



Available  
 Through  
 Distribution

T-57-11

These units are ideally suited for telecommunications and applications with a widely varying input voltage, such as automotive test equipment, process control, minicomputers, and geosurvey equipment.



**Special Features**

- 4:1 ultra wide input range  
 9-36 Vdc  
 20-72 Vdc
- Remote on/off
- 85% efficiency
- Continuous short circuit protection
- Six-sided shielding

The 15-watt MS/MT Series operates over an ultra wide input range of 9 to 36 Vdc or 20 to 72 Vdc. Efficiencies of 85% are typical over varying load conditions of 20% to 100%. Additional features include input reverse polarity protection, remote on/off control, logic compatible with CMOS or open collector TTL, short circuit protection with auto restart, overvoltage protection, and an operating temperature range of -25°C to +71°C with no derating. Units are packaged in a six-sided, continuous, shielded case for EMI/RFI protection and measure 2.0" x 2.0" x 0.4". In addition, the MT Series single and dual outputs offer output trim capability.

**Electrical Specifications**

**Input**

Vin - nominal	24, 48
Voltage range	9-36 Vdc, 20-72 Vdc
Input filtering	Pi
Reflected ripple	< 100 mA
Remote on/off control	MT Series only

**Output**

Voltage tolerance	±1% main output, ± 3% auxiliary
Ripple and noise	50 mV p-p (max)*
Short circuit protection	Power foldback, auto restart
Temperature coefficient	0.02% / °C max
Output trim	MT Series single & duals only

**General**

Regulation:	<u>Main</u>	<u>Aux.</u>	
	Line	± 0.25%	± 2%
	Load	± 0.25%	± 3%
(See Notes 1, 2 on reverse side.)			
Efficiency	85% (typ)		
I/O isolation	500 Vdc - input to output		
Switching frequency	125 kHz ± 10%		

**Environmental**

Operating temperature range:  
 -25°C to +71°C (no derating)

Storage temperature:  
 -40°C to +105°C

Cooling:  
 Free air convection

**Notes**

\* Measured with 3.3 µF 25 V tantalum capacitor across each output.

All specifications are typical at nominal line and full load at +25°C unless otherwise noted.

Specifications subject to change without notice.

**DC/DC Converters**  
 15 Watts  
 MS/MT Series

www.DataSheet4U.com

# DC/DC Converters



ASTECS STANDARD POWER  
Division of Astec America Inc.  
401 Jones Road  
Oceanside, CA 92054-1216  
Telephone: 619-757-1880  
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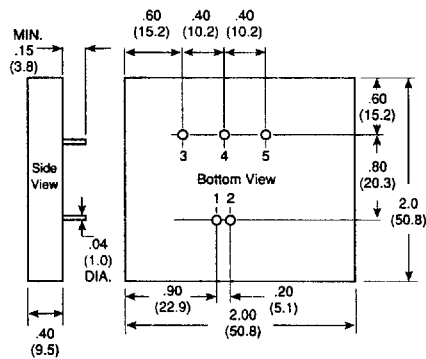
ASTECS STANDARD POWER EUROPE  
A Division of Astec Europe Limited  
Unit 2B, Carlisle Close, Sheffield Road  
Chesterfield S41 9ED, UK  
Telephone: 0246-455946  
Facsimile: 0246-450428

## Ordering Information

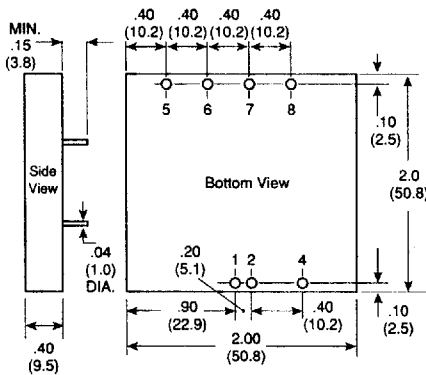
	Input Voltage	Output Voltage	Output Current	Case 1 Model Number	SCI Equivalent Model Number	Case 2 Model Number	SCI Equivalent Model Number	Regulation % Line ±	Regulation % Load ±
Single	9 - 36 V	5 Vdc	3000 mA	MSS2300-8	JA11-300-18	MTS2300-8	JP11-300-18	0.25	0.25
	20 - 72 V	5 Vdc	3000 mA	MSS2300-9	JA11-300-48	MTS2300-9	JP11-300-48	0.25	0.25
	9 - 36 V	12 Vdc	1250 mA	MSS3125-8	JA12-125-18	MTS3125-9	JP12-125-18	0.25	0.25
	20 - 72 V	12 Vdc	1250 mA	MSS3125-9	JA12-125-48	MTS3125-9	JP12-125-48	0.25	0.25
	9 - 36 V	15 Vdc	1000 mA	MSS4100-8	JA13-100-18	MTS4100-8	JP13-100-18	0.25	0.25
	20 - 72 V	15 Vdc	1000 mA	MSS4100-9	JA13-100-48	MTS4100-9	JP13-100-48	0.25	0.25
Dual	9 - 36 V	± 12 Vdc	± 625 mA	MSD3125-8	JA22-125-18	MTD3125-8	JP22-125-18	0.25	0.25
	20 - 72 V	± 12 Vdc	± 625 mA	MSD3125-9	JA22-125-48	MTD3125-9	JP22-125-48	0.25	0.25
	9 - 36 V	± 15 Vdc	± 500 mA	MSD4100-8	JA23-100-18	MTD4100-8	JP23-100-18	0.25	0.25
	20 - 72 V	± 15 Vdc	± 500 mA	MSD4100-9	JA23-100-48	MTD4100-9	JP23-100-48	0.25	0.25
Triple	9 - 36 V	+ 5 / ± 12 Vdc	1500 / ± 310 mA			MTT23210-8	JP34-210-18	0.25/3.0	0.25/3.0
	20 - 72 V	+ 5 / ± 12 Vdc	1500 / ± 310 mA			MTT23210-9	JP34-210-48	0.25/3.0	0.25/3.0
	9 - 36 V	+ 5 / ± 15 Vdc	1500 / ± 200 mA			MTT24200-8	JP35-200-18	0.25/3.0	0.25/3.0
	20 - 72 V	+ 5 / ± 15 Vdc	1500 / ± 200 mA			MTT24200-9	JP35-200-48	0.25/3.0	0.25/3.0

## Drawings

Case 1

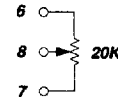


Case 2



## Notes

- Four to eight pins 0.040 (1.0) dia. x 020 (5.1) Lg Min.
- All dimensions are in inches and (mm).
- Load regulation from minimum load to full load with all other outputs at rated load.
- Minimum current of 10% full load required on main output and auxiliaries.
- Maximum total power from all outputs is 15 watts, and no output is to exceed its maximum rated current.
- Shield connected to Output Common or -Output.
- External output trimming: output may be externally trimmed ± 10% (MT single and dual only).
- Remote On/Off Control (pin 4) referenced to Input Minus (pin 2).  
On - greater than 2.0 Vdc or open circuit.  
Off - less than 1.6 Vdc or short circuit (MT Series only).



## Pin Assignments

Single Output			Dual Output			Triple Output	
Pin	Case 1	Case 2	Pin	Case 1	Case 2	Pin	Case 2
1	+Input	+Input	1	+Input	+Input	1	+Input
2	-Input	-Input	2	-Input	-Input	2	-Input
3	+Output	No pin	3	+Output	No pin	3	No pin
4	No pin	Remote on/off	4	Common out	Remote on/off	4	Remote on/off
5	-Output	No pin	5	-Output	+Output	5	+V2 out (12 V or 15 V)
6		+Output	6		Common out	6	+V1 out (5 V)
7		-Output	7		-Output	7	Common out
8		Trim	8		Trim	8	-V3 out (12 V or 15 V)