



## Power line chokes

Current-compensated ring core triple chokes  
440/ 250 V AC, 6 ... 25 A, 1.3 ... 6 mH

**Series/Type:** B82747F

**Date:** January 2011

Current-compensated ring core triple chokes

**Rated voltage 440/ 250 V AC**


**Rated current 6 A to 25 A**

**Rated inductance 1.3 mH to 6 mH**

**Construction**

- Current-compensated ring core triple choke
- Ferrite core
- Polycarbonate case (UL 94 V-0)
- Polyurethane potting (UL 94 V-0)
- For through-hole fixing
- Sector winding

**Features**

- > 1% stray inductance for symmetrical interference suppression
- High currents
- Design complies with EN 60938-2 (VDE 0565-2)
- ENEC (VDE) approval 
- RoHS-compatible

**Applications**

- Suppression of common-mode interferences
- Switch-mode power applications

**Terminals**

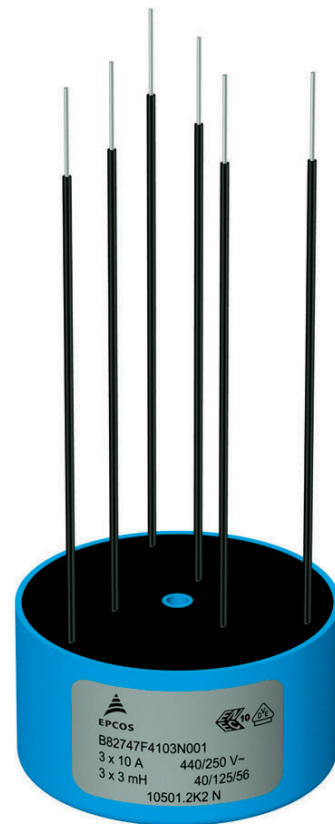
- Ends of winding wires
- Hot dip tinned

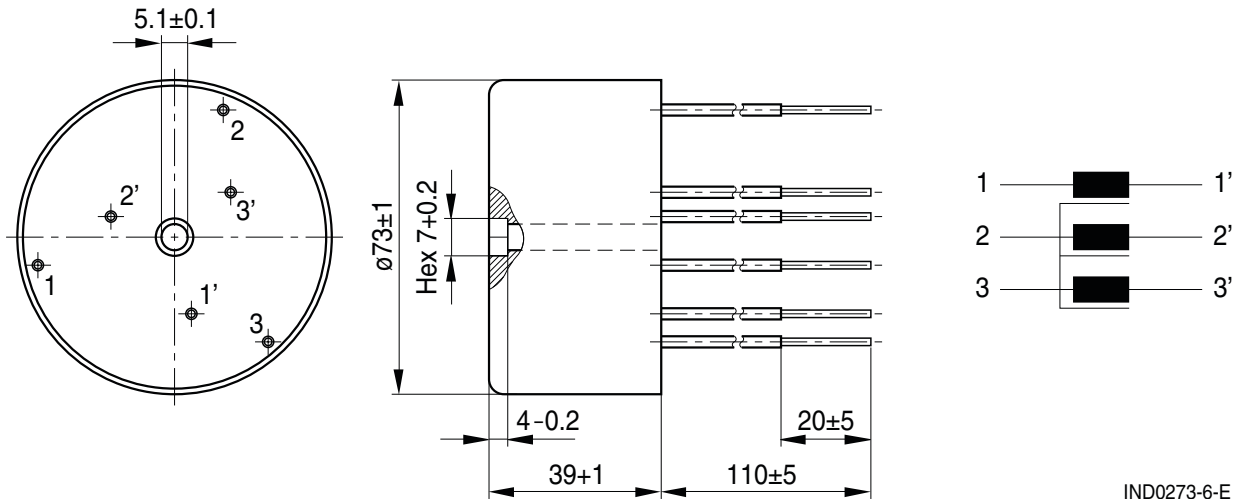
**Marking**

Manufacturer, approval marks, ordering code, rated current, rated voltage, rated inductance, climatic category, date of manufacture (YYWWD.internal ID code), factory identification code

**Delivery mode**

Blister tray in cardboard box



**Dimensional drawing and pin configuration**


IND0273-6-E


Dimensions in mm

Tolerances acc. ISO 2768-c

**Technical data and measuring conditions**

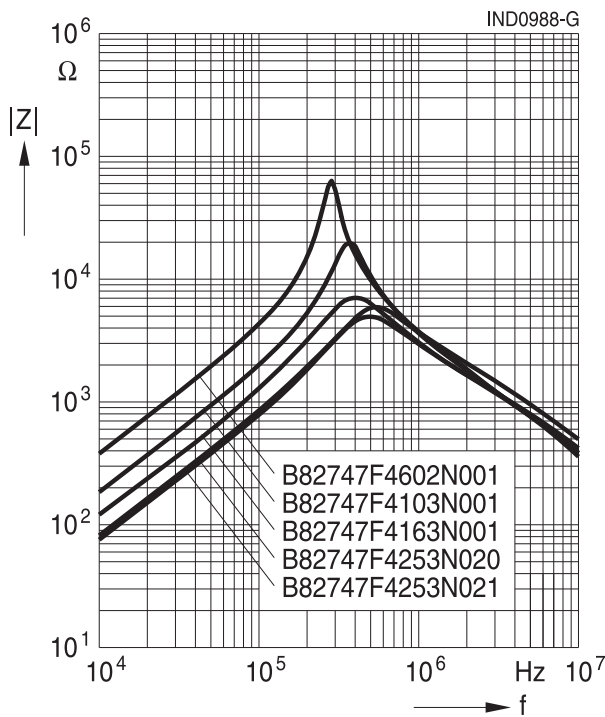
Rated voltage $V_R$	440/250 V AC (50/ 60 Hz)
Test voltage $V_{test}$	2500 V AC, 2 s (line/ line)
Rated temperature $T_R$	+40 °C or +60 °C
Rated current $I_R$	Referred to 50 Hz and rated temperature
Rated inductance $L_R$	Measured with Agilent 4284A at 10 kHz, 0.1 mA, +20 °C Inductance is specified per winding.
Inductance tolerance	±30% at +20 °C
Inductance decrease $\Delta L/ L_0$	< 20% at DC magnetic bias with $I_R$ , +20 °C
Stray inductance $L_{stray,typ}$	Measured with Agilent 4284A at 10 kHz, 5 mA, +20 °C, typical value
DC resistance $R_{typ}$	Measured at +20 °C, typical values, specified per winding
Solderability (lead free)	Sn96.5Ag3.0Cu0.5: (245 ±5) °C, (3 ±0.3) s Wetting of soldering area ≥ 95% (to IEC 60028-2-58, test Ta)
Climatic category	40/ 125/ 56 (to IEC 60068-1)
Storage conditions (packaged)	-25 °C ... +40 °C, ≤ 75% RH
Weight	Approx. 350 g
Approvals	EN 60938-2

Characteristics and ordering codes

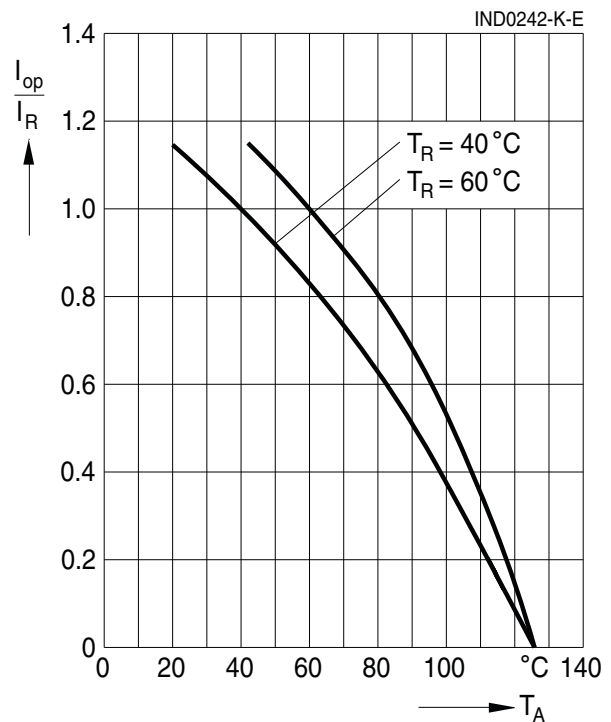
$I_R$ A	$L_R$ mH	$L_{stray,typ}$ $\mu$ H	$R_{typ}$ m $\Omega$	$T_R$ $^{\circ}$ C	Wire $\varnothing$ mm	Ordering code	Approvals 
6	6.0	145	50	60	1.0	B82747F4602N001	X
10	3.0	64	20	60	1.4	B82747F4103N001	X
16	2.0	38	12	60	1.6	B82747F4163N001	X
25	1.3	22	7.5	40	1.8	B82747F4253N020	X
25	1.3	22	4.7	60	2.24	B82747F4253N021	X

x = approval granted

**Impedance  $|Z|$  versus frequency  $f$**   
measured with windings in parallel at 20  $^{\circ}$ 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. Derating must be applied in case the ambient temperature in the application exceeds the rated temperature of the component.
  - Ensure the operation temperature (which is the sum of the ambient temperature and the temperature rise caused by losses / self-heating) of the component in the application does not exceed the maximum value specified in the climatic category.
  - 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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