200 Watt Industrial

Features

- 5 x 3 x 1.5 inches form factor
- 200 W with forced-air cooling
- High efficiency > 88%
- 12 V fan output
- 5 V standby output
- Remote sense
- Now IEC/EN/UL62368-1 Compliant New
- Output voltage adjustability
- Approved with metal enclosures/accessories

Electrical Specifications

Input Voltage	90–264 VAC/120–390 VDC, Universal	
Input Frequency	47–63 Hz	
Input Current	120 VAC: 2.4 A max.	230 VAC: 1.2 A max.
No Load Power	0.8 W	
Inrush Current	120 VAC: 35 A max .	230 VAC: 65 A max.
Leakage Current	120 VAC: < 150 µA	230 VAC: < 300 µA
Efficiency	120 VAC: 84% typical	230 VAC: 86% typical
Hold-up Time	120 VAC > 10 ms	230 VAC > 10 ms
Power Factor	120 VAC: 0.99	230 VAC: 0.95
Output Power	160 to 200 W	
Peak Power	250 W for 0.2 s	
Line Regulation	+/–0.5%	
Load Regulation	+/–2.0%	
Transient Response	< 10%, 50% to 100% load change, 50 Hz, 50% duty cycle, 0.1 A/µs, recovery time < 5 ms	
Rise Time	< 100 ms	
Set Point Tolerance	+/–1%	
Output Adjustability	+/–3.0%	
Over Current Protection	110% typical above rating	
Over Voltage Protection	110 to 150%	
Short Circuit Protection	Short term, autorecovery	
Switching Frequency	PFC converter: Variable, 35–250 kHz; 90 kHz typical Resonant converter: Variable, 35–250 kHz; 90 kHz typical	
Operating Temperature	–20 to +70°C, refer derating curve, –20 to 0°C, start-up is guaranteed	
Storage Temperature	–40 to +85°C	
Relative Humidity	95% Rh, noncondensing	
Altitude	Operating: 10,000 ft.; Nonoperating: 40,000 ft.	
MTBF	1.6m Hours, Telcordia -SR332-issue 3	
Isolation Voltage	Min. 4000 VDC between input to output	
Cooling	Convection: 83 W; 300 LFM: 175 W (5 V model) Convection: 160 W; 300 LFM: 200 W (other models)	

Please read our datasheet & drawing disclaimer here.

Model Number	Description	Voltage	Max. Load[1] (Convection)	Max. Load[1] (300 LFM)	Min. Load	Ripple[2]
LFWLT200–1000	Class I with Screw Terminal	5 V	16.67 A	35.0 A	0.0 A	1%
LFWLT200–1300	Class I with JST Connector			26.0 A		
LFWLT200–1001	Class I with Screw Terminal	12 V	13.33 A	16.67 A	0.0 A	1%
LFWLT200–1301	Class I with JST Connector					
LFWLT200–1002	Class I with Screw Terminal	15 V	10.67 A	13.33 A	0.0 A	1%
LFWLT200–1302	Class I with JST Connector					
LFWLT200–1003	Class I with Screw Terminal	24 V	6.67 A	8.33 A	0.0 A	1%
LFWLT200–1303	Class I with JST Connector					
LFWLT200–1004	Class I with Screw Terminal	48 V	3.33 A	4.17 A	0.0 A	1%
LFWLT200–1304	Class I with JST Connector					
LFWLT200–1005	Class I with Screw Terminal	30 V	5.33 A	6.67 A	0.0 A	1%
LFWLT200–1305	Class I with JST Connector					
LFWLT200–CK metal cover kit accessory						

For Power supply unit with Base plate (metal accessory option) add "-B" suffix at the end of model number
For Power supply unit with L bracket (metal accessory option) add "-L" suffix at the end of model number
For Power supply unit with U channel (metal accessory option) add "-U" suffix at the end of model number
For Power supply unit with CK Cover kit (metal accessory option) add "-CK" suffix at the end of model number

Notes

1. Combined output power from V1, VSTBY and VFAN should not exceed the total output power rating.
2. Ripple is 2% up to 20% load and < 1% above 20% load. Ripple is peak to peak with 20 MHz bandwidth and 10 µF (Electrolytic capacitor) in parallel with a 0.1 µF capacitor at rated line voltage and load ranges.
3. Fan output voltage tolerance is +/–20%. During V1 full load, VFAN needs min. 20 mA load to be within regulation band.
4. Peak current for fan output is 1 A.
5. Class I products have an Earthing tab. For Class II version Enquire with EOS Sales Rep before Order.
6. Specifications are for nominal input voltage, 25°C and max. load unless otherwise stated.
7. PSU is supplied with J3 housing, pin–4 and pin–6 shorted to enable main output without remote on/off feature.
8. Derate output power linearly to 80% from 90 VAC to 80 VAC input.
9. When used in Cover Kit, de-rate output power to 70 % under all operating conditions.

Pin Connections		
J1	Pin 1	AC NEUTRAL
	Pin 2	AC LINE
Spade Connector (J4) (Class I product only)		EARTH
J2	Pin 1, 2, 3	RTN
	Pin 4, 5, 6	V1

Pin Connections		
J3	Pin 1	+VE REMOTE SENSE
	Pin 2	VFAN (+12 V/0.5 A)
	Pin 3	–VE REMOTE SENSE
	Pin 4	REMOTE ON/OFF
	Pin 5	VSTBY (+5 V/1 A, +/–5%)
	Pin 6	RTN
	Pin 7	POWER FAIL
	Pin 8	POWER GOOD

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Mechanical Specifications	
AC Input Connector (J1)	Molex: 26–60–4030 or equivalent Mating: 09–50–3031; Pins: 08–50–0106
EARTH (J4)	Molex: 19705–4301 or equivalent; Mating: 190030001
DC Output Connector (J2)	Option 1: Tyco: 2–1776112–3 or equivalent Mating: 13 AWG wire Option 2: JST: B6P–VH–B (LF) (SN) or B6P–VH (LF) (SN) or equivalent Mating: VHR–6M; Pins: SVH–41T–P1.1
Signal Connector (J3)	Molex: 22–23–2081 or equivalent Mating: 22–01–2087, Pins: 08–50–0113
Dimensions	5.0 x 3.0 x 1.5 inches (127.0 x 76.2 x 38.1 mm)
Weight	325 g

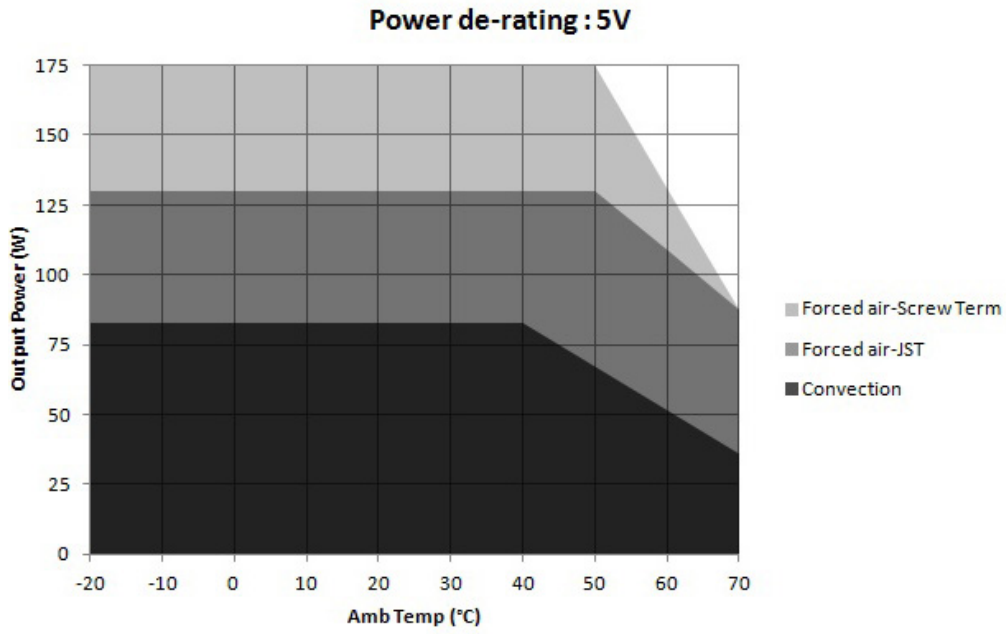
EMC		
Parameter	Conditions/Description	Criteria
Conducted Emissions	EN55032-B, CISPR22-B, FCC PART15-B	Pass
Radiated Emissions	EN 55032 B	Pass
Input Current Harmonics	EN 61000-3-2	Class D
Voltage Fluctuation and Flicker	EN 61000-3-3	Pass
ESD Immunity	EN 61000-4-2	Level 3, Criterion A
Radiated Field Immunity	EN 61000-4-3	Level 3, Criterion A
Electrical Fast Transient Immunity	EN 61000-4-4	Level 3, Criterion A
Surge Immunity	EN 61000-4-5	Level 3, Criterion A
Conducted Immunity	EN 61000-4-6	Level 3, Criterion A
Magnetic Field Immunity	EN 61000-4-8	Level 3, Criterion A
Voltage dips, interruptions	EN 61000-4-11	Criterion A & B

Safety	
CE Mark	Complies with LVD Directive
Approval Agency	Nemko, IEC, UL
Safety Standard(s)	EN/IEC/UL 62368-1 (Ed.3)
Safety File Number(s)	Class I UL: Certificate Number : E515384, Nemko: Certificate No: P20224647, CB Test Certificate No: NO112686

Signal	
Power Good Signal	TTL signal goes high after main output is within regulation band, delay is 0.1 to 0.3 s
Power Fail Signal	TTL signal goes low 1 ms advance before output goes out of regulation due to mains failure
Remote Sense	Compensates for 200 mV drop
Remote on/off	To turn on PSU short remote pin to ground

Please read our datasheet & drawing disclaimer here.

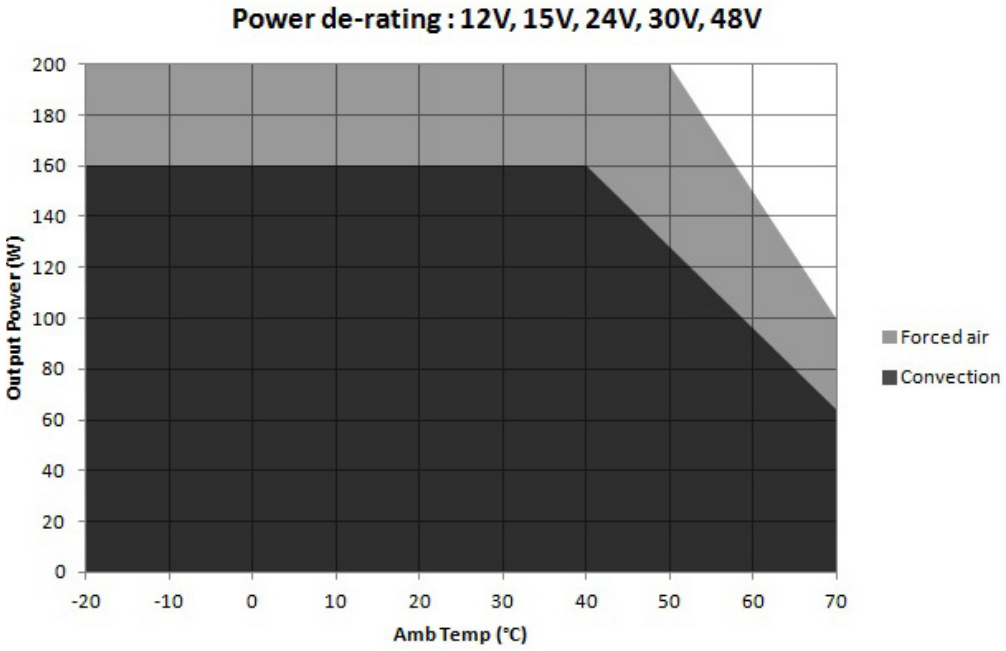
Derating Curve



Convection load: 83W up to 40 °C
De-rate above 40 °C @ 1.89% per °C

Forced air cooled load : 130W up to 50°C
(for JST connector version)
De-rate above 50 °C @ 1.63% per °C

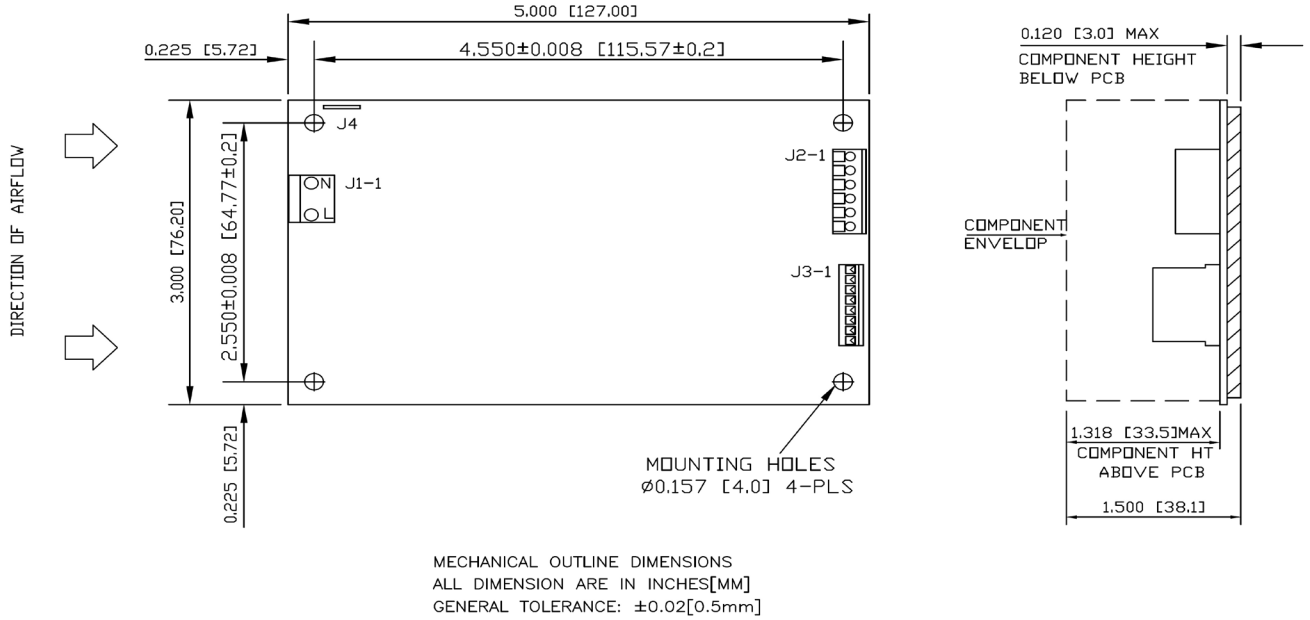
Forced air cooled load : 175W up to 50°C
(for screw terminal version)
De-rate above 50 °C @ 2.5% per °C



Convection load: 160W up to 40 °C
De-rate above 40 °C @ 2% per °C

Forced air cooled load : 200W up to 50°C
De-rate above 50 °C @ 2.5% per °C

Mechanical Drawing



MECHANICAL OUTLINE DIMENSIONS
ALL DIMENSION ARE IN INCHES[MM]
GENERAL TOLERANCE: ±0.02[0.5mm]

Notes: In case the PCB is mounted in a metal enclosure, using metal hardware ensure the following
1. Stand off, used to mount PCB has OD of 5.4 mm max.
2. Screws, used to fix PCB on stand off, have head dia of 6.0 mm max.
3. Washer, if used, to have dia of 6.5 mm max.

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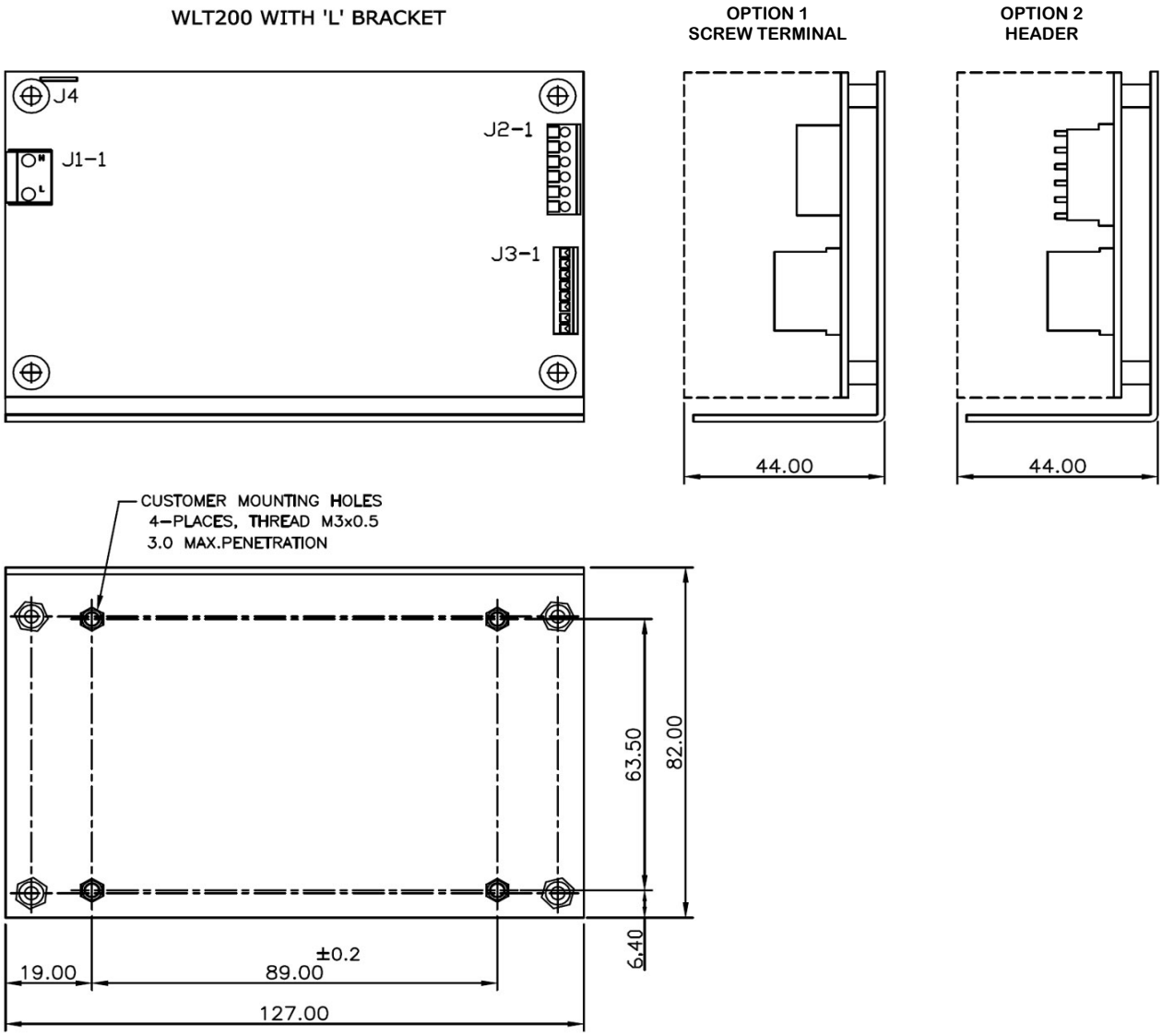
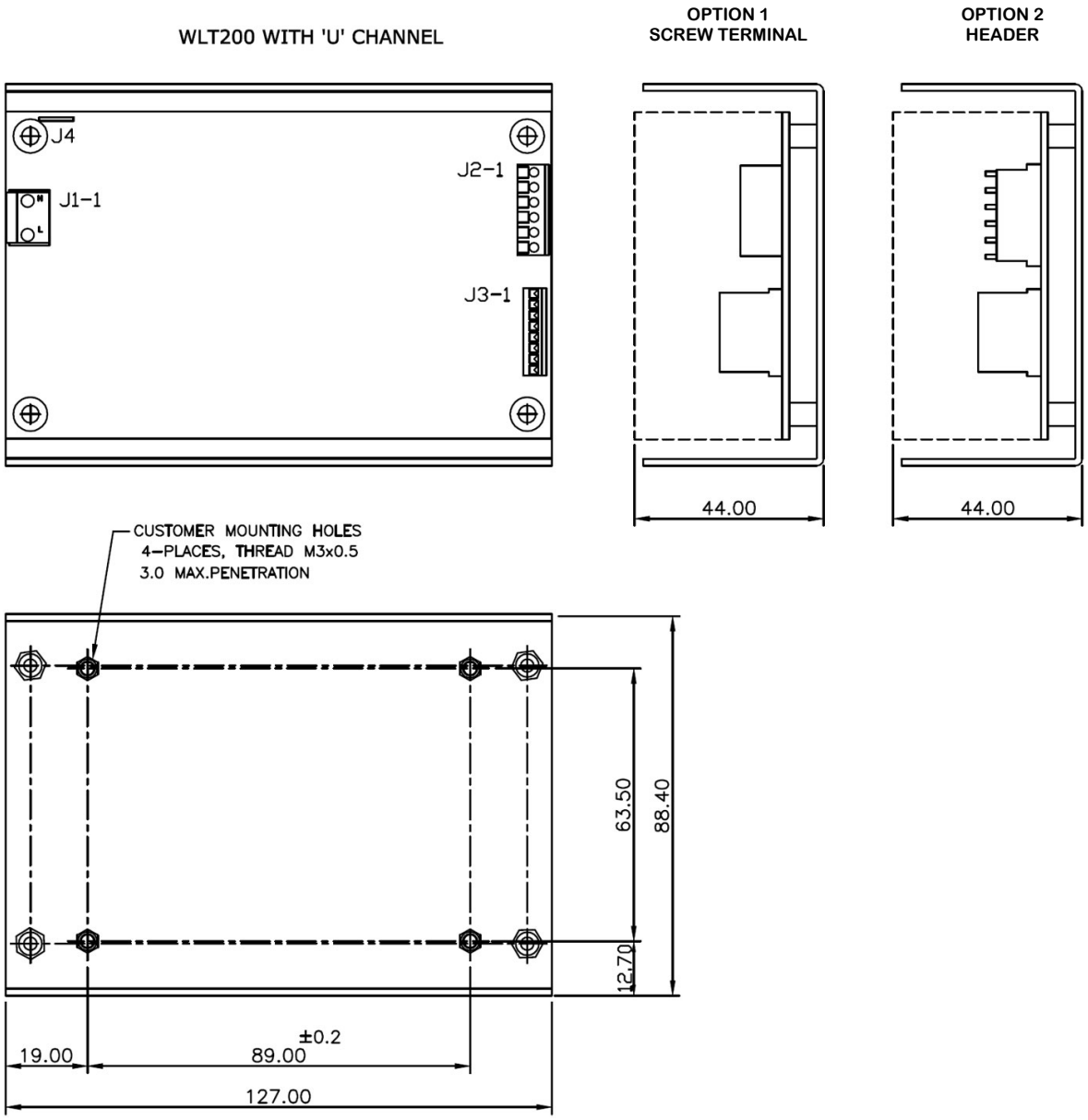
Mechanical Drawing



MECHANICAL OUTLINE DIMENSIONS
ALL DIMENSIONS ARE IN MM
GEN.TOLERANCE:+/-0.5 MM

Mechanical Drawing



MECHANICAL OUTLINE DIMENSIONS
ALL DIMENSIONS ARE IN MM
GEN.TOLERANCE:+/-0.5 MM

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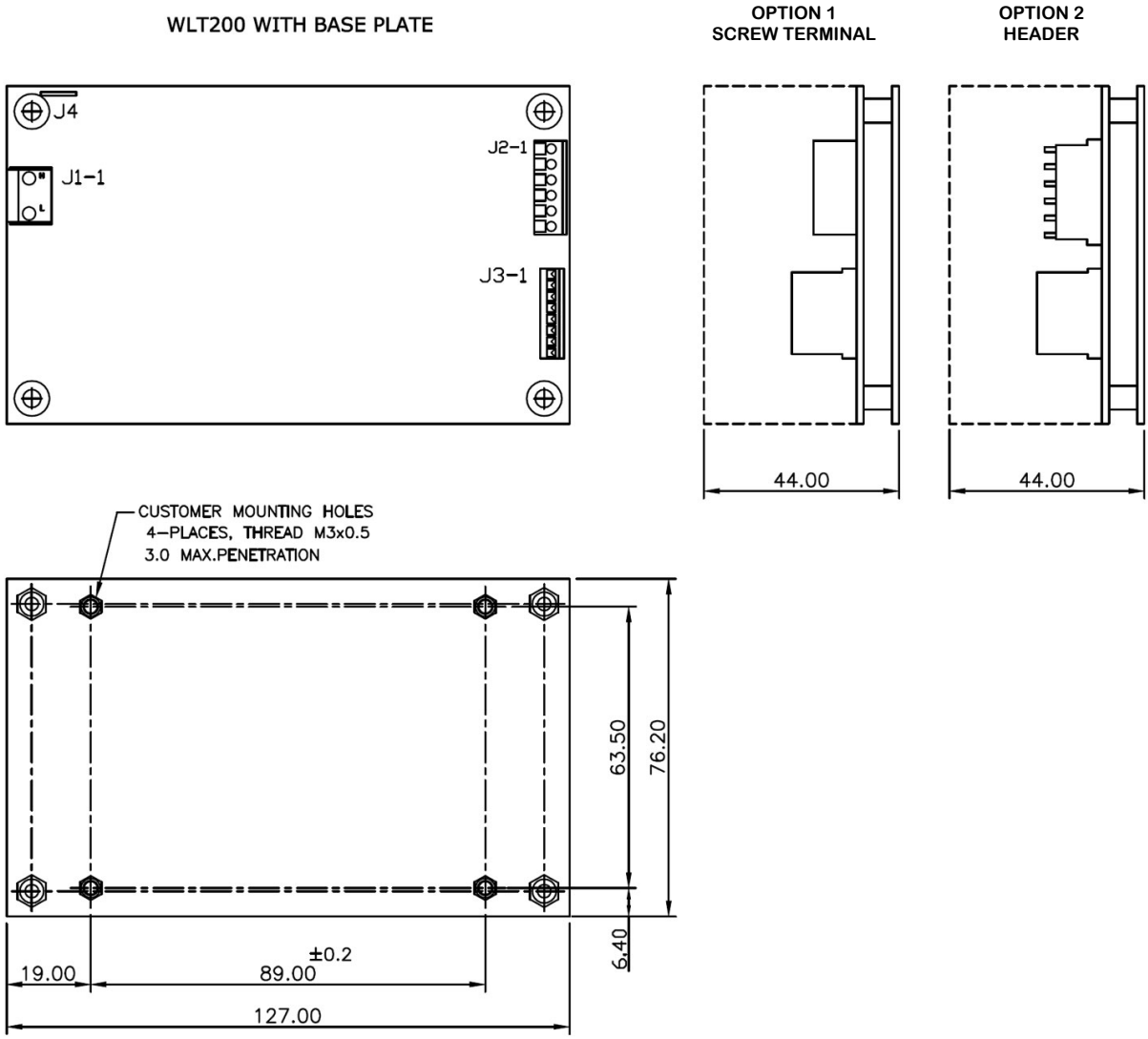
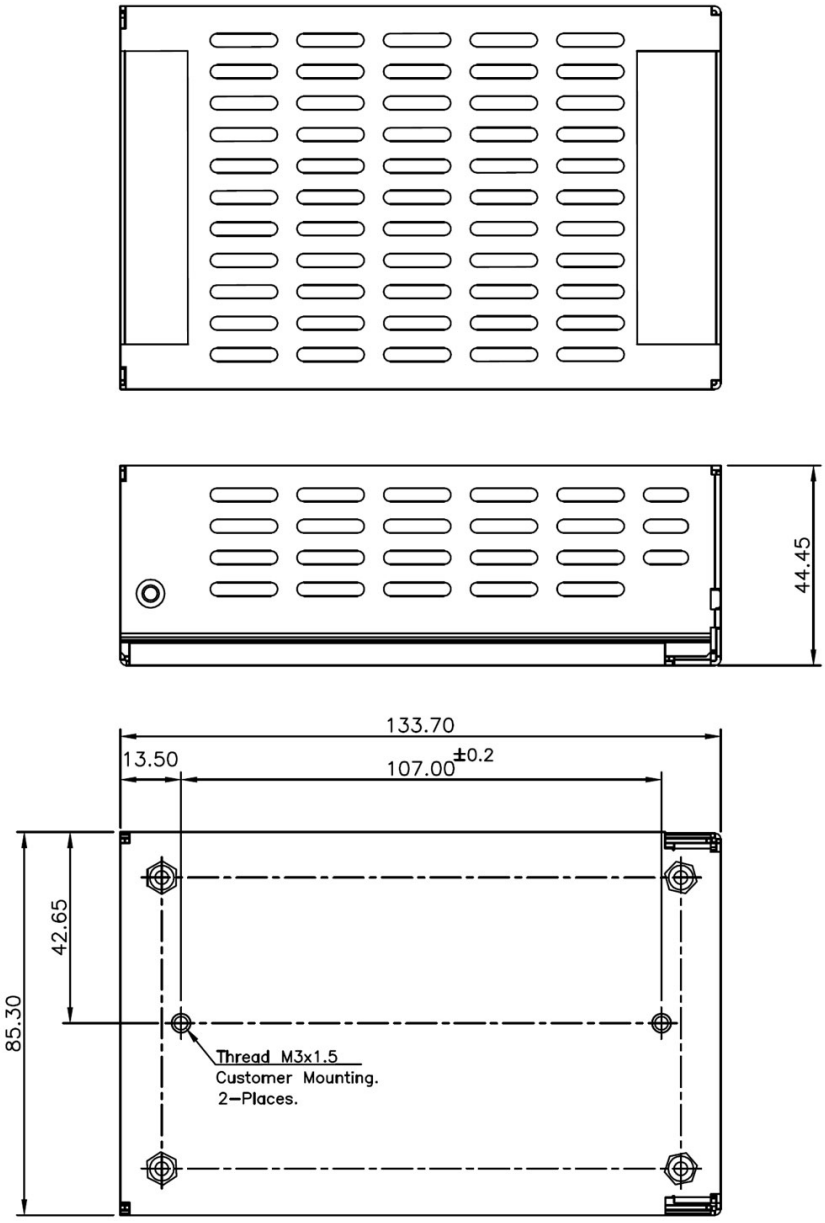
Mechanical Drawing



MECHANICAL OUTLINE DIMENSIONS
ALL DIMENSIONS ARE IN MM
GEN.TOLERANCE:+/-0.5 MM

Mechanical Drawing

WLT200 WITH COVER KIT



MECHANICAL OUTLINE DIMENSIONS
ALL DIMENSIONS ARE IN MM.
GEN. TOLERANCE: ±1.0 mm