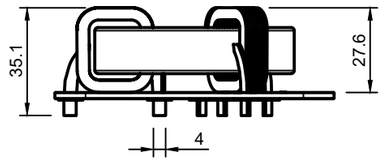
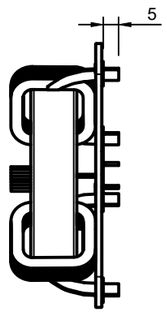
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DIMENSSIONS & PROJECTION

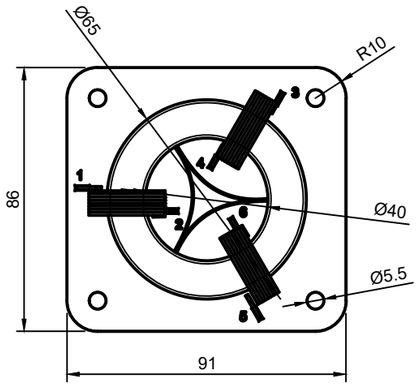
Bottom View



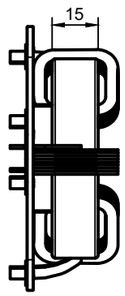
Right View



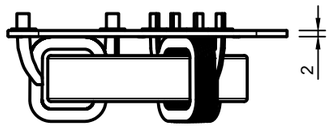
Front View



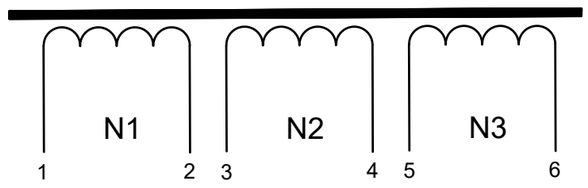
Left View



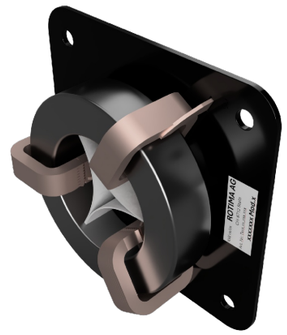
Top View



SCHEMATIC



DESCRIPTION



This 3-phase CM-inductor from Rotima AG is a high-permeability common-mode inductor engineered for suppression of conducted electromagnetic interference (EMI) and high-frequency common-mode noise in low-to-medium power 3-phase AC systems and DC systems typically up to 14 kW power throughput at 400 VAC with a rated current of 20 A.

The high permeability magnetic material utilizes a tape-wound nanocrystalline alloy ring core, which provides high inductance with a relatively small number of turns.

The three identical windings are wound in isolated sectors around the toroid to achieve high dielectric isolation between phases and low parasitic capacitance to extend effective filtering bandwidth into the MHz range.

ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Value	Unit	Tolerance
Core type	-	T65/40/15 Core		Nanocrystalline
Winding	$N_1/N_2/N_3$	8/8/8 turns		
Common mode inductance	L	3 ±20%	mH	typ.
Differential mode inductance	L_{DM}	60	µH	typ.
Rated current	I_r	20	A	typ.
DC resistance (N1)	R_{DC}	5.68	mΩ	max.
Total loss (maximum)		8.16	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	2.7	mH	typ.
DC resistance (N1)	R_{DC}		6.7	mΩ	typ.
Dielectric strength (N1 - N2)	-	1 kV AC, 50 Hz, 10s	<0.1	mA	typ.

AREAS OF APPLICATION

- Input/Output EMI filtering
- Bearing current mitigation
- 3-Phase string 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. T400.10.002.003

Title: Common Mode Inductor Based on T65/40/15 3 mH, 20 A

Dept.: Engineering

ROTIMA ALWAYS ON

DWG No.: LQ-CMT65005

Customer ref No.

Rev ID

Language EN

Scale 1:2

First angle projection

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

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Scale

First angle projection

Sheet 2/2

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