



# **UNIVERSAL SHIELDING CORP.**

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## **FILTER SPECIFICATION FOR 30 AMP FILTER CABINET**

|                                 |  |
|---------------------------------|--|
| <b><u>PART NUMBER:</u></b>      | <b>USC-W-30-B4 (Old PN USC-50-4X30)</b>  |
| <b><u>PART DESCRIPTION:</u></b> | Filter Cabinet containing four (4) individual filter elements rated up to 30 amps. Refer to accompanying diagram.  |
| <b><u>PRODUCT SUMMARY:</u></b>  | EMI/RFI Power Line Filters are used to block unwanted signals and remove interference from entering or exiting through the power lines and meeting TEMPEST requirements.   |
| <b><u>INSERTION LOSS:</u></b>   | <b>100 dB from 14 KHz – 40 GHz</b>   |
| <b><u>STANDARDS</u></b>         |  |
| MIL-STD-220C                    | Method of insertion loss measurements for Radio Frequency filters  |
| MIL-F-15733                     | Military Specifications - General Specifications for Filters and Capacitors, Radio Frequency Interference  |
| MIL-STD-285                     | Shielded Effectiveness Testing   |
| <b><u>CONSTRUCTION:</u></b>     | Power line penetration filters may be mounted through the outer wall of a shielded enclosure. The filters are RFI secure and are supplied with threaded nipple. To prevent shock hazards, filters will be supplied with bleeder resistors. |

## **ELECTRICAL**

### **Current Rating:**

The filters shall be capable of withstanding 140% of rated current for 15 minutes without any deterioration.

### **Insertion Loss:**

The filters shall provide the specified insertion loss of 100 dB minimum over the indicated frequency range (14 KHz – 40 GHz) when measured in accordance with MIL-STD-220C.

### **Voltage:**

The filters shall be capable of operating continuously at full-rated voltage and of withstanding an initial test of twice the rated voltage for one minute.

0-400 VDC

120/208 VAC (50/60 Hz)

277/480 VAC (50/60 Hz)

## **MECHANICAL**

### **CASE:**

The filter case shall be made of cold-rolled steel.

### **CONSTRUCTION:**

Input and output terminals shall be completely enclosed in RF shielded compartments. Cover on the input compartment shall be screw-down type.

### **FINISH:**

All filter cases shall be made corrosion-resistant with suitable plating.

### **IMPREGNANT:**

The impregnant shall be non-flammable as classified by U.L. and MIL-F-15738.

### **TERMINALS:**

The terminals shall be made of high temperature ceramic.

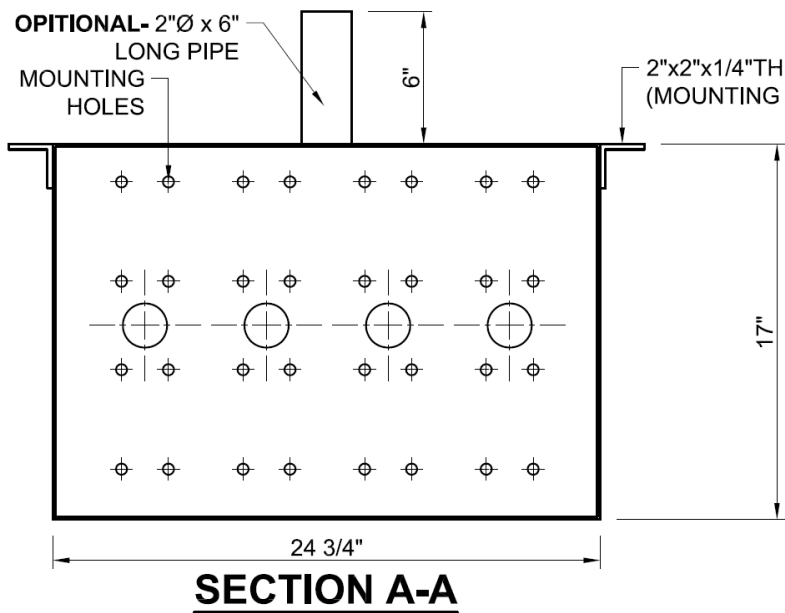
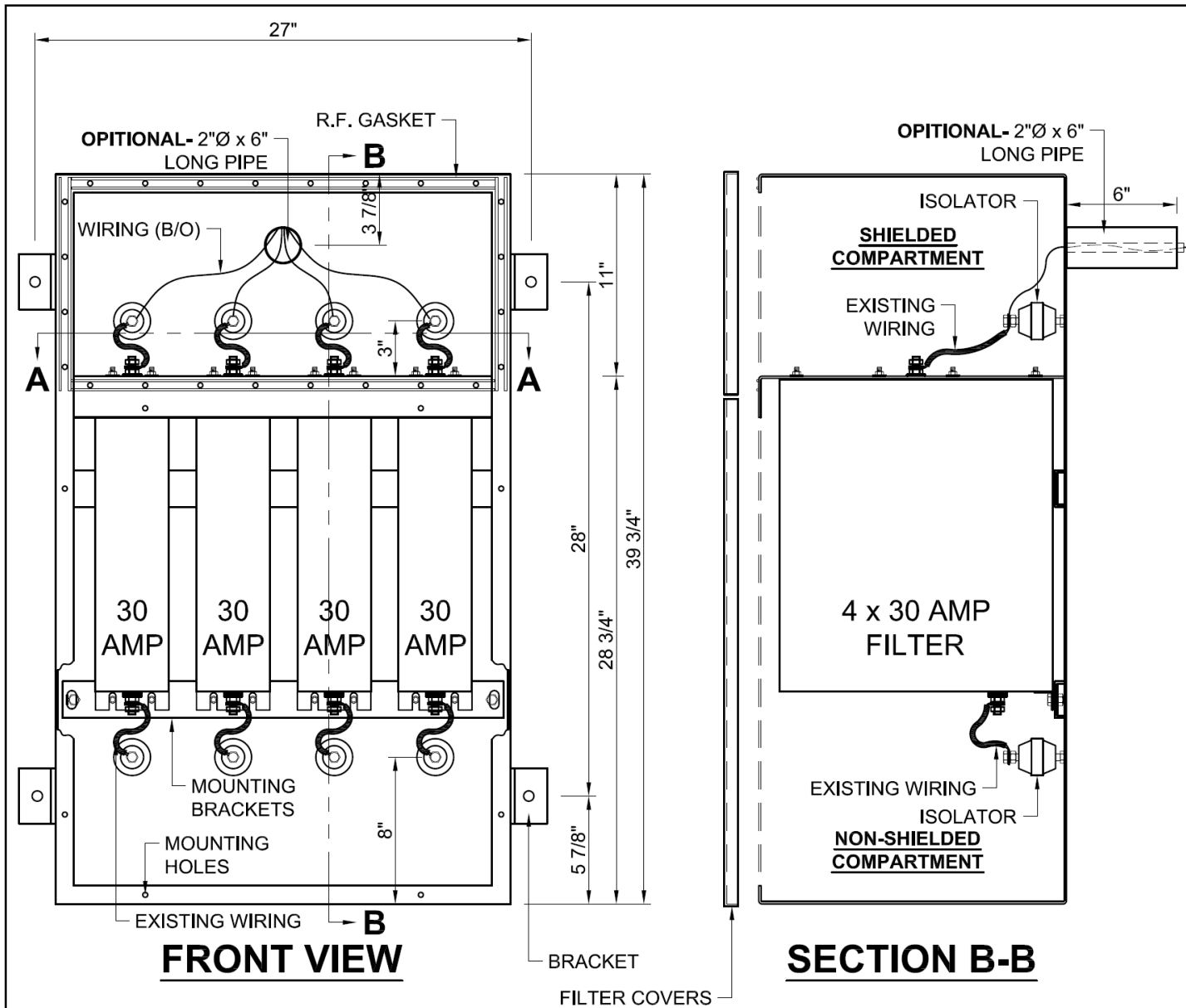
## **POWER FACTOR CORRECTION COILS**

Will be required where limited generator output requires reduced reactive current.

Since screen room filters consist of inductors and capacitors, they apply a fixed reactive load to power lines. Filters which provide high attenuation at low frequencies present the greatest no-load current problems due to their large capacitive component.

If the power source has sufficient reserve to furnish the added reactive current, there is no difficulty. However, if the power source is limited, RF Power Factor Correction Coils must be used to cancel the undesirable capacitive-reactive load component.





**ITEM # 1**  
**QTY: 1**

**R.F. FILTER CABINET FOR:**

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|---------------------|-----------------------|
| PROJECT: -          |                       |
| SCALE: 1 1/2"=1'-0" | DRAWN BY: ALFONSO     |
| DATE: 09-14-17      | DRAWING # USC-50-4x30 |