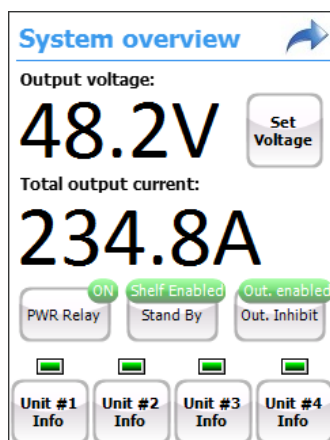


TCR-4-48G

DEMO Rack for TCP3500 Power Supplies

The TCR-4-48G power rack can be configured with four TCP3500 Series units delivering up to 14 kW of output power. It can be mounted to a 19 inch rack systems using adaptor mounting brackets. Two internal RS485 interfaces are used for control, monitoring and diagnostic information that can be supplied to a system controller. Water cooling base plate makes the TCR-4-48G suitable for a wide variety of Industrial Applications where the liquid cooling is required.



Standard Functions

- 19" Rack with liquid-cooling Base Plate
- Compatible with all TCP3500 PSU models
- Maximal Configuration up to 4 Units (14 kW)
- 3-phase Solid State Relay for power modules AC input driving
- Low Inductance DC output busbars construction
- Two RS485 interfaces (PSU's Control/Monitor and Digital Control of Output Voltage)
- Coolant temperature (water): 0 to 35°C with minimal flow rate 2 l/min. (recommended 4 l/min.)

Optional

- 3.2" Touch Screen Display on front panel with Smart monitoring and control menu
- Input and Output water temperature measurement
- Auxiliary output 24 V / 120 W
- USB Interfaces for system monitoring and control via PC and SW GUI



Figure 1. 19" Rack rear view – AC input connector, DC output busbars, signal connectors and coolant (water) connecting

1. TCP3500 SERIES MODEL SELECTION

| MODEL | INPUT VOLTAGE RANGE | NOMINAL OUTPUT VOLTAGE | OUTPUT VOLTAGE RANGE | MAX OUTPUT CURRENT | MAX OUTPUT POWER | AVAILABILITY |
|---------------|--------------------------|------------------------|------------------------|------------------------------|------------------|---------------------|
| TCP3500-H048G | 180 – 528 Vrms, 50/60 Hz | 48 V | Adjustable 10 – 50 VDC | 73 ADC or pulse ¹ | 3500 W | Mass production |
| TCP3500-1048G | 180 – 528 Vrms, 50/60 Hz | 48 V | Adjustable 10 – 50 VDC | 73 ADC | 3500 W | Mass production |
| TCP3500-H060G | 180 – 528 Vrms, 50/60 Hz | 60 V | Adjustable 20 – 60 VDC | 65 ADC or pulse ¹ | 3500 W | Engineering samples |
| TCP3500-1024G | 180 – 528 Vrms, 50/60 Hz | 24 V | Adjustable 5 – 30 VDC | 145 ADC | 3500 W | Consult factory |

¹ PSU model with pulse load operation capability 0 – 100 kHz, 0 – 100% Duty, 0/Iout_max.

2. RACK SPECIFICATIONS

| PARAMETER | DESCRIPTION / CONDITION | MIN | NOM | MAX | UNIT |
|---------------------|---|-----------------------|-----|-----|------|
| Input Voltage | 3-phase, 3 wires + PE | 104 - 305 / 180 - 528 | | | V |
| Input Frequency | Permitted variation | 47 | | 63 | Hz |
| Input Current | per Line at 3 x 180 V (line to line) | | | 56 | Arms |
| Output Voltage | Adjustable or fixed (see Model Selection table) | | | | |
| Output Power Rating | High Line and Low Line | | 14 | | kW |
| Output Current | Fixed or Adjustable (see PSU models above) | | | | |
| Efficiency | Typical, High Line at load above 40% | | 94 | | % |

3. SAFETY, REGULATORY AND EMC SPECIFICATIONS OF TCP3500

| PARAMETER | DESCRIPTION / CONDITION | | SPECIFICATION |
|---------------------------------------|-----------------------------|------------------------------------|------------------|
| Radiated Emission | EN55011 | | Class A |
| Conducted Emissions | EN55011 | | Class A |
| Electrostatic Discharge | IEC 61000-4-2 | Level 4: ±8 kV contact, ±15 kV air | Criterion B |
| Radiated Electromagnetic Field | IEC 61000-4-3 | | 10 V/m |
| Electrical Fast Transient (EFT)/Burst | IEC 61000-4-4 | | Level 3: ±2/1 kV |
| Surge Immunity | Level 3: ±1 kV DM, ±2 kV CM | | Criterion B |

4. MONITORING AND CONTROL

4.1 GUI (GRAPHIC USER INTERFACE) AND RS485 COMMUNICATION PROTOCOL

Bel Power Solutions provides a Windows® XP/Vista/Win7 compatible SW User Interface allowing the programming and monitoring of the TCP3500 power supplies. The SW Utility can be downloaded from: belpowersolutions.com.

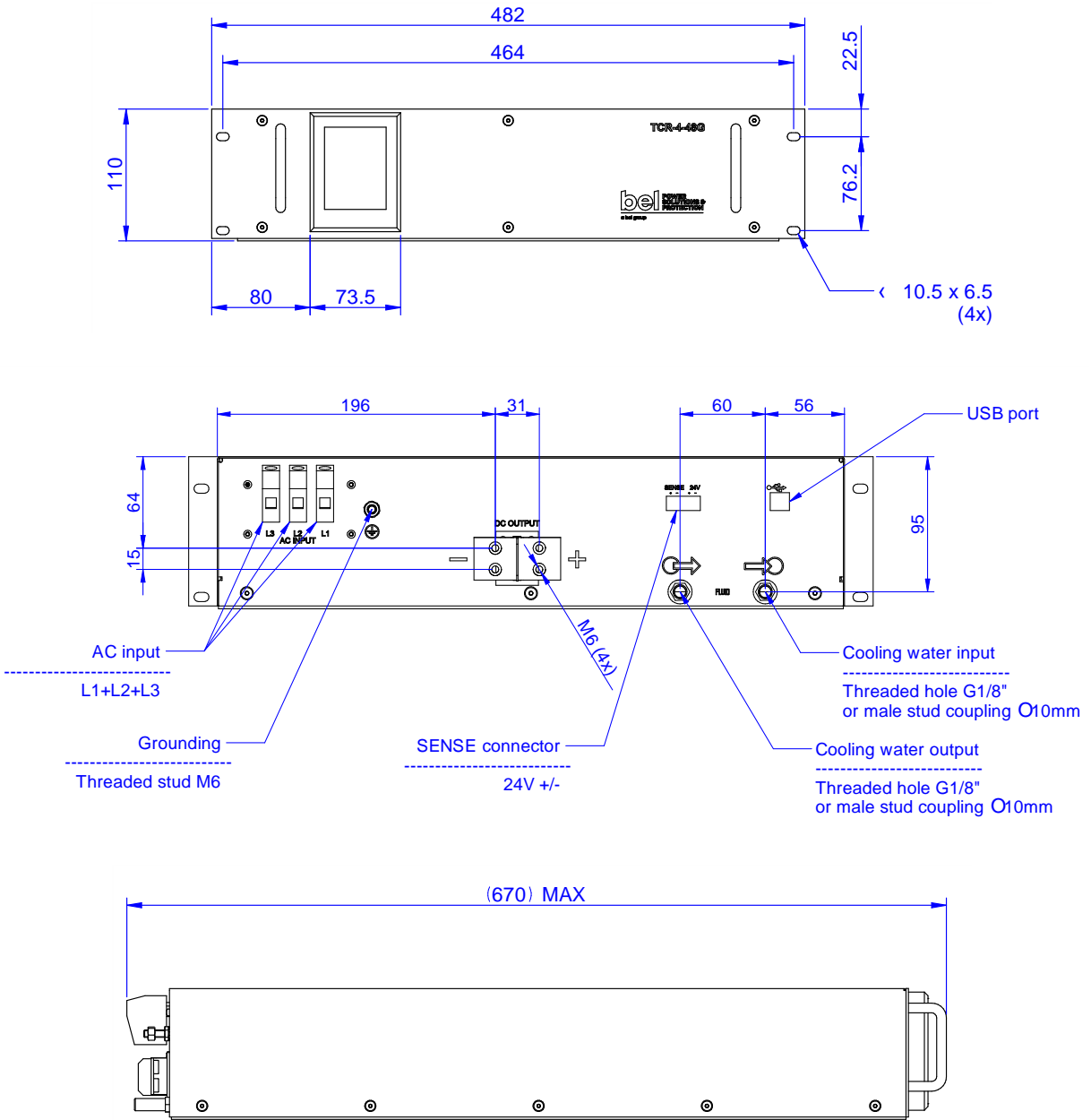
For detailed information please see Communication Manual (BCA.00129) or contact Bel Power Solutions sales representative.



Figure 2. SW GUI application screen shot – Data logger menu

5. MECHANICAL SPECIFICATIONS

| PARAMETER | DESCRIPTION / CONDITION | MIN | NOM | MAX | UNIT |
|------------------------|--|-----|-----------------|-----|--------|
| Dimensions (W x D x H) | See Figure 2 | | 482 x 670 x 110 | | mm |
| Weight | With 4 PSUs installed | | 43 | | kg |
| Cooling | Liquid cooled (water cooled) base plate with water flow rate | 2 | 4 | | l/min. |



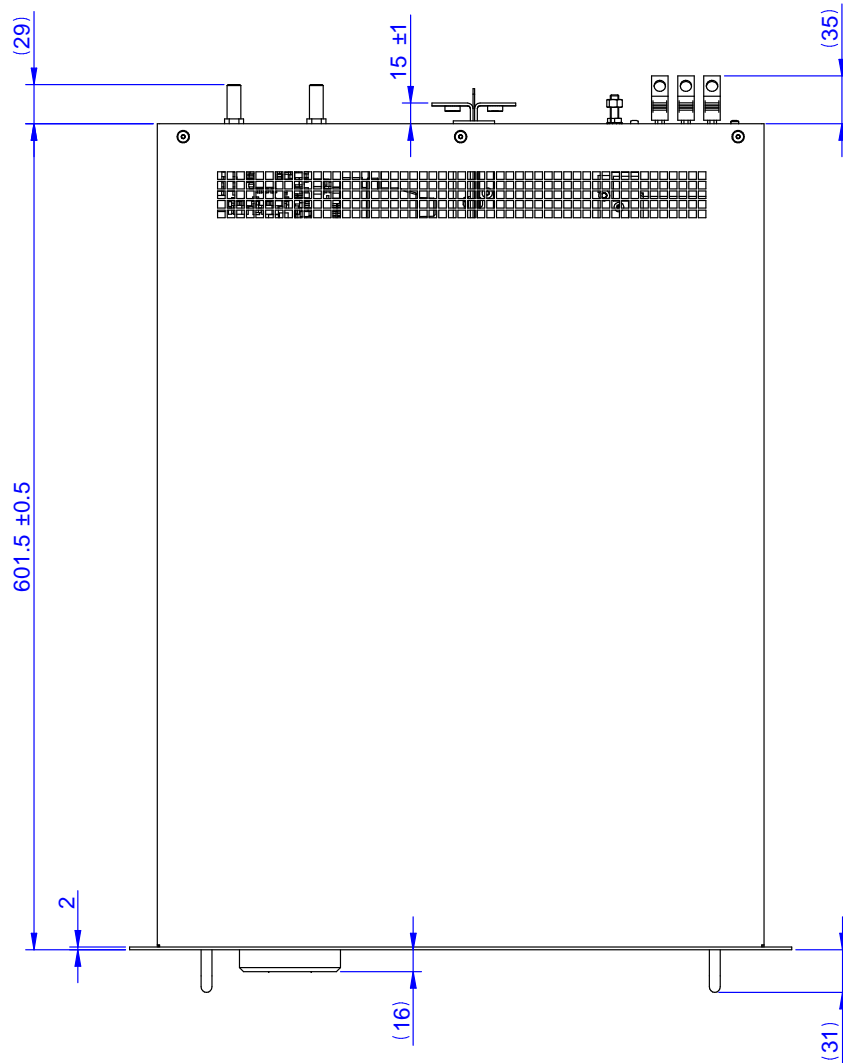


Figure 2. Mechanical Dimensions

For more information on these products consult: tech.support@psbel.com

NUCLEAR AND MEDICAL APPLICATIONS - Products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.

TECHNICAL REVISIONS - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.



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