

DC/DC-AC/DC Converters

- Rated up to 255 Watts
- UL, cUL Recognized
- Isolations to 12kV for Medical Applications
- ROHS Compliant
- Short Lead Times
- High MTBF Rates
- Continuous Short Circuit Protected
- Switching Regulators
- SIP, DIP, SMD, DIN Rail and Chassis Mounting

DC-DC Converter



- $\pm 5\%$, $\pm 10\%$ input range
- Regulated and unregulated output
- Continuous short circuit protection
- High isolation up to 12KVDC
- Operating temperature up to 105°C
- Low ripple & noise
- Medical standard compliance
- Meet RoHS, CE, UL standard

DC-DC Fixed Input, Isolated, Unregulated Series

SMD Package



SIP Package



DIP Package



Series	Power/Current	Input Voltage (VDC)	Output Voltage (VDC)	Isolation (VDC)	Package
MHK8S03B	3.5mA	7.5	3.3	1KVDC	SIP
M1WCB_XT	1W	5	5	1KVDC	SMD
M1WCB_D	1W	5	5	1KVDC	SIP
MW2B_XTR2	0.25W	5, 12, 24	5, 12	1.5KVDC	SMD
M1WB_XTR2	1W	3.3, 5, 12, 15, 24	3.3, 5, 12, 15, 24	1.5KVDC	SMD
M1WF_XTR2	1W	3.3, 5, 12, 15, 24	3.3, 5, 12, 15, 24	3KVDC	SMD
M1WA_SR2	1W	5, 12, 24	$\pm 5, \pm 12, \pm 15, \pm 24$	1.5KVDC	SIP
M1WB_LSR2	1W	5, 12, 24	5, 12, 15, 24	1.5KVDC	SIP
M1WB_SR2	1W	3.3, 5, 12, 24	3.3, 5, 9, 12, 15, 24	1.5KVDC	SIP
M1WB_DR2	1W	3.3, 5, 12, 24	3.3, 5, 9, 12, 15, 24	1.5KVDC	DIP
M1WE_SR2	1W	5, 12, 24	$\pm 5, \pm 12, \pm 15, \pm 24$	3KVDC	SIP
M1WF_SR2	1W	5, 12, 24	5, 12, 15, 24	3KVDC	SIP
M1WG_S	1W	5, 12, 24	$\pm 5, \pm 9, \pm 12, \pm 15$	6KVDC	SIP
M1WH_S	1W	5, 12, 24	3.3, 5, 9, 12, 15	6KVDC	SIP
M1WAY_D	1W	12	± 12	12KVDC	SIP
M1WBY_D	1W	12	12	12KVDC	SIP
M2WA_SR2	2W	5, 12, 24	$\pm 5, \pm 12, \pm 15, \pm 24$	1.5KVDC	SIP
M2WB_SR2	2W	5, 12, 24	5, 12, 15, 24	1.5KVDC	SIP
M2WE_SR2	2W	5, 12, 24	$\pm 5, \pm 12, \pm 15, \pm 24$	3KVDC	SIP
M2WF_SR2	2W	5, 12, 24	5, 12, 15, 24	3KVDC	SIP
M2WG_S	2W	5, 12, 24	$\pm 5, \pm 9, \pm 12, \pm 15$	6KVDC	SIP
M2WH_S	2W	5, 12, 24	3.3, 5, 9, 12, 15	6KVDC	SIP
M3WB_T	3W	5	5	1.5KVDC	SMD

DC-DC Fixed Input, Isolation, Regulated Series

SIP Package



Series	Power	Input Voltage (VDC)	Output Voltage (VDC)	Isolation (VDC)	Package
M1WIA_KS	1W	5, 12, 24	$\pm 5, \pm 12, \pm 15$	1KVDC	SIP
M1WIB_LS	1W	5, 12, 24	5, 12, 15	1KVDC	SIP
M1WIE_KS	1W	5, 12, 24	$\pm 5, \pm 12, \pm 15$	3KVDC	SIP
M1WIF_S	1W	5, 12, 24	5, 12, 15	3KVDC	SIP
M2WIA_KS	2W	5, 12, 24	$\pm 5, \pm 12, \pm 15$	1KVDC	SIP
M2WIB_S	2W	5, 12, 24	5, 12, 15	1KVDC	SIP
M2WIF_S	2W	5, 12, 24	5, 12, 15	3KVDC	SIP

DC-DC Wide Input, non-isolated, Regulated Series

SMD Package



SIP Package



Series	Current	Input Voltage (VDC)	Output Voltage (VDC)	Description	Package
M78xx05R2	500mA	4.75~32	3.3, 5, 6.5, 9, -3.3, -5, -6.5, -9	High efficiency, negative output continuous short circuit protection	SIP
M78xx10M	1000mA	4.75~20	1.5, 1.8, 2.5, 3.3, 5	High efficiency, continuous short circuit protection	SIP
M78xx10	1000mA	4.75~32	1.5, 1.8, 2.5, 3.3, 5, 6.5, 9, 12, 15	High efficiency, continuous short circuit protection	SIP
M78xx10L	1000mA	4.75~32	1.5, 1.8, 2.5, 3.3, 5, 6.5, 9, 12, 15	High efficiency, continuous short circuit protection	SIP
M78xx15	1500mA	4.75~18	1.5, 1.8, 2.5, 3.3, 5, 6.5	High efficiency, continuous short circuit protection	SIP
M78xx15L	1500mA	4.75~18	1.5, 1.8, 2.5, 3.3, 5, 6.5	High efficiency, continuous short circuit protection	SIP
M78xx20	2000mA	4.75~18	1.5, 1.8, 2.5, 3.3, 5, 6.5	High efficiency, continuous short circuit protection	SIP
M78xx20L	2000mA	4.75~18	1.5, 1.8, 2.5, 3.3, 5, 6.5	High efficiency, continuous short circuit protection	SIP
M78xx05T	500mA	4.5~28	3.3, 5, 9, 12, 15	High efficiency, continuous short circuit protection	SMD
M78xx10T	1000mA	5~18	1.5, 1.8, 2.5, 3.3, 5, 6.5	High efficiency, continuous short circuit protection	SMD
M78xx05U	500mA	9~72	3.3, 5, 6.5, 9, 12, 15, 24	High efficiency, continuous short circuit protection	SIP
M78xx05UL	500mA	9~72	3.3, 5, 6.5, 9, 12, 15, 24	High efficiency, continuous short circuit protection	SIP

AC-DC Converter

- Cost effective, high reliability, high isolation, lower ripple & noise
- High efficiency, low consumption
- EMC meet EN55022 & IEC61000
- Multiple package options: module, open-frame, DIN rail, and chassis mounting
- Multiple protection: over current, over voltage, and short circuit protection
- Meet ROHS, CE, UL standard
- Widely used in field of new energy, electric power industry, smart grid, instrument, and medical equipment

MA-D Series, 1~20W, Small Dimension



Series	Power	Input Voltage	Output Voltage (VDC)	Isolation (VAC)
MA01-D10B	1W	85~305VAC, 120~430VDC	3.3,5,9,12,15,24	3KVAC
MA02-D10B	2W	85~305VAC, 120~430VDC	3.3,5,9,12,15,24	3KVAC
MA03-D10B	3W	85~264VAC, 120~370VDC	3.3,5,9,12,15,24	3KVAC
MA05-D20B	5W	85~264VAC, 120~370VDC	3.3,5,9,12,15,24	4KVAC
MA10-D20B	10W	85~264VAC, 120~370VDC	3.3,5,9,12,15,24	4KVAC
MA10-D20B-MU	10W	85~264VAC, 120~370VDC	3.3,5,9,12,15,24	4KVAC
MA12-D20B	12W	85~264VAC, 120~370VDC	3.3,5,12,15,24	4KVAC
MA20-D10B	20W	85~264VAC, 120~370VDC	3.3,5,12,15,24	3KVAC

MA-H Series, 5~25W



Series	Power	Input Voltage	Output Voltage (VDC)
MA05-H	5W	85~264VAC, 120~370VDC	3.3,5,9,12,15,24, ± 5 , ± 12 , ± 15 , ± 24 5/5,5/12,5/15,5/24, 5/ ± 5 ,5/ ± 12 ,5/ ± 15 ,5/ ± 24
MA10-H	10W	85~264VAC, 120~370VDC	3.3,5,9,12,15,24, ± 5 , ± 12 , ± 15 , ± 24 5/5,5/12,5/15,5/24, 5/ ± 5 ,5/ ± 12 ,5/ ± 15
MA15-H	15W	85~264VAC, 120~370VDC	3.3,5,9,12,15,24, ± 5 , ± 12 , ± 15 5/5,5/12,5/15,5/24, 5/ ± 5 ,5/ ± 12 ,5/ ± 15 ,5/ ± 24
MA20-H	20W	85~264VAC, 120~370VDC	3.3,5,9,12,15,24, ± 5 , ± 12 , ± 15 5/12,5/15,5/24, 5/ ± 5 ,5/ ± 12 ,5/ ± 15 ,5/ ± 24
MA25-H	25W	85~264VAC, 120~370VDC	3.3,5,9,12,15,24,48
MA40-H	40W	85~264VAC, 120~370VDC	3.3,5,9,12,15,24,5/12,5/24
MA60-H	60W	90~264VAC, 122~370VDC	5,9,12,15,24,48

MA-B Series, 3~15W, High Reliability



Series	Power	Input Voltage	Output Voltage (VDC)
MA03-B	3W	85~264VAC, 120~370VDC	3.3,5,9,12,15,24
MA05-B	5W	85~264VAC, 120~370VDC	3.3,5,9,12,15,24, ± 5 , ± 12 , ± 15 , ± 24 5/5,5/12,5/15,5/24
MA10-B	10W	85~264VAC, 120~370VDC	3.3,5,9,12,15,24, ± 5 , ± 12 , ± 15 , 5/5
MA15-B	15W	85~264VAC, 120~370VDC	3.3,5,12,15,24

MA-LI Series, Din-Rail Up to 900W



Series	Power	Input Voltage	Output Voltage (VDC)	Isolation (VAC)
MA24LI	24W	90~264VAC, 120~370VDC	5,12,24	3KVAC
MA72LI	72W	165~264VAC	24	4KVAC

MA-S Series, Low Cost



Series	Power	Input Voltage	Output Voltage (VDC)	Isolation (VAC)
MA01-S	1W	85~264VAC, 100~400VDC	5,9,12,15,24	3KVAC
MA03-SR2	3W	85~264VAC, 100~400VDC	5,9,12,15,24	3KVAC
MA05-S	5W	85~264VAC, 100~400VDC	5,9,12,15,24	3KVAC

Special for Electric Power Industry



Series	Power	Input Voltage	Output Voltage (VDC)	Isolation (VAC)
MA30-M	30W	85~264VAC, 90~370VDC	5/ ± 12 /24	2KVAC
MA05-HE	5W	85~264VAC, 120~370VDC	9,24, 5/24	3KVAC
MA10-HER2	10W	85~264VAC, 120~370VDC	12,24, 5/5,5/12,5/24	3KVAC
MA15-HER2	15W	85~264VAC, 120~370VDC	5,12,24, 5/12,5/24	3KVAC
MA25-HER2	25W	85~264VAC, 120~370VDC	5,12,24	3KVAC
MA10-O24B	6.5W	30~280VAC, 30~400VDC	5,12,13	4KVAC
MA10-O26D	10W	65~460VAC, 90~650VDC	5/12	4KVAC
MA18-O26C	18W	65~460VAC, 90~650VDC	5.6/13/13	4KVAC

DC-DC Converter



- 2:1, 4:1 input range
- Isolated and non-isolated output
- Six-sided metal shielding package
- Remote control and output trimming
- Meet EN55022 CLASS A without external components
- Meet RoHS, CE, UL standard
- Multiple protection: Under/over voltage, over temperature, and short circuit protection

DC-DC Wide Input, Isolated, Regulated Series

SMD Package



SIP Package



DIP Package



Chassis Mounting Package



Din-Rail Mounting Package



	Series	Power	Input Voltage	Output Voltage (VDC)	Isolation (VDC)	Package
Wide Input (2:1)	M11WVRA_SR2 M11WVRB_SR2	1W	4.5~9, 9~18, 18~36, 36~75	±5, ±12, ±15 5, 12, 15, 24	1.5KVDC	SIP
	M11WVRE_SR2 M11WVRF_SR2	1W	4.5~9, 9~18, 18~36, 36~75	±5, ±12, ±15 5, 12, 15, 24	3KVDC	SIP
	M3WVWRB_MTR2	3W	4.5~9, 9~18, 18~36, 36~75	5, 12, 15	1.5KVDC	SMD
	M3WVWRA_SR2 M3WVWRB_SR2	3W	4.5~9, 9~18, 18~36, 36~75	±5, ±12, ±15 5, 12, 15, 24	1.5KVDC	SIP
	M3WVWRE_SR2 M3WVWRF_SR2	3W	4.5~9, 9~18, 18~36, 36~75	±5, ±12, ±15 5, 12, 15, 24	3KVDC	SIP
	M3WVWRA_(Z)PR2 M3WVWRB_(Z)PR2	3W	4.5~9, 9~18, 18~36, 36~75	±5, ±12, ±15 5, 12, 15, 24	1.5KVDC	DIP
	M3WVWRE_PR2 M3WVWRF_PR2	3W	4.5~9, 9~18, 18~36, 36~75	±5, ±12, ±15 5, 12, 15	3KVDC	DIP
	M6WVRA_ZPR2 M6WVRB_ZPR2	6W	9~18, 18~36, 36~75	±5, ±12, ±15 3.3, 5, 12, 15	1.5KVDC	DIP
	M6WVRA_YMDR2 M6WVRB_YMDR2	6W	9~18, 18~36, 36~75	±5, ±12, ±15 3.3, 5, 12, 15, 24	1.5KVDC	DIP
	M10WVRA_(X)DR2 M10WVRB_(X)DR2	10W	9~18, 18~36, 36~75	±5, ±12, ±15 3.3, 5, 12, 15, 24	1.5KVDC	DIP
	M15WVRA_LDR2 M15WVRB_LDR2	15W	9~18, 18~36, 36~75	±5, ±12, ±15 3.3, 5, 12, 15	1.5KVDC	DIP
	M20WVRA_LDR2 M20WVRB_LDR2	20W	9~18, 18~36, 36~75	±5, ±12, ±15 3.3, 5, 12, 15	1.5KVDC	DIP
Ultra-wide Input (4:1)	M30WVRB_LDR2	30W	18~36, 36~75	3.3, 5, 12, 15	1.5KVDC	DIP
	M50WVRB_LD	50W	18~36, 36~75	3.3, 5, 12, 15	1.5KVDC	DIP
	M3WPWB_ZPR2	3W	9~36, 18~75	5, 12, 15	1.5KVDC	DIP
	M6WURA_ZPR2 M6WURB_ZPR2	6W	9~36, 18~75	±5, ±12, ±15 3.3, 5, 12, 15	1.5KVDC	DIP
	M6WURF_PR2	6W	9~36, 18~75	5, 12, 15	3KVDC	DIP
	M6WURA_YMDR2 M6WURB_YMDR2	6W	9~36, 18~75	±5, ±12, ±15 3.3, 5, 12, 15, 24	1.5KVDC	DIP
	M10WURA_(X)DR2 M10WURB_(X)DR2	10W	9~36, 18~75	±5, ±12, ±15 3.3, 5, 12, 15, 24	1.5KVDC	DIP
	M15WURA_LDR2 M15WURB_LDR2	15W	9~36, 18~75	±5, ±12, ±15 3.3, 5, 12, 15	1.5KVDC	DIP
	M20WURA_LDR2 M20WURB_LDR2	20W	9~36, 18~75	±5, ±12, ±15 3.3, 5, 12, 15, 24	1.5KVDC	DIP
	M20WURB_YMD	20W	9~36, 18~75	3.3, 5, 12, 15, 24	1.5KVDC	DIP
	M30WURA_DR2 M30WURB_DR2 M30WURC_DR2	30W	9~36, 18~75	±5, ±12, ±15 5, 12, 15 3.3/±12, 3.3/±15, 5/±12, 5/±15	1.5KVDC	DIP
	M6WURB1D_YMD	6W	40~160	5, 12, 15, 24	1.5KVDC	DIP
	M10WURB1D_XD	10W	40~160	5, 12, 15, 24	1.5KVDC	DIP
	M15WURB1D_LD	15W	40~160	5, 12, 15, 24	1.5KVDC	DIP
	M20WURB1D_LD	20W	40~160	5, 12, 15, 24	1.5KVDC	DIP
	M1WURB_LD	1000mA	9~36	3.3	1.5KVDC	DIP
	M2WURB_LD	2000mA	9~36	4.2	1.5KVDC	DIP
	M3WURB_LD	3000mA	9~36	3.3, 3.7	1.5KVDC	DIP

DC/DC Converter/PV/EMC Auxiliary Device/LED & IGBT Driver

High Wattage DC/DC converters



Series	Power	Input Voltage (VDC)	Output Voltage (VDC)	Isolation (VDC)	Package
PD75_W	75W	9-36, 18-75	3.3, 5, 12, 15, 24, 28, 48	2.25KVDC	DIP/Terminal Block
PD100HAE	100W	9-18, 18-36, 36-75	3.3, 5, 12, 15, 24, 28, 48	2.25KVDC	DIP/Terminal Block
PD100	100W	18-36, 36-75	1.8, 2.5, 3.3, 5, 12, 15	1.6KVDC	DIP
PD150	150W	9-36, 18-75	12, 15, 24, 28, 48	2.25KVDC	Chassis Mount
PD200	255W	8.5-22, 16.5-36, 33-75	3.3, 5, 12, 15, 24, 28, 48, 53	2.25KVDC	DIP/Terminal Block

M_PV Series, Overwide and Overhigh Input Voltage



Series	Power	Input Voltage (VDC)	Output Voltage (VDC)	Isolation (VDC)	Description
M5W_PV	5W	200~1200	5	4KVDC	High efficiency and reliability
M10W_PV	10W	200~1200	5,9,24	4KVDC	High efficiency and reliability
M15W_PV	15W	100~1200	12,24	4KVDC	High efficiency and reliability

EMC Auxiliary Device



Series	Function	Input Voltage (VDC)	Weight (g)	Description
MXC_L01D	EMC filter	85~264	50	Used with AC-DC converter
MXC_L01D2	EMC filter	85~264	85	Used with AC-DC converter
MXC_C01D	EMC filter	40~160	40	Used with M6WURB1D_YMD and M6WURB1_XD
MXC_CX1D	EMC filter	40~160	40	Used with M15WURB1D-LD and M20WURB1D-LD
MXI_B03D	EMC filter	0~80	15	Used with DC-DC converter which power Within 20W
MXL2D	Anti-jamming filter	/	4.5,5,7.5	/
MXS_A01D	Surge suppressor	0~40	25	Used with DC-DC converter which power Within 3W
MXT_AX1D	EFT suppressor	0~40	25	Used with DC-DC converter which power Within 10W
MXT_BX1D	EFT suppressor	0~80	25	Used with DC-DC converter which power Within 10W

LED Driver



Series	Input Voltage (VDC)	Vout (VDC)	Iout (mA)	Efficiency	Description
ML24H_R	5.5~46	3.3~36	0~300,0~350,0~500,0~600,0~700	95%	PWM and analog dimming
ML24H_1	5.5~48	3.3~36	1000	97%	PWM and analog dimming
ML24H_12	5.5~48	3.3~36	1200	97%	PWM and analog dimming
ML24W	5.5~48	3.3~36	0~300,0~350,0~500,0~600,0~700	96%	PWM and analog dimming
ML24RT	5.5~48	3.3~36	0~300,0~350,0~500,0~600,0~700	96%	PWM and analog dimming

IGBT Driver Optocouple Isolated and With Isolation Power Source Series



Series	VCE Max	Power Supply VCC (VDC)	Gate Voltage	Output Peak Current	Max. Frequency	Driving Channels	Isolation (VAC)
MIP12W05S-37	1700V	15	+15V/-8V	±5A	20KHz	1	3750VAC
MIP12W05S-37A	1700V	12	+15V/-8V	±5A	20KHz	1	3750VAC

Series	VCE Max	Power Supply VCC (VDC)	Power Supply VEE (VDC)	Gate Voltage	Output Peak Current	Max. Frequency	Driving Channels	Isolation (VAC)
MIC962	1700V	15	-10	+15V/-8V	±5A	20KHz	1	3750VAC

IGBT Driver Assistant Power Series



Series	Input (VDC)	Positive Output (VDC)	Negative Output (VDC)	Input Range	Max. Output Avg. Current	Efficiency	Isolation
MIA01	15	+15	-8.7	±3%	80mA/40mA	80%	3000VAC
MIA01-09	15	+9	/	±3%	110mA	80%	3000VAC
MIA01-A09	15	+9	-9	±3%	55mA/55mA	80%	3000VAC
MIA01-17	15	+17	-8.6	±3%	80mA/40mA	80%	3000VAC
MIA02	12	+15	-8.7	±3%	80mA/40mA	80%	3000VAC
MIA03	24	+15	-8.7	±3%	80mA/40mA	80%	3000VAC
MIA04	12	+15	-8	±25%	100mA/80mA	80%	3000VAC
MIAW01	12	+15	-9	9~18	±200mA	85%	3000VDC
MIAW02	24	+15	-9	18~36	±200mA	85%	3000VDC

For more information



See our Power Supply Catalog for AC/DC products



See our Power Cord Catalog for AC cables and related products

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