



**TRI-MAG, Inc.**  
 ® your POWER Specialists

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# HIGH DENSITY, Low Profile TLW50-TLW400(50-400W) SERIES

DC-DC CONVERTER  
 2:1 Wide Range Input

## FEATURES

- Remote Sense
- Current Limit
- Over voltage Protection
- Thermal Shutdown
- Inhibit and load share (option)
- PC Mountable
- High Stable Regulated Output
- Thermally Conductive Encapsulant
- 100% Burn-in And Triple Tested
- MTBF > 500,000 Minimum

## APPLICATIONS

- Computer & Local Area Network
- N + 1 Redundant Systems
- Telecommunications
- Industrial And Testing Equipment
- Battery-Powered Equipment
- Medical Equipment
- Distributed Power Systems



## ELECTRICAL SPECIFICATIONS

Input Voltage Range	TLW Series (2:1)
Output voltage Accuracy	±2%
Load Regulation	±0.1%
Line Regulation	±0.1%
Ripple & Noise (Pk-Pk, DC - 20MHz)	2% of nominal output voltage
Short Circuit Protection	120% of full load
OverVoltage Protection	120% to 140% of nominal output voltage
Transient Response	500µs (micro second)
Thermal Shutdown	100°C on base plate

## GENERAL SPECIFICATIONS

Optional Inhibit (On/Off)	2mA sink & saturation voltage < 0.75V (Device)			
Efficiency (at full load)	80% Typical			
Operating Frequency	300KHz Typical			
Isolation Voltage	<u>Input to</u>	<u>Input to</u>	<u>Output to</u>	
	Series	Output	Baseplated	Baseplated
	TLW200	3750VAC	2500VAC	500VDC
	TLW400	3750VAC	1500VDC	500VDC
	TLW75	1500VDC	1500VDC	500VDC
TLW50	1500VDC	500VDC	500VDC	
Base Plate Operating Temperature	-25°C to +100°C			
Storage Temperature	-40°C to +100°C			
Isolation Resistance	10 <sup>9</sup> Ohms, min.			
Reflected Ripple Current	30mA, typical			
Case Material	Non-conductive plastic with metal base			



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**200 WATT: 2:1 WIDE RANGE INPUT, SINGLE OUTPUT**

Model-Type	Input Voltage (VDC)	Input Current A (typ)	Output Voltage (VDC)	Output Current A (max)
TLW200-2403S	18-36 (24)	10.5	3.3	40
TLW200-2405S	18-36 (24)	11.0	5	30
TLW200-2410S	18-36 (24)	13.5	10	20
TLW200-2412S	18-36 (24)	14.5	12	17
TLW200-4803S	36-65 (48)	7.0	3.3	50
TLW200-4805S	36-65 (48)	7.5	5	40
TLW200-4810S	36-65 (48)	7.0	10	20
TLW200-4812S	36-65 (48)	7.0	12	17
TLW200-7203S	50-100 (72)	4.5	3.3	50
TLW200-7205S	50-100 (72)	5.5	5	40
TLW200-7210S	50-100 (72)	5.0	10	20
TLW200-7212S	50-100 (72)	5.5	12	17
TLW200-2C03S	100-200(155)	2.5	3.3	50
TLW200-2C05S	100-200(155)	2.5	5	40
TLW200-2C10S	100-200(155)	2.5	10	20
TLW200-2C12S	100-200(155)	2.5	12	17
TLW200-2C15S	100-200(155)	2.5	15	10
TLW200-3C03S	200-400(300)	1.5	3.3	50
TLW200-3C05S	200-400(300)	1.5	5	40
TLW200-3C10S	200-400(300)	1.5	10	20
TLW200-3C12S	200-400(300)	1.5	12	17
TLW200-3C15S	200-400(300)	1.0	15	10

**50 WATT: 2:1 WIDE RANGE INPUT, SINGLE OUTPUT**

Model-Type	Input Voltage (VDC)	Input Current mA (typ)	Output Voltage (VDC)	Output Current A (max)
TLW050-4803S	36-72(48)	870	3.3	10
TLW050-4805S	36-72(48)	1250	5	10
TLW050-4812S	36-72(48)	1220	12	4.16
TLW050-4815S	36-72(48)	1220	15	3.33

**75 WATT: 2:1 WIDE RANGE INPUT, SINGLE OUTPUT**

Model-Type	Input Voltage (VDC)	Input Current mA (typ)	Output Voltage (VDC)	Output Current A (max)
TLW075-4803S	36-72(48)	1210	3.3	15
TLW075-4805S	36-72(48)	1830	5	15
TLW075-4812S	36-72(48)	1830	12	6.25
TLW075-4815S	36-72(48)	1830	15	5.0

**400 WATT: 2:1 WIDE RANGE INPUT, SINGLE OUTPUT**

Model-Type	Input Voltage (VDC)	Input Current A (typ)	Output Voltage (VDC)	Output Current A (max)
TLW400-4803S	36-72(48)	8.10	3.3	100
TLW400-4805S	36-72(48)	9.80	5	80
TLW400-4812S	36-72(48)	10.00	12	34
TLW400-4815S	36-72(48)	10.00	15	27
TLW400-4824S	36-72(48)	10.00	24	17
TLW400-3C03S	220-380(300)	1.29	3.3	100
TLW400-3C05S	220-380(300)	1.60	5	80
TLW400-3C12S	220-380(300)	1.60	12	34
TLW400-3C15S	220-380(300)	1.60	15	27

**100 WATT: 2:1 WIDE RANGE INPUT, SINGLE OUTPUT**

Model-Type	Input Voltage (VDC)	Input Current mA (typ)	Output Voltage (VDC)	Output Current A (max)
TLW100-4803S	36-72(48)	2426	3.3	30
TLW100-4805S	36-72(48)	2450	5	20
TLW100-4810S	36-72(48)	2450	12	8.3

**NOTE:**

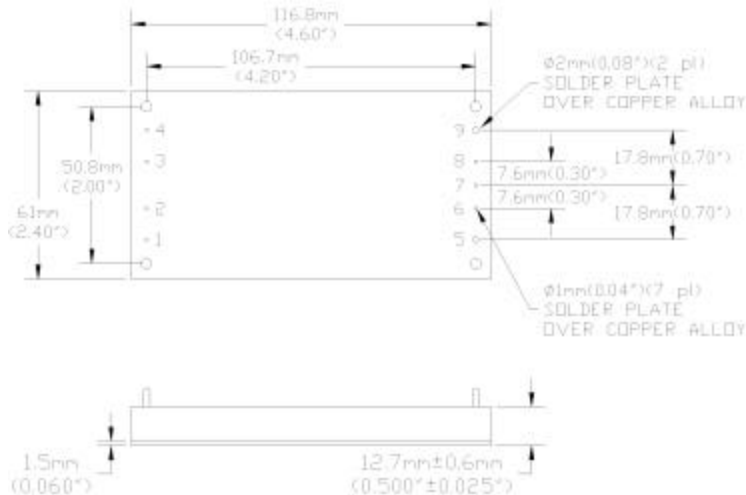
1. THE MAXIMUM CURRENT RATINGS ARE VALID ONLY IF THE BASE-PLATE TEMPERATURE IS HELD BELOW 100°C.
2. FOR OUTPUT CONFIGURATION OTHER THAN SHOWN ABOVE, PLEASE CONSULT THE MANUFACTURER.
3. PROPER HEAT SINK IS REQUIRED FOR ALL MODELS.
4. SCREW TERMINAL TYPE IS ALSO AVAILABLE.
5. FOR FRONT-END RECTIFIER AND POWER FACTOR CORRECTION PLEASE REFER TO SWITCHING POWER SUPPLY CATALOG TFE600 SERIES.
6. APPLICATION NOTES AVAILABLE.



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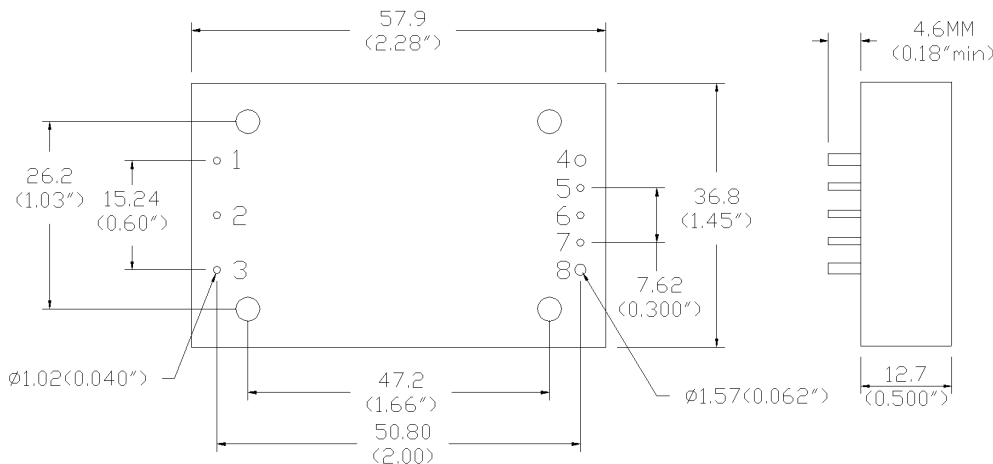
## Mechanical Drawing: TLW200 and TLW400



### Pin Connections

Pin	Function
1	+ Input
2	Gate Input
3	N/C
4	- Input
5	+ Output
6	+ Sense
7	Trim
8	- Sense
9	- Output

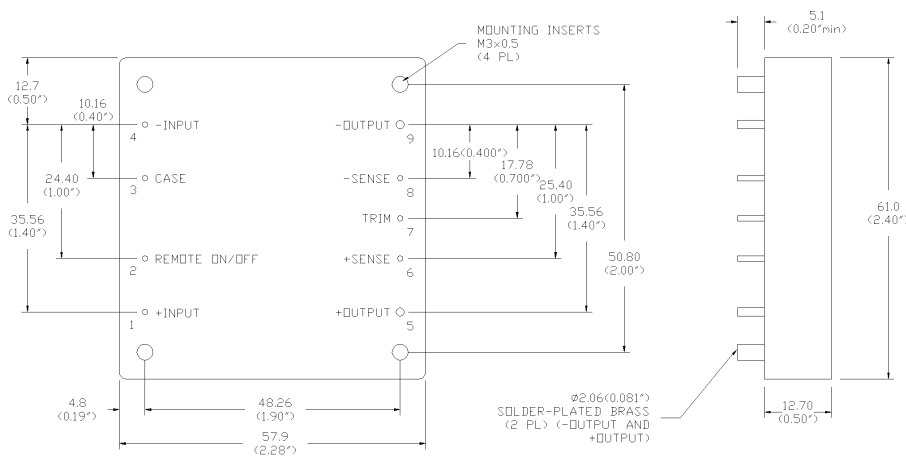
## Mechanical Drawing: TLW100



### Pin Connections

Pin	Function
1	- Input
2	On/Off
3	+ Input
4	- Output
5	-Sense
6	Trim
7	+ Sense
8	+ Output

## Mechanical Drawing: TLW050 and TLW075



### Pin Connections

Pin	Function
1	+ Input
2	On/Off
3	Gate Input
4	- Input
5	+ Output
6	+ Sense
7	Trim
8	- Sense
9	- Output