SIEMENS energy



Proven technology that enables solid performance

The GEAFOL® Neo: the foundation of power distribution and static converter applications



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The GEAFOL Neo: A true GEAFOL and more!





60 years. Endless innovation.

The GEAFOL Neo represents the next stage in the evolution of the proven GEAFOL Basic. Built on an incredible 60 years of GEAFOL technology and quality, it incorporates numerous innovations that give it distinctive and forward-looking characteristics. Its design addresses requirements for specialized applications – needs that were unimaginable when the first original GEAFOL was developed.

As a result, for example, the GEAFOL Neo distribution and static converter transformers with a maximum rated power of up to round about 7 MVA are almost ten percent lighter than comparable models from the established GEAFOL series. And this "slimming down" also has a positive effect on the dimensions, especially for transformers with higher medium voltages.

Applications

The GEAFOL Neo is ideally suited for a wide range of applications – from data centers and battery storage systems to demanding industrial environments and emerging green technologies such as installations in wind turbines. Its robust insulation and built-in resistance to transient voltages ensure exceptional reliability even under challenging operating conditions. Designed with sustainability in mind, the GEAFOL Neo features a recyclable, energy-efficient construction that reduces environmental impact while delivering long-term performance. Thanks to its compact footprint, it integrates seamlessly into space-constrained installations without compromising on power or durability.







Universal use

The highest safety requirements must be met whenever distribution transformers are operated in the direct vicinity of humans. GEAFOL Neo transformers are the perfect solution in this case, because their trusted GEAFOL design is coupled with outstanding operational reliability and a long service life. What's more, they've got the seal of approval because all GEAFOL Neo transformers meet the specifications of IEC 60076-11/ DIN EN IEC 60076-11.

Other standards, such as GOST, SABS, or CSA/ANSI/IEEE, can also be taken into account on request. Our GEAFOL transformers are tested by UL/CSA/TÜV as well.

They meet the high requirements for safe installation in residential and work environments with Climatic Class C3, Environmental Class E3, and Fire Classification F1.[1)]

Optimal combination

Keeping the distance between the transformer and consumers as short as possible considerably reduces both the complexity of the electrical network and losses in the transmission and distribution of energy. Frequently, however, there is a shortage of space in the vicinity of the consumer.

The GEAFOL Neo distribution and static converter transformers represents an optimal combination of performance, safety and small dimensions. In addition, the high degree of standardization ensures an excellent cost-benefit ratio. Thanks to their compact shape and comprehensive safety certification, GEAFOL Neo transformers can be used in almost every environment.

1) Other climate and environment classes on request.



Further development of proven technology

With roughly 200,000 transformers in use worldwide, essential parts of the GEAFOL technology have already proven themselves over the long term. These include the strip winding and foil winding made from aluminum, which we adopted without change for the new GEAFOL Neo in order to ensure reliability and a long service life.
For this purpose, the mechanical construction and high voltage windings were redesigned to make them lighter and smaller for a truly clean solution. This involved the use of complex calculation, design and simulation programs.

As a result, it was possible to considerably improve heat dissipation. With significantly fewer horizontal surfaces, less dust is deposited, which leads to a further reduction in the already minimal time and effort needed for maintenance and also increases operational reliability, because of less creepage paths.

GEAFOL Compact

A further development of the GEAFOL Neo is the GEAFOL Compact, which reduces the dimensions and weight further, especially with voltage levels U_m 36/40.5 kV. The reduction of dimensions could be achieved by the introduction of special insulating fittings at the delta connection tubes and tapping area which increase the resistance to humidity and pollution. This version is particularly wellsuited for installation in areas with limited space and/or higher installation altitudes.



Everything that's needed for the future

The GEAFOL Neo is also setting new standards when it comes to being prepared for the future. Even though the end of its service life is still a long way off, the GEAFOL Neo already has the perfect answer to the question of recycling. All metal parts including the electrical steel of the core (GOES) as well as the cast resin can be recycled in an environmentally friendly way.

Engineered for Ecodesign: certified, low-loss, and future-ready

Since July 1, 2015, transformers that are installed within the European Economic Area (EEA) must meet the ecodesign requirements of the new directive, provided that they fall within the scope of the directive.

Because the directive is a measure to implement Ecodesign Directive 2009/125/EC, the CE mark is used as evidence of compliance. GEAFOL Neo transformers are designed accordingly and are particularly low-loss and economical.

Since July 1, 2021 the GEAFOL Neo must be configured in accordance with stage two of the Ecodesign Directive, which sets even stricter minimum standards for energy efficiency. The transformers meet the standard EN 50708-2-1 respectively EN 50708-3-1.

Comparable efficiency regulations exist outside Europe as well. For example, in the United States, the Department of Energy (DOE) defines mandatory requirements under 10 CFR Part 431 as part of its Energy Conservation Program.

Built-in safety

The coils of the GEAFOL Neo's **high-voltage winding** are manufactured from aluminum foil (copper windings on request). This foil winding combines simple winding techniques with high electrical safety, because its insulation is subject to less electrical stress than other types of windings. In the case of a conventional round-wire winding, the turn-to-turn voltages amount to double the voltage between layers, which finally can result in several thousands volts between two turns. In the case of a foil winding, however, no more than the simple turn-to-turn voltage occurs because each layer consists of one turn.

The result is great power frequency and impulse voltage strength. In addition, the epoxy-resin vacuum casting of the high-voltage windings is performed at a high temperature, which avoids hazardous entrapped gas and allows for a high level of freedom from partial discharges up to twice the rated voltage. A high level of process expertise guarantees excellent product quality as reflected in, among other things, an excellent MTBF (mean-time between failure) Index.



GEAFOL Neo and GEAFOL Compact – the intelligent further development of an excellent technology.



Regardless of the application: The GEAFOL Neo's low weight, small dimensions and high operational reliability with the lowest possible maintenance make it the first choice.

Reliable design

The conductive material for the **low-voltage strip winding** is also made of aluminum (copper on request), with the width of the aluminum strip practically equivalent to the length of the coil in order to considerably reduce the axial short-circuit forces in the transformer. It's these characteristics that make the design of the GEAFOL Neo possible. The conductive and insulating materials are securely bonded to each other by heat treatment and form a compact unit that also reliably handles radial forces. The ends of the windings are sealed by resin.

Using vacuum switches with GEAFOL transformers

Transformers are the key operating elements at hubs in the distribution system. Switches must control the switching of distribution and static converter transformers reliably and safely, with no need for overvoltage protection.

An important parameter in transformers is the magnetization current, one of the "small inductive currents". Interrupting these currents naturally creates marked transients but no unacceptably high switching overvoltages that would pose a threat to connected transformers are permitted.

Comprehensive tests using a combination of Siemens Energy GEAFOL transformers with different power ratings and medium voltage levels together with Siemens vacuum switches have proven that the GEAFOL medium voltage windings can handle switching overvoltages with no difficulty – providing further proof of their high product quality and operational safety.

GEAFOL – benefits at a glance

Safe & reliable

- High dielectric strength and mechanical resilience
- Zero partial discharge for long-term reliability[1)]
- Superior overload capacity for harsh conditions
- Stable operation in humid and extreme temperatures

Sustainable

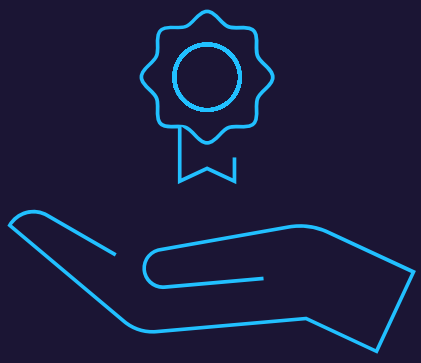
- Flame-retardant, self-extinguishing materials
- Low acoustic emissions
- Dry-type design – no liquid insulation
- Almost fully recyclable components

Economical & adaptable

- No special rooms or extra protection apart from closed electrical area required
- Proximity installation for optimal efficiency
- Easy relocation and site adaptability
- Minimal maintenance for low lifecycle cost
- Up to 50% higher power rating with forced-air cooling

GEAFOL NEO – next-level advantages

- Up to 10% lighter for easier handling and installation
- Loss-optimized design meeting the latest Ecodesign standards
- Certified safety and quality according to international standards
- Compact size with maximum power for space-saving efficiency



1) Below ambient noise level

Transformer design and features

A proven design for your success – the reliable, space-saving GEAFOL Neo

1 **Three-limb core** made of grainoriented, low-loss electric sheet steel insulated on both sides (GOES)

2 **Low-voltage winding** made of aluminum (alternatively copper) strip; turns are permanently bonded with insulating sheet (Prepreg)

3 **High-voltage winding** made of individual aluminum (alternatively copper) coils using foil technology and vacuum casting

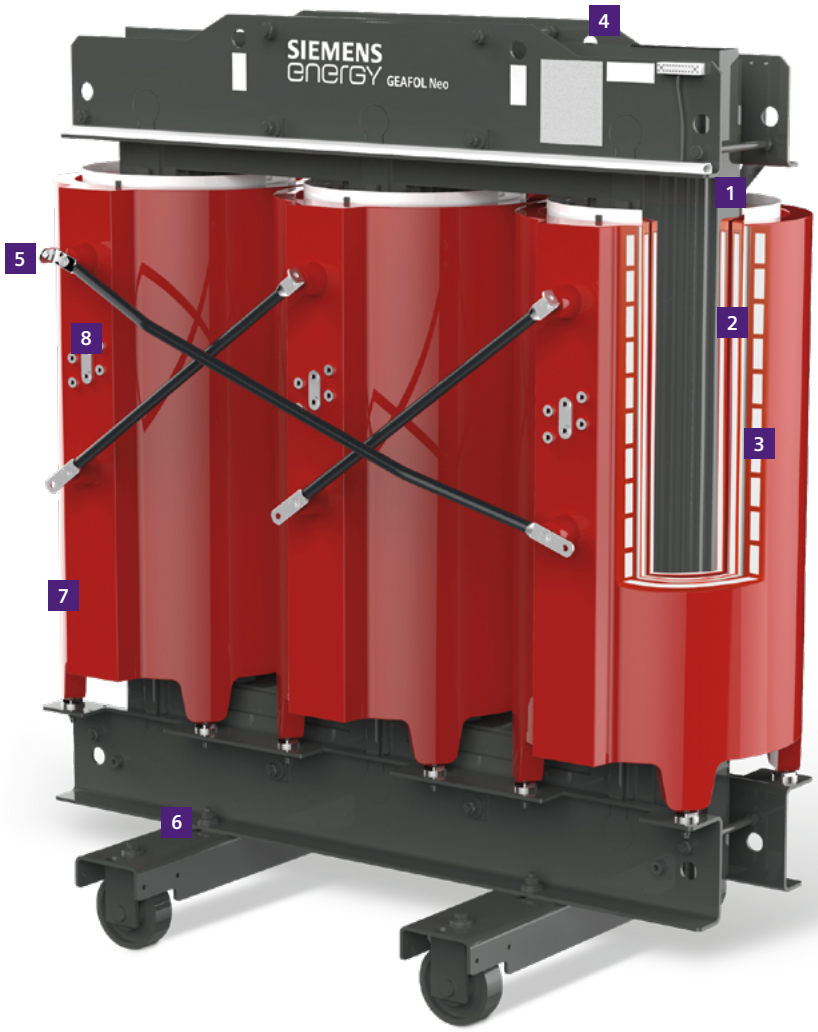
4 **Lifting eyes integrated into the upper core frame for simple transport**

5 **Delta connection tubes with HV terminals**

6 **Clamping frame and truck** Convertible rollers for longitudinal and transverse travel

7 **Insulation made of an epoxy-resin/ quartz powder mixture** makes the transformer extensively maintenancefree, moisture-proof and suitable for the tropics, fire-resistant, and selfextinguishing

8 **High-voltage tappings ± 2 x 2.5% (on the HV terminal side) to adapt to the particular network conditions; reconnectable in de-energized condition**



Temperature monitoring with PTC thermistor detector in the low-voltage windings (alternatively: Pt100 sensors)

Painting of steel parts
Two-component coating, RAL 7016, on request: special two-component coating for particularly aggressive environments

Structure made of individual components
For example, windings can be individually assembled and replaced on site

Climatic Class C3[1)] (aluminum windings)

Environmental class E3[1)]

Fire classification F1

1) Other climate and environment classes on request.

Selection of transformers

GEAFOL Neo transformers according to Ecodesign Directive 2009/125/EC, EU Regulation No. 2019/1783, Tier 2 (as of July 1, 2021)

Rated power	Frequency	Rated primary voltage tapping ± 2 x 2.5%	Rated secondary voltage (no-load)	Insulation level HV (AC/LI)	Insulation level LV (AC/LI)	Impedance voltage at rated current	No-load losses	Load losses	Noise level	Total weight[1]	Dimensions[1]		
											Length	Width	Height
S_r [kVA]	[Hz]	U_r HV [kV]	U_r LV [kV]	[kV]	[kV]	u_{zr} [%]	P_0 [W]	P_{k120} [W]	L_{WA} [dB]	[kg]	[mm]	[mm]	[mm]
100	50	10	0.4	28/75	3/–	4	252	1800	49	800	1250	695	985
		20	0.4	50/95	3/–	4	252	1800	49	1060	1310	765	1250
160	50	10	0.4	28/75	3/–	4	360	2600	52	1120	1320	710	1125
		20	0.4	50/95	3/–	4	360	2600	52	1390	1450	785	1145
250	50	10	0.4	28/75	3/–	4	468	3400	55	1700	1450	730	1235
		20	0.4	50/95	3/–	4	468	3400	55	1760	1510	765	1260
315	50	10	0.4	28/75	3/–	4	558	3878	57	1990	1510	820	1345
		20	0.4	50/95	3/–	4	558	3878	57	1930	1560	855	1300
400	50	10	0.4	28/75	3/–	4	675	4500	58	2250	1560	825	1410
		20	0.4	50/95	3/–	4	675	4500	58	2050	1550	855	1435
500	50	10	0.4	28/75	3/–	4	812	5630	59	2530	1590	830	1510
		20	0.4	50/95	3/–	4	812	5630	59	2370	1580	855	1530
630	50	10	0.4	28/75	3/–	6	990	7100	61	1920	1445	845	1465
		20	0.4	50/95	3/–	6	990	7100	61	2220	1520	885	1560
		20	0.4	50/125	3/–	6	990	7100	61	2250	1515	880	1610
		30	0.4	70/145	3/–	6	1140	7800	61	3060	1750	935	1750
800	50	10	0.4	28/75	3/–	6	1170	8000	63	2310	1530	860	1555
		20	0.4	50/95	3/–	6	1170	8000	63	2590	1585	895	1620
		20	0.4	50/125	3/–	6	1170	8000	63	2590	1575	890	1730
		30[2]	0.4	70/145	3/–	6	1350	8800	63	2920	1645	915	1800
1000	50	10	0.4	28/75	3/–	6	1395	9000	64	2720	1610	990	1620
		20	0.4	50/95	3/–	6	1395	9000	64	3150	1695	1000	1740
		20	0.4	50/125	3/–	6	1395	9000	64	3120	1670	995	1810
		30[2]	0.4	70/145	3/–	6	1600	9900	64	3430	1685	1010	1955
1250	50	10	0.4	28/75	3/–	6	1620	11000	66	3220	1660	990	1730
		20	0.4	50/95	3/–	6	1620	11000	66	3650	1760	1010	1820
		20	0.4	50/125	3/–	6	1620	11000	66	3730	1770	1010	1890
		30[2]	0.4	70/145	3/–	6	1860	12100	66	3750	1765	1020	2000
1600	50	10	0.4	28/75	3/–	6	1980	13000	67	3820	1735	990	1895
		20	0.4	50/95	3/–	6	1980	13000	67	4240	1835	1020	1900
		20	0.4	50/125	3/–	6	1980	13000	67	4350	1860	1025	1970
		30[2]	0.4	70/145	3/–	6	2280	14300	67	4670	1905	1045	2040
2000	50	10	0.4	28/75	3/–	6	2340	16000	69	4750	1870	1280	2050
		20	0.4	50/95	3/–	6	2340	16000	69	5200	1885	1280	2190
		20	0.4	50/125	3/–	6	2340	16000	69	5030	1905	1280	2130
		30[2]	0.4	70/145	3/–	6	2690	17600	69	5580	1990	1280	2240
2500	50	10	0.4	28/75	3/–	6	2790	19000	70	6070	2025	1280	2170
		20	0.4	50/95	3/–	6	2790	19000	70	6560	2080	1280	2285
		20	0.4	50/125	3/–	6	2790	19000	70	6210	2010	1280	2360
		30[2]	0.4	70/145	3/–	6	3210	20900	70	6430	2110	1280	2340
3150	50	10	0.4	28/75	3/–	6	3420	22000	73	7810	2160	1280	2475
		20	0.4	50/95	3/–	6	3420	22000	73	8180	2205	1280	2525
		20	0.4	50/125	3/–	6	3420	22000	73	7570	2165	1280	2565
		30[2]	0.4	70/145	3/–	6	3930	24200	73	8330	2275	1280	2475
4000	50	10	0.72	28/75	3/–	8	PEI: 99.382%		75	7380	2375	1350	2175
		20	0.72	50/95	3/–	8	PEI: 99.382%		75	7550	2450	1350	2250
		30[2]	0.72	70/145	3/–	8	PEI: 99.382%		75	8100	2570	1350	2340
5000	50	10	0.72	28/75	3/–	8	PEI: 99.397%		84	8720	2480	1400	2395
		20	0.72	50/95	3/–	8	PEI: 99.387%		84	8950	2550	1400	2480
		30[2]	0.72	70/145	3/–	8	PEI: 99.387%		84	9540	2670	1400	2540

All GEAFOL Neo transformers comply with IEC 60076-11/DIN EN IEC 60076-11/DIN EN 50708-2-1 respectively 50708-3-1.
Power ratings > 5000 kVA, different voltages and designs as well as special equipment on request.
1) Dimension drawing: page 18, indications are approximate values. 2) Compact design

IEC standard

GEAFOL Neo transformers for installation outside of European Economic Area

Rated power	Frequency	Rated primary voltage tapping ± 2 x 2.5%	Rated secondary voltage (no-load)	Insulation level HV (AC/LI)	Insulation level LV (AC/LI)	Impedance voltage at rated current	No-load losses	Load losses	Noise level	Total weight[1]	Dimensions[1]		
											Length	Width	Height
S_r [kVA]	[Hz]	U_r HV [kV]	U_r LV [kV]	[kV]	[kV]	u_{zr} [%]	P_0 [W]	P_{k120} [W]	L_{WA} [dB]	[kg]	[mm]	[mm]	[mm]
100	50	10	0.4	28/75	3/–	4	440	1850	61	600	1190	685	920
		10	0.4	28/75	3/–	4	320	1850	51	780	1230	690	985
		10	0.4	28/75	3/–	6	360	2000	61	580	1200	690	910
		10	0.4	28/75	3/–	6	290	2000	51	710	1210	690	1040
		20	0.4	50/95	3/–	4	600	1750	61	690	1230	750	1035
		20	0.4	50/95	3/–	4	400	1750	51	880	1290	760	1085
		20	0.4	50/95	3/–	6	460	2050	61	700	1270	765	1040
		20	0.4	50/95	3/–	6	340	2050	51	780	1260	725	1120
160	50	10	0.4	28/75	3/–	4	610	2600	65	840	1270	700	1005
		10	0.4	28/75	3/–	4	440	2600	54	940	1270	700	1105
		10	0.4	28/75	3/–	6	500	2750	65	790	1280	710	980
		10	0.4	28/75	3/–	6	400	2750	54	860	1310	710	990
		20	0.4	50/95	3/–	4	700	2500	65	910	1330	770	1085
		20	0.4	50/95	3/–	4	580	2500	54	1070	1340	735	1130
		20	0.4	50/95	3/–	6	650	2700	65	850	1330	775	1075
		20	0.4	50/95	3/–	6	480	2700	54	950	1360	745	1095
250	50	10	0.4	28/75	3/–	4	820	3200	68	990	1320	705	1045
		10	0.4	28/75	3/–	4	600	3200	57	1140	1340	710	1125
		10	0.4	28/75	3/–	6	700	3300	68	940	1350	715	1045
		10	0.4	28/75	3/–	6	560	3300	57	1100	1380	725	1070
		20	0.4	50/95	3/–	4	880	3200	68	1100	1360	740	1155
		20	0.4	50/95	3/–	4	800	3300	57	1290	1400	745	1210
		20	0.4	50/95	3/–	6	880	3400	68	1040	1400	750	1115
		20	0.4	50/95	3/–	6	650	3400	57	1180	1430	755	1135
315	50	10	0.4	28/75	3/–	4	980	3500	68	1150	1370	820	1075
		10	0.4	28/75	3/–	4	730	3500	59	1350	1390	820	1155
		10	0.4	28/75	3/–	6	850	3900	68	1080	1370	820	1120
		10	0.4	28/75	3/–	6	670	3700	59	1190	1410	820	1125
		20	0.4	50/95	3/–	4	1250	3500	68	1310	1440	835	1190
		20	0.4	50/95	3/–	4	930	3500	59	1470	1470	840	1210
		20	0.4	50/95	3/–	6	1000	3800	68	1250	1450	840	1200
		20	0.4	50/95	3/–	6	780	3800	59	1350	1480	840	1190
400	50	10	0.4	28/75	3/–	4	1150	4400	68	1320	1400	820	1225
		10	0.4	28/75	3/–	4	880	4400	60	1470	1390	820	1325
		10	0.4	28/75	3/–	6	1000	4900	68	1250	1410	820	1220
		10	0.4	28/75	3/–	6	800	4900	60	1450	1460	820	1240
		20	0.4	50/95	3/–	4	1270	3800	68	1460	1460	840	1310
		20	0.4	50/95	3/–	4	1100	3800	60	1670	1520	845	1310
		20	0.4	50/95	3/–	6	1200	4300	68	1370	1480	845	1275
		20	0.4	50/95	3/–	6	940	4300	60	1540	1530	850	1320
500	50	10	0.4	28/75	3/–	4	1300	5900	69	1480	1450	820	1180
		10	0.4	28/75	3/–	4	1000	5300	61	1630	1420	820	1345
		10	0.4	28/75	3/–	6	1200	6400	69	1390	1450	820	1255
		10	0.4	28/75	3/–	6	950	6400	61	1540	1490	820	1250
		20	0.4	50/95	3/–	4	1700	4900	69	1650	1510	845	1370
		20	0.4	50/95	3/–	4	1300	4900	61	1830	1520	845	1385
		20	0.4	50/95	3/–	6	1400	5100	69	1530	1520	855	1270
		20	0.4	50/95	3/–	6	1100	5100	61	1750	1560	860	1355

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Power ratings > 5000 kVA, different voltages and designs as well as special equipment on request.
1) Dimension drawing: page 18, indications are approximate values.

IEC standard

GEAFOL Neo transformers for installation outside of European Economic Area

Rated power	Frequency	Rated primary voltage tapping ± 2 x 2.5%	Rated secondary voltage (no-load)	Insulation level HV (AC/LI)	Insulation level LV (AC/LI)	Impedance voltage at rated current	No-load losses	Load losses	Noise level	Total weight[1]	Dimensions[1]		
											Length	Width	Height
S_r [kVA]	[Hz]	U_r HV [kV]	U_r LV [kV]	[kV]	[kV]	u_{zr} [%]	P_0 [W]	P_{k120} [W]	L_{WA} [dB]	[kg]	[mm]	[mm]	[mm]
630	50	10	0.4	28/75	3/–	4	1500	7300	70	1660	1460	820	1335
		10	0.4	28/75	3/–	4	1150	7300	62	1880	1480	820	1430
		10	0.4	28/75	3/–	6	1370	7500	70	1760	1550	835	1350
		10	0.4	28/75	3/–	6	1100	7500	62	1900	1560	835	1370
		20	0.4	50/95	3/–	4	2000	6900	70	1900	1550	855	1405
		20	0.4	50/95	3/–	4	1600	6900	62	2090	1520	845	1570
		20	0.4	50/95	3/–	6	1650	6800	70	1800	1590	865	1370
		20	0.4	50/95	3/–	6	1250	6800	62	2140	1650	880	1400
800	50	10	0.4	28/75	3/–	4	1800	7800	72	2020	1520	820	1520
		10	0.4	28/75	3/–	4	1400	7800	64	2280	1550	830	1540
		10	0.4	28/75	3/–	6	1700	8300	72	2000	1610	845	1345
		10	0.4	28/75	3/–	6	1300	8300	64	2240	1640	855	1370
		20	0.4	50/95	3/–	4	2400	8500	72	2140	1550	855	1615
		20	0.4	50/95	3/–	4	1900	8500	64	2360	1580	860	1605
		20	0.4	50/95	3/–	6	1900	8200	72	2120	1650	875	1445
		20	0.4	50/95	3/–	6	1500	8200	64	2340	1670	885	1450
1000	50	10	0.4	28/75	3/–	4	2100	10000	73	2560	1600	990	1635
		10	0.4	28/75	3/–	4	1600	10000	65	2980	1640	990	1745
		10	0.4	28/75	3/–	6	2000	9500	73	2390	1620	990	1580
		10	0.4	28/75	3/–	6	1500	9500	65	2650	1660	990	1560
		20	0.4	50/95	3/–	4	2800	9500	73	2580	1590	990	1790
		20	0.4	50/95	3/–	4	2300	8700	65	2860	1630	990	1810
		20	0.4	50/95	3/–	6	2300	9000	73	2460	1660	990	1645
		20	0.4	50/95	3/–	6	1800	9000	65	2760	1700	990	1680
1250	50	10	0.4	28/75	3/–	6	2400	11000	78	2710	1720	990	1655
		10	0.4	28/75	3/–	6	1800	11000	68	3220	1780	990	1715
		20	0.4	50/95	3/–	6	2700	11200	78	2850	1780	990	1695
		20	0.4	50/95	3/–	6	2100	11200	68	3150	1800	990	1710
1600	50	10	0.4	28/75	3/–	6	2800	13600	76	2970	1705	990	1710
		10	0.4	28/75	3/–	6	2100	13600	68	3340	1745	990	1730
		20	0.4	50/95	3/–	6	3100	13200	76	3200	1765	1010	1810
		20	0.4	50/95	3/–	6	2400	13200	68	3570	1800	1015	1860
2000	50	10	0.4	28/75	3/–	6	3500	15500	78	3640	1805	1280	1815
		10	0.4	28/75	3/–	6	2600	15500	70	4090	1855	1280	1850
		20	0.4	50/95	3/–	6	3900	15800	78	3700	1785	1280	2025
		20	0.4	50/95	3/–	6	2900	15800	70	4070	1820	1280	2055
2500	50	10	0.4	28/75	3/–	6	4300	20000	81	4380	1895	1280	2045
		10	0.4	28/75	3/–	6	3000	20000	71	5030	1920	1280	2085
		20	0.4	50/95	3/–	6	4400	19000	81	4590	1900	1280	2150
		20	0.4	50/95	3/–	6	3500	19000	71	5070	1990	1280	2135
3150	50	10	0.4	28/75	3/–	6	5100	24000	82	5830	2100	1280	2210
		10	0.4	28/75	3/–	6	3900	24000	74	6390	2130	1280	2330
		20	0.4	50/95	3/–	6	5500	23000	82	6620	2190	1280	2410
		20	0.4	50/95	3/–	6	4200	23000	74	7140	2230	1280	2450
4000	50	10	0.72	28/75	3/–	8	5500	28800	82	7300	2350	1400	2150
		20	0.72	50/95	3/–	8	5900	28800	84	7500	2380	1400	2200
5000	50	10	0.72	28/75	3/–	8	6500	33900	83	8610	2490	1400	2440
		20	0.72	50/95	3/–	8	7000	33900	85	8790	2540	1400	2510

All GEAFOL Neo transformers comply with IEC 60076-11/DIN EN IEC 60076-11.
Power ratings > 5000 kVA, different voltages and designs as well as special equipment on request
1) Dimension drawing: page 18, indications are approximate values.

IEEE standard

GEAFOL Neo transformers according to IEEE C57.12.01 std. (2020)

Rated power	Frequency	Rated primary voltage tapping ± 2 x 2.5%	Rated secondary voltage (no-load)	Insulation level HV (AC/LI)	Insulation level LV (AC/LI)	Impedance voltage at rated current	DOE Efficiencies	Noise level	Total weight[1)]	Dimensions[1)]		
										Length	Width	Height
S_r		U_r HV	U_r LV			u_{zr}		L_{WA}				
[kVA]	[Hz]	[kV]	[kV]	[kV]	[kV]	[%]	[%]	[dB]	[kg]	[mm]	[mm]	[mm]
100	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	98.52	50	800	1250	695	985
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	98.36	50	1060	1310	765	1250
		23	0.48	50/110	4/10	< 5.75	–	50	1120	1320	710	1125
		34.5	0.48	70/150	4/10	< 5.75	–	50	1390	1450	785	1145
160	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	98.82	55	1700	1450	730	1235
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	98.51	55	1760	1510	765	1260
		23	0.48	50/110	4/10	< 5.75	–	55	1990	1510	820	1345
		34.5	0.48	70/150	4/10	< 5.75	–	55	1930	1560	855	1300
250	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	98.93	55	1990	1510	820	1345
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	98.81	55	1930	1560	855	1300
		23	0.48	50/110	4/10	< 5.75	98.69	55	1990	1510	820	1345
		34.5	0.48	70/150	4/10	< 5.75	98.69	55	1930	1560	855	1300
315	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	99.09	60	1990	1510	820	1345
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	98.99	60	1930	1560	855	1300
		23	0.48	50/110	4/10	< 5.75	98.89	60	2250	1560	825	1410
		34.5	0.48	70/150	4/10	< 5.75	98.89	60	2050	1550	855	1435
400	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	99.09	60	2250	1560	825	1410
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	98.99	60	2050	1550	855	1435
		23	0.48	50/110	4/10	< 5.75	98.89	60	2250	1560	825	1410
		34.5	0.48	70/150	4/10	< 5.75	98.89	60	2050	1550	855	1435
500	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	99.09	60	2400	1650	860	1265
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	98.99	60	2180	1620	995	1400
		23	0.48	50/110	4/10	< 5.75	98.89	60	3150	1840	1065	1625
		34.5	0.48	70/150	4/10	< 5.75	98.89	60	3980	2100	1045	1715
630	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	99.21	61	3310	1650	860	1265
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	99.12	61	2650	1680	1005	1535
		23	0.48	50/110	4/10	< 5.75	99.02	61	3310	1850	1045	1810
		34.5	0.48	70/150	4/10	< 5.75	99.02	61	4620	2140	1030	1875
800	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	99.28	63	2730	1720	875	1350
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	99.20	63	2650	1770	1055	1585
		23	0.48	50/110	4/10	< 5.75	99.11	63	3880	1880	1090	1845
		34.5	0.48	70/150	4/10	< 5.75	99.11	63	4620	2120	1115	1975
1000	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	99.28	63	3260	1800	990	1475
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	99.20	63	3310	1770	1055	1585
		23	0.48	50/110	4/10	< 5.75	99.11	63	3880	1880	1090	1845
		34.5	0.48	70/150	4/10	< 5.75	99.11	63	5000	2120	1115	1975
1250	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	99.37	64	4825	1800	990	1475
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	99.30	64	3310	1760	1010	1820
		23	0.48	50/110	4/10	< 5.75	99.21	64	4980	1990	1055	2000
		34.5	0.48	70/150	4/10	< 5.75	99.21	64	6180	2190	1125	2090
1600	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	99.43	65	6415	1735	990	1895
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	99.36	65	4550	1940	1035	1740
		23	0.48	50/110	4/10	< 5.75	99.28	65	4980	2140	1280	2070
		34.5	0.48	70/150	4/10	< 5.75	99.28	65	6180	2250	1280	2300
2000	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	99.43	65	6415	2050	1280	1945
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	99.36	65	6130	2040	1280	1900
		23	0.48	50/110	4/10	< 5.75	99.28	65	6440	2140	1280	2070
		34.5	0.48	70/150	4/10	< 5.75	99.28	65	7510	2250	1280	2300
2500	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	99.47	66	8435	2240	1280	2125
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	99.41	66	6900	2090	1280	2015
		23	0.48	50/110	4/10	< 5.75	99.33	66	7570	2210	1280	2200
		34.5	0.48	70/150	4/10	< 5.75	99.33	66	9480	2540	1400	2350
3150	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	NON DOE	68	7235	2180	1280	2145
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	NON DOE	68	6900	2190	1280	2085
		23	0.48	50/110	4/10	< 5.75	NON DOE	68	8810	2330	1280	2320
		34.5	0.48	70/150	4/10	< 5.75	NON DOE	68	9480	2560	1330	2340
4000	60	12.47 or 13.8	0.48	34/60	4/10	< 5.75	NON DOE	68	7380	2375	1350	2175
		23	0.48	50/110	4/10	< 5.75	NON DOE	68	7550	2450	1350	2250
		34.5	0.48	70/150	4/10	< 5.75	NON DOE	68	8100	2570	1350	2340
5000	60	12.47 or 13.8	0.48	34/60	4/10	< 5.75	NON DOE	69	8720	2480	1400	2395
		23	0.48	50/110	4/10	< 5.75	NON DOE	69	8950	2550	1400	2480
		34.5	0.48	70/150	4/10	< 5.75	NON DOE	69	9540	2670	1400	2540

All GEAFOL Neo transformers comply with IEEE C57.12.01 std and are subjected to testing in compliance with IEEE C57.12.91 std.
Power ratings > 5000 kVA, different voltages and designs as well as special equipment on request.
1) Dimension drawing: page 18, indications are approximate values.
Please note: Losses are calculated individually for each transformer.

IEEE standard

GEAFOL Neo transformers NON DOE (2020)

Rated power	Frequency	Rated primary voltage tapping ± 2 x 2.5%	Rated secondary voltage (no-load)	Insulation level HV (AC/LI)	Insulation level LV (AC/LI)	Impedance voltage at rated current	DOE Efficiencies	Noise level	Total weight[1)]	Dimensions[1)]		
										Length	Width	Height
S_r [kVA]	[Hz]	U_r HV [kV]	U_r LV [kV]	[kV]	[kV]	u_{zr} [%]	[%]	L_{WA} [dB]	[kg]	[mm]	[mm]	[mm]
100	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	NON DOE	50	600	1190	685	920
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	NON DOE	50	780	1230	690	985
		23	0.48	50/110	4/10	< 5.75	NON DOE	50	580	1200	690	910
		34.5	0.48	70/150	4/10	< 5.75	NON DOE	50	710	1210	690	1040
160	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	NON DOE	55	840	1270	700	1005
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	NON DOE	55	940	1270	700	1105
		23	0.48	50/110	4/10	< 5.75	NON DOE	55	790	1280	710	980
		34.5	0.48	70/150	4/10	< 5.75	NON DOE	55	860	1310	710	990
250	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	NON DOE	55	990	1320	705	1045
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	NON DOE	55	1440	1340	710	1125
		23	0.48	50/110	4/10	< 5.75	NON DOE	55	940	1350	715	1045
		34.5	0.48	70/150	4/10	< 5.75	NON DOE	55	1100	1380	725	1070
315	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	NON DOE	60	1150	1370	820	1075
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	NON DOE	60	1350	1390	820	1155
		23	0.48	50/110	4/10	< 5.75	NON DOE	60	1080	1370	820	1120
		34.5	0.48	70/150	4/10	< 5.75	NON DOE	60	1190	1410	820	1125
400	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	NON DOE	60	1320	1400	820	1225
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	NON DOE	60	1470	1390	820	1325
		23	0.48	50/110	4/10	< 5.75	NON DOE	60	1250	1410	820	1220
		34.5	0.48	70/150	4/10	< 5.75	NON DOE	60	1450	1460	820	1240
500	60	4.16 or 6.9	0.48	12/30	4/10	< 5.75	NON DOE	60	2400	1650	860	1265
		12.47 or 13.8	0.48	34/60	4/10	< 5.75	NON DOE	60	2180	1620	995	1400
		23	0.48	50/110	4/10	< 5.75	NON DOE	60	3150	1840	1065	1625
		34.5	0.48	70/150	4/10	< 5.75	NON DOE	60	3980	2100	1045	1715

All GEAFOL Neo transformers comply with IEEE C57.12.01 std and are subjected to testing in compliance with IEEE C57.12.91 std.
Power ratings > 5000 kVA, different voltages and designs as well as special equipment on request.
1) Dimension drawing: page 18, indications are approximate values.
Please note: Losses are calculated individually for each transformer.

IEEE standard

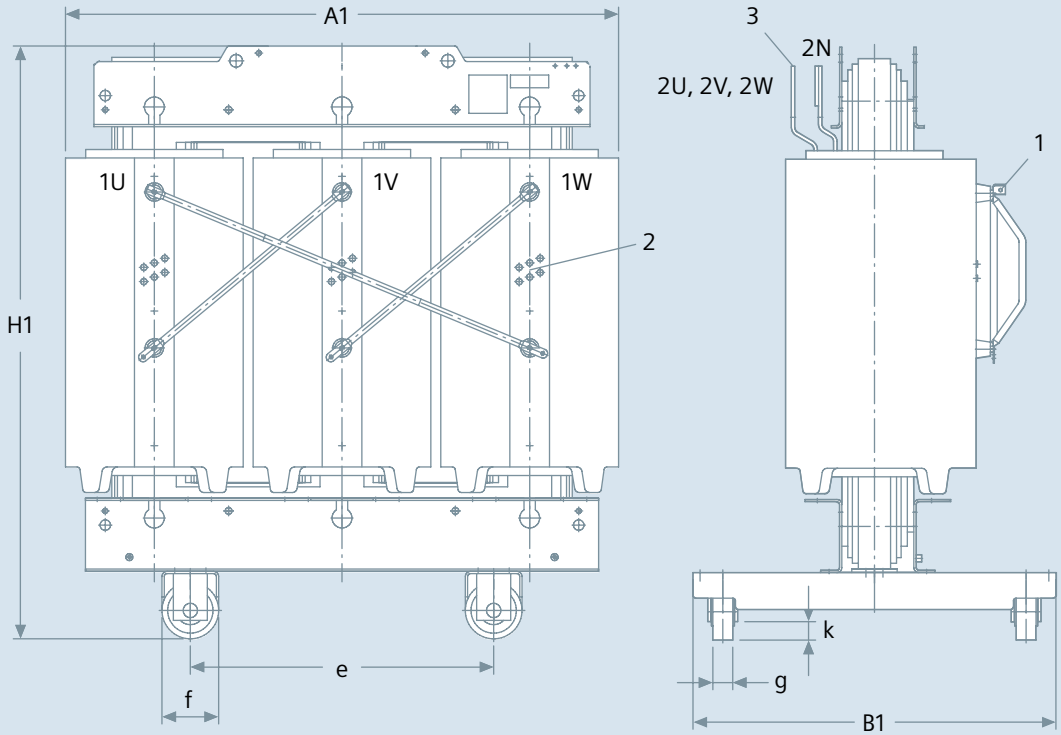
GEAFOL Neo transformers NON DOE (2020)

Rated power	Frequency	Rated primary voltage tapping ± 2 x 2.5%	Rated secondary voltage (no-load)	Insulation level HV (AC/LI)	Insulation level LV (AC/LI)	Impedance voltage at rated current	Noise level	Total weight[1)]	Dimensions[1)]		
									Length	Width	Height
S_r [kVA]	[Hz]	U_r HV [kV]	U_r LV [kV]	[kV]	[kV]	u_{zr} [%]	L_{WA} [dB]	[kg]	[mm]	[mm]	[mm]
630	60	4.16 or 6.9	0.48	12/30	4/10	> 5.75	61	3310	1650	860	1265
		12.47 or 13.8	0.48	34/60	4/10	> 5.75	61	2650	1680	1005	1535
		23	0.48	50/110	4/10	> 5.75	61	3310	1850	1045	1810
		34.5	0.48	70/150	4/10	> 5.75	61	4620	2140	1030	1875
800	60	4.16 or 6.9	0.48	12/30	4/10	> 5.75	63	2730	1720	875	1350
		12.47 or 13.8	0.48	34/60	4/10	> 5.75	63	2650	1770	1055	1585
		23	0.48	50/110	4/10	> 5.75	63	3880	1880	1090	1845
		34.5	0.48	70/150	4/10	> 5.75	63	4620	2120	1115	1975
1000	60	4.16 or 6.9	0.48	12/30	4/10	> 5.75	63	3260	1800	990	1475
		12.47 or 13.8	0.48	34/60	4/10	> 5.75	63	3310	1770	1055	1585
		23	0.48	50/110	4/10	> 5.75	63	3880	1880	1090	1845
		34.5	0.48	70/150	4/10	> 5.75	63	5000	2120	1115	1975
1250	60	4.16 or 6.9	0.48	12/30	4/10	> 5.75	64	4825	1800	990	1475
		12.47 or 13.8	0.48	34/60	4/10	> 5.75	64	3310	1760	1010	1820
		23	0.48	50/110	4/10	> 5.75	64	4980	1990	1055	2000
		34.5	0.48	70/150	4/10	> 5.75	64	6180	2190	1125	2090
1600	60	4.16 or 6.9	0.48	12/30	4/10	> 5.75	65	6415	1735	990	1895
		12.47 or 13.8	0.48	34/60	4/10	> 5.75	65	4550	1940	1035	1740
		23	0.48	50/110	4/10	> 5.75	65	4980	2140	1280	2070
		34.5	0.48	70/150	4/10	> 5.75	65	6180	2250	1280	2300
2000	60	4.16 or 6.9	0.48	12/30	4/10	> 5.75	65	6415	2050	1280	1945
		12.47 or 13.8	0.48	34/60	4/10	> 5.75	65	6130	2040	1280	1900
		23	0.48	50/110	4/10	> 5.75	65	6440	2140	1280	2070
		34.5	0.48	70/150	4/10	> 5.75	65	7510	2250	1280	2300
2500	60	4.16 or 6.9	0.48	12/30	4/10	> 5.75	66	8435	2240	1280	2125
		12.47 or 13.8	0.48	34/60	4/10	> 5.75	66	6900	2090	1280	2015
		23	0.48	50/110	4/10	> 5.75	66	7570	2210	1280	2200
		34.5	0.48	70/150	4/10	> 5.75	66	9480	2540	1400	2350
3150	60	4.16 or 6.9	0.48	12/30	4/10	> 5.75	68	7235	2180	1280	2145
		12.47 or 13.8	0.48	34/60	4/10	> 5.75	68	6900	2190	1280	2085
		23	0.48	50/110	4/10	> 5.75	68	8810	2330	1280	2320
		34.5	0.48	70/150	4/10	> 5.75	68	9480	2560	1330	2340
4000	60	23	0.48	50/110	4/10	> 5.75	68	7300	2350	1400	2150
		34.5	0.48	70/150	4/10	> 5.75	68	7500	2380	1400	2200
5000	60	23	0.48	50/110	4/10	> 5.75	69	8610	2490	1400	2440
		34.5	0.48	70/150	4/10	> 5.75	69	8790	2540	1400	2510

All GEAFOL Neo transformers comply with IEEE C57.12.01 std and are subjected to testing in compliance with IEEE C57.12.91 std.
Power ratings > 5000 kVA, different voltages and designs as well as special equipment on request
1) Dimension drawing: page 18, indications are approximate values.
Please note: Losses are calculated individually for each transformer.

Chassis dimensions

Dimension drawing of the GEAFOL Neo transformer



Dimension drawing
Dimensions A1, B1, and H1, see pages 12 to 17

Dimension e applies for longitudinal and transverse travel

1 High-voltage terminal

2 High-voltage tappings-tapping at the HV terminal side

3 Low-voltage terminal

Rated power	Dimensions in mm			
[kVA]	e	f	g	k
630 to 800	670	125	40	45
1000 to 1600	820	160	50	55
2000 to 3150	1070	200	70	65
> 3150	on request			

Terminal dimensions (low-voltage)

Hole measurements for 400 V low-voltage terminals

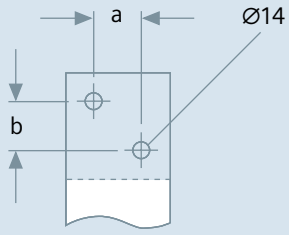


Fig. 1

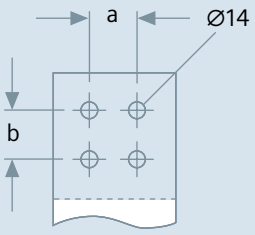


Fig. 2

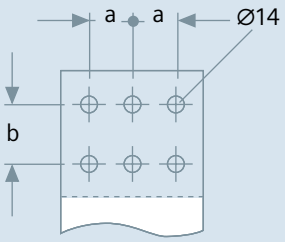


Fig. 3

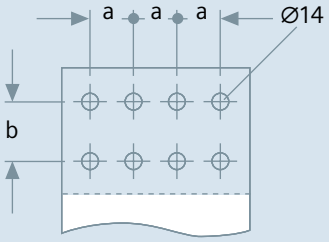


Fig. 4

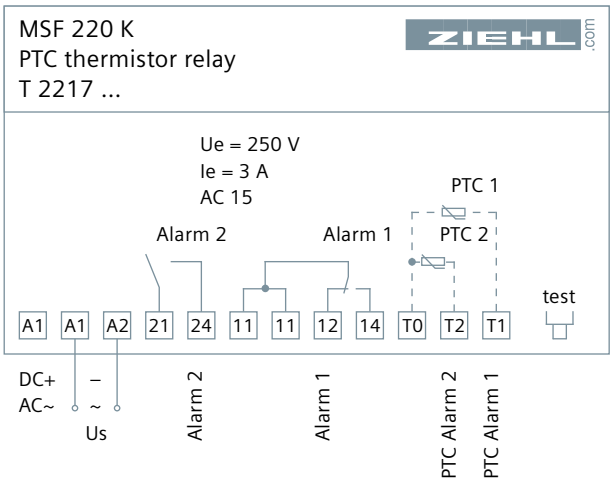
Dimensions in mm

Rated power	Fig.	Dimensions in mm	
[kVA]		a	b
630	1	26	26
800 to 1250	2	60	40
1600	3	40	40
2000	3	50	40
2500	3	60	40
3150	4	60	40

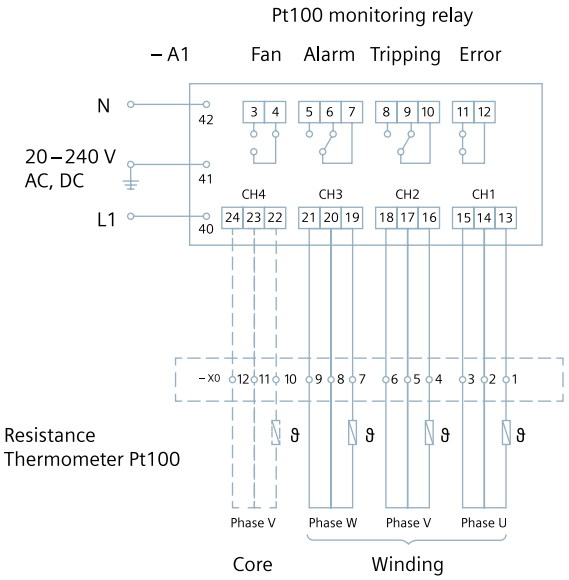
Notes

Thickness of terminals depend on power rating/current (usually between 6 and 12 mm).
Unless otherwise indicated on the individual pages of this catalog, the specified values, dimensions, and weights in particular are subject to change without notice. The illustrations are non-binding. All product designations used are trademarks or product names of Siemens Energy or other suppliers. All dimensions in this catalog are given in mm unless otherwise stated.

Accessories[1)]



Connection diagram for standard trigger device for PTC sensors



Wiring diagram tripping device for PT100 sensors (example)

Additional transformer ventilation for more power

GEAFOL Neo transformers can be equipped with fans to increase the power rating by up to about 50% (depending on type). With a 30% increase in power rating, for example, the short-circuit losses given in the list are increased by about 69% and the short-circuit voltage increases linearly by 30%.

The fans are automatically switched on or off via temperature sensors in the LV winding in connection with a fan controller.

Temperature monitoring

The temperature of GEAFOL transformers is monitored in the low-voltage winding by means of PTC thermistor detectors or by using PT100 sensors (on request).

In the case of static converter transformers, the core temperature is also monitored. The most cost-effective solution is monitoring with PTC thermistor detectors and trip relay without temperature indication.
Every GEAFOL transformer is equipped with at least one PTC thermistor detector loop for tripping.

1) Accessories on request.

Function

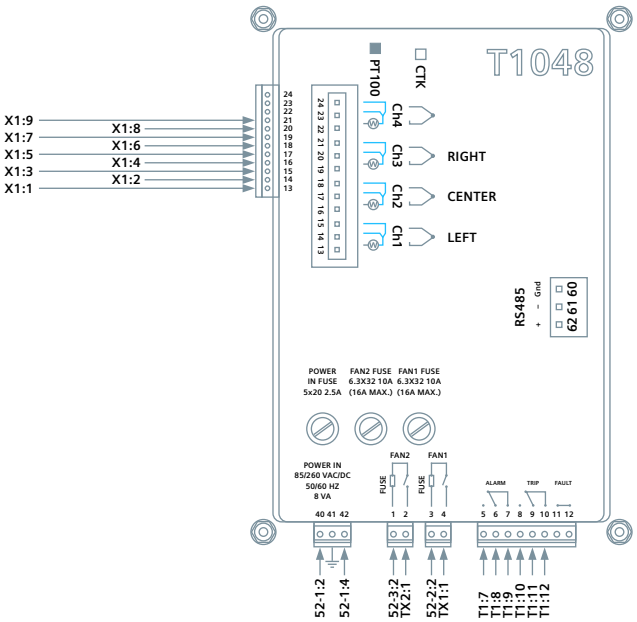
Temperature monitoring with PTC thermistors: If two sensor systems are used to monitor temperature, one is wired up to give an alarm and the other to switch off the transformer. The nominal operating temperatures of both systems differ by 20 K. A third system can, for example, take over controlling of the fans.

The temperature sensors function as PTC resistors: If the response temperature of a sensor is reached, the resistance rises sharply and the trip relay switches over immediately.

If the winding cools down by about 6 K below the operating temperature, the relay coil in the trip relay is fully energized and the contact switches back. The ambient temperature of the trip relay is limited to 55° Celsius. It is therefore suitable for installation in medium or low-voltage distribution cabinets.

Tecsystem T1048

Example with PT100 sensors



Innovative housing design



Proven technology in a new design

Innovation is something you can also see, at least when it comes to the new, award-winning GEAFOL housing whose stylistic idiom is based on the new transformer family design. Besides these purely visual aspects, the housing offers our customers other benefits as well.

Higher mechanical stability

Because the transformer and housing are delivered on a common base frame as a permanently mounted unit, they offer an extremely stable, robust overall configuration. This is further supported by the mechanically fixed installation of the transformer and the use of phases at the housing corners. Crossbraces can also be used at the transformer on request.

Greater flexibility and safety

The housing roof can be opened from the inside to permit hoisting by crane. The bolts connecting the housing and transformer are accommodated inside the housing for a higher degree of personnel safety. And thanks to the fully modular construction, a subsequent upgrade to a higher protection class (IP class) is possible at any time.

Versions for indoor and outdoor installation in multiple protection classes as well as various installation options such as, for example, “infrared window” or with air-/water heat exchanger are available.

Furthermore, al lot of special, customized housing designs are available, for example with flanges or openings for cable on busbar routing. Control cabinets which can be integrated into the housing design are also in our delivery portfolio.

Further information upon request.



Standard housings

These housings are available in versions for indoor and outdoor installation. Standard delivery is as a construction kit.



Labyrinth arrangement of ventilation louvres provides additional security against access with wire.

The roof strips are turned down at the side walls and screwed firmly into place.



Roof construction of protection class IP23 (indoor installation)

Cutaway of the ventilation slots with the roof strips.









Installation	Indoor	Indoor	Indoor		Outdoor
Protection class according to IEC	**IP00**	**IP20**	**IP23**	**IP23D**	**IP23DW**
Protection class according to IEEE	**IP00**	**IP20**	**NEMA1**	**–**	**NEMA3R**
Environmental influences					
Enclosed electrical operating areas	•	•	•	•	•
Electrical operating areas	–	•	•	•	•
Water up to 60 °C up to the ⊥	–	–	•	•	•
Snow	–	–	–	–	•
Direct sunlight	–	–	–	–	•
Salty air	•	•	•	•	Special paint finish
Aggressive chemical atmosphere	•	•	•	•	Special paint finish
Accidental contact	–	•	•	•	•
Foreign matter > 12.5 mm diameter	–	•	•	•	•
Protection against access with wire[1)]	–	–	On request	•	•

1) Test wire diameter 1 mm according to EN 60529.

Technical data for housings

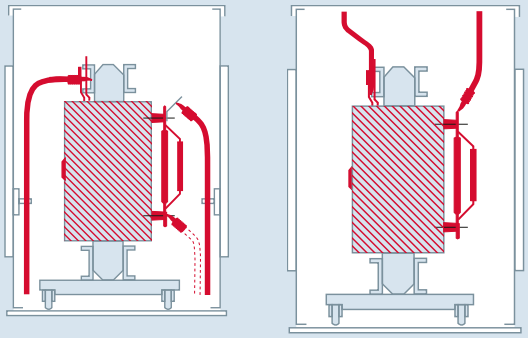
Transformers according to IEC standard

Housing size	Max. housing dimensions			Housing weight
	L [mm]	W [mm]	H [mm]	[kg]
Indoor (protection class IP20)				
1	1390	1010	1335	121
2	1860	1280	1535	177
3	1860	1280	1885	211
4	2120	1500	2120	252
5	2360	1500	2340	290
Indoor (protection class IP23 and IP23D)				
1	1390	1010	1395	134
2	1860	1280	1595	207
3	1860	1280	1945	247
4	2120	1500	2225	302
5	2360	1500	2495	370
Outdoor (protection class IP23DW)				
1	1440	1070	1540	153
2	1880	1320	1845	233
3	1880	1420	2245	267
4	2240	1540	2480	325
5	2380	1540	2950	392

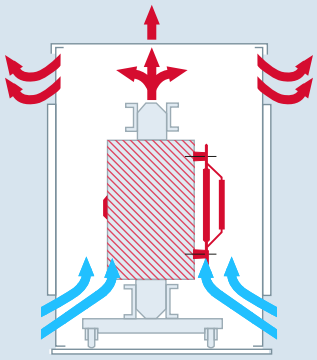
Transformers according to IEEE standard

Housing size	Max. housing dimensions			Housing weight
	L [mm]	W [mm]	H [mm]	[kg]
Indoor and Outdoor (protection class IP20 NEMA 1 and NEMA 3R)				
1	2000	1400	1700	450
2	2300	1700	2000	600
3	2650	1700	2300	745
4	3000	1900	2600	835
5	3300	1900	2800	927

The enclosure footprint remains identical for NEMA 1 (indoor) and NEMA 3R (outdoor) configurations. However, NEMA 3R designs incorporate peripheral louvers that extend approximately 15 cm beyond the enclosure's perimeter on all sides. While these louvers do not alter the official footprint, any adjacent equipment must account for this additional clearance around the enclosure.

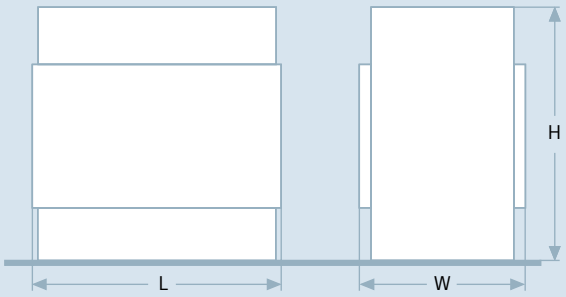


Variable connection technology:
The cable can be fed in through the floor, roof, or one of the side walls.



A reduction in power is possible in the case of installation inside the protective housing.

Dimension drawing of the housing



Selection of housings

Standard housing[1)2)3)4)] for GEAFOL Neo transformers according to

IEC

Rated power S_r [kVA]	Rated voltage U_r HV[2)] [kV]	Housing size
100	10	2
	10	2
	10	2
	10	2
	20	2
	20	3
	20	3
	20	3
160	10	3
	10	3
	10	3
	10	3
	20	3
	20	3
	20	3
	20	3
250	10	3
	10	3
	10	3
	10	3
	20	3
	20	3
	20	3
	20	3
315	10	3
	10	3
	10	3
	10	3
315	20	3
	20	3
	20	3
	20	3
400	10	3
	10	3
	10	3
	10	3
	20	3
	20	3
	20	3
	20	3
500	10	3
	10	3
	10	3
	10	3

Rated power S_r [kVA]	Rated voltage U_r HV[2)] [kV]	Housing size
500	20	3
	20	3
	20	3
	20	3
630	10	3
	10	3
	10	3
	10	3
	20	3
	20	3
	20	3
	20	3
800	10	3
	10	3
	10	3
	10	3
	20	4
	20	4
	20	3
	20	3
1000	10	4
	10	4
	10	4
	10	4
	20	4
	20	4
	20	4
	20	4
1250	10	4
	10	4
	20	4
	20	4
1600	10	4
	10	4
	20	4
	20	4
2000	10	5
	10	5
	20	5
	20	5
2500	10	5
	10	5[3)]
	20	5
	20	5[4)]

Ecodesign Directive

Rated power S_r [kVA]	Rated voltage U_r HV[2)] [kV]	Housing size
100	10	2
	20	3
160	10	3
	20	3
250	10	3
	20	3
315	10	3
	20	3
400	10	3
	20	3
500	10	3
	20	3
630	10	3
	20	3

Rated power S_r [kVA]	Rated voltage U_r OS[2)] [kV]	Housing size
800	10	3
	20	4
1000	10	3
	20	4
1250	10	4
	20	4
1600	10	4
	20	4
2000	10	4
	20	4
2500	10	5[3)]
	20	5[4)]
> 2500	Housing on request	

1) Different design and special equipment on request. Verification of the exact size of the housing in case of order. In addition, special accessories, such as thermographic windows, interlock supterms, control cubicles for local temperature and fan control etc. can be provided on request.
2) Version for 30 kV on request. 3) IP20: height + 100 mm 4) IP20/IP23/IP23F: width + 100 mm, height + 100 mm
Apart from standard housings, we can supply a wide range of special housings, e. g. with frame construction and doors that can also be equipped with roof ventilators. These housing types are also suitable for combined installation with low- and medium-voltage cabinets. Please ask us if you need them.

IEEE standard

Standard housing[1)2)3)4)] for GEAFOL Neo transformers according to

IEEE

Rated power S_r [kVA]	Rated voltage U_r HV[2)] [kV]	Housing size
100	4.16 or 6.9	1
	12.47 or 13.8	1
	23	1
	34.5	1
160	4.16 or 6.9	1
	12.47 or 13.8	1
	23	1
	34.5	1
250	4.16 or 6.9	1
	12.47 or 13.8	1
	23	1
	34.5	1
300	4.16 or 6.9	1
	12.47 or 13.8	1
	23	1
	34.5	2
315	4.16 or 6.9	1
	12.47 or 13.8	1
	23	1
	34.5	2
400	4.16 or 6.9	1
	12.47 or 13.8	1
	23	1
	34.5	2
500	4.16 or 6.9	1
	12.47 or 13.8	1
	23	1
	34.5	2

Rated power S_r [kVA]	Rated voltage U_r HV[2)] [kV]	Housing size
630	4.16 or 6.9	1
	12.47 or 13.8	1
	23	1
	34.5	1
800	4.16 or 6.9	2
	12.47 or 13.8	2
	23	2
	34.5	2
1000	4.16 or 6.9	2
	12.47 or 13.8	2
	23	2
	34.5	2
1250	4.16 or 6.9	2
	12.47 or 13.8	2
	23	2
	34.5	2
1600	4.16 or 6.9	3
	12.47 or 13.8	3
	23	3
	34.5	3
2000	4.16 or 6.9	4
	12.47 or 13.8	4
	23	4
	34.5	4
2500	4.16 or 6.9	4
	12.47 or 13.8	4[3)]
	23	4
	34.5	4[4)]

Ecodesign Directive

Rated power S_r [kVA]	Rated voltage U_r HV[2)] [kV]	Housing size
100	4.16 or 6.9	1
	34.5	1
160	4.16 or 6.9	1
	34.5	1
250	4.16 or 6.9	1
	34.5	1
315	4.16 or 6.9	1
	34.5	2
400	4.16 or 6.9	1
	34.5	2
500	4.16 or 6.9	1
	34.5	2
630	4.16 or 6.9	1
	34.5	2

Rated power S_r [kVA]	Rated voltage U_r OS[2)] [kV]	Housing size
800	4.16 or 6.9	2
	34.5	2
1000	4.16 or 6.9	2
	34.5	2
1250	4.16 or 6.9	2
	34.5	2
1600	4.16 or 6.9	3
	34.5	3
2000	4.16 or 6.9	4
	34.5	4
2500	4.16 or 6.9	4[3)]
	34.5	4[4)]
> 2500	Housing on request	

1) Different design and special equipment on request. Verification of the exact size of the housing in case of order. In addition, special accessories, such as thermographic windows, interlock supterms, control cubicles for local temperature and fan control etc. can be provided on request.
2) Version for 30 kV on request. 3) IP20: height + 100 mm 4) IP20/IP23/IP23F: width + 100 mm, height + 100 mm
Apart from standard housings, we can supply a wide range of special housings, e. g. with frame construction and doors that can also be equipped with roof ventilators. These housing types are also suitable for combined installation with low- and medium-voltage cabinets. Please ask us if you need them.

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