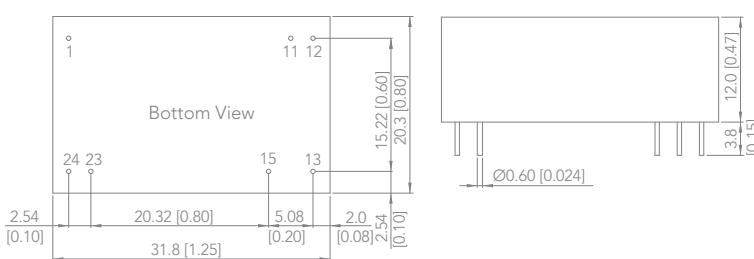
- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- Ultra-high I/O Isolation 9000VDC with Reinforced Insulation, rated for 1000Vrms Working Voltage
- Common Mode Transient Immunity : 15KV/μs
- Qualified for IGBT and High Isolation Applications
- Operating Ambient Temp. Range -40°C to +95°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Designed-in Conducted EMI meets EN55032/22 Class A & FCC Level A
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MIE03-05S05HI | 5 | 700 | 82% | | | |
| MIE03-05S058HI | 5.8 | 600 | 82% | | | |
| MIE03-05S12HI | 5 | 12 | 290 | 83% | | |
| MIE03-05S15HI | (4.5 – 9) | 15 | 235 | 84% | | |
| MIE03-05D12HI | | ±12 | ±145 | 84% | | |
| MIE03-05D15HI | | ±15 | ±115 | 84% | | |
| MIE03-12S05HI | 5 | 700 | 82% | | | |
| MIE03-12S12HI | 12 | 290 | 86% | | | |
| MIE03-12S15HI | 12 (9 – 18) | 15 | 235 | 87% | | |
| MIE03-12D12HI | | ±12 | ±145 | 87% | | |
| MIE03-12D15HI | | ±15 | ±115 | 87% | | |
| MIE03-24S05HI | 5 | 700 | 82% | | | |
| MIE03-24S12HI | 12 | 290 | 85% | | | |
| MIE03-24S15HI | 24 (18 – 36) | 15 | 235 | 87% | | |
| MIE03-24D12HI | | ±12 | ±145 | 87% | | |
| MIE03-24D15HI | | ±15 | ±115 | 86% | | |
| MIE03-48S05HI | 5 | 700 | 82% | | | |
| MIE03-48S12HI | 12 | 290 | 85% | | | |
| MIE03-48S15HI | 48 (36 – 75) | 15 | 235 | 85% | | |
| MIE03-48D12HI | | ±12 | ±145 | 84% | | |
| MIE03-48D15HI | | ±15 | ±115 | 84% | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | | |
|--------------------------------|--------|--------------------------|--|--|
| Pin | Single | Dual | | |
| 1 | +Vin | +Vin | | |
| 11 | No Pin | Common | | |
| 12 | -Vout | No Pin | | |
| 13 | +Vout | -Vout | | |
| 15 | No Pin | +Vout | | |
| 23 | -Vin | -Vin | | |
| 24 | -Vin | -Vin | | |



MIE06-HI Series • 6W • Ultra-high Isolation



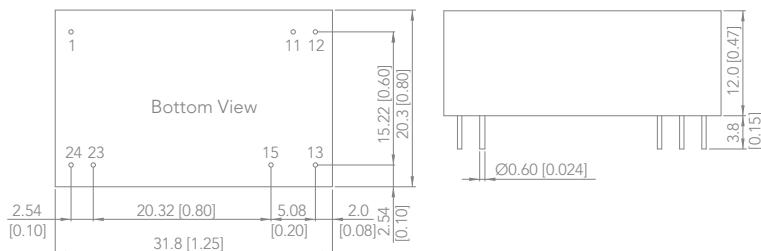
- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- Ultra-high I/O Isolation 9000VDC with Reinforced Insulation, rated for 1000Vrms Working Voltage
- Common Mode Transient Immunity : 15KV/μs
- Qualified for IGBT and High Isolation Applications
- Operating Ambient Temp. Range -40°C to +92.5°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Designed-in Conducted EMI meets EN55032/22 Class A & FCC Level A
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking



| ■ Specifications | | ■ Model Selection Guide | | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MIE06-12S05HI | 5 | 1200 | 83% | | | |
| MIE06-12S12HI | 12 | 500 | 86% | | | |
| MIE06-12S15HI | 12 (9 – 18) | 15 | 400 | 86% | | |
| MIE06-12D12HI | ±12 | ±250 | 87% | | | |
| MIE06-12D15HI | ±15 | ±200 | 87% | | | |
| MIE06-24S05HI | 5 | 1200 | 83% | | | |
| MIE06-24S12HI | 12 | 500 | 86% | | | |
| MIE06-24S15HI | 24 (18 – 36) | 15 | 400 | 87% | | |
| MIE06-24D12HI | ±12 | ±250 | 86% | | | |
| MIE06-24D15HI | ±15 | ±200 | 87% | | | |
| MIE06-48S05HI | 5 | 1200 | 83% | | | |
| MIE06-48S12HI | 12 | 500 | 86% | | | |
| MIE06-48S15HI | 48 (36 – 75) | 15 | 400 | 89% | | |
| MIE06-48D12HI | ±12 | ±250 | 87% | | | |
| MIE06-48D15HI | ±15 | ±200 | 88% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ■ Mechanical Dimensions | | ■ Pin Connections | | |
|-------------------------|--------|-------------------|--|--|
| Pin | Single | Dual | | |
| 1 | +Vin | +Vin | | |
| 11 | No Pin | Common | | |
| 12 | -Vout | No Pin | | |
| 13 | +Vout | -Vout | | |
| 15 | No Pin | +Vout | | |
| 23 | -Vin | -Vin | | |
| 24 | -Vin | -Vin | | |



MKE10-HI Series • 10W • Ultra-high Isolation



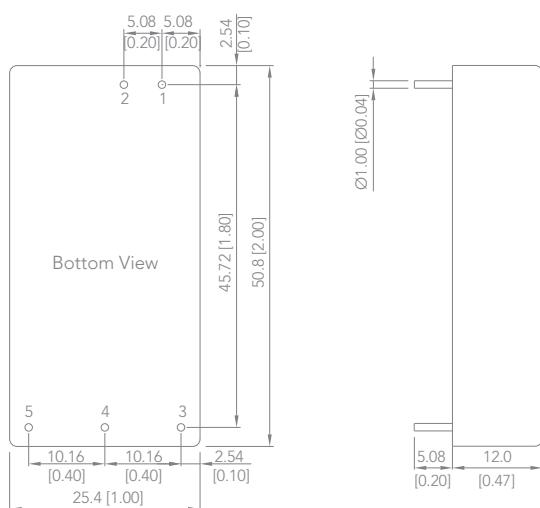
- Industrial Standard 2"×1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- Ultra-high I/O Isolation 8000VDC with Reinforced Insulation, rated for 300Vrms Working Voltage
- Common Mode Transient Immunity : 15KV/μs
- Qualified for IGBT and High Isolation Applications
- Operating Ambient Temp. Range -40°C to +75°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Designed-in EMI Emission meets EN55022 Class A & FCC Level A
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ■ Specifications | | ■ Model Selection Guide | | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MKE10-12S05HI | 5 | 1600 | 75% | | | |
| MKE10-12S051HI | 5.1 | 1600 | 74% | | | |
| MKE10-12S12HI | 9 (12 – 18) | 12 | 835 | 79% | | |
| MKE10-12D12HI | ±12 | ±417 | 80% | | | |
| MKE10-12D15HI | ±15 | ±333 | 81% | | | |
| MKE10-24S05HI | 5 | 2000 | 76% | | | |
| MKE10-24S051HI | 5.1 | 2000 | 75% | | | |
| MKE10-24S12HI | 24 (18 – 36) | 12 | 835 | 80% | | |
| MKE10-24D12HI | ±12 | ±417 | 81% | | | |
| MKE10-24D15HI | ±15 | ±333 | 82% | | | |
| MKE10-48S05HI | 5 | 2000 | 76% | | | |
| MKE10-48S051HI | 5.1 | 2000 | 75% | | | |
| MKE10-48S12HI | 48 (36 – 75) | 12 | 835 | 80% | | |
| MKE10-48D12HI | ±12 | ±417 | 81% | | | |
| MKE10-48D15HI | ±15 | ±333 | 82% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ■ Mechanical Dimensions | | ■ Pin Connections | | |
|-------------------------|--------|-------------------|--|--------|
| Pin | Single | Dual | | |
| 1 | +Vin | | | +Vin |
| 2 | -Vin | | | -Vin |
| 3 | +Vout | | | +Vout |
| 4 | No Pin | | | Common |
| 5 | -Vout | | | -Vout |



MKE15-HI Series • 15W • Ultra-high Isolation


NEW

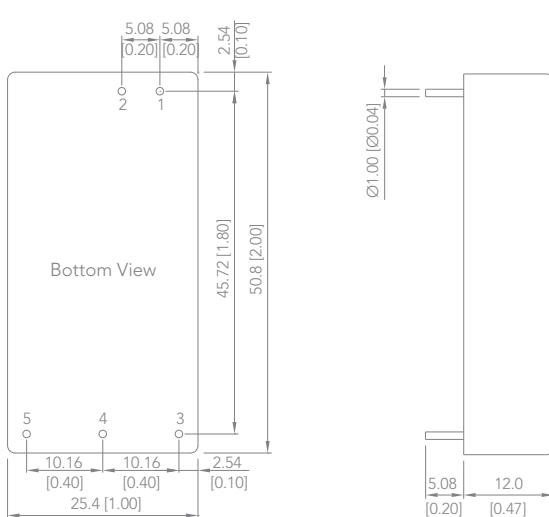
- Industrial Standard 2"×1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- Ultra-high I/O Isolation 8000VDC with Reinforced Insulation, rated for 1000Vrms Working Voltage
- Common Mode Transient Immunity : 15KV/μs
- Qualified for IGBT and High Isolation Applications
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Designed-in EMI Emission meets EN55032/22 Class A & FCC Level A
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking



| Specifications | | Model Selection Guide | | | | |
|-----------------------|-------------------|------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MKE15-12S05HI | 5 | 3000 | 85% | | | |
| MKE15-12S051HI | 5.1 | 3000 | 85% | | | |
| MKE15-12S12HI | 12 | 12 | 1250 | 88% | | |
| MKE15-12S15HI | (9 – 18) | 15 | 1000 | 88% | | |
| MKE15-12S24HI | 24 | 625 | 88% | | | |
| MKE15-12D12HI | ±12 | ±625 | 88% | | | |
| MKE15-12D15HI | ±15 | ±500 | 89% | | | |
| MKE15-24S05HI | 5 | 3000 | 87% | | | |
| MKE15-24S051HI | 5.1 | 3000 | 87% | | | |
| MKE15-24S12HI | 12 | 1250 | 88% | | | |
| MKE15-24S15HI | (18 – 36) | 15 | 1000 | 89% | | |
| MKE15-24S24HI | 24 | 625 | 90% | | | |
| MKE15-24D12HI | ±12 | ±625 | 90% | | | |
| MKE15-24D15HI | ±15 | ±500 | 89% | | | |
| MKE15-48S05HI | 5 | 3000 | 87% | | | |
| MKE15-48S051HI | 5.1 | 3000 | 87% | | | |
| MKE15-48S12HI | 12 | 1250 | 87% | | | |
| MKE15-48S15HI | (36 – 75) | 15 | 1000 | 90% | | |
| MKE15-48S24HI | 24 | 625 | 89% | | | |
| MKE15-48D12HI | ±12 | ±625 | 89% | | | |
| MKE15-48D15HI | ±15 | ±500 | 88% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

| Mechanical Dimensions | | | Pin Connections | | |
|------------------------------|--------|------|------------------------|--------|--------|
| Pin | Single | Dual | Pin | Single | Dual |
| 1 | +Vin | | 1 | +Vin | +Vin |
| 2 | -Vin | | 2 | -Vin | -Vin |
| 3 | +Vout | | 3 | +Vout | +Vout |
| 4 | No Pin | | 4 | No Pin | Common |
| 5 | -Vout | | 5 | -Vout | -Vout |



MKE20-HI Series • 20W • Ultra-high Isolation



<NEW

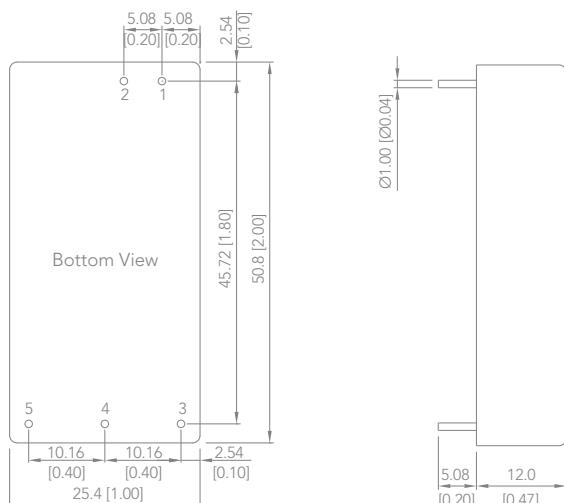
- Industrial Standard 2"×1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- Ultra-high I/O Isolation 8000VDC with Reinforced Insulation, rated for 1000Vrms Working Voltage
- Common Mode Transient Immunity : 15KV/μs
- Qualified for IGBT and High Isolation Applications
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Designed-in EMI Emission meets EN55032/22 Class A & FCC Level A
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking



| ■ Specifications | | ■ Model Selection Guide | | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MKE20-12S05HI | 5 | 4000 | 85% | | | |
| MKE20-12S051HI | 5.1 | 4000 | 85% | | | |
| MKE20-12S12HI | 12 | 1670 | 88% | | | |
| MKE20-12S15HI | 12 (9 - 18) | 15 | 1333 | 88% | | |
| MKE20-12S24HI | 24 | 840 | 89% | | | |
| MKE20-12D12HI | ±12 | ±840 | 89% | | | |
| MKE20-12D15HI | ±15 | ±670 | 89% | | | |
| MKE20-24S05HI | 5 | 4000 | 87% | | | |
| MKE20-24S051HI | 5.1 | 4000 | 87% | | | |
| MKE20-24S12HI | 12 | 1670 | 88% | | | |
| MKE20-24S15HI | 24 (18 - 36) | 15 | 1333 | 89% | | |
| MKE20-24S24HI | 24 | 840 | 90% | | | |
| MKE20-24D12HI | ±12 | ±840 | 90% | | | |
| MKE20-24D15HI | ±15 | ±670 | 90% | | | |
| MKE20-48S05HI | 5 | 4000 | 87% | | | |
| MKE20-48S051HI | 5.1 | 4000 | 87% | | | |
| MKE20-48S12HI | 12 | 1670 | 88% | | | |
| MKE20-48S15HI | 48 (36 - 75) | 15 | 1333 | 90% | | |
| MKE20-48S24HI | 24 | 840 | 89% | | | |
| MKE20-48D12HI | ±12 | ±840 | 89% | | | |
| MKE20-48D15HI | ±15 | ±670 | 90% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

■ Mechanical Dimensions



■ Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | No Pin | Common |
| 5 | -Vout | -Vout |

MIZI03 Series • 3W • Railway Certified



NEW

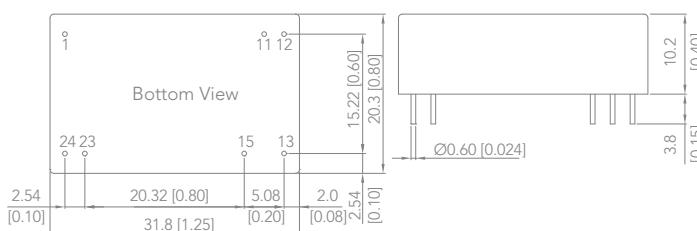
- Industrial Standard DIP-24 Package
- Ultra-wide Input Ranges 9-36VDC, 18-75VDC, 40-160VDC
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -40°C to +92°C
- No Min. Load Requirement
- Overload and Short Circuit Protection
- Designed-in Conducted EMI meets EN55032/22 Class A & FCC Level A (Pending)
- Vibration and Shock meets EN61373 (Pending)
- Cooling, Dry & Damp Heat Test meet IEC/EN 60068-2-1, 2, 30 (Pending)
- Fire Protection Test meets EN45545-2 (Pending)
- Railway EMC Standard meets EN50121-3-2 (Pending)
- Railway Certified meets EN50155 (IEC60571) (Pending)
- UL/cUL/IEC/EN 62368-1 (60950-1) Safety Approval & CE Marking (Pending)



| ■ Specifications | | ■ Model Selection Guide | | | |
|------------------|---------------------|-------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MIZI03-24S05 | | 5 | 600 | 79% | |
| MIZI03-24S12 | | 12 | 250 | 83% | |
| MIZI03-24S15 | 24 (9 - 36) | 15 | 200 | 83% | |
| MIZI03-24D12 | | ±12 | ±125 | 83% | |
| MIZI03-24D15 | | ±15 | ±100 | 83% | |
| MIZI03-48S05 | | 5 | 600 | 79% | |
| MIZI03-48S12 | | 12 | 250 | 83% | |
| MIZI03-48S15 | 48 (18 - 75) | 15 | 200 | 83% | |
| MIZI03-48D12 | | ±12 | ±125 | 83% | |
| MIZI03-48D15 | | ±15 | ±100 | 83% | |
| MIZI03-110S05 | | 5 | 600 | 78% | |
| MIZI03-110S12 | | 12 | 250 | 82% | |
| MIZI03-110S15 | 110 (40 - 160) | 15 | 200 | 82% | |
| MIZI03-110D12 | | ±12 | ±125 | 82% | |
| MIZI03-110D15 | | ±15 | ±100 | 82% | |

*For full series datasheet, please refer to www.minmax.com.tw

| ■ Mechanical Dimensions | | | ■ Pin Connections | | |
|-------------------------|--------|--------|-------------------|--------|--------|
| Pin | Single | Dual | Pin | Single | Dual |
| 1 | +Vin | +Vin | 1 | +Vin | +Vin |
| 11 | No Pin | Common | 11 | No Pin | Common |
| 12 | -Vout | No Pin | 12 | -Vout | No Pin |
| 13 | +Vout | -Vout | 13 | +Vout | -Vout |
| 15 | No Pin | +Vout | 15 | No Pin | +Vout |
| 23 | -Vin | -Vin | 23 | -Vin | -Vin |
| 24 | -Vin | -Vin | 24 | -Vin | -Vin |



MKZI10 Series • 10W • Railway Certified



<NEW

- Industrial Standard 2"×1" Package
- Ultra-wide Input Range 9-36VDC, 18-75VDC, 40-160VDC
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -40°C to +95°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Designed-in Conducted EMI meets EN55032/22 Class A & FCC Level A
- Vibration and Shock meets EN61373
- Cooling, Dry & Damp Heat Test meet IEC/EN60068-2-1,2,30
- Fire Protection Test meets EN45545-2
- Railway EMC Standard meets EN50121-3-2
- Railway Certified meets EN50155 (IEC60571)
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking



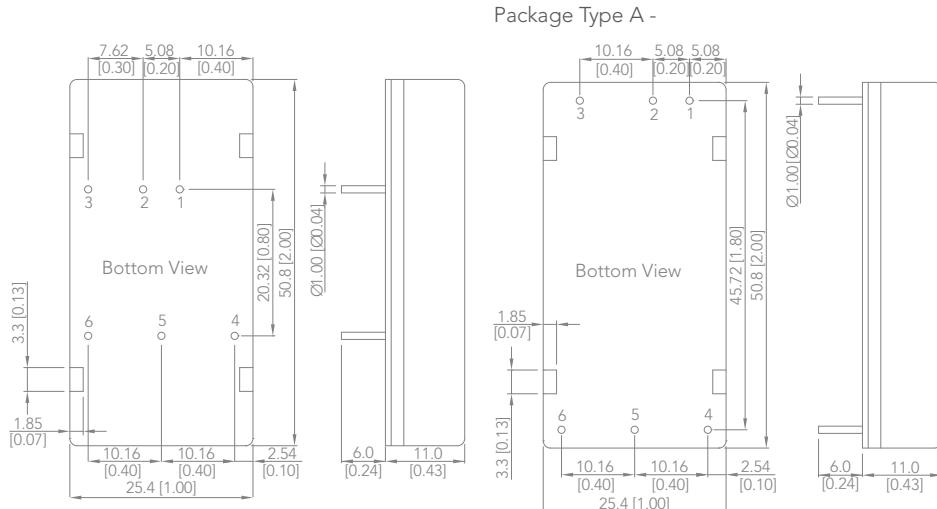
| ► Specifications | | ► Model Selection Guide | | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MKZI10-24S05 | 5 | 2000 | 84% | | | |
| MKZI10-24S12 | 12 | 835 | 86% | | | |
| MKZI10-24S15 | 24 | 15 | 670 | 87% | | |
| MKZI10-24S24 | (9 – 36) | 24 | 417 | 88% | | |
| MKZI10-24D12 | | ±12 | ±417 | 86% | | |
| MKZI10-24D15 | | ±15 | ±335 | 87% | | |
| MKZI10-48S05 | 5 | 2000 | 85% | | | |
| MKZI10-48S12 | 12 | 835 | 87% | | | |
| MKZI10-48S15 | 48 | 15 | 670 | 87% | | |
| MKZI10-48S24 | (18 – 75) | 24 | 417 | 86% | | |
| MKZI10-48D12 | | ±12 | ±417 | 89% | | |
| MKZI10-48D15 | | ±15 | ±335 | 88% | | |
| MKZI10-110S05 | 5 | 2000 | 82% | | | |
| MKZI10-110S12 | 12 | 835 | 85% | | | |
| MKZI10-110S15 | 110 | 15 | 670 | 85% | | |
| MKZI10-110S24 | (40 – 160) | 24 | 417 | 85% | | |
| MKZI10-110D12 | | ±12 | ±417 | 86% | | |
| MKZI10-110D15 | | ±15 | ±335 | 86% | | |

*To order the converter with heatsink, please add a suffix -HS.

*To order the converter with package type A, please add a suffix A.

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|---------------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | Remote On/Off | |
| 4 | +Vout | +Vout |
| 5 | Trim | Common |
| 6 | -Vout | -Vout |

► Pin Connections (For Type A)

| Pin | Single | Dual |
|-----|---------------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | Remote On/Off | |
| 4 | +Vout | +Vout |
| 5 | -Vout | Common |
| 6 | Trim | -Vout |

MKZI20 Series • 20W • Railway Certified



< NEW

- Industrial Standard 2"×1" Package
- Ultra-wide Input Range 9-36VDC, 18-75VDC, 40-160VDC
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -40°C to +90°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim
- Designed-in Conducted EMI meets EN55032/22 Class A & FCC Level A
- Vibration and Shock meets EN61373
- Cooling, Dry & Damp Heat Test meet IEC/EN60068-2-1,2,30
- Fire Protection Test meets EN45545-2
- Railway EMC Standard meets EN50121-3-2
- Railway Certified meets EN50155 (IEC60571)
- UL/cUL/IEC/EN 62368-1(60950-1) Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MKZI20-24S05 | 5 | 4000 | 87% | | |
| MKZI20-24S12 | 12 | 1670 | 87% | | |
| MKZI20-24S15 | 24 | 15 | 1330 | 87% | |
| MKZI20-24S24 | (9 – 36) | 24 | 833 | 87% | |
| MKZI20-24D12 | | ±12 | ±833 | 86% | |
| MKZI20-24D15 | | ±15 | ±667 | 86% | |
| MKZI20-48S05 | 5 | 4000 | 87% | | |
| MKZI20-48S12 | 12 | 1670 | 88% | | |
| MKZI20-48S15 | 48 | 15 | 1330 | 88% | |
| MKZI20-48S24 | (18 – 75) | 24 | 833 | 88% | |
| MKZI20-48D12 | | ±12 | ±833 | 87% | |
| MKZI20-48D15 | | ±15 | ±667 | 87% | |
| MKZI20-110S05 | 5 | 4000 | 84% | | |
| MKZI20-110S12 | 12 | 1670 | 86% | | |
| MKZI20-110S15 | 110 | 15 | 1330 | 86% | |
| MKZI20-110S24 | (40 – 160) | 24 | 833 | 86% | |
| MKZI20-110D12 | | ±12 | ±833 | 86% | |
| MKZI20-110D15 | | ±15 | ±667 | 86% | |

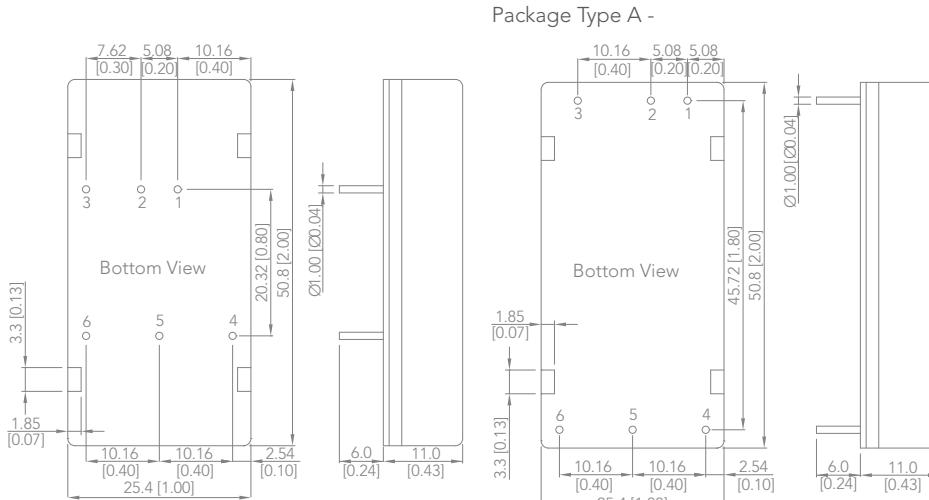
*To order the converter with heatsink, please add a suffix -HS.

*To order the converter with package type A, please add a suffix A.

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | | ► Pin Connections | | |
|-------------------------|---------------|--------|-------------------|---------------|-------|
| Pin | Single | Dual | Pin | Single | Dual |
| 1 | +Vin | +Vin | 1 | +Vin | +Vin |
| 2 | -Vin | -Vin | 2 | -Vin | -Vin |
| 3 | Remote On/Off | | 3 | Remote On/Off | |
| 4 | +Vout | +Vout | 4 | +Vout | +Vout |
| 5 | Trim | Common | 5 | -Vout | -Vout |
| 6 | -Vout | | 6 | | |

| ► Pin Connections (For Type A) | | | | | |
|--------------------------------|---------------|--------|-----|---------------|--------|
| Pin | Single | Dual | Pin | Single | Dual |
| 1 | +Vin | +Vin | 1 | +Vin | +Vin |
| 2 | -Vin | -Vin | 2 | -Vin | -Vin |
| 3 | Remote On/Off | | 3 | Remote On/Off | |
| 4 | +Vout | +Vout | 4 | +Vout | +Vout |
| 5 | -Vout | Common | 5 | -Vout | Common |
| 6 | Trim | -Vout | 6 | Trim | -Vout |



MTQZ50 Series • 50W • Railway Certified



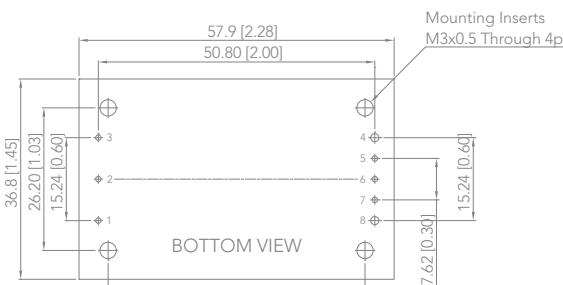
- Industrial Standard Quarter Brick Package
- Wide Input Range 43-101VDC & 66-160VDC
- Excellent Efficiency up to 92%
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Overload/Voltage/Temp. and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim, Output Sense
- Vibration and Shock meets EN61373
- Cooling, Dry & Damp Heat Test meet IEC/EN60068-2-1,2,30
- Fire Protection Test meets EN45545-2
- Railway EMC Standard meets EN50121-3-2
- Railway Certified meets EN50155 (IEC60571)
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|---|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MTQZ50-72S05 | | 5 | 10000 | 90% | | |
| MTQZ50-72S12 | 72 | 12 | 4170 | 92% | | |
| MTQZ50-72S15 | (43 – 101) | 15 | 3330 | 92% | | |
| MTQZ50-72S24 | | 24 | 2080 | 91% | | |
| MTQZ50-110S05 | | 5 | 10000 | 90% | | |
| MTQZ50-110S12 | 110 | 12 | 4170 | 91% | | |
| MTQZ50-110S15 | (66 – 160) | 15 | 3330 | 92% | | |
| MTQZ50-110S24 | | 24 | 2080 | 91% | | |
| *To order the converter with heatsink, please add a suffix -HS. | | | | | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | |
|-------------------------|---------------|-------------------|----------|
| Pin | Function | Pin | Function |
| 1 | +Vin | | |
| 2 | Remote On/Off | | |
| 3 | -Vin | | |
| 4 | -Vout | | |
| 5 | *-Sense | | |
| 6 | Trim | | |
| 7 | *+Sense | | |
| 8 | +Vout | | |



* If remote sense not used the +sense should be connected to +output and -sense should be connected to -output. Maximum output deviation is 10% inclusive of trim.

MTQZ75 Series • 75W • Railway Certified



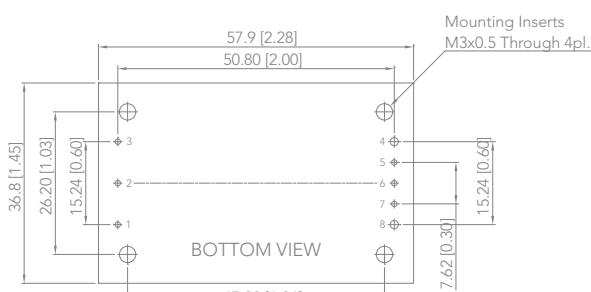
- Industrial Standard Quarter Brick Package
- Wide Input Range 43-101VDC & 66-160VDC
- Excellent Efficiency up to 92%
- I/O Isolation 3000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload/Voltage/Temp. and Short Circuit Protection
- Remote On/Off Control, Output Voltage Trim, Output Sense
- Vibration and Shock meets EN61373
- Cooling, Dry & Damp Heat Test meet IEC/EN60068-2-1,2,30
- Fire Protection Test meets EN45545-2
- Railway EMC Standard meets EN50121-3-2
- Railway Certified meets EN50155 (IEC60571)
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | |
|---|---|-------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MTQZ75-72S05 | | 5 | 15000 | 89% | |
| MTQZ75-72S12 | 72 | 12 | 6250 | 92% | |
| MTQZ75-72S15 | (43 – 101) | 15 | 5000 | 92% | |
| MTQZ75-72S24 | | 24 | 3125 | 91% | |
| MTQZ75-110S05 | | 5 | 15000 | 89% | |
| MTQZ75-110S12 | 110 | 12 | 6250 | 91% | |
| MTQZ75-110S15 | (66 – 160) | 15 | 5000 | 91% | |
| MTQZ75-110S24 | | 24 | 3125 | 90% | |
| *To order the converter with heatsink, please add a suffix -HS. | | | | | |
| Safety Approval & Railway Approval | UL/cUL/IEC/EN 60950-1, CB-Report EN50155 (IEC60571) & EN45545-2, CE Marking | | | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | |
|-------------------------|---------------|-------------------|----------|
| Pin | Function | Pin | Function |
| 1 | +Vin | | |
| 2 | Remote On/Off | | |
| 3 | -Vin | | |
| 4 | -Vout | | |
| 5 | *-Sense | | |
| 6 | Trim | | |
| 7 | *+Sense | | |
| 8 | +Vout | | |



* If remote sense not used the +sense should be connected to +output and -sense should be connected to -output. Maximum output deviation is 10% inclusive of trim.

MAU400 Series • 1W • Medical Safety



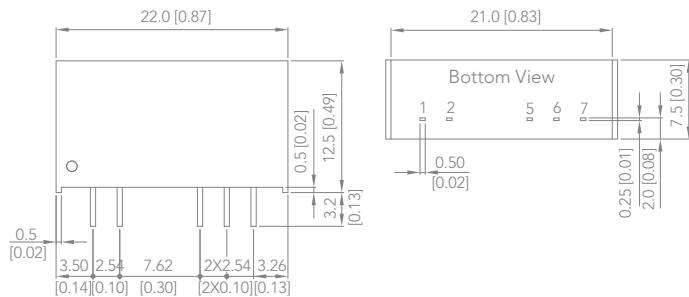
- Industrial Standard SIP-7 Package
- I/O Isolation 3000VAC with Reinforced Insulation, rated for 300Vrms Working Voltage
- Operating Ambient Temp. Range -25°C to +85°C
- Medical EMC Standard meets 4th Edition of EMI EN55011 and EMS EN60601-1-2
- Medical Safety meets 1xMOPP & 2xMOOP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MAU401 | 5 | 200 | 66% | | |
| MAU402 | 12 | 80 | 66% | | |
| MAU403 | 15 | 65 | 66% | | |
| MAU404 | (4.5 – 5.5) | ±5 | ±100 | 66% | |
| MAU405 | ±12 | ±40 | 72% | | |
| MAU406 | ±15 | ±35 | 73% | | |
| MAU411 | 5 | 200 | 66% | | |
| MAU412 | 12 | 80 | 66% | | |
| MAU413 | 15 | 65 | 66% | | |
| MAU414 | (10.8 – 13.2) | ±5 | ±100 | 66% | |
| MAU415 | ±12 | ±40 | 74% | | |
| MAU416 | ±15 | ±35 | 75% | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 5 | -Vout | -Vout |
| 6 | No Pin | Common |
| 7 | +Vout | +Vout |

MAU01M Series • 1W • Medical Safety



NEW

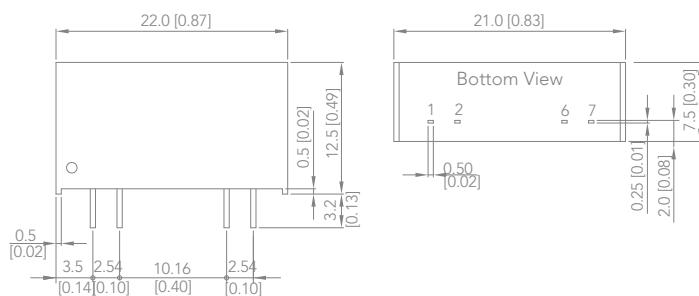
- Industrial Standard SIP-7 Package
- I/O Isolation 4000VAC with Reinforced Insulation, rated for 300Vrms Working Voltage
- Low Leakage Current <2µA
- Operating Ambient Temp. Range -40°C to 95°C
- Short Circuit Protection
- Medical EMC Standard meets 4th Edition of EMI EN55011 and EMS EN60601-1-2
- Medical Safety meets 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 with CE Marking



| ► Specifications | | ► Model Selection Guide | | | |
|------------------|---------------------|-------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MAU01-05S05M | | 5 | 200 | 79% | |
| MAU01-05S12M | 5 (4.5 – 5.5) | 12 | 84 | 80% | |
| MAU01-05S15M | | 15 | 68 | 81% | |
| MAU01-12S05M | | 5 | 200 | 79% | |
| MAU01-12S12M | 12 (10.8 – 13.2) | 12 | 84 | 81% | |
| MAU01-12S15M | | 15 | 68 | 79% | |
| MAU01-24S05M | | 5 | 200 | 76% | |
| MAU01-24S12M | 24 (21.6 – 26.4) | 12 | 84 | 79% | |
| MAU01-24S15M | | 15 | 68 | 79% | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Function |
|-----|----------|
| 1 | +Vin |
| 2 | -Vin |
| 6 | -Vout |
| 7 | +Vout |

NC = No Connection

MSCU01M Series • 1W • Medical Safety



<NEW

- Industrial Standard SMD Package
- I/O Isolation 4000VAC with Reinforced Insulation, rated for 250Vrms Working Voltage
- Low Leakage Current <2µA
- Operating Ambient Temp. Range -40°C to 95°C
- Short Circuit Protection
- Medical EMC Standard meets 4th Edition of EMI EN55011 and EMS EN60601-1-2
- Medical Safety meets 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 with CE Marking

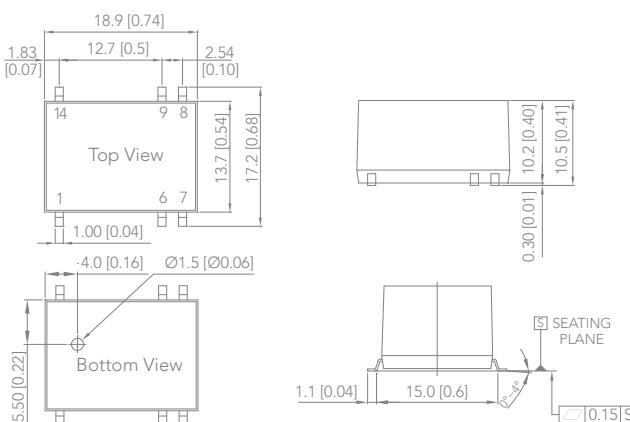


| ► Specifications | | ► Model Selection Guide | | | |
|------------------|---------------------|-------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MSCU01-05S05M | 5 | 200 | 76% | | |
| MSCU01-05S12M | 12 | 84 | 80% | | |
| MSCU01-05S15M | 5 (4.5 – 5.5) | 15 | 68 | 83% | |
| MSCU01-05D12M | ±12 | ±42 | 80% | | |
| MSCU01-05D15M | ±15 | ±33 | 84% | | |
| MSCU01-12S05M | 5 | 200 | 76% | | |
| MSCU01-12S12M | 12 | 84 | 79% | | |
| MSCU01-12S15M | 12 (10.8 – 13.2) | 15 | 68 | 80% | |
| MSCU01-12D12M | ±12 | ±42 | 79% | | |
| MSCU01-12D15M | ±15 | ±33 | 80% | | |
| MSCU01-24S05M | 5 | 200 | 76% | | |
| MSCU01-24S12M | 12 | 84 | 80% | | |
| MSCU01-24S15M | 24 (21.6 – 26.4) | 15 | 68 | 80% | |
| MSCU01-24D12M | ±12 | ±42 | 80% | | |
| MSCU01-24D15M | ±15 | ±33 | 80% | | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter for water-washable process, please add a suffix -W

| ► Mechanical Dimensions | | ► Pin Connections | | |
|-------------------------|--------|-------------------|--|--|
| Pin | Single | Dual | | |
| 1 | -Vin | -Vin | | |
| 6 | NC | Common | | |
| 7 | NC | -Vout | | |
| 8 | +Vout | +Vout | | |
| 9 | -Vout | Common | | |
| 14 | +Vin | +Vin | | |



MDHU100 Series • 2W • Medical Safety



- Industrial Standard DIP-16 Package
- I/O Isolation 4000VAC with Reinforced Insulation,
rated for 300Vrms Working Voltage
- Low Leakage Current <2µA
- Operating Ambient Temp. Range -25°C to +80°C
- Medical EMC Standard meets 4th Edition of EMI EN55011 and EMS EN60601-1-2
- Medical Safety meets 1xMOPP & 2xMOOP per 3rd Edition of IEC/EN 60601-1 &
ANSI/AAMI ES60601-1
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking

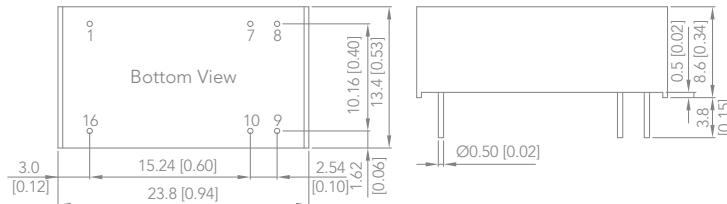


| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|---------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MDHU102 | 5 | 400 | 66% | | | |
| MDHU104 | 12 | 165 | 66% | | | |
| MDHU105 | 5 (4.5 – 5.5) | 15 | 133 | 66% | | |
| MDHU108 | ±12 | ±83 | 72% | | | |
| MDHU109 | ±15 | ±66 | 73% | | | |
| MDHU112 | 5 | 400 | 66% | | | |
| MDHU114 | 12 | 165 | 66% | | | |
| MDHU115 | 12 (10.8 – 13.2) | 15 | 133 | 66% | | |
| MDHU118 | ±12 | ±83 | 74% | | | |
| MDHU119 | ±15 | ±66 | 75% | | | |
| MDHU122 | 5 | 400 | 66% | | | |
| MDHU124 | 12 | 165 | 66% | | | |
| MDHU125 | 24 (21.6 – 26.4) | 15 | 133 | 66% | | |
| MDHU128 | ±12 | ±83 | 74% | | | |
| MDHU129 | ±15 | ±66 | 75% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | | |
|--------------------------------|--------|--------------------------|--------|--|
| Pin | Single | Dual | | |
| 1 | -Vin | | -Vin | |
| 7 | NC | | NC | |
| 8 | NC | | Common | |
| 9 | +Vout | | +Vout | |
| 10 | -Vout | | -Vout | |
| 16 | +Vin | | +Vin | |

NC = No Connection



MSHU100 Series • 2W • Medical Safety



- Industrial Standard SMD Package
- I/O Isolation 4000VAC with Reinforced Insulation, rated for 300Vrms Working Voltage
- Low Leakage Current <2µA
- Operating Ambient Temp. Range -25°C to +80°C
- Water-washable Process Available (option)
- Qualified for Lead-free Reflow Solder Process According to IPC/JEDEC J-STD-020D.1
- Tape & Reel Package Available
- Medical EMC Standard meets 4th Edition of EMI EN55011 and EMS EN60601-1-2
- Medical Safety meets 1xMOPP & 2xMOOP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



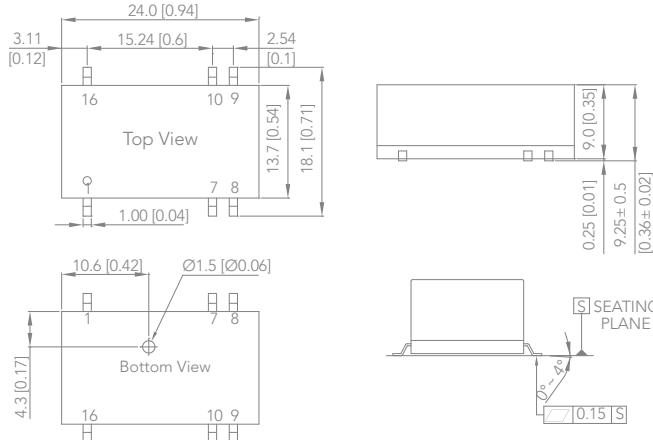
| ► Specifications | | ► Model Selection Guide | | | | |
|------------------|---------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MSHU102 | 5 | 400 | 66% | | | |
| MSHU104 | 12 | 165 | 66% | | | |
| MSHU105 | 5 (4.5 – 5.5) | 15 | 133 | 66% | | |
| MSHU108 | ±12 | ±83 | 72% | | | |
| MSHU109 | ±15 | ±66 | 73% | | | |
| MSHU112 | 5 | 400 | 66% | | | |
| MSHU114 | 12 | 165 | 66% | | | |
| MSHU115 | 12 (10.8 – 13.2) | 15 | 133 | 66% | | |
| MSHU118 | ±12 | ±83 | 74% | | | |
| MSHU119 | ±15 | ±66 | 75% | | | |
| MSHU122 | 5 | 400 | 66% | | | |
| MSHU124 | 12 | 165 | 66% | | | |
| MSHU125 | 24 | 15 | 133 | 66% | | |
| MSHU128 | (21.6 – 26.4) | ±12 | ±83 | 74% | | |
| MSHU129 | ±15 | ±66 | 75% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

*To order the converter for water-washable process, please add a suffix -W.

| ► Mechanical Dimensions | | ► Pin Connections | | |
|-------------------------|--------|-------------------|--------|--|
| Pin | Single | Dual | | |
| 1 | -Vin | | -Vin | |
| 7 | NC | | NC | |
| 8 | NC | | Common | |
| 9 | +Vout | | +Vout | |
| 10 | -Vout | | -Vout | |
| 16 | +Vin | | +Vin | |

NC = No Connection



MIDR03M Series • 3W • Medical Safety



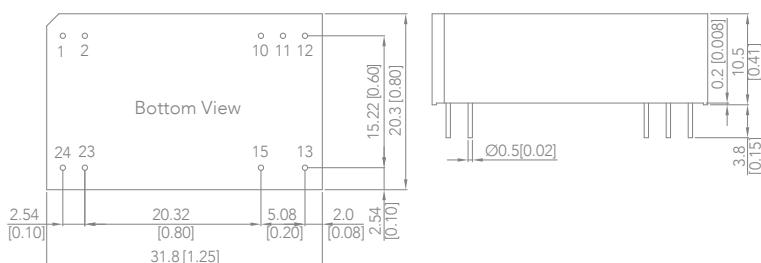
- Industrial Standard DIP-24 Package
- Fully Regulated Output Voltage
- I/O Isolation 3000VAC with Reinforced Insulation, rated for 300Vrms Working Voltage
- Low Leakage Current <2µA
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Short Circuit Protection
- Designed-in Conducted EMI meets EN55011/22 Class A & FCC Level A
- Medical EMC Standard meets 4th Edition of EMI EN55011 and EMS EN60601-1-2
- Medical Safety meets 1xMOPP & 2xMOOP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MIDR03-05S05M | 5 | 600 | 60% | | | |
| MIDR03-05S12M | 12 | 250 | 62% | | | |
| MIDR03-05S15M | 5 ±10% | 15 | 200 | 62% | | |
| MIDR03-05D12M | ±12 | ±125 | 60% | | | |
| MIDR03-05D15M | ±15 | ±100 | 60% | | | |
| MIDR03-12S05M | 5 | 600 | 60% | | | |
| MIDR03-12S12M | 12 | 250 | 62% | | | |
| MIDR03-12S15M | 12 ±10% | 15 | 200 | 62% | | |
| MIDR03-12D12M | ±12 | ±125 | 60% | | | |
| MIDR03-12D15M | ±15 | ±100 | 60% | | | |
| MIDR03-24S05M | 5 | 600 | 60% | | | |
| MIDR03-24S12M | 12 | 250 | 64% | | | |
| MIDR03-24S15M | 24 ±10% | 15 | 200 | 64% | | |
| MIDR03-24D12M | ±12 | ±125 | 60% | | | |
| MIDR03-24D15M | ±15 | ±100 | 60% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | | |
|--------------------------------|--------|--------------------------|--|--|
| Pin | Single | Dual | | |
| 1,2 | +Vin | +Vin | | |
| 10,11 | No Pin | No Pin | | |
| 12 | -Vout | -Vout | | |
| 13 | +Vout | +Vout | | |
| 15 | No Pin | No Pin | | |
| 23,24 | -Vin | -Vin | | |



MIHW1000 Series • 3W • Medical Safety



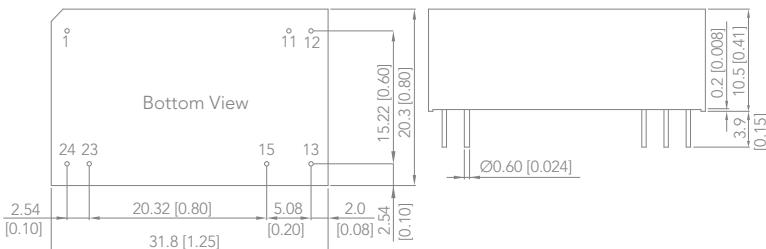
- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 4000VAC with Reinforced Insulation, rated for 1000Vrms Working Voltage
- Low Leakage Current <2µA
- Operating Ambient Temp. Range -40°C to +85°C
- Overload and Short Circuit Protection
- Designed-in Conducted EMI meets EN55011/22 Class A & FCC Level A
- Medical EMC Standard meets 4th Edition of EMI EN55011 and EMS EN60601-1-2
- Medical Safety meets 1xMOPP & 2xMOOP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|-------------------------|-------------------|--------------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MIHW1002 | | 5 | 600 | 70% | | |
| MIHW1003 | 12 | 250 | 75% | | | |
| MIHW1008 | 24 | 125 | 76% | | | |
| MIHW1006 | (4.5 – 9) | ±12 | ±125 | 75% | | |
| MIHW1007 | ±15 | ±100 | 75% | | | |
| MIHW1012 | 5 | 600 | 74% | | | |
| MIHW1013 | 12 | 250 | 80% | | | |
| MIHW1018 | 24 | 125 | 81% | | | |
| MIHW1016 | (9 – 18) | ±12 | ±125 | 80% | | |
| MIHW1017 | ±15 | ±100 | 80% | | | |
| MIHW1022 | 5 | 600 | 78% | | | |
| MIHW1023 | 12 | 250 | 83% | | | |
| MIHW1028 | 24 | 125 | 84% | | | |
| MIHW1026 | (18 – 36) | ±12 | ±125 | 83% | | |
| MIHW1027 | ±15 | ±100 | 83% | | | |
| MIHW1032 | 5 | 600 | 78% | | | |
| MIHW1033 | 12 | 250 | 83% | | | |
| MIHW1038 | 48 | 125 | 84% | | | |
| MIHW1036 | (36 – 75) | ±12 | ±125 | 83% | | |
| MIHW1037 | ±15 | ±100 | 83% | | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | | |
|--------------------------------|--------|--------------------------|--|--|
| Pin | Single | Dual | | |
| 1 | +Vin | +Vin | | |
| 11 | No Pin | Common | | |
| 12 | -Vout | No Pin | | |
| 13 | +Vout | -Vout | | |
| 15 | No Pin | +Vout | | |
| 23 | -Vin | -Vin | | |
| 24 | -Vin | -Vin | | |



MIHW2000 Series • 3W • Medical Safety



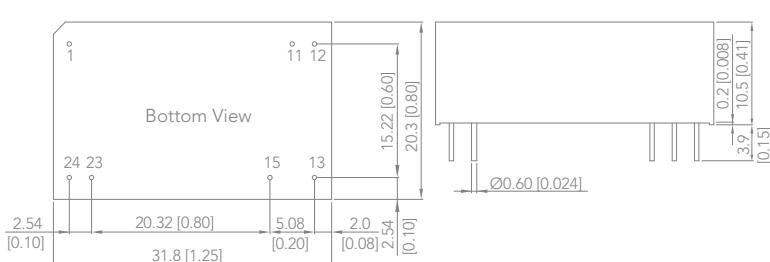
- Industrial Standard DIP-24 Package
- Ultra-wide 4:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 4000VAC with Reinforced Insulation, rated for 1000Vrms Working Voltage
- Low Leakage Current <2µA
- Operating Ambient Temp. Range -40°C to +85°C
- Overload and Short Circuit Protection
- Designed-in Conducted EMI meets EN55011/22 Class A & FCC Level A
- Medical EMC Standard meets 4th Edition of EMI EN55011 and EMS EN60601-1-2
- Medical Safety meets 1xMOPP & 2xMOOP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MIHW2022 | | 5 | 600 | 78% | | |
| MIHW2023 | 24 | 12 | 250 | 83% | | |
| MIHW2026 | (9 – 40) | ±12 | ±125 | 83% | | |
| MIHW2027 | | ±15 | ±100 | 83% | | |
| MIHW2032 | | 5 | 600 | 78% | | |
| MIHW2033 | 48 | 12 | 250 | 83% | | |
| MIHW2036 | (18 – 80) | ±12 | ±125 | 83% | | |
| MIHW2037 | | ±15 | ±100 | 83% | | |
| MIHW2042 | | 5 | 600 | 78% | | |
| MIHW2043 | 110 | 12 | 250 | 83% | | |
| MIHW2046 | (36 – 160) | ±12 | ±125 | 83% | | |
| MIHW2047 | | ±15 | ±100 | 83% | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | | |
|-------------------------|--------|-------------------|--------|--|
| Pin | Single | Dual | | |
| 1 | +Vin | | +Vin | |
| 11 | No Pin | | Common | |
| 12 | -Vout | | No Pin | |
| 13 | +Vout | | -Vout | |
| 15 | No Pin | | +Vout | |
| 23 | -Vin | | -Vin | |
| 24 | -Vin | | -Vin | |



MIW03M Series • 3.5W • Medical Safety



<NEW

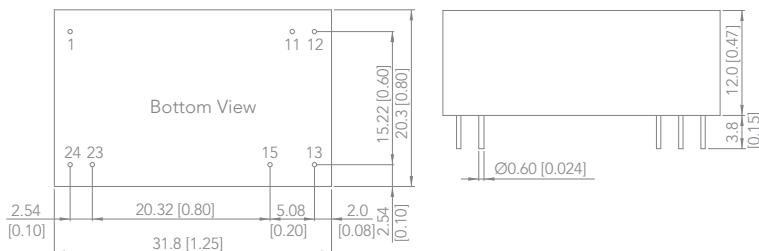
- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 5000VAC with Reinforced Insulation, rated for 250Vrms Working Voltage
- Creepage & Clearance Distance meet 8mm
- Low Leakage Current < 2µA
- Operating Ambient Temp. Range -40°C to 95°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Designed-in Conducted EMI meets EN55011 Class A & FCC Level A
- Medical EMC Standard meets 4th Edition of EMI EN55011 and EMS EN60601-1-2
- Medical Safety meets 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 with CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MIW03-05S05M | | 5 | 700 | 83% | | |
| MIW03-05S058M | | 5.8 | 600 | 83% | | |
| MIW03-05S12M | 5 | 12 | 290 | 84% | | |
| MIW03-05S15M | (4.5 – 9) | 15 | 235 | 84% | | |
| MIW03-05D12M | | ±12 | ±145 | 84% | | |
| MIW03-05D15M | | ±15 | ±115 | 84% | | |
| MIW03-12S05M | | 5 | 700 | 83% | | |
| MIW03-12S12M | | 12 | 290 | 87% | | |
| MIW03-12S15M | 12 (9 – 18) | 15 | 235 | 87% | | |
| MIW03-12D12M | | ±12 | ±145 | 87% | | |
| MIW03-12D15M | | ±15 | ±115 | 87% | | |
| MIW03-24S05M | | 5 | 700 | 83% | | |
| MIW03-24S12M | | 12 | 290 | 86% | | |
| MIW03-24S15M | 24 (18 – 36) | 15 | 235 | 87% | | |
| MIW03-24D12M | | ±12 | ±145 | 87% | | |
| MIW03-24D15M | | ±15 | ±115 | 86% | | |
| MIW03-48S05M | | 5 | 700 | 83% | | |
| MIW03-48S12M | | 12 | 290 | 86% | | |
| MIW03-48S15M | 48 (36 – 75) | 15 | 235 | 85% | | |
| MIW03-48D12M | | ±12 | ±145 | 84% | | |
| MIW03-48D15M | | ±15 | ±115 | 84% | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | |
|-------------------------|--------|-------------------|--------|
| Pin | Single | Dual | |
| 1 | +Vin | | +Vin |
| 11 | No Pin | | Common |
| 12 | -Vout | | No Pin |
| 13 | +Vout | | -Vout |
| 15 | No Pin | | +Vout |
| 23 | -Vin | | -Vin |
| 24 | -Vin | | -Vin |



MIHW3000 Series • 6W • Medical Safety



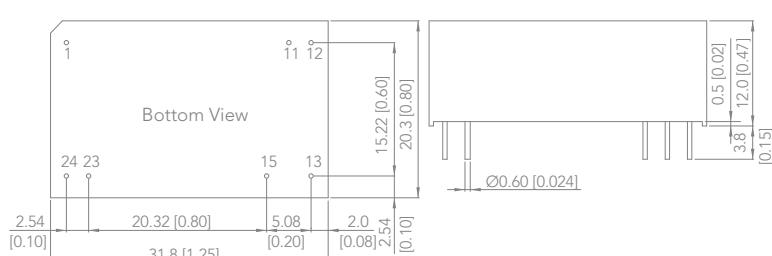
- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 4000VAC with Reinforced Insulation, rated for 1000Vrms Working Voltage
- Low Leakage Current <2µA
- Operating Ambient Temp. Range -40°C to +75°C
- Overload and Short Circuit Protection
- Designed-in Conducted EMI meets EN55011/22 Class A & FCC Level A
- Medical EMC Standard meets 4th Edition of EMI EN55011 and EMS EN60601-1-2
- Medical Safety meets 1xMOPP & 2xMOOP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MIHW3022 | | 5 | 1000 | 75% | | |
| MIHW3023 | 12 | 12 | 500 | 78% | | |
| MIHW3026 | (9 - 18) | ±12 | ±250 | 78% | | |
| MIHW3027 | | ±15 | ±200 | 78% | | |
| MIHW3032 | | 5 | 1000 | 77% | | |
| MIHW3033 | 24 | 12 | 500 | 80% | | |
| MIHW3036 | (18 - 36) | ±12 | ±250 | 80% | | |
| MIHW3037 | | ±15 | ±200 | 80% | | |
| MIHW3042 | | 5 | 1000 | 77% | | |
| MIHW3043 | 48 | 12 | 500 | 80% | | |
| MIHW3046 | (36 - 75) | ±12 | ±250 | 80% | | |
| MIHW3047 | | ±15 | ±200 | 80% | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | | |
|-------------------------|--------|-------------------|--------|--|
| Pin | Single | Dual | | |
| 1 | +Vin | +Vin | | |
| 11 | No Pin | No Pin | Common | |
| 12 | -Vout | -Vout | No Pin | |
| 13 | +Vout | +Vout | -Vout | |
| 15 | No Pin | No Pin | +Vout | |
| 23 | -Vin | -Vin | -Vin | |
| 24 | -Vin | -Vin | -Vin | |



MIW06M Series • 6W • Medical Safety



<NEW

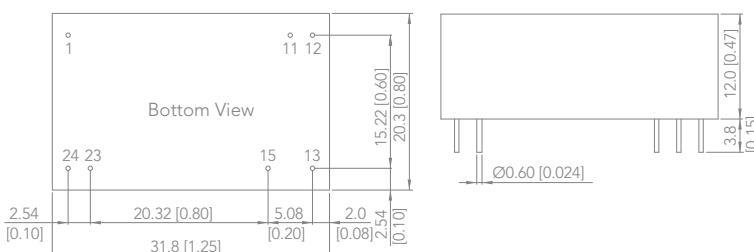
- Industrial Standard DIP-24 Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 5000VAC with Reinforced Insulation, rated for 250Vrms Working Voltage
- Creepage & Clearance Distance meet 8mm
- Low Leakage Current <2µA
- Operating Ambient Temp. Range -40°C to 92.5°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Designed-in Conducted EMI meets EN55011 Class A & FCC Level A
- Medical EMC Standard meets 4th Edition of EMI EN55011 and EMS EN60601-1-2
- Medical Safety meets 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 with CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MIW06-12S05M | | 5 | 1200 | 84% | | |
| MIW06-12S12M | | 12 | 500 | 87% | | |
| MIW06-12S15M | 12 (9 – 18) | 15 | 400 | 86% | | |
| MIW06-12D12M | | ±12 | ±250 | 87% | | |
| MIW06-12D15M | | ±15 | ±200 | 87% | | |
| MIW06-24S05M | | 5 | 1200 | 84% | | |
| MIW06-24S12M | | 12 | 500 | 87% | | |
| MIW06-24S15M | 24 (18 – 36) | 15 | 400 | 87% | | |
| MIW06-24D12M | | ±12 | ±250 | 86% | | |
| MIW06-24D15M | | ±15 | ±200 | 87% | | |
| MIW06-48S05M | | 5 | 1200 | 84% | | |
| MIW06-48S12M | | 12 | 500 | 87% | | |
| MIW06-48S15M | 48 (36 – 75) | 15 | 400 | 89% | | |
| MIW06-48D12M | | ±12 | ±250 | 87% | | |
| MIW06-48D15M | | ±15 | ±200 | 88% | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | | |
|-------------------------|--------|-------------------|--|--|
| Pin | Single | Dual | | |
| 1 | +Vin | +Vin | | |
| 11 | No Pin | Common | | |
| 12 | -Vout | No Pin | | |
| 13 | +Vout | -Vout | | |
| 15 | No Pin | +Vout | | |
| 23 | -Vin | -Vin | | |
| 24 | -Vin | -Vin | | |



MKW10M Series • 10W • Medical Safety



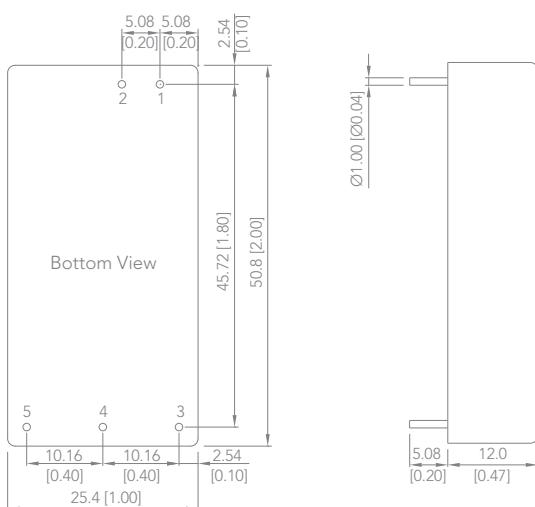
- Industrial Standard 2" × 1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 4200VAC with Reinforced Insulation, rated for 300Vrms Working Voltage
- Low Leakage Current <10µA
- Operating Ambient Temp. Range -40°C to +75°C
- Overload and Short Circuit Protection
- Designed-in EMI Emission meets EN55011/22 Class A & FCC Level A
- Medical EMC Standard meets 4th Edition of EMI EN55011 and EMS EN60601-1-2
- Medical Safety meets 1xMOPP & 2xMOOP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| MKW10-12S05M | | 5 | 1600 | 74% | | |
| MKW10-12S051M | | 5.1 | 1600 | 75% | | |
| MKW10-12S12M | 12 (9 – 18) | 12 | 835 | 80% | | |
| MKW10-12D12M | | ±12 | ±417 | 80% | | |
| MKW10-12D15M | | ±15 | ±333 | 81% | | |
| MKW10-24S05M | | 5 | 2000 | 75% | | |
| MKW10-24S051M | | 5.1 | 2000 | 76% | | |
| MKW10-24S12M | 24 (18 – 36) | 12 | 835 | 81% | | |
| MKW10-24D12M | | ±12 | ±417 | 81% | | |
| MKW10-24D15M | | ±15 | ±333 | 82% | | |
| MKW10-48S05M | | 5 | 2000 | 75% | | |
| MKW10-48S051M | | 5.1 | 2000 | 76% | | |
| MKW10-48S12M | 48 (36 – 75) | 12 | 835 | 81% | | |
| MKW10-48D12M | | ±12 | ±417 | 81% | | |
| MKW10-48D15M | | ±15 | ±333 | 82% | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | No Pin | Common |
| 5 | -Vout | -Vout |

MKW15M Series • 15W • Medical Safety



<NEW

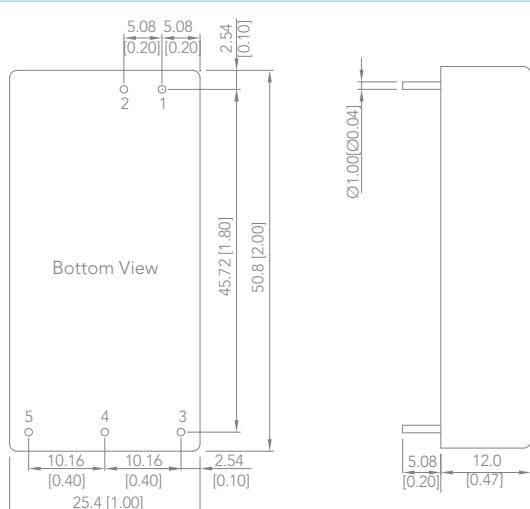
- Industrial Standard 2"×1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 4200VAC with Reinforced Insulation, rated for 300Vrms Working Voltage
- Low Leakage Current<5µA
- Operating Ambient Temp. Range -40°C to +85°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Designed-in EMI Emission meets EN55011 Class A & FCC Level A
- Medical EMC Standard meets 4th Edition of EMI EN55011 and EMS EN60601-1-2
- Medical Safety meets 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 with CE Marking



| ► Specifications | | ► Model Selection Guide | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MKW15-12S05M | 5 | 3000 | 86% | | |
| MKW15-12S051M | 5.1 | 3000 | 86% | | |
| MKW15-12S12M | 12 | 1250 | 89% | | |
| MKW15-12S15M | (9 ~ 18) | 15 | 1000 | 88% | |
| MKW15-12S24M | 24 | 625 | 88% | | |
| MKW15-12D12M | ±12 | ±625 | 88% | | |
| MKW15-12D15M | ±15 | ±500 | 89% | | |
| MKW15-24S05M | 5 | 3000 | 88% | | |
| MKW15-24S051M | 5.1 | 3000 | 88% | | |
| MKW15-24S12M | 12 | 1250 | 89% | | |
| MKW15-24S15M | 24 | 1000 | 89% | | |
| MKW15-24S24M | (18 ~ 36) | 24 | 625 | 90% | |
| MKW15-24D12M | ±12 | ±625 | 90% | | |
| MKW15-24D15M | ±15 | ±500 | 89% | | |
| MKW15-48S05M | 5 | 3000 | 88% | | |
| MKW15-48S051M | 5.1 | 3000 | 88% | | |
| MKW15-48S12M | 12 | 1250 | 88% | | |
| MKW15-48S15M | 48 | 15 | 1000 | 90% | |
| MKW15-48S24M | (36 ~ 75) | 24 | 625 | 89% | |
| MKW15-48D12M | ±12 | ±625 | 89% | | |
| MKW15-48D15M | ±15 | ±500 | 88% | | |

*For full series datasheet, please refer to www.minmax.com.tw

| ► Mechanical Dimensions | | ► Pin Connections | | |
|-------------------------|--------|-------------------|--|--------|
| Pin | Single | Dual | | |
| 1 | +Vin | | | +Vin |
| 2 | -Vin | | | -Vin |
| 3 | +Vout | | | +Vout |
| 4 | No Pin | | | Common |
| 5 | -Vout | | | -Vout |



MKW20M Series • 20W • Medical Safety



NEW

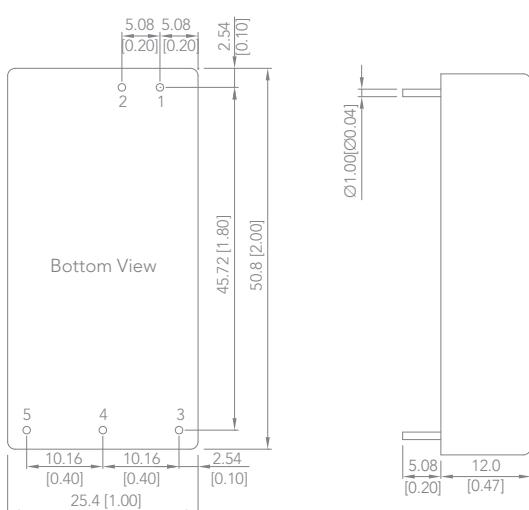
- Industrial Standard 2" × 1" Package
- Wide 2:1 Input Voltage Range
- Fully Regulated Output Voltage
- I/O Isolation 4200VAC with Reinforced Insulation, rated for 300Vrms Working Voltage
- Low Leakage Current <5µA
- Operating Ambient Temp. Range -40°C to +80°C
- No Min. Load Requirement
- Overload/Voltage and Short Circuit Protection
- Designed-in EMI Emission meets EN55011 Class A & FCC Level A
- Medical EMC Standard meets 4th Edition of EMI EN55011 and EMS EN60601-1-2
- Medical Safety meets 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1 with CE Marking



| ► Specifications | | ► Model Selection Guide | | | |
|------------------|-------------------|-------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VDC | Output Voltage VDC | Output Current mA max | Efficiency | |
| MKW20-12S05M | 5 | 4000 | 86% | | |
| MKW20-12S051M | 5.1 | 4000 | 86% | | |
| MKW20-12S12M | 12 | 1670 | 89% | | |
| MKW20-12S15M | (9 - 18) | 15 | 1333 | 88% | |
| MKW20-12S24M | 24 | 840 | 89% | | |
| MKW20-12D12M | ±12 | ±840 | 89% | | |
| MKW20-12D15M | ±15 | ±670 | 89% | | |
| MKW20-24S05M | 5 | 4000 | 88% | | |
| MKW20-24S051M | 5.1 | 4000 | 88% | | |
| MKW20-24S12M | 12 | 1670 | 89% | | |
| MKW20-24S15M | (18 - 36) | 15 | 1333 | 89% | |
| MKW20-24S24M | 24 | 840 | 90% | | |
| MKW20-24D12M | ±12 | ±840 | 90% | | |
| MKW20-24D15M | ±15 | ±670 | 90% | | |
| MKW20-48S05M | 5 | 4000 | 88% | | |
| MKW20-48S051M | 5.1 | 4000 | 88% | | |
| MKW20-48S12M | 12 | 1670 | 89% | | |
| MKW20-48S15M | (36 - 75) | 15 | 1333 | 90% | |
| MKW20-48S24M | 24 | 840 | 89% | | |
| MKW20-48D12M | ±12 | ±840 | 89% | | |
| MKW20-48D15M | ±15 | ±670 | 90% | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



► Pin Connections

| Pin | Single | Dual |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | No Pin | Common |
| 5 | -Vout | -Vout |

AJM-24 Series • 24W • Medical & Industrial Safety



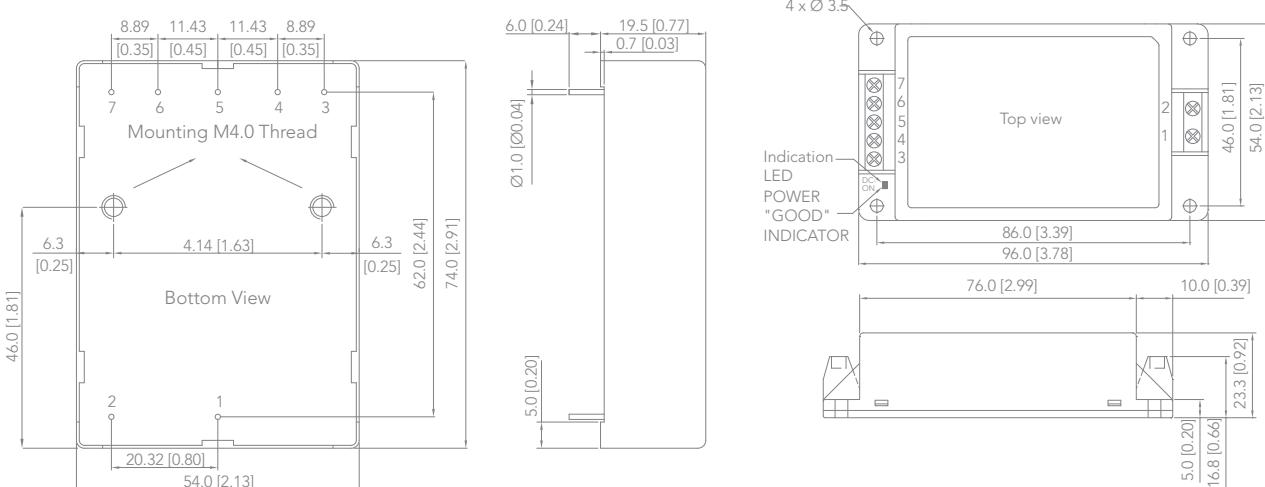
- Fully Encapsulated Plastic Case for PCB, Chassis and DIN-Rail Mounting Version
- Universal Input 85-264VAC, 47-440Hz
- Protection Class II as per IEC/EN 60536
- I/O Isolation 4000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -40°C to +80°C
- Overload/Voltage and Short Circuit Protection
- Designed-in EMI Emission meets EN55011/22/32 Class B & FCC Level B
- Designed-in EMC Immunity meets EN61000-4-2,3,4,5,6,8,11
- Medical EMC Standard meets 4th Edition of EMI EN55011 & EMS EN60601-1-2
- Medical Safety meets 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1
- UL508 Safety Approval Specifically for Industrial Application
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking



| ► Specifications | | ► Model Selection Guide | | | |
|--|-------------------|-------------------------|-----------------------|------------|--|
| Model Number | Input Voltage VAC | Output Voltage VDC | Output Current mA max | Efficiency | |
| AJM-24S05 | 85 – 264 | 5 | 3000 | 77% | |
| AJM-24S09 | | 9 | 2666 | 82% | |
| AJM-24S12 | | 12 | 2000 | 83% | |
| AJM-24S15 | | 15 | 1600 | 82% | |
| AJM-24S24 | | 24 | 1000 | 85% | |
| AJM-24D12 | | ±12 | ±1000 | 84% | |
| AJM-24D15 | | ±15 | ±800 | 84% | |
| ► Pin Connections (PCB & Chassis) | | | | | |
| Pin | Single | Dual | | | |
| 1 | AC Neutral | AC Neutral | | | |
| 2 | AC Line | AC Line | | | |
| 3 | No Pin | No Pin | | | |
| 4 | -Vout | -Vout | | | |
| 5 | No Pin | No Pin | Common | | |
| 6 | +Vout | +Vout | +Vout | | |
| 7 | No Pin | No Pin | No Pin | | |
| No Pin = NC (No Connection) in Chassis Package | | | | | |

*For full series datasheet, please refer to www.minmax.com.tw

► Mechanical Dimensions



APM-40 Series • 40W • Medical & Industrial Safety



- Fully Encapsulated Plastic Case for PCB, Chassis and DIN-Rail Mounting Version
- Universal Input 85-264VAC, 47-440Hz
- Protection Class II as per IEC/EN 60536
- I/O Isolation 4000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -40°C to +80°C
- Overload/Voltage and Short Circuit Protection
- Designed-in EMI Emission meets EN55011/22/32 Class B & FCC Level B
- Designed-in EMC Immunity meets EN61000-4-2,3,4,5,6,8,11
- Medical EMC Standard meets 4th Edition of EMI EN55011 & EMS EN60601-1-2
- Medical Safety meets 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1
- UL508 Safety Approval Specifically for Industrial Application
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking

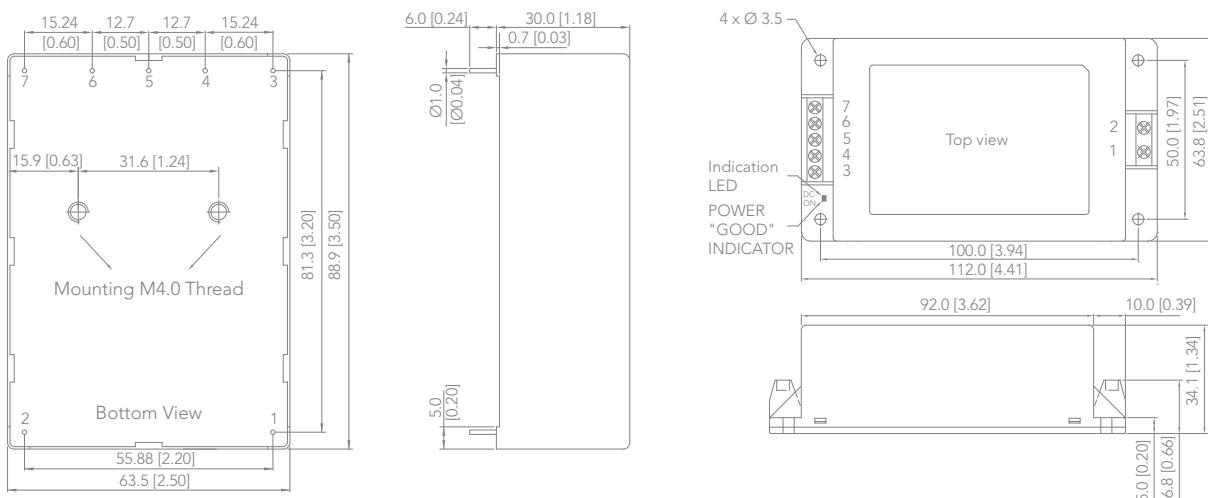


| ► Specifications | | ► Model Selection Guide | | | | | | | | | |
|-------------------------------|--------|-----------------------------------|-------------------|--------------------|-----------------------|------------|--|--|--|--|--|
| | | Model Number 85 – 264 | Input Voltage VAC | Output Voltage VDC | Output Current mA max | Efficiency | | | | | |
| Input Voltage Range | | | | | | | | | | | |
| Output Voltage Accuracy | | | | | | | | | | | |
| Line Regulation | | | | 5 | 8000 | 81% | | | | | |
| Load Regulation | Single | | | 12 | 3330 | 84% | | | | | |
| | Dual | | | 15 | 2660 | 85% | | | | | |
| Ripple & Noise (20MHz) 5V | | | | 24 | 1660 | 84% | | | | | |
| others | | | | ±12 | ±1660 | 84% | | | | | |
| Efficiency | | | | ±15 | ±1330 | 85% | | | | | |
| I/O Isolation Voltage | | ► Pin Connections (PCB & Chassis) | | | | | | | | | |
| Operating Ambient Temp. Range | | Pin | Single | Dual | | | | | | | |
| Overload Protection | | | | | | | | | | | |
| Short Circuit Protection | | | | | | | | | | | |
| Case Material | | | | | | | | | | | |
| Safety Approval | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

*For full series datasheet, please refer to www.minmax.com.tw

No Pin = NC (No Connection) in Chassis Package

► Mechanical Dimensions



AYM-60 Series • 60W • Medical & Industrial Safety



- Fully Encapsulated Plastic Case for PCB, Chassis and DIN-Rail Mounting Version
- Universal Input 85-264VAC, 47-440Hz
- Protection Class II as per IEC/EN 60536
- I/O Isolation 4000VAC with Reinforced Insulation
- Operating Ambient Temp. Range -40°C to +80°C
- Overload/Voltage and Short Circuit Protection
- Designed-in EMI Emission meets EN55011/22/32 Class B & FCC Level B
- Designed-in EMC Immunity meets EN61000-4-2,3,4,5,6,8,11
- Medical EMC Standard meets 4th Edition of EMI EN55011 & EMS EN60601-1-2
- Medical Safety meets 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1
- UL508 Safety Approval Specifically for Industrial Application
- UL/cUL/IEC/EN 60950-1 Safety Approval & CE Marking

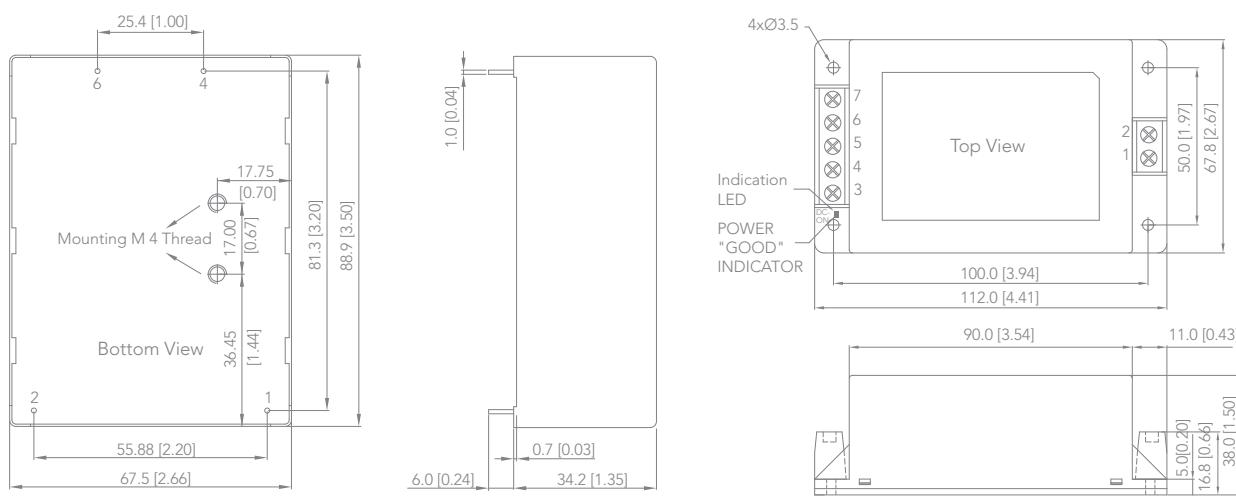


| ■ Specifications | | ■ Model Selection Guide | | | | |
|-----------------------------------|-------------------|-------------------------|-----------------------|------------|--|--|
| Model Number | Input Voltage VAC | Output Voltage VDC | Output Current mA max | Efficiency | | |
| AYM-60S051 | | 5.1 | 10000 | 84% | | |
| AYM-60S12 | | 12 | 5000 | 87% | | |
| AYM-60S15 | 85 – 264 | 15 | 4000 | 87% | | |
| AYM-60S24 | | 24 | 2500 | 87% | | |
| AYM-60S48 | | 48 | 1250 | 88% | | |
| ■ Pin Connections (PCB & Chassis) | | | | | | |
| Pin | PCB | Chassis | | | | |
| 1 | AC Neutral | AC Neutral | | | | |
| 2 | AC Line | AC Line | | | | |
| 3 | - | NC | | | | |
| 4 | +Vout | +Vout | | | | |
| 5 | - | NC | | | | |
| 6 | -Vout | -Vout | | | | |
| 7 | - | NC | | | | |

*For full series datasheet, please refer to www.minmax.com.tw

NC = No Connection

■ Mechanical Dimensions



MINMAX POWER SOLUTIONS 1-75W

General Purpose Power Solutions



1-5W SIP Package DC-DC Converters

- ♦ I/O Isolation Voltage 1000/1500/1600/3000VDC
- ♦ Operating Ambient Temp. Range -40°C to +95°C
- ♦ UL/cUL/IEC/EN 60950-1 ITE Safety Approval

1-6W SMD Package DC-DC Converters

- ♦ I/O Isolation Voltage 1000/1500/3000VDC
- ♦ Operating Ambient Temp. Range -40°C to +90°C
- ♦ UL/cUL/IEC/EN 60950-1 ITE Safety Approval

1-10W DIP Package DC-DC Converters

- ♦ I/O Isolation Voltage 1500/3000VDC
- ♦ Operating Ambient Temp. Range -40°C to +90°C
- ♦ UL/cUL/IEC/EN 60950-1 ITE Safety Approval

10-25W 1"x1" Package DC-DC Converters

- ♦ I/O Isolation Voltage 1500VDC
- ♦ Operating Ambient Temp. Range -40°C to +90°C
- ♦ UL/cUL/IEC/EN 60950-1 ITE Safety Approval

30-50W 2"x1" & 2"x1.6" Package DC-DC Converters

- ♦ High Efficiency up to 92%
- ♦ Operating Ambient Temp. Range -40°C to +85°C
- ♦ UL/cUL/IEC/EN 60950-1 ITE Safety Approval

20-60W Chassis & DIN-Rail Mounting DC-DC Converters

- ♦ I/O Isolation Voltage 2500VDC
- ♦ Operating Ambient Temp. Range -40°C to +90°C
- ♦ UL/cUL/IEC/EN 60950-1 ITE Safety Approval & CE Marking

0.5-1A Switching Regulators

- ♦ Pin-out compatible with LM78xx Linear Regulator
- ♦ Excellent Efficiency up to 97%
- ♦ Operating Ambient Temp. Range -40°C to +90°C

2-60W AC-DC Power Supplies

- ♦ I/O Isolation Voltage 3000VAC with Reinforced Insulation
- ♦ Operating Ambient Temp. Range -30°C to +70°C
- ♦ UL/cUL/IEC/EN 60950-1 ITE Safety Approval

Ultra-high Isolation Power Solutions



1-20W Ultra-high Isolation DC-DC Converters

- ♦ I/O Isolation Voltage 5200/8000/9000VDC with Reinforced Insulation
- ♦ Operating Ambient Temp. Range -40°C to +95°C
- ♦ UL/cUL/IEC/EN 60950-1 ITE Safety Approval



3-75W Railway Certified DC-DC Converters

- ♦ I/O Isolation Voltage 3000VAC with Reinforced Insulation
- ♦ Operating Ambient Temp. Range -40°C to +95°C
- ♦ Railway Certified meets EN50155 (IEC60571) & EN45545-2

Railway Certified Power Solutions



1-20W Medical Safety DC-DC Converters

- ♦ I/O Isolation Voltage 3000/4000/4200/5000VAC with Reinforced Insulation
- ♦ Medical Safety meets 2xMOOP/2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1
- ♦ UL/cUL/IEC/EN 60950-1 ITE Safety Approval

24-60W Medical Safety AC-DC Power Supplies

- ♦ I/O Isolation Voltage 4000VAC with Reinforced Insulation
- ♦ Medical Safety meets 2xMOPP per 3rd Edition of IEC/EN 60601-1 & ANSI/AAMI ES60601-1
- ♦ UL/cUL/IEC/EN 60950-1 ITE Safety Approval

Medical Safety Power Solutions

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www.minmaxpower.com