ENERGEKS

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CATALOGUE DATA SHEET

Dry-type distribution transformer

160 kVA 15.75 / 0.42 kV

№ 228-2025-44

Technical parameters			
Parameter description		**Value**	
1	Transformer type	Dry-type distribution transformer in cast resin insulation **TeoEco2 160 kVA 15.75/0.42 kV Tier2**	
2	Rated power	160 kVA	
3	Rated voltage	**HV**	**LV**
		15.75 kV	0.42 kV
4	Frequency	50 HZ	
5	Off-circuit tap changer	**±3 x 2.5 %**	**-**
6	Connection	Delta	Star + Neutral
7	Vector group	Dyn 5	
8	Insulation level (Um / AC / LI)	**17.5 / 38 / 95**	**1.1 / 8 / -**
9	Winding material	Cooper (Cu)	Cooper (Cu)
10	Winding type	Vacuum cast resin	Impregnated
11	Number of phases	3	
12	Standards	IEC 60076-11 / EN 50588-1	
13	Regulations and compliance	REG. UE 548/2014, EcoDesign (EU) 2019/1783 – Stage II	
14	Certificate	BGTCLVVX22072021	
15	Installation	Indoor	
16	Degree of protection	IP00	
17	Cooling method	AN	
18	Ambient temperature range	- 25 / + 40 °C	
19	Installation altitude	<1000 m above sea level	
Guaranteed values / reference temperature 120 °C			
Standard tolerances apply to the parameters below			
20	**No-load losses**	**360 W**	
21	**Load losses**	**2600 W**	
22	**Impedance**	**6 %**	
23	No-load current	0.45 %	
24	Partial discharge level	10 pC	
25	Noise level LpA / LwA	41 / 53 dBA	
26	Climatic, environmental and fire behaviour class	**C3-E3-F1**	
Insulation class		**HV**	**LV**
27	Thermal insulation class	F	F
28	Temperature rise (K)	100	100
Overall dimensions and weight (preliminary)			
29	Length × width × height (mm)	1190 × 600 × 1305	
30	Wheel track (mm)	520	
31	Weight (kg)	1040	
Note: Losses, dimensions and weight are indicative and will be confirmed after receipt of the purchase order and completion of the design stage.			

Tests

- Routine tests in accordance with the applicable standard.
- Type tests and special tests can be arranged on customer request for an additional fee.

Efficiency		
cos ϕ 0,9	• 50 %	• 99,00%
cos ϕ 0,9	• 75 %	• 98,81%
cos ϕ 0,9	• 100 %	• 98,56%
cos ϕ 0,9, voltage drop		2,61%

Standard accessories			
	Item	pcs.	Notes
1	HV terminals	3	
2	LV terminals	4	
3	Off-circuit tap changer	5	
4	Rating plate	1	aluminum
5	Lifting lugs	4	
6	Earthing terminals	2	
7	Bi-directional rollers	4	
8	PT100 temperature sensors	3	included
9	Terminal box (IP55)	1	included
10	Digital temperature monitoring relay T-154	1	included
11	Test report	1	
12	Declaration of conformity	1	

Optional equipment	
1	Anti-vibration pads
2	Fan set with control unit
3	Side low-voltage cable outlet
4	Protective enclosure
5	Additional PT100 sensors
6	Ball connector for portable earthing rods
7	Electrostatic shield

TECHNICAL DESCRIPTION

TeoEco2 Energeks dry type cast resin transformers are designed in accordance with European standards for MV LV equipment. The design based on **epoxy resin insulation and copper windings** ensures low load losses, high thermal stability and long service life. **A short circuit voltage of 6 %** provides an appropriate balance between short circuit current limitation and stable system operation.
The transformers are resistant to moisture, dust and environmental contaminants, making them suitable for demanding operating conditions.

The units comply with the requirements of **PN EN 60076, IEC 60076-11, EN 50588** and **Ecodesign Tier 2** regulations and are manufactured in accordance with **ISO 9001, ISO 14001** and **ISO 18001** management systems.

DOCUMENTATION AND COMPLIANCE

Each TeoEco2 Energeks transformer is supplied with a complete set of technical documentation including **a catalogue sheet, installation manual, test reports, conformity documents according to EN 60076-1, reports issued by accredited or equivalent certification bodies, the CE Declaration of Conformity** and a **warranty** certificate.

DESIGN AND OPERATING CONDITIONS

• design suitable for indoor installations and industrial environments
• dry type oil free technology eliminating leakage risk and increasing fire safety
• suitability for installation in limited technical spaces
• resin insulation resistant to moisture and environmental contamination
• stable operating parameters and long service life

APPLICATION AREAS

• water supply systems, water treatment plants and wastewater treatment facilities
• data centres, server rooms and critical infrastructure requiring high supply continuity and enhanced safety
• public utility buildings including hospitals, schools, office buildings and administrative facilities
• industrial plants and municipal facilities executed under public procurement procedures, where formal compliance, complete documentation and repeatable technical parameters are required
• photovoltaic installations, wind power plants and grid integration systems at medium voltage level
• transport infrastructure including railways, metro systems and airports, as well as backup power supply systems

GRID COMPATIBILITY

• technical parameters and equipment configurations compliant with standards applied by European electricity distribution system operators
• solution compatible with MV LV distribution networks operated by European DSOs in accordance with applicable grid codes and technical requirements
• easy integration with medium and low voltage infrastructure in distribution, industrial and municipal projects