

Cast Resin Dry Transformers

Powering Safety, Shaping the Future






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ABOUT ELSEWEDY ELECTRIC

A global leader that has evolved from a local manufacturer of electrical products into an integrated infrastructure solutions provider; with over 19,000 employees and with recorded revenues of more than USD 5 Billion in 2023. We Operate in five key business sectors: Wire, Cable & Accessories, Electrical Products, Engineering & Construction, Digital Solutions, and Infrastructure Investments. With a strong presence in 19 different countries, 31 production facilities spread across African and Asian countries including Egypt, Algeria, KSA, Qatar, Indonesia, Pakistan, and Tanzania. We export a wide range of high-end products to over 110 countries worldwide. At the heart of our approach is an all-in-one integrated Engineering, Procurement & Construction (EPC) service, enabling us to deliver the most complex turnkey projects on time and with the highest efficiency.

WE OPERATE IN FIVE KEY BUSINESS SECTORS

 WIRE, CABLE & ACCESSORIES	 ELECTRICAL PRODUCTS	 ENGINEERING & CONSTRUCTION	 DIGITAL SOLUTIONS	 INFRASTRUCTURE INVESTMENTS
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ELECTRICAL PRODUCTS

In an ever-changing world, with new developments arising each day, we strive for consistency by constantly innovating and adapting our electrical products and services to stay one step ahead of our customers' needs. We provide a wide range of world-class, trusted, safe, and reliable solutions. We offer tailored services to a variety of distinct industries worldwide. We offer Transformers, Busways, Motors, and Fiberglass Poles, produced and sold through 10 manufacturing facilities and 12 sales offices across Africa, Asia, and America. Our products' quality has been tested and certified according to international specifications and offered at competitive prices to our customers' convenience.

TRANSFORMERS <ul style="list-style-type: none">✓ Power✓ Oil Distribution✓ Cast Resin Dry 	SUBSTATIONS <ul style="list-style-type: none">✓ Mobile✓ Package / Compact 
MOTION APPLIANCES 	BUSWAY SYSTEMS 

CAST RESIN DRY TRANSFORMERS

1ST IN MIDDLE EAST & AFRICA

ELSEWEDY ELECTRIC CAST RESIN DRY TRANSFORMERS IS THE FIRST OF ITS KIND, SAFEST AND MOST RELIABLE TRANSFORMER ON GRID

We produce transformers to suit any project, with power ratings of up to 15 MVA and voltage of up to 36 kV. Cast Resin Dry Type (ESCART) transformers are used by utility companies and T&D contractors in locations with densely-packed occupants, where safety is critical. with production capacity up to 400/ month transformer, with the latest updated technology & laser automated M/Cs .

WE'RE UP TO C4, E4 & F1 CERTIFIED.



APPLICATIONS



METRO



AIRPORTS



SCHOOLS



HOSPITALS



COMMERCIAL COMPLEXES



MANUFACTURING



INFRASTRUCTURE



HIGH RISE BUILDINGS

BUILDINGS

- ✓ Office Buildings
- ✓ Shopping Centers
- ✓ Industrial Buildings
- ✓ Hotels, Hospitals
- ✓ New Compounds and Resorts

ENERGY & INFRASTRUCTURE

- ✓ Transportation
- ✓ Infrastructure
- ✓ Airports
- ✓ Utilities' Infrastructure

INDUSTRY

- ✓ Rated power from 50 KVA up to 15/20 MVA
- ✓ System voltage up to 36 KV
- ✓ Data center Transformers for High harmonics Loads with K-factor
- ✓ TX with MV-MV sides, 22/11 KV, 33/13.8 KV, ...etc
- ✓ Isolation Transformers
- ✓ Step Up or Step down transformers
- ✓ Transformers for indoor and outdoor with Enclosure IP
- ✓ Transformers with On Load Tap changer
- ✓ Transformer Low losses tier2 or any specified Losses by customer

SPECIAL APPLICATION

- ✓ Dual HV & LV Winding (11-22, 11/6.6, 0.4 kV)
- ✓ Renewable transformers (wind turbine & solar plants) with special design to withstand high harmonics



CONSTRUCTION & ACCESSORIES

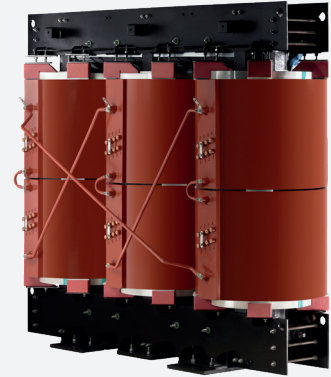
CONSTRUCTION

- ✓ Iron Core
- ✓ LV Terminal
- ✓ Fixation Support
- ✓ HV Terminal
- ✓ LV Coil
- ✓ HV Coil
- ✓ HV Winding
- ✓ Tapping Link
- ✓ Delta Connection Rods
- ✓ Earthing
- ✓ Yoke Clamping & Wheelbase
- ✓ Roller

Encapsulated Cast Resin in moulds under Vacuum and Pressure.

✓ LV FOIL WINDINGS

- Are encapsulated under Vacuum or impregnated with hot polymerized resin according to customer specifications.
- High resistivity to short-circuits reduced axial and radial short-circuit forces to a minimum.



ACCESSORIES

✓ ENCLOSURES

Transformers can be equipped with enclosures of different protection level according to IEC60529 for different service condition with IP20 and up to IP44 for both indoor and outdoor applications

- HV cable Box
- LV cable Box
- Adaptation with Bus-way

✓ AIR-FORCED SYSTEM (OPTIONAL)

- The enclosures are specially designed that the heat is dissipated properly.
- Tangential fans with low noise.
- Up to %40 increase of Power.

✓ TEMPERATURE CONTROL SYSTEM

- PT100 linear resistances and PTC sensors
- Temperature monitoring control unit with following options:
 - Fan control - on & off/alarm/trip
 - Provide Alarm, Trip and Fault signals
 - Possibility to connect with BMS through MOD BUS RS485 (Optional)
 - ETH (Ethernet module) (Optional)

✓ OTHER ACCESSORIES (OPTIONAL)

- Surge arrestor
- Over current relays
- Current Transformers
- Smart meters
- Space heaters
- VRT200/VRT600 for Fans protection
- Anti vibration Pads and roller dampers
- Surge counters

BENEFITS

ELSEWEDY ELECTRIC SMART DRY TRANSFORMERS

ELSEWEDY ELECTRIC offers advanced smart transformers equipped for remote monitoring via connectivity to BMS, SCADA systems, and more. Additionally, our transformers can be easily monitored using a mobile application or via static IP. This comprehensive monitoring capability extends to assessing the transformer's thermal performance. Notably, our smart temperature controllers are complemented by Smart Fans designed to optimize thermal performance. Moreover, various other parameters such as Power KVA, Voltage, Current, and Power Factor can be remotely monitored. This suite of smart features ensures that all components within Elsewedy transformers operate intelligently, empowering users with precise control over transformer performance and enhancing its lifespan.

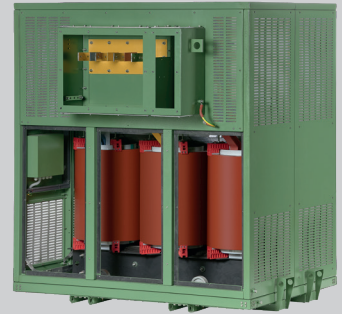


ELSEWEDY ELECTRIC TRANSFORMER IS CONNECTED WITH A THERMAL CONTROLLER, WITH EITHERNET MODULE OR MODBUS RS485 CAN BE REMOTELY CONTROLLED WITH THE FOLLOWING:

- ✓ Transformer temperature of winding.
- ✓ Transformer alarm status.
- ✓ Transformer trip status.
- ✓ Fault of sensor connected to transformer.
- ✓ Fan operation / fan fault status of transformers.

HEALTH & SAFETY

- ✓ Hardly inflammable, self-extinguishing with certificates for F1.
- ✓ Highly moisture-proof.
- ✓ No pollution to the environment with certificate up to E4.
- ✓ Extremely low content of burnable material.
- ✓ No content of any halogen, silicones, nitrogen in the insulation.
- ✓ Free from all restrictions that apply oil type transformers.



FLEXIBILITY & COST SAVING

- ✓ Minimum maintenance is required.
- ✓ No liquids used; no risk for leakage.
- ✓ Repair Possibilities (at site).
- ✓ Installation close to the center of major consumers.
- ✓ Reduce cable & installation costs, transmission losses.

DURABILITY

- ✓ Cooling is the most efficient (up to %40).
- ✓ Free of Partial discharge, therefore, high life expectancy.
- ✓ Excellent insulation level, short circuit & lightning Impulse.
- ✓ Ability to handle greater short time overloads rather than oil type.



TESTING

ELSEWEDY ELECTRIC TRANSFORMERS HAS THE LARGEST AND LATEST TESTING EQUIPMENT LABORATORY IN THE MIDDLE EAST AND AFRICA,

Carrying out various routine, type tests. In addition to this, a part of the special tests performed internally and then certified by external testing procedures like KEMA (CESI) or other international labs.

✓ ROUTINE

- Measurements of Winding Resistance.
- Measurements of Ratio and Vector group.
- Measurements of Impedance Voltage.
- Measurements of Load loss.
- Measurements of No-load loss.
- Measurements of Partial Discharge.
- Applied Voltage Test.
- Induced Voltage Test.

✓ SPECIAL TEST

- Noise level Test.

✓ TYPE TEST

- Lightning impulse Test.
- Temperature rise Test.



ELSEWEDY SMART TRANSFORMERS ENABLES OPERATORS TO EFFICIENTLY MONITOR AND ANALYZE CRITICAL TRANSFORMER PARAMETERS REMOTELY, INCLUDING:

- ✓ Core Performance
- ✓ Winding Conditions
- ✓ Fan operation Efficiency
- ✓ Transformer Temperature of Winding
- ✓ Transformer Alarm Status
- ✓ Transformer Trip Status
- ✓ Fault of Sensor Connected to Transformer
- ✓ Fan Operation / Fan Fault Status of Transformers

Dynamic control of real and reactive power can optimize the efficiency of distribution systems, improve power quality in a more dynamic operating environment and limit fault current.

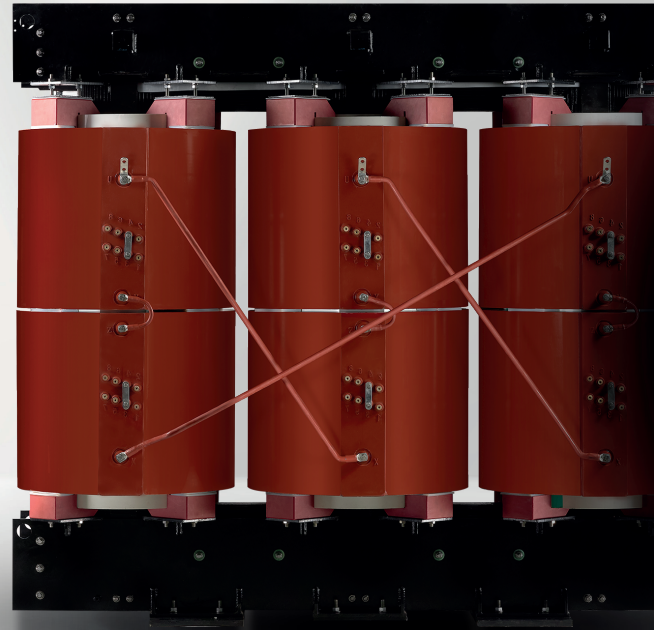


TECHNICAL DATA SHEET

RATING KVA	HIGH VOLTAGE (KV)	IMP. (%)	NO-LOAD LOSSES (KW)	LOAD LOSSES AT 75 C (KW)	LOAD LOSSES AT 120 C (KW)	WITHOUT ENCLOSURE				WITH ENCLOSURE				DISTANCE BETWEEN WHEELS FRONT (K) (MM)	DISTANCE BETWEEN WHEELS SIDE (K) (MM)	NOISE LEVEL (DB)
						LENGTH (L) (MM)	WIDTH (D) (MM)	HEIGHT (F) (MM)	WEIGHT (KG)	LENGTH (L) (MM)	WIDTH (Y) (MM)	HEIGHT (Z) (MM)	WEIGHT (KG)			
160	12	4	0.61	2.3	2.7	1130	1100	1380	1000	1450	1100	1760	1300	520	850	50
	24	4	0.65	2.3	2.7	1300	1200	1430	1100	1600	1200	1860	1400	520	890	50
250	12	4	0.82	3.1	3.5	1160	1050	1370	1150	1760	1450	1760	1500	520	860	53
	24	4	0.88	3.3	3.8	1470	1300	1680	1300	1800	1300	2210	1650	520	950	53
315	12	4	0.96	3.6	4.2	1330	1100	1380	1300	1600	1100	1510	1650	670	800	54
	24	4	1.03	4	4.6	1360	1400	1620	1650	1850	1400	2160	2100	670	800	54
400	12	4	1.15	4.3	4.9	1240	1100	1580	1500	1600	1100	1960	1850	670	880	55
	24	4	1.2	4.8	5.5	1400	1250	1670	1750	1700	1250	2210	2150	670	900	55
500	12	4	1.3	5.1	6	1270	1400	1500	1650	1550	1400	2050	2150	670	900	56
	24	4	1.5	5.6	6.5	1360	1400	1550	1850	1800	1400	2150	2450	830	930	56
630	12	4	1.5	6.4	7.3	1700	1150	660	2350	1700	1150	2110	2650	670	900	57
	24	4	1.65	6.8	7.8	1950	1400	1730	2550	1950	1400	2310	2900	670	930	57
800	12	5	1.7	7.7	8.8	1560	1250	1700	2500	1900	1250	2160	2900	670	990	58
	24	5	2	8.2	9.4	1560	1450	1930	2650	2050	1450	2560	3250	670	990	58
1000	12	5	1.85	8	9.2	1580	1450	1930	2950	1850	1450	2480	3700	820	880	59
	24	5	2.2	8.9	10.3	1580	1450	1925	2750	2050	1450	2540	3450	820	1010	59
1250	12	5	2.5	10.5	12	1640	1500	1980	3350	1900	1500	2590	4100	820	900	61
	24	5	2.8	11.5	13.1	1770	1600	2040	3450	2250	1600	2640	4250	820	1010	61
1500	12	6	2.6	11.2	12.9	1670	1500	2095	3650	2000	1500	2790	4450	820	960	61
	24	6	2.8	12.8	14.58	1760	1600	2205	3800	2350	1600	2630	4600	820	1040	61
1600	12	6	2.8	12.3	14	1760	1500	2095	3850	2100	1500	2890	4650	820	1000	61
	24	6	3.1	14	16	1760	1600	2230	3950	2200	1600	2900	4800	1070	1130	61
2000	12	6	3.5	14.9	17	1830	1500	2335	4550	2150	1500	3090	5550	1070	1170	62
	24	6	4	17.5	20	1920	1600	2335	4850	2400	1600	3150	5850	1070	1170	62
2500	12	6	4.3	18.3	21	2070	1700	2385	6050	2300	1700	3240	7200	1070	1180	65
	24	6	5	20	23	2220	1700	2440	6700	2750	1700	3240	7900	1070	11800	65
3150	12	7	5.5	22	25	2280	1800	2420	7500	2550	1800	3250	8750	1070	1290	65
	24	7	6.3	23	26	2450	1800	2465	8000	2900	1800	3340	9500	1070	1360	65

ELSEWEDY
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ELSEWEDY ELECTRIC S.A.E

Plot No. 13co3, Cairo Festival City, 5th Settlement, P.O. Box 310, New Cairo, Egypt.



Call Now
19159



+202 2759 9700
+202 2759 9701



Info@elsewedyelectric.com
www.elsewedyelectric.com