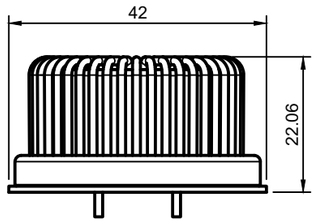
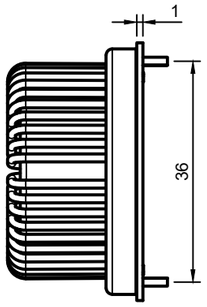
© ALL RIGHTS RESERVED. THESE DRAWINGS AND SPECIFICATIONS SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OF SALE OF APPARATUS OR DEVICES WITHOUT EXPRESS WRITTEN PERMISSION FROM ROTIMA AG

DIMENSSIONS & PROJECTION

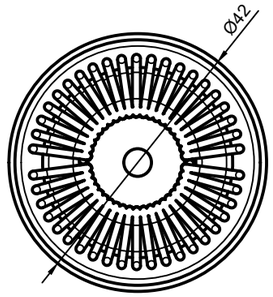
Bottom View



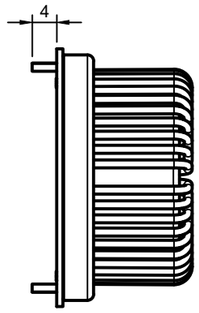
Right View



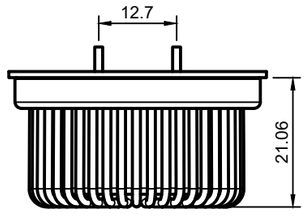
Front View



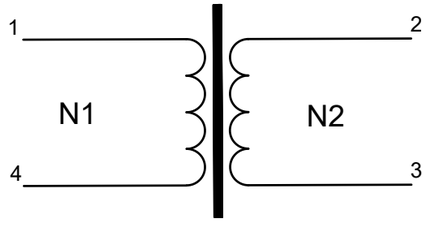
Left View



Top View



SCHEMATIC



DESCRIPTION

This CM-inductor from Rotima AG is a high-permeability ferrite common-mode inductor designed for suppression of conducted electromagnetic interference and high-frequency common-mode noise in power and signal circuits. This CM-inductor is designed for grid applications with 230 VAC and a rated current of 10 A.

The high permeability of the KA70 magnetic material provides high inductance with a relatively small number of turns. The identical winding configuration provides effective common-mode impedance while maintaining a comparatively low impedance for balanced differential-mode currents.

Under normal balanced operation, the magnetic flux generated by the two windings substantially cancels, allowing the choke to carry a continuous current of 10 A per winding.



ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Value	Unit	Tolerance
Core type	-	T31/19/15 Core		KA70 materrial
Winding	N_1/N_2	21/21 turns		
Common mode inductance	L_{CM}	3.0 ±20%	mH	typ.
Differential mode inductance	L_{DM}	66.7	µH	typ.
Rated current	I_r	10	A	typ.
DC resistance (N1)	R_{DC}	22.3	mΩ	max.
Total loss (maximum)		4.42	W	max.
Rated temperature	T_r	+60	°C	typ.
Operating temperature range	T	–20 … +125	°C	typ.

TEST RESULTS

Parameter	Symbol	Test Conditions	Value	Unit	Tolerance
Inductance (N1)	L	1 kHz, 250 mV	5.22	mH	typ.
DC resistance (N1)	R_{DC}		16.3	mΩ	typ.
Dielectric strength (N1 - N2)	-	1 kV AC, 50 Hz, 10s	<0.1	mA	typ.

AREAS OF APPLICATION

- AC mains input EMI filters, and EMC/EMI filtering
- Switch-mode power supplies (SMPS)
- Motor drives and inverters
- DC-Bus filtering / Active front end (AFE) rectifiers
- On-Board chargers, etc

Rev.	Revision note	Date of issue	Name
0.1	First release	23.09.2026	OAK

Standard | Cust. drawing no

Prepared 09.09.2026 Oyebola Akinboyewa

Approved 23.09.2026 Lukas Schmieden

Part No. T400.10.002.002

Title: Common Mode Inductor Based on T31/19/15 3 mH, 10A

Dept.: Engineering

DWG No.: LQ-CMT31004

ROTIMA ALWAYS ON

Customer ref No.

Rev ID | Language EN

First angle projection | Scale 1:1 | Sheet 1/2

PRECAUTIONS AND WARNINGS

General:

- This electronic component has been designed and manufactured for use in general electronic equipment.
- The component has been designed and manufactured for use within the values specified in the data sheet. Failure to comply with the application and operating conditions specified in the data sheet may result in damage to or dissolution of the wire insulation.
- Do not drop the components or subject them to impact, as this may damage them.
- Rotima AG products are qualified in accordance with international standards, which are listed in each product reliability report. Rotima AG does not guarantee the validity and sustainability of product features that exceed Rotima's specifications.

Storage conditions:

- Storing Rotima AG products for more than 12 months is not recommended. Among other things, this can lead to deterioration of the connections, resulting in poor solderability. Therefore, all products should be used within 12 months of the date of shipment.
- Do not expose the components to direct sunlight.
- The storage conditions in the original packaging are defined in accordance with DIN EN 61760-2.
- The storage conditions specified in the original packaging apply to the storage period and not to the transport time of the components.

Rev.	Revision note	Date of issue	Name
0.1	First release	23.09.2026	OAK

Standard | Cust. drawing no

Prepared 09.09.2026 Oyebola Akinboyewa

Approved 23.09.2026 Lukas Schmieden

Part No. T400.10.002.002

Title: Common Mode Inductor Based on T31/19/15 3 mH, 10A

Dept.: Engineering

ROTIMA ALWAYS ON

DWG No. LQ-CMT31004

Customer ref No.

Rev ID | Language EN

Scale

First angle projection

Sheet 2/2

© ALL RIGHTS RESERVED. THESE DRAWINGS AND SPECIFICATIONS SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OF SALE OF APPARATUS OR DEVICES WITHOUT EXPRESS WRITTEN PERMISSION FROM ROTIMA AG