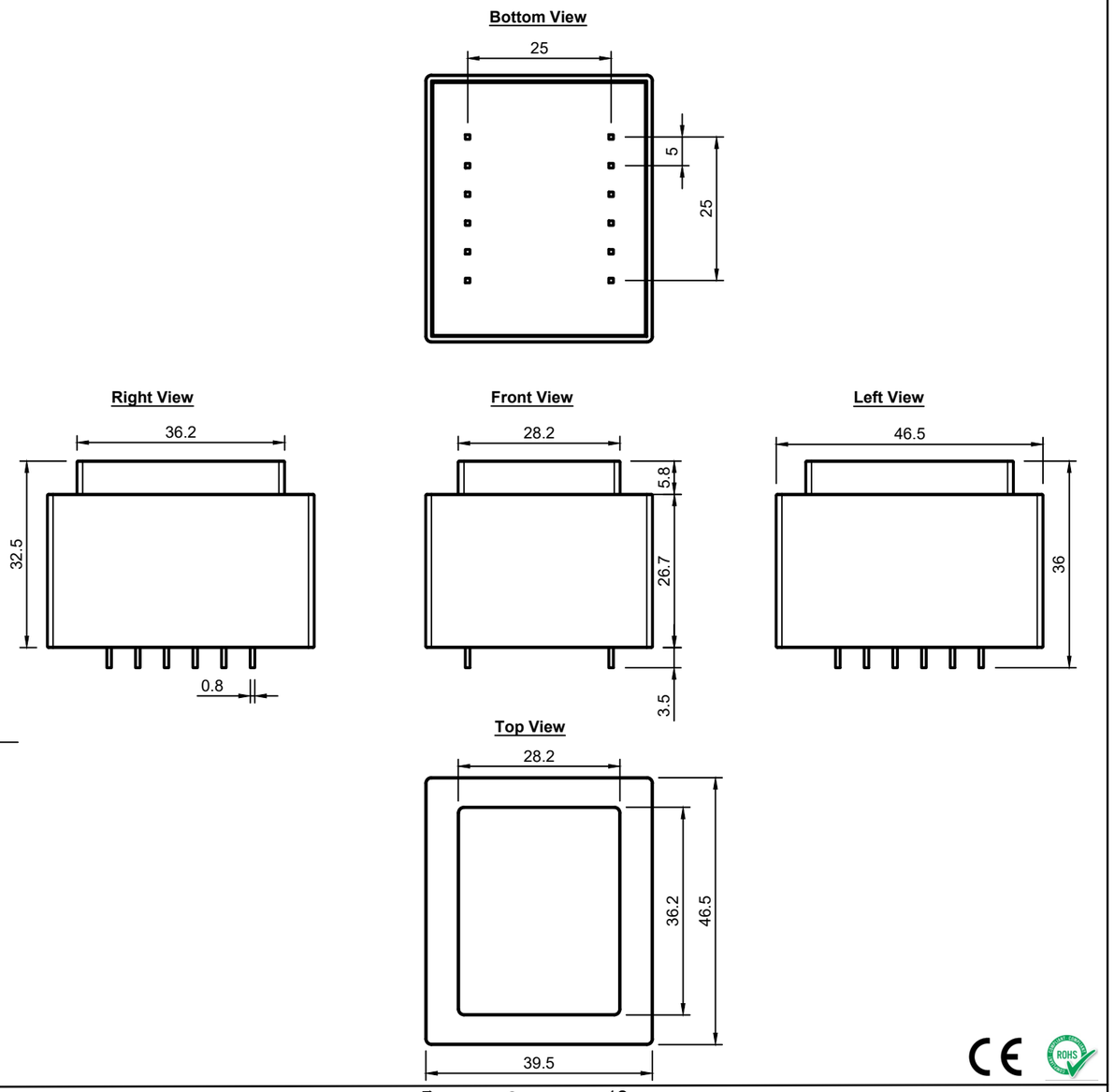
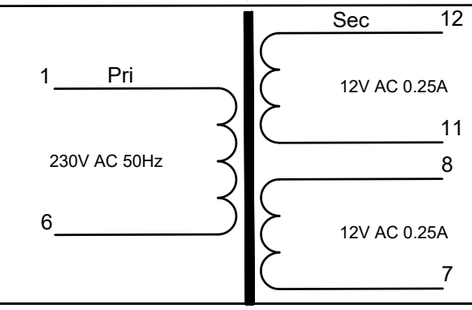
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DIMENSSIONS & PROJECTION



SCHEMATIC

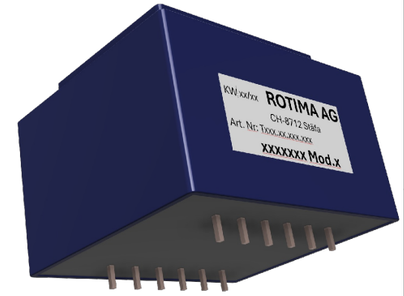


DESCRIPTION

This PCB transformer from Rotima AG is designed for mains-frequency voltage conversion and galvanically isolated low-voltage power supplies in compact electronic equipment.

The double-chamber EI design provides physical separation between the primary and secondary circuits, supporting high electrical isolation and reduced capacitive coupling in PCB-mounted applications.

With a 230 V AC input, two independent 12 V AC outputs and a total rated power of 6 VA, the component is suitable for isolated power supplies, control electronics, test and laboratory equipment and lighting applications.



ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Value	Unit	Tolerance
Core type	-	EI42 Core, 0.5 mm		Silicone steel
Winding	$N_p/N_{s1}/N_{s2}$	600/37/37 turns		
Magnetising inductance (N1)	L_p	8.1 ±20%	H	typ.
Magnetising current	I_m	91.5	mA	max.
Open circuit voltage	V_o	12.6 - 14.3	V	typ.
Rated Power	P_r	6.0	VA	typ.
Rated primary voltage	V_p	230	V	typ.
Rated secondary current	I_r	2x 0.25	A	typ.
Rated secondary voltage	V_s	2x 12	V	typ.
Short-circuit current	I_{sc}	3	A	max.
DC resistance (N1)	R_{DC}	530	Ω	max.
Total loss (maximum)		1.2	W	max.
Rated temperature	T_r	+60	°C	typ.
Operating temperature range	T	–40 … +125	°C	typ.
Efficiency	η	83	%	typ.

TEST RESULTS

Parameter	Symbol	Test Conditions	Value	Unit	Tolerance
Inductance (N1)	L	100 Hz, 250 mV		H	typ.
Leakage inductance (N1)	L_δ	1 kHz, 250 mV		mH	typ.
DC resistance (N1)	R_{DC}	100 Hz, 250 mV	578	Ω	typ.
Dielectric strength (N1 - N2)	-	3.5 kV AC, 60s	<0.2	mA	typ.
Insulation resistance (N1 - N2)	-	0.5 kV DC, 60s	60	GΩ	typ.

AREAS OF APPLICATION

- Galvanically isolated low-voltage power supplies
- Control electronics
- Test & laboratory equipment
- Lighting systems

Rev.	Revision note	Date of issue	Name
0.1	First release	24.09.2026	OAK

Standard | Cust. drawing no

Prepared 04.09.2026 Oyebola Akinboyewa

Approved 24.09.2026 Lukas Schmieden

Part No. T400.10.001.001

Title: EI42 PCB Transformer 230 VAC 50 Hz - 2x12 VAC 250 mA

Dept.: Engineering

ROTIMA ALWAYS ON

DWG No.: LQ-T26174901

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.

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