ENERGEKS

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CATALOGUE DATA SHEET

Dry-type distribution transformer

1600 kVA 15.75 / 0.42 kV

№ 228-2025-48

Technical parameters			
Parameter description		**Value**	
1	Transformer type	Dry-type distribution transformer in cast resin insulation **TeoEco2 1600 kVA 15.75/0.42 kV Tier2**	
2	Rated power	1600 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	Aluminium	Aluminium
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**	**1980 W**	
21	**Load losses**	**13000 W**	
22	**Impedance**	**6 %**	
23	No-load current	0.35 %	
24	Partial discharge level	10 pC	
25	Noise level LpA / LwA	52 / 67 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)	1735 × 1000 × 2165	
30	Wheel track (mm)	820	
31	Weight (kg)	3830	
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	Aluminium
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 **medium voltage dry type cast resin transformers** are designed in accordance with European standards for MV LV equipment. The use of **epoxy resin insulation combined with aluminium windings** ensures stable operation, high reliability and a well balanced technical and economic performance.
A short circuit voltage of 6 % provides an optimal compromise between short circuit current limitation and system stability, supporting safe and predictable operation in distribution and industrial networks.

Thanks to their **cast resin insulation system,** the transformers are resistant to moisture, dust and environmental contamination. This makes them suitable for demanding operating conditions where durability and long term performance are essential.

The transformers comply with **EN 60076 & IEC 60076 11** standards, meet the requirements of **EN 50588** and **Ecodesign Tier 2** regulations, and are manufactured under certified quality, environmental and occupational safety management systems.

DOCUMENTATION AND COMPLIANCE

Each TeoEco2 Energeks transformer is supplied with complete technical documentation, including a data sheet, installation and operation instructions, test reports, conformity documents, accredited laboratory reports where applicable, CE Declaration of Conformity and warranty documentation.

The documentation package supports formal acceptance procedures, regulatory compliance and smooth integration into medium and low voltage electrical installations across European markets.

DESIGN AND OPERATING CONDITIONS

•The transformers are designed for indoor in
• Designed for indoor installation and demanding industrial environments
• Dry type oil free technology eliminating the risk of leakage and improving fire safety
• Compact design enabling installation in limited technical and electrical rooms
• Cast resin insulation providing high resistance to humidity, dust and environmental pollution
• Stable electrical parameters ensuring reliable long term operation
• Long service life combined with low maintenance requirements
• Suitable for continuous operation in industrial facilities and critical infrastructure

APPLICATION AREAS

• Water supply systems, water treatment plants and wastewater treatment facilities
• Data centres, server rooms and critical infrastructure requiring high power supply continuity
• Public buildings including hospitals, schools, office buildings and administrative facilities
• Industrial plants and municipal projects requiring formal compliance and complete technical documentation
• Photovoltaic installations and renewable energy systems
• Wind power plants and medium voltage grid integration projects
• Transport infrastructure including railways, metro systems and airports
• Backup and emergency power supply systems

GRID COMPATIBILITY

• Electrical parameters and equipment configurations are aligned with technical standards commonly applied by European distribution system operators
• The solution is compatible with requirements typically enforced across EU medium and low voltage distribution networks
• Designed for straightforward integration into MV LV infrastructure in distribution, industrial and municipal projects
• Supports stable and reliable operation within MV LV systems without the need for non standard design adaptations