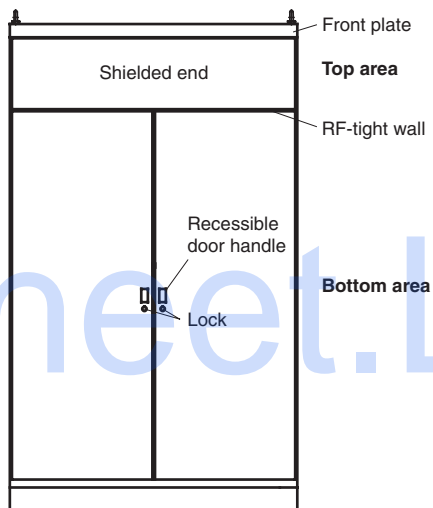


### Features

- General-purpose use through design with separate lines without intercoupling
- Use of single chokes
- Cable connection in filter eliminating extra mechanical effort
- Insertion loss to CISPR 17
- Stopband attenuation to 40 GHz



SSB1823-4-E

### Design

The filter cabinet consists of two areas.

The bottom area holds the low-frequency filter circuitry consisting of capacitors and chokes.

The top area is RF-tight. This is where the cables leading to the shielded room are connected.

The two areas of the cabinet are joined by an RF-tight wall, integrated into which there are coaxial feed-through capacitors. The wall is of high-grade Cr-Ni steel material, ensuring constant and non-corroding contact with the feed-through capacitors even in an unfavorable environment.

### Access and connection

The bottom area is accessible through two doors, each fitted with a recessible handle and lock. The top area has a specially designed lid with a dual seal that is bolted RF-tight to the cabinet.

In each area there are copper terminal rails for cable connection. Modified cable inlets and outlets are available on inquiry.

### Electrical design

Filtering is separate for each line. This maintains the specified attenuation even in the presence of leakage current and on full load.

### Capacitor configuration

The capacitors are able to handle peak current far in excess of the rms current. In this way they can discharge high-energy transients without suffering damage.

The capacitors are self-healing and come with integrated overpressure disconnection. Consequently a capacitor will not burst under inadmissible overload or at the end of its service life.

### **RF-tight cable routing from top cabinet area to shielding wall**

RF-tight cable routing uses flexible connector fittings with an inner diameter of 80 mm. The connector fittings must be ordered separately.

There are matching openings for the connector fittings on the rear of the cabinet. Unused openings can be sealed with special cover flange plates.

Refer to the chapter on installation accessories for connector fittings and cover flange plates.

### **Installation**

On the front and rear of its base, the filter cabinet has a plate that can be unscrewed. After removing these plates, a cabinet can be simply moved with a forklift truck for example. There is a ring at each corner on the top for use of a crane.

For enhanced protection against shock, there are openings in the bottom so that the cabinet can be bolted to the floor.

### **Protective measures (grounding)**

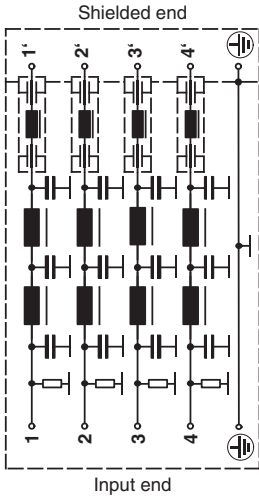
The high capacitances between the lines and ground require special protective measures. If there are no product-specific requirements, protection with a secondary ground wire (diameter min. 10 mm<sup>2</sup>) in accordance with EN 50178 is necessary. For this purpose the filter case have connecting bolts at each end.

Resistors are incorporated in the filter to discharge capacitors after turn-off.

### **EMP protection**

For overvoltage protection, the cabinet can be fitted with block varistors (model SIOV B80K...). The advantage of varistors is the absence of follow-up current once the overvoltage has decayed. These block varistors are also notable for their high discharge capacity (max. 100 000 A for an 8/20  $\mu$ s curve per line).

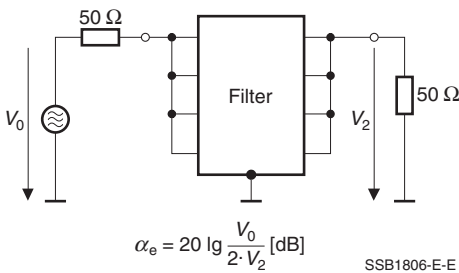
**Circuit diagrams**



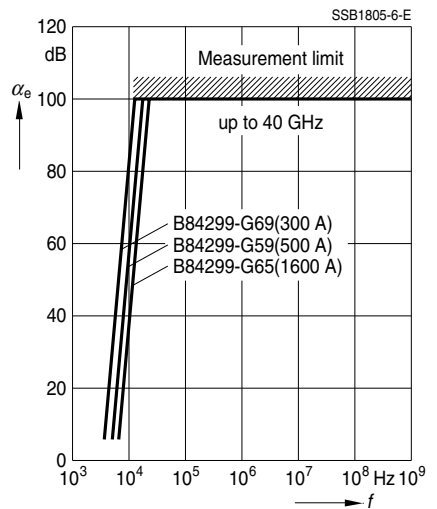
SSB1804-X-E

**Insertion loss  $\alpha_e$  (typical values at  $Z = 50 \Omega$ )**

**Measurement circuit**



SSB1806-E-E



**General technical data**

Rated voltage $V_R$	440 V 250 V	line/line line/case
Number of lines	4	
Rated current $I_R$	see characteristics	referred to + 40°C ambient temperature
Max. admissible overcurrent $I_{over}$	75 · $I_R$ for 50 ms 10 · $I_R$ for 1 s 2 · $I_R$ for 1 min 1,4 · $I_R$ for 15 min	
Rated frequency $f_R$	50/60 Hz	
Test voltages $V_T$	1200 Vdc, 2 s 1200 Vdc, 2 s	line/line line/case
Voltage drop/phase $\Delta V$	< 1 %	of $V_R$ at 50 Hz and $I_R$
DC resistance $R_{max}$	see characteristics	per line
Climatic category	25/085/56	(-25 °C/+85 °C/56 days damp heat test) to EN 60068-1

**Characteristics and ordering codes**

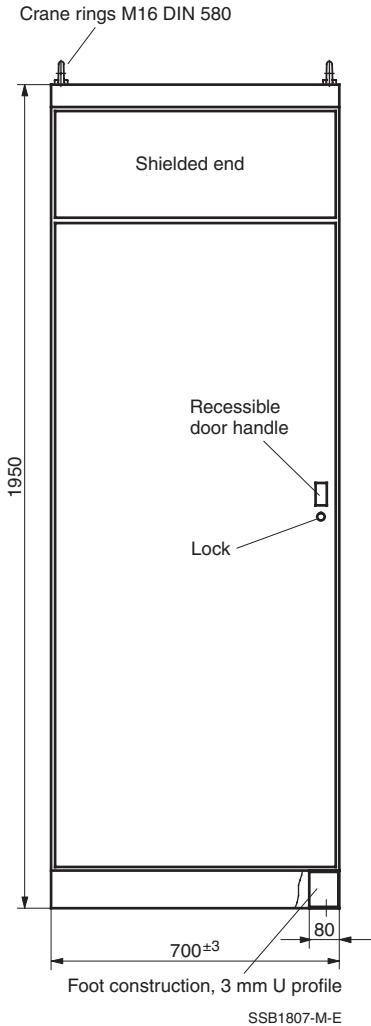
$I_R$ A	$R_{max}$ mΩ	Dimensional drawing	Approx. weight kg	Ordering code <sup>1)</sup>
4 × 300	< 1	1	400	B84299-G69-B...
4 × 500	< 0,5	1	450	B84299-G59-B...
4 × 1600	< 0,03	2	800	B84299-G65-B...

1) The ordering code will be completed by the producer.

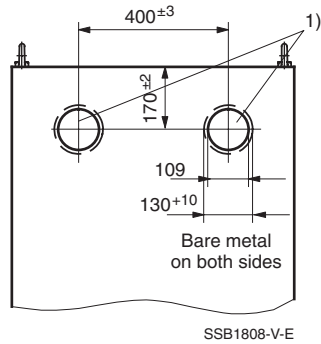
**Dimensional drawing 1**

300- and 500-A filters

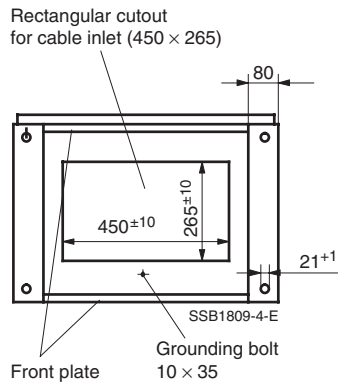
**Front view**



**Rear view**



**View from below**

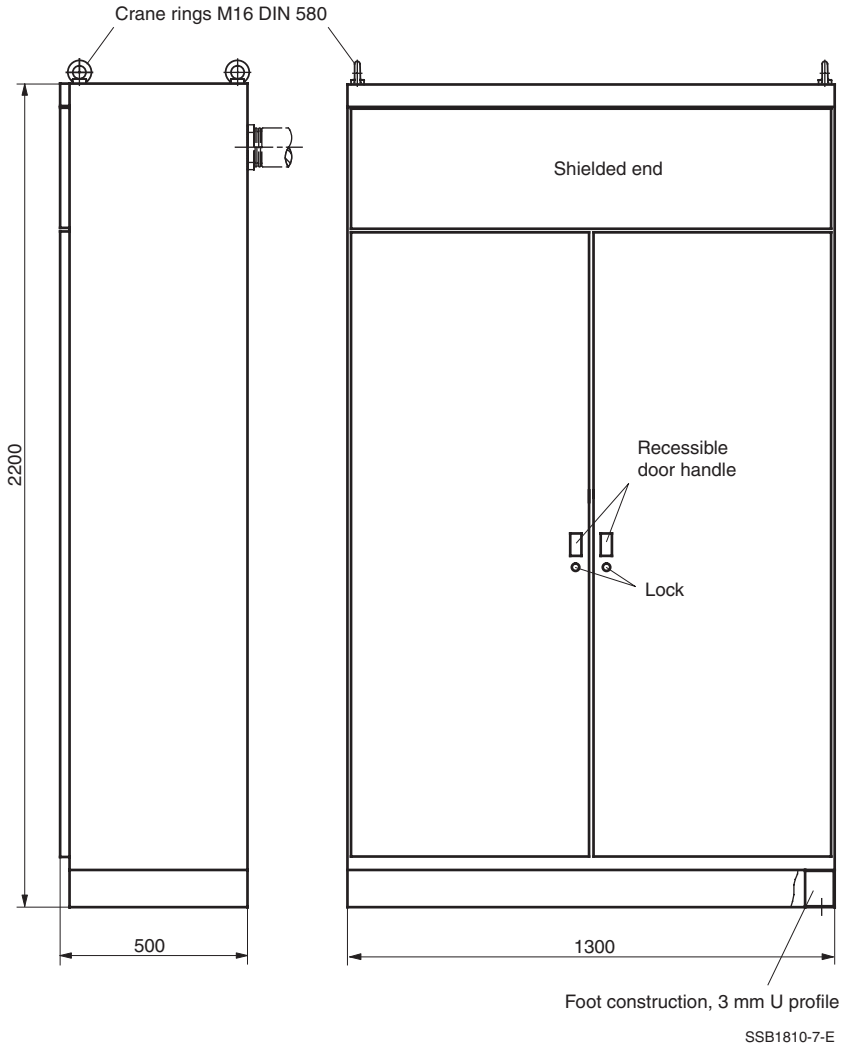


RAL 7035 color  
(light gray, semigloss)

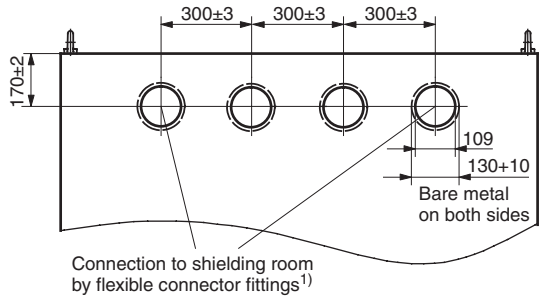
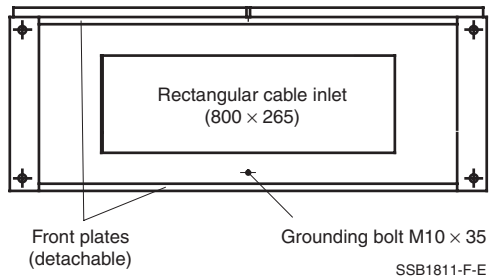
1) Connector fittings must be ordered separately.  
Ordering code: B84298-A46-L\*\*\* (inner diameter 80 mm)

**Dimensional drawing 2**

1600-A filter



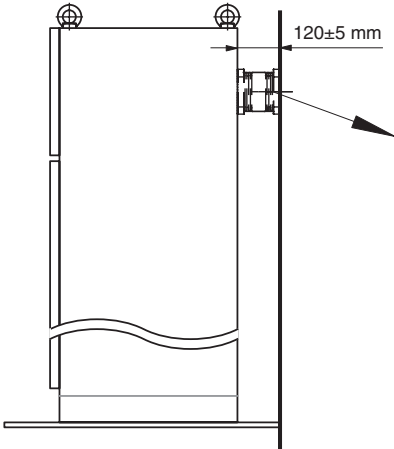
RAL 7035 color  
(light gray, semigloss)

**Dimensional drawing 2 (continued)**
**Rear view**

**View from below**


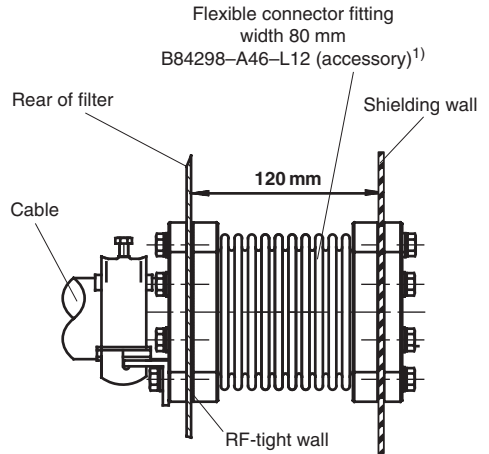
Inquire for modified cable inlets and outlets.

1) Connector fittings must be ordered separately.  
 Ordering code: B84298-A46-L\*\*\* (inner diameter 80 mm)  
 Cover flange for RF-tight sealing of unused connector openings:  
 Ordering code: B84298-M80-C1

Example of RF-tight installation with connector fitting



SSB1812-N



SSB1813-W-E

1) Connector fittings must be ordered separately.



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