



## Power line chokes

I core chokes

500 V AC, 4 ... 40 A, 0.056 ... 5.6 mH

**Series/Type:** B82505W

**Date:** October 2008, October 2009

**Rated voltage 500 V AC/600 V DC**  
**Rated current 4 A to 40 A**  
**Rated inductance 0.056 mH to 5.6 mH**

### Construction

- I core choke
- Rectangular plastic case
- Resin potting

### Features

- Low power dissipation
- Suppression of broadband interference
- Compact design
- Design complies with EN 60938-2 (VDE 0565-2)
- RoHS-compatible

### Applications

- Suppression of symmetrical and asymmetrical interference
- High-performance power supplies
- Industrial applications

### Terminals

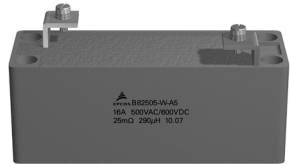
Screw terminals M5

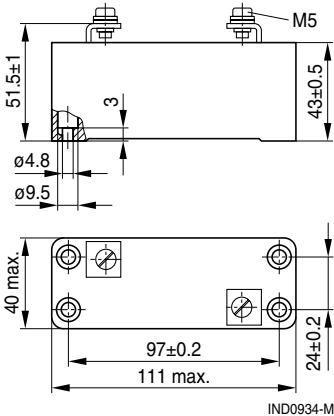
### Marking

Manufacturer, ordering code, rated inductance, rated voltage, rated current, DC resistance, date of manufacture (MM.YY)

### Delivery mode

Cardboard box



**Dimensional drawing**


Tolerances to ISO 2768-C  
unless otherwise noted.

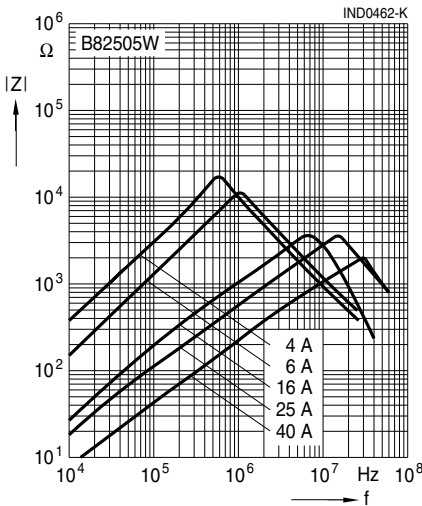
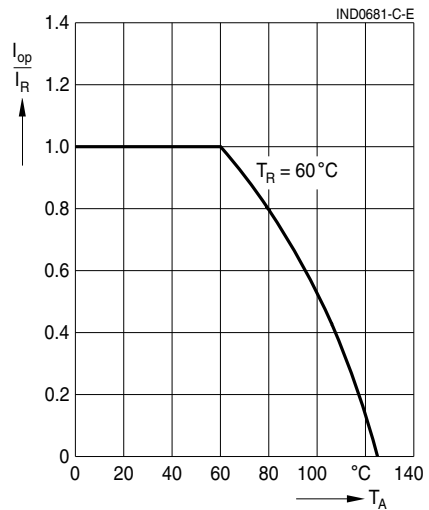
Dimensions in mm

**Technical data and measuring conditions**

Rated voltage $V_R$	500 V AC (50/60 Hz) / 600 V DC During operation between winding and metal parts (VDE 0565-2).
Test voltage $V_{test}$	2800 V AC, 2 s (winding/core) 2800 V AC, 2 s (winding/case)
Rated temperature $T_R$	60 °C
Rated current $I_R$	Referred to 50 Hz and rated temperature
Permissible operating current at 400 Hz	$0.6 \cdot I_R$
Rated inductance $L_R$	Measured with Agilent 4284A at 0.1 mA, 20 °C Measuring frequency: $L_R \leq 1 \text{ mH} = 100 \text{ kHz}$ $L_R > 1 \text{ mH} = 10 \text{ kHz}$
Inductance tolerance	$\pm 20\%$ at 20 °C
DC resistance $R_{typ}$	Measured at 20 °C, typical values
Storage conditions (packaged)	-25 °C ... +40 °C, $\leq 75\%$ RH
Climatic category	40/125/56 (to IEC 60068-1)
Weight	Approx. 600 g

**Characteristics and ordering codes**

$I_R$ A	$L_R$ mH	$R_{typ}$ $\Omega$	Ordering code
4	5.6	0.480	B82505W0000A002
6	2.2	0.220	B82505W0000A003
8	1.2	0.075	B82505W0000A008
16	0.29	0.025	B82505W0000A015
25	0.15	0.015	B82505W0000A006
40	0.056	0.006	B82505W0000A007

**Impedance  $|Z|$  versus frequency  $f$**   
 measured at 20 °C, typical values

**Current derating  $I_{op}/I_R$**   
 versus ambient temperature  $T_A$ 


## Cautions and warnings

- Please note the recommendations in our Inductors data book (latest edition) and in the data sheets.
  - Particular attention should be paid to the derating curves given there.
  - The soldering conditions should also be observed. Temperatures quoted in relation to wave soldering refer to the pin, not the housing.
- If the components are to be washed varnished it is necessary to check whether the washing varnish agent that is used has a negative effect on the wire insulation, any plastics that are used, or on glued joints. In particular, it is possible for washing varnish agent residues to have a negative effect in the long-term on wire insulation.
- The following points must be observed if the components are potted in customer applications:
  - Many potting materials shrink as they harden. They therefore exert a pressure on the plastic housing or core. This pressure can have a deleterious effect on electrical properties, and in extreme cases can damage the core or plastic housing mechanically.
  - It is necessary to check whether the potting material used attacks or destroys the wire insulation, plastics or glue.
  - The effect of the potting material can change the high-frequency behaviour of the components.
- Ferrites are sensitive to direct impact. This can cause the core material to flake, or lead to breakage of the core.
- Even for customer-specific products, conclusive validation of the component in the circuit can only be carried out by the customer.

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