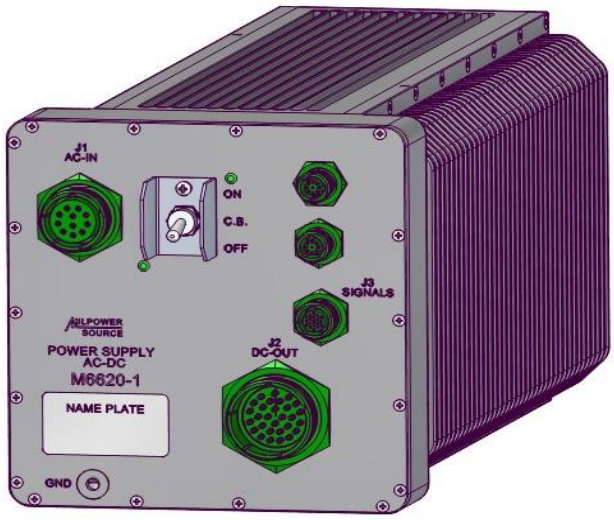
M6620 SERIES

SINGLE-OUTPUT, UP TO 2500W AC/DC POWER SUPPLY

The M6620 power supply is an innovative power system designed for harsh outdoor / indoor environments.
The combination of convection cooling and IP68 rating enables operation in the harshest environment.
Digital communication enables dynamic control of output voltage / current, can be utilized for smart battery charging.
Internal MCU enables supervision of battery temperature and charge current to elongate battery life



Part number	Input		Output	
	Voltage range	Frequency	Nominal Voltage	Current
M6620-101	85-265VAC/Single phase	50/60Hz	28V	90 A

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THE MAIN FEATURES OF THE M6620 SERIES ARE:

- Operate from single-phase grid.
- Convection cooled.
- Wide output voltage range:
  - 23V to 31V for the 28V.
  - Optional: 40V to 52V for the 48V-please consult factory.
- Remote On/Off.
- Active current sharing – 98% accuracy.
- Batteries can be any chemistry (the unit automatically adjust to battery type)
- Smart battery charging:
  - Charge curve can be customized as required.
  - Battery temperature monitoring – and compensation (remote sensing fixture required or junction box).
  - Limiting battery charge current while delivering full power to the system (remote sensing fixture required or junction box).
  - Reverse battery connection protection.
  - Reverse discharge protection, Battery discharge into PSU is less than 1Ma.
- Hiccup / constant current OCP options.
- RS485 communication.
- Ethernet, CAN, Ether-CAT, communication – (requires comm fixture).
- Dynamically controlled OCP, OVP, OTP (via communication).
- Latch up or auto recovery from all protections.
- Front panel LED indications
- MIL-STD-D38999 connector

SPECIFICATIONS:

AC Input	Voltage Range	85Vac ~ 264Vac 50/60Hz Single phase
	Isolation	Input to output / case 2500Vac Input to Signals 2500Vac
	Inrush Current Limiter	<50A
DC Output	Rating	Nominal output voltage 28V Output voltage range- 23 to 31V Max output Power – high line 2500W at 230Vac input Max output Power – low line 2500W at 115Vac input Max output Power 2000W when input is < 100V For 48V nominal output voltage please consult factory
	Voltage Regulation	Less than 2% (no load to full load, –40 °C to +60 °C with recommended conduction cooling)
	Ripple and Noise	100 - 150 mVp-p typical (max 1%) with a 1µF ceramic capacitor parallel to the load.
	Isolation	Output to case 200V Signals to case 200V
	Current Limit & Overload	Continuous protection (constant current) for unlimited time.
	Efficiency	92% Typical at 20V @ 250W output Vin 230Vac
	Overvoltage Protection	Overvoltage Protection at 110% ± 5% of nominal voltage. Dynamically controlled via communication

SPECIFICATIONS (CONT.):

Environment Designed to meet MIL-STD-810F	Temperature	Operating: -40 °C to +60°C (ambient). Operating: -40 °C to +90°C (case). Storage: -40 °C to +85°C
	Shock	Method 516.5 Method 516.6
	Sand and dust	Method 510.4, procedure I& II (blowing dust). Method 510.5, procedure I (blowing dust).
	Fungus	method 508.5 method 508.6
	Salt atmosphere	method 509.4 method 509.5
	Wind	Up to 20M/Sec gusts of 40M/Sec
	Acceleration	method 513.6
	Immersion	Method 512.1
	Mechanical Shock	Method 516.5 Method 516.6
	Vibration	Method 514.6
IP	IP rating	Designed to meet IP67/8

EMI	***Designed to meet MIL-STD-461F****	CE102	conducted emissions, power leads,10 kHz to 10 MHz	Figure CE102-1, Basic Curve for 28VDC
		CS101	conducted susceptibility, power leads, 30 Hz to 150 kHz	FIGURE CS101-1, Curve #2 for 28VDC
		CS114	Conducted Susceptibility, Bulk Cable Injection,10 kHz to 200 MHz;	FIGURE CS114-1, Curve #5 for Ground Army
		CS115	Conducted Susceptibility, Bulk Cable Injection,	FIGURE CS115-1
		CS116	Conducted Susceptibility, Damped Sinusoidal Transients, Cables and Power Leads, 10 kHz to 100 MHz;	FIGURE CS116-2
		*CS117	conducted susceptibility, lightning induced transients, cables and power leads.	All equipment installations, External Equipment Levels
		CS118	Personnel Borne Electrostatic Discharge	TABLE VIII, ±8 contact and ±15 air
		RE102	Radiated Emissions, electric field, 10 kHz to 18 GHz	RE102 limit for Ground Army
		RS103	Radiated Susceptibility, electric field, 2 MHz to 18 GHz	Table XI, RS103 Ground Army, 50V/m * Compliance is achieved when using a shielded enclosure and interconnection cable.

Indirect lightning(1)	Indirect lightning pass/fail criteria - loss of function with permanent damage to equipment. paragraph A.5.4		
Grounding and bonding(1)	The unit shall include the necessary electrical bonding to meet the E3 requirements of the standard. Compliance shall be verified by test. paragraph A.5.10		
IEC/EN61000-4-5(1)	Testing and measurement techniques – Surge immunity test. Class level 2		
Safety(1)	EN62368-1: Ed.3		
Form factor	mm deep. For detailed 6.5mm height and 44186 mm wide, 239.5 6620001dimensions and tolerances see Drawing: M		
Weight	Approx. 18 kg Typical		
Connectors			
Refference	Function	Connector P/N	Mating Connector P/N
J1	AC Power Input	8D7C17W06PN or Eq.	8D517W06SN or Eq.
J2	DC Power Output	8D7C21W11SN or Eq.	8D521W11SN or Eq.
J3	Ssignals	8D7L13W35SN or Eq.	8D513W35PN or Eq.
J4	Daisy Chain for parallel Operation	8D7L09W35SN or Eq.	8D509W35PN or Eq.
J5			

PIN ASSIGNMENT:

AC input	J1
Part number	8D7C17W06PN oe Eq.
Pin	Function
A	Phase
B	Neutral
C	Earth
D	Earth
E	Phase
F	Neutral

DC out	J2
Part number	8D7C21W11SN or Eq.
Pin	Function
A	Vout_p
B	Vout_p
C	Vout_ret
D	Vout_ret
E	Vout_ret
F	Vout_ret
G	Vout_ret
H	Vout_p
J	Vout_p
K	Vout_p
L	Vout_ret

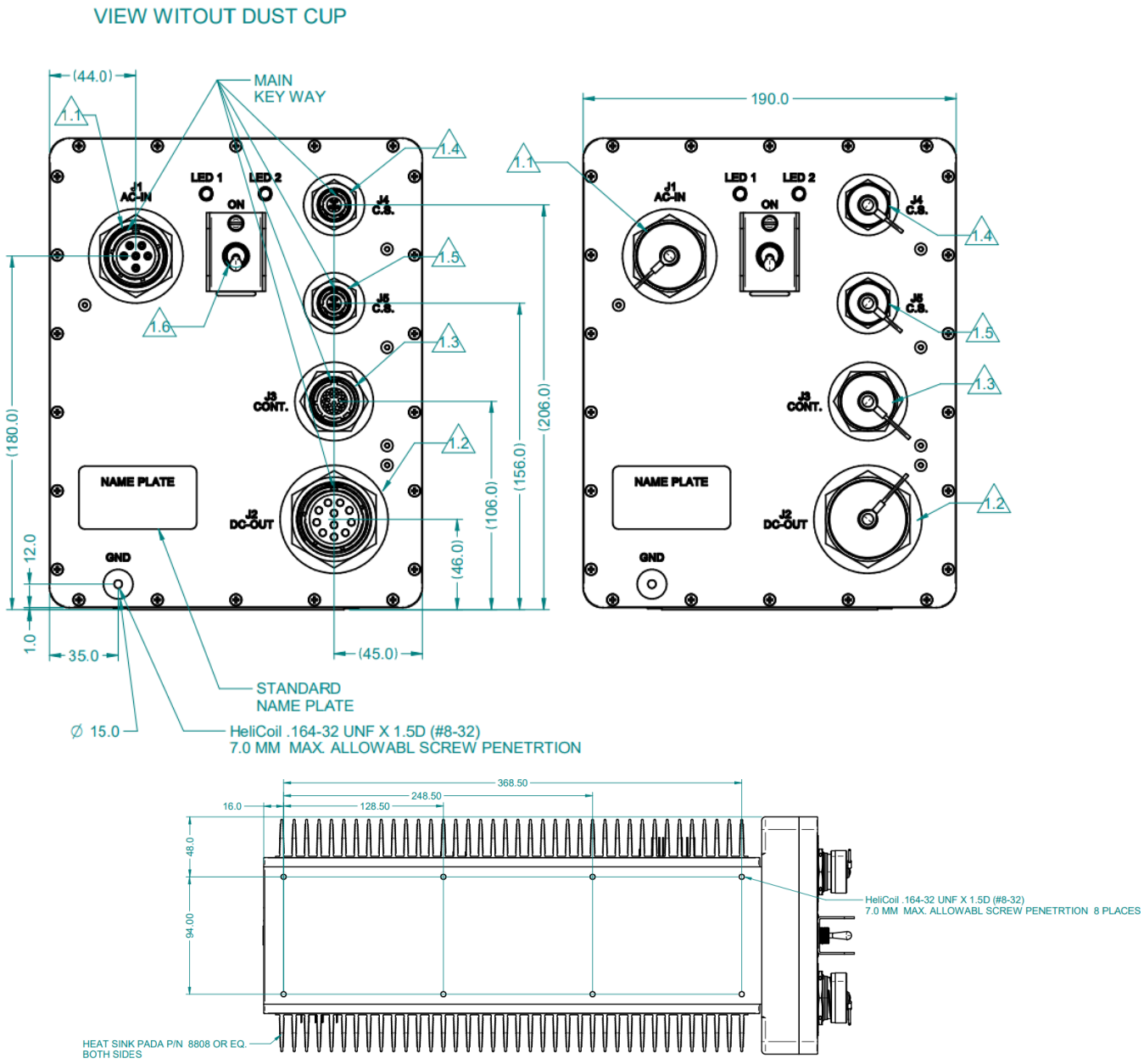
CS Signals	J4
Part number	8D7L09W35SN or Eq.
1	NC
2	CS_Bus_P
3	CS_Bus_N
4	CS_Master
5	NC
6	NC

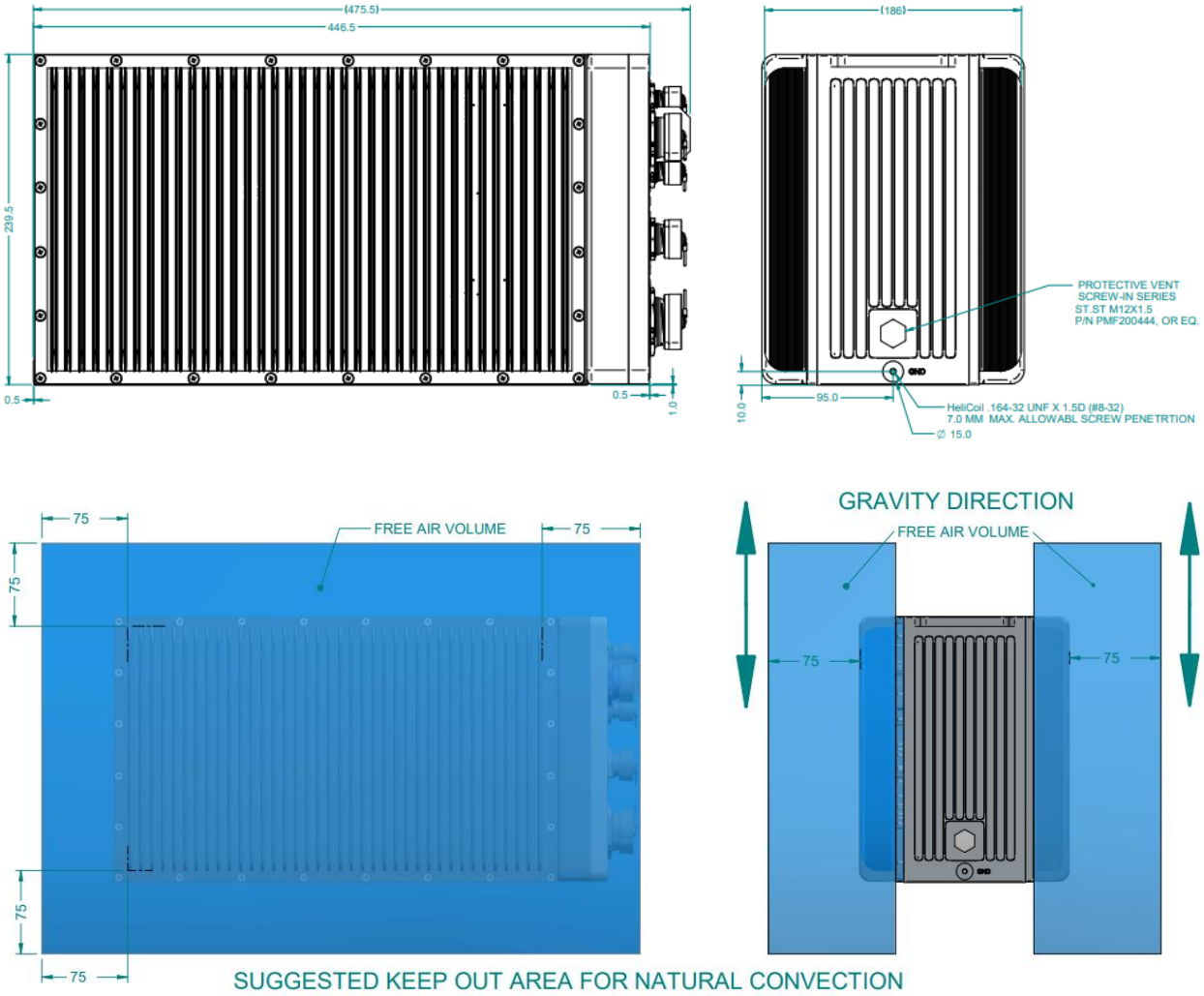
User Signal	J3
Part number	8D7L13W35SN or Eq.
Pin	Function
1	NC
2	NC
3	Aux 12V
4	Aux 5V0
5	Sig Ret
6	Batt_current_sns_p
7	Batt_current_sns_n
8	Sig Ret
9	Sig_tbd
10	Battleshort
11	ext_ntc_a
12	ext_ntc_b
13	NC
14	RS_485_A
15	RS_485_B
16	NC
17	Power_good
18	Inhibit
19	Sig Ret
20	NC
21	Remote_sns_P
22	Remote_sns_N

CS Signals	J5
Part number	8D7L09W35SN or Eq.
1	NC
2	CS_Bus_P
3	CS_Bus_N
4	CS_Master
5	NC
6	NC

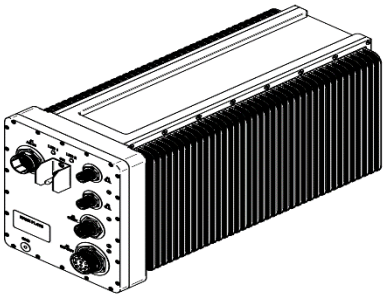
OUTLINE DRAWING:

For detailed dimensions and tolerances see Drawing: M6620001





NOTES :
1. CONNECTORS LIST:
   1.1. AC POWER INPUT, J1, 8D7C17W06PN [SOURIAU] OR EQ , WITH CAP D38999/33W17R OR EQ.
   1.2 DC POWER OUTPUT , J2, 8D7C21W11SN [SOURIAU] OR EQ , WITH CAP D38999/33W21R OR EQ.
   1.3 CONTROL, J3, 8D7L13W35SSN [SOURIAU] OR EQ, WITH CAP D38999/33W13R OR EQ.
   1.4 CURRENT SHARAING , J4, 8D7L09W35SN [SOURIAU] OR EQ. WITH CAP D38999/33W9R OR EQ.
   1.5 CURRENT SHARAING , J5, 8D7L09W35SN) SOURIAU (OR EQ. WITH CAP D38999/33W9R OR EQ.
   1.6 ON / OFF CIRCET BRACKER IULN1-1-62 OR EQ.
2. MTL. AL 6061-T651
3. FINISH: CHROMATE CONVERSION COATING PER MIL -DTL-5541, LAST REVISION,TYPE I , CLASS 1A.
4. PAINT :
   4.1 PRIMER PAINTING :
      APPLY SINGLE LAYER OF EPOGAL COATING, EPOXY PRIMER , TAMBOUR CODE No. 649-050[18].
      THICKNESS OF DRY COAT LAYER : 50-70 µm.
   4.2 INTERMEDIATE COAT PAINTING :
      APPLY TWO LAYERS OF COATING OF EPOXY POLYAMIDE ACCORDING TO MIL-PRF-22750[14],
      HHIKNESS OF EACH DRY COAT 25-40 µm TOTAL THIKNESS 50- 80 µm.
   4.3 TOP COAT PAINTING :
      APPLY TWO LAYERS OF POLYURETHANE TOP COAT ACCORDING TO MIL-C-83286[12] OR MIL-PRF-85285[15], TOP COAT COLOR ID - RAL 6007
      THIKNESS OF EACH DRY COAT LAYER : 25-40 µm ; TOTAL THIKNESS : 50- 80 µm.
   4.4 TOTAL PAINT THIKNESS
      TOTAL THIKNESS OF DRY COAT OF PAINT 150-230 µm.
5. COOLING:
   5.1 FREE CONVECTION METHOD
6. WORKMANSHIP SHALL BE MIL-STD-454, REQT. 9
7. ENGRAVING
   7.1. CHARACTER HEIGHT : 4.0 [MM].
   7.2. CHARACTER DEPTH : 0.5 [MM].
   7.3. CHARACTER ARE CENTRALLY LOCATED,
   7.4. FILL ENGRAVING WITH BLACK LUSTERLESS EPOXY PAINT COLOR PER FED-STD 595 N0 : 37038.



Note: Specifications are subject to change without prior notice by the manufacturer