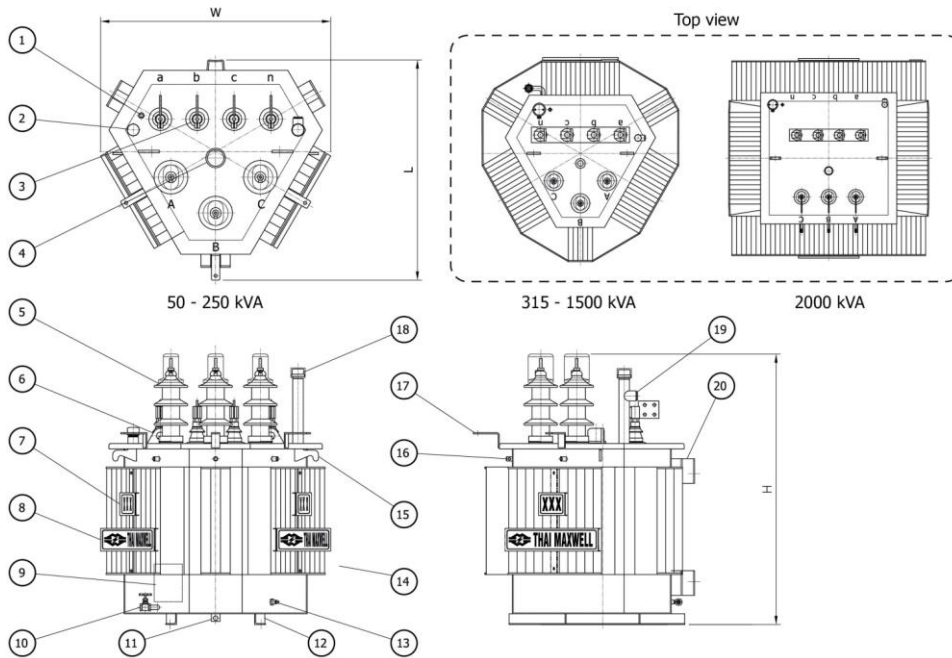


TECHNICAL DATA OF "STANDARD" 3D DISTRIBUTION THREE PHASE TRANSFORMER



No.	Description
1	Thermometer pocket
2	Pressure relief valve
3	LV Bushing
4	Off-load tap changer
5	HV Bushing with insulation cap
6	Lifting eyes for untanking/tanking assembly
7	Capacity plate
8	Trade mark with company plate
9	Name plate
10	Oil drain valve with plug
11	Sludge drain pipe with plug
12	Foundation
13	Earth terminal
14	Corrugated fin
15	Lifting lugs
16	Ground for lightning arrester
17	Arrester mounting provision
18	Oil filling cap with insulation cap
19	Oil level gauge
20	Support lugs

Rated primary voltage : 22kV

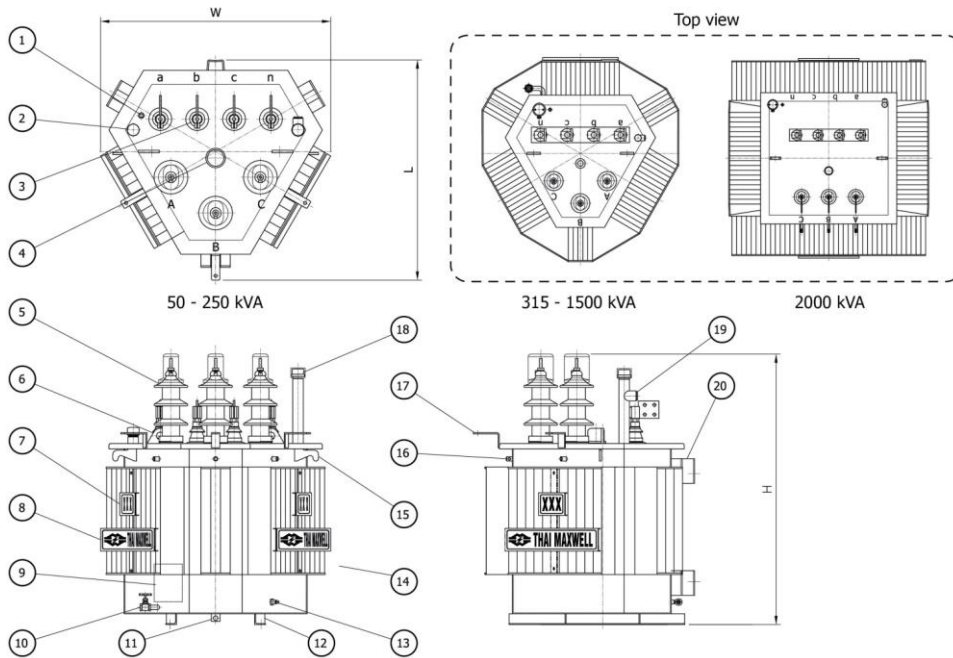
CAPACITY (kVA)	NO-LOAD LOSSES (Watt)	LOAD LOSSES AT 75 °C (Watt)	TOTAL LOSSES AT 75 °C (Watt)	IMPEDANCE AT 75 °C (%)	EFFICIENCY (P.F.=1)		VOLTAGE REGULATION AT FULL LOAD (P.F.=1) (%)	NOISE LEVEL dB (A) : 0.3 m	OUTLINE DIMENSION Approx.(mm.)			OIL QTY. (lt)	TOTAL WEIGHT Approx. (kg)
					1/2 Load (%)	Full Load (%)			W	L	H		
315	800	3900	4700	4.0	98.89	98.53	1.31	52	1190	1275	1290	295	1225
400	960	4600	5560	4.0	98.96	98.63	1.22	52	1225	1300	1320	330	1430
500	1150	5500	6650	4.0	99.00	98.69	1.17	52	1375	1430	1410	435	1735
630	1350	6500	7850	4.0	99.06	98.77	1.11	53	1385	1435	1480	480	2015
800	1400	10500	11900	6.0	99.00	98.53	1.48	54	1640	1650	1510	605	2395
1000	1600	12500	14100	6.0	99.06	98.61	1.42	55	1750	1740	1610	710	2850
1250	1850	14500	16350	6.0	99.13	98.71	1.33	57	1815	1795	1700	830	3355
1500	2050	18000	20050	6.0	99.13	98.68	1.37	57	1915	1890	1670	945	3910
1600	2350	19000	21350	6.0	99.12	98.68	1.36	58	1920	1900	1700	1050	4150
2000	2650	22500	25150	6.0	99.18	98.76	1.30	58	1925	1925	1770	1595	5490
2500	3000	25500	28500	7.0	99.26	98.87	1.26	60	2105	2100	1875	1970	6790
3000	3800	33000	36800	7.0	99.20	98.79	1.34	61	2155	2165	1935	2330	8000

Note :

1. The transformer is designed to operate under the following conditions
 - Altitude : Up to 1000 m above sea level
 - Ambient air temperature : 40 °C maximum
2. Limits of temperature rise
 - (top oil) : not exceeding 60 °C
 - (winding) : not exceeding 65 °C
3. Insulation class : A(105 °C)
4. Connection symbol : Dyn 11
5. Reference standard : IEC 60076
6. Special vector group and other primary voltage available upon request

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TECHNICAL DATA OF "STANDARD" 3D DISTRIBUTION THREE PHASE TRANSFORMER



No.	Description
1	Thermometer pocket
2	Pressure relief valve
3	LV Bushing
4	Off-load tap changer
5	HV Bushing with insulation cap
6	Lifting eyes for untanking/tanking assembly
7	Capacity plate
8	Trade mark with company plate
9	Name plate
10	Oil drain valve with plug
11	Sludge drain pipe with plug
12	Foundation
13	Earth terminal
14	Corrugated fin
15	Lifting lugs
16	Ground for lightning arrester
17	Arrester mounting provision
18	Oil filling cap with insulation cap
19	Oil level gauge
20	Support lugs

Rated primary voltage : 24kV

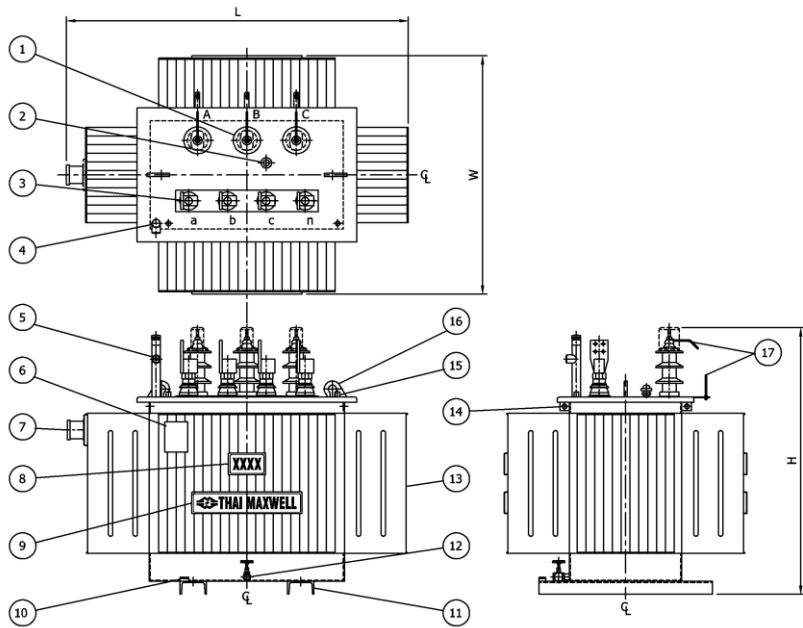
CAPACITY (kVA)	NO-LOAD LOSSES (Watt)	LOAD LOSSES AT 75 °C (Watt)	TOTAL LOSSES AT 75 °C (Watt)	IMPEDANCE AT 75 °C (%)	EFFICIENCY (P.F.=1)		VOLTAGE REGULATION AT FULL LOAD (P.F.=1) (%)	NOISE LEVEL dB (A) : 0.3 m	OUTLINE DIMENSION Approx.(mm.)			OIL QTY. (lt)	TOTAL WEIGHT Approx. (kg)
					1/2 Load (%)	Full Load (%)			W	L	H		
315	800	3900	4700	4.0	98.89	98.53	1.31	52	1250	1340	1355	310	1285
400	960	4600	5560	4.0	98.96	98.63	1.22	52	1285	1365	1385	345	1500
500	1150	5500	6650	4.0	99.00	98.69	1.17	52	1445	1500	1480	455	1820
630	1350	6500	7850	4.0	99.06	98.77	1.11	53	1455	1505	1555	505	2115
800	1400	10500	11900	6.0	99.00	98.53	1.48	54	1720	1730	1585	635	2515
1000	1600	12500	14100	6.0	99.06	98.61	1.42	55	1840	1830	1690	745	2990
1250	1850	14500	16350	6.0	99.13	98.71	1.33	57	1905	1885	1785	870	3520
1500	2050	18000	20050	6.0	99.13	98.68	1.37	57	2010	1985	1755	990	4100
1600	2350	19000	21350	6.0	99.12	98.68	1.36	58	2030	1995	1800	1050	4355
2000	2650	22500	25150	6.0	99.18	98.76	1.30	58	2020	2020	1860	1675	5760
2500	3000	25500	28500	7.0	99.26	98.87	1.26	60	2210	2320	1970	2070	7120
3000	3800	33000	36800	7.0	99.20	98.79	1.34	61	2260	2270	2030	2445	8400

Note :

- The transformer is designed to operate under the following conditions
 - Altitude : Up to 1000 m above sea level
 - Ambient air temperature : 40 °C maximum
- Limits of temperature rise
 - (top oil) : not exceeding 60 °C
 - (winding) : not exceeding 65 °C
- Insulation class : A(105 °C)
- Connection symbol : Dyn 11
- Reference standard : IEC 60076
- Special vector group and other primary voltage available upon request

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TECHNICAL DATA OF OIL-IMMERSED HERMETICALLY SEALED THREE PHASE TRANSFORMER



NO.	DESCRIPTION
1	HV BUSHING with INSULATION CAP
2	OFF-LOAD TAP CHANGER
3	LV BUSHING
4	PRESSURE RELIEF VALVE
5	OIL LEVEL GAUGE
6	NAME PLATE
7	DIAL TYPE OIL THERMOMETER
8	CAPACITY PLATE
9	TRADE MARK with COMPANY PLATE
10	EARTH TERMINAL
11	FOUNDATION
12	OIL DRAN VALVE with PLUG
13	CORRUGATED FIN
14	LIFTING LUGS FOR TANK ONLY
15	THERMOMETER POCKET
16	LIFTING EYES
17	ARCHING HORN

Rated primary voltage : 24kV, 22kV, 12kV, 6.6kV or below

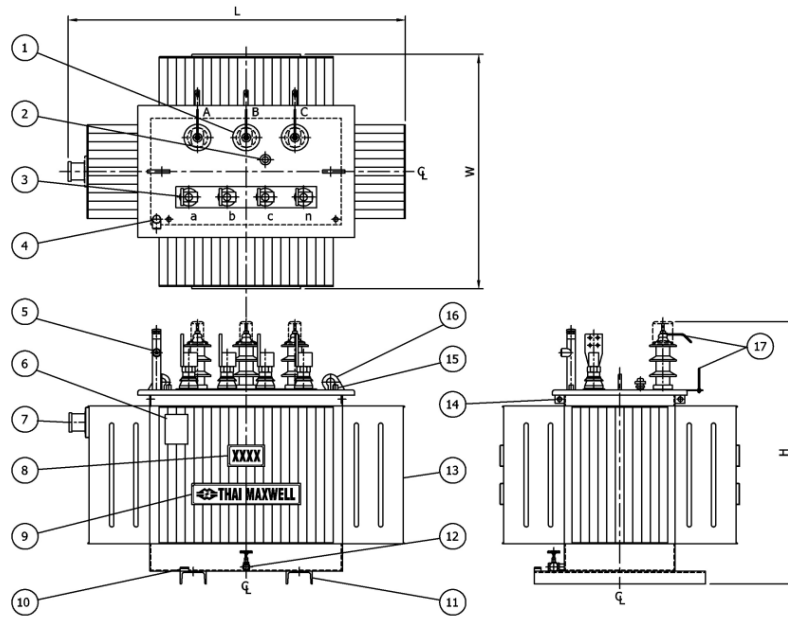
CAPACITY (kVA)	NO-LOAD LOSSES (Watt)	LOAD LOSSES AT 75 °C (Watt)	TOTAL LOSSES AT 75 °C (Watt)	IMPEDANCE AT 75 °C (%)	EFFICIENCY (P.F.=1)		VOLTAGE REGULATION AT FULL LOAD (P.F.=1) (%)	NOISE LEVEL dB (A) : 0.3 m	OUTLINE DIMENSION Approx.(mm.)			OIL QTY. (lt)	TOTAL WEIGHT Approx. (kg)
					½ Load (%)	Full Load (%)			W	L	H		
50	160	950	1110	4.0	98.43	97.83	1.96	48	710	920	890	85	335
100	250	1550	1800	4.0	98.74	98.23	1.62	51	705	1085	930	95	500
160	360	2100	2460	4.0	98.91	98.49	1.38	55	755	1270	1000	145	720
250	600	2950	3550	4.0	98.94	98.60	1.25	55	800	1030	1130	235	1090
315	800	3900	4700	4.0	98.89	98.53	1.31	56	935	1465	1040	195	1060
400	960	4600	5560	4.0	98.96	98.63	1.22	56	990	1500	1130	280	1260
500	1150	5500	6650	4.0	99.00	98.69	1.17	56	980	1565	1330	425	1680
630	1350	6500	7850	4.0	99.06	98.77	1.11	57	940	1560	1590	430	1955
750	1450	9000	10450	6.0	99.02	98.63	1.37	58	1230	1875	1670	555	2360
800	1400	10500	11900	6.0	99.00	98.53	1.48	58	1230	1840	1700	580	2350
1000	1600	12500	14100	6.0	99.06	98.61	1.42	58	1270	2100	1545	765	2900
1250	1850	14500	16350	6.0	99.13	98.71	1.33	60	1300	2150	1730	780	3270
1500	2050	18000	20050	6.0	99.13	98.68	1.37	60	1285	2110	1920	890	3825
1600	2350	19000	21350	6.0	99.12	98.68	1.36	61	1360	2200	1850	1065	4430
2000	2650	22500	25150	6.0	99.18	98.76	1.30	61	1390	2320	1920	1220	5115
2500	3000	25500	28500	7.0	99.26	98.87	1.26	62	1420	3320	2150	1250	5570
3000	3800	33000	36800	7.0	99.20	98.79	1.34	63	1450	2400	2150	1430	6600

Note :

1. The transformer is designed to operate under the following conditions
 - Altitude : Up to 1000 m above sea level
 - Ambient air temperature : 40 °C maximum
2. Limits of temperature rise
 - (top oil) : not exceeding 60 °C
 - (winding) : not exceeding 65 °C
3. Insulation class : A
4. Connection symbol : Dyn 11
5. Reference standard : IEC 60076
6. Special vector group and other primary voltage available upon request

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TECHNICAL DATA OF OIL-IMMERSED HERMETICALLY SEALED THREE PHASE TRANSFORMER



NO.	DESCRIPTION
1	HV BUSHING with INSULATION CAP
2	OFF-LOAD TAP CHANGER
3	LV BUSHING
4	PRESSURE RELIEF VALVE
5	OIL LEVEL GAUGE
6	NAME PLATE
7	DIAL TYPE OIL THERMOMETER
8	CAPACITY PLATE
9	TRADE MARK with COMPANY PLATE
10	EARTH TERMINAL
11	FOUNDATION
12	OIL DRAN VALVE with PLUG
13	CORRUGATED FIN
14	LIFTING LUGS FOR TANK ONLY
15	THERMOMETER POCKET
16	LIFTING EYES
17	ARCHING HORN

Rated primary voltage : 24kV, 12/24kV

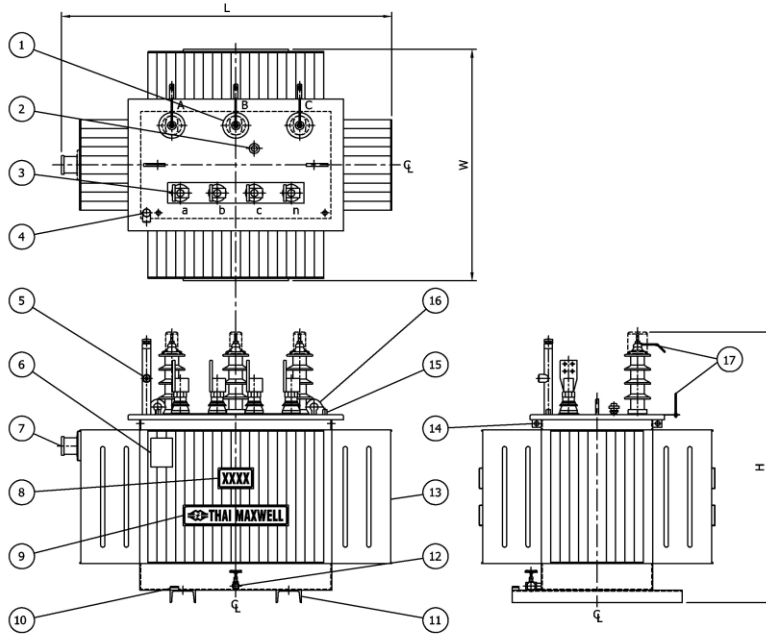
CAPACITY	NO-LOAD LOSSES	LOAD LOSSES AT 75 °C	TOTAL LOSSES AT 75 °C	IMPEDANCE AT 75 °C	EFFICIENCY (P.F.=1)		VOLTAGE REGULATION AT FULL LOAD (P.F.=1)	NOISE LEVEL dB (A) : 0.3 m	OUTLINE DIMENSION Approx.(mm.)			OIL QTY. (lt)	TOTAL WEIGHT Approx. (kg)
					½ Load (%)	Full Load (%)			W	L	H		
50	210	1050	1260	4.0	98.15	97.54	2.16	48	730	960	975	140	500
100	340	1750	2090	4.0	98.47	97.95	1.81	51	630	940	1260	175	680
160	480	2350	2830	4.0	98.68	98.26	1.54	55	630	995	1275	200	760
250	670	3250	3920	4.0	98.83	98.46	1.37	55	760	1100	1350	265	1060
315	800	3900	4700	4.0	98.89	98.53	1.31	56	750	1105	1460	320	1240
400	960	4600	5560	4.0	98.96	98.63	1.22	56	840	1480	1500	362	1500
500	1150	5500	6650	4.0	99.00	98.69	1.17	56	840	1430	1590	400	1680
630	1350	6500	7850	4.0	99.06	98.77	1.11	57	920	1520	1670	455	1980
750	1450	9000	10450	6.0	99.02	98.63	1.37	58	1250	1900	1680	600	2455
800	1400	10500	11900	6.0	99.00	98.53	1.48	58	1200	1830	1730	610	2620
1000	1600	12500	14100	6.0	99.06	98.61	1.42	58	1270	1975	1790	755	2940
1250	1850	14500	16350	6.0	99.13	98.71	1.33	60	1290	2020	1880	860	3450
1500	2050	18000	20050	6.0	99.13	98.68	1.37	60	1285	2005	1930	925	3910
2000	2650	22500	25150	6.0	99.18	98.76	1.30	61	1440	2210	1980	1170	4985

Note :

1. The transformer is designed to operate under the following conditions
 - Altitude : Up to 1000 m above sea level
 - Ambient air temperature : 40 °C maximum
2. Limits of temperature rise
 - (top oil) : not exceeding 60 °C
 - (winding) : not exceeding 65 °C
3. Insulation class : A
4. Connection symbol : Dyn 11 or Dyn 1
5. Reference standard : IEC 60076
6. Special vector group and other primary voltage available upon request

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TECHNICAL DATA OF OIL-IMMERSED HERMETICALLY SEALED THREE PHASE TRANSFORMER



NO.	DESCRIPTION
1	HV BUSHING with INSULATION CAP
2	OFF-LOAD TAP CHANGER
3	LV BUSHING
4	PRESSURE RELIEF VALVE
5	OIL LEVEL GAUGE
6	NAME PLATE
7	DIAL TYPE OIL THERMOMETER
8	CAPACITY PLATE
9	TRADE MARK with COMPANY PLATE
10	EARTH TERMINAL
11	FOUNDATION
12	OIL DRAN VALVE with PLUG
13	CORRUGATED FIN
14	LIFTING LUGS FOR TANK ONLY
15	THERMOMETER POCKET
16	LIFTING EYES
17	ARCHING HORN

Rated primary voltage : 33kV

CAPACITY (kVA)	NO-LOAD LOSSES (Watt)	LOAD LOSSES AT 75 °C (Watt)	TOTAL LOSSES AT 75 °C (Watt)	IMPEDANCE AT 75 °C (%)	EFFICIENCY (P.F.=1)		VOLTAGE REGULATION AT FULL LOAD (P.F.=1) (%)	NOISE LEVEL dB (A) : 0.3 m	OUTLINE DIMENSION Approx.(mm.)			OIL QTY. (lt)	TOTAL WEIGHT Approx. (kg)
					½ Load (%)	Full Load (%)			W	L	H		
50	170	950	1120	4.0	98.40	97.81	1.96	48	270	920	1040	108	395
100	260	1550	1810	4.0	98.72	98.22	1.62	51	770	1260	1120	155	615
160	370	2100	2470	4.0	98.89	98.48	1.38	55	700	1220	1250	210	900
250	520	2950	3470	4.0	99.00	98.63	1.25	55	770	1280	1270	250	1165
315	850	3900	4750	4.0	98.85	98.51	1.31	56	1000	1420	1275	275	1135
400	1000	4600	5600	4.0	98.94	98.62	1.22	56	1010	1490	1405	340	1475
500	1200	5500	6700	4.0	98.98	98.68	1.17	56	910	1540	1630	405	1735
630	1400	6500	7900	4.0	99.05	98.76	1.11	57	920	1550	1740	460	2030
750	1450	9000	10450	6.0	99.02	98.63	1.37	58	1080	1780	1740	545	2265
800	1450	10500	11950	6.0	98.99	98.53	1.48	58	1340	1860	1705	665	2550
1000	1650	12500	14150	6.0	99.05	98.60	1.42	58	1270	2090	1810	705	2890
1250	1900	14500	16400	6.0	99.12	98.70	1.33	60	1290	2130	1940	830	3420
1500	2100	18000	20100	6.0	99.13	98.68	1.37	60	1310	2165	2065	1040	4475
1600	2400	19000	21400	6.0	99.11	98.68	1.36	61	1330	2170	2140	1135	4700
2000	2700	22500	25200	6.0	99.17	98.76	1.30	61	1370	2280	2100	1235	5020
2500	3150	25500	28650	7.0	99.24	98.87	1.26	62	1440	2350	2140	1250	5450
3000	3900	33000	36900	7.0	99.20	98.78	1.34	63	1450	2400	2160	1440	6490

Note :

1. The transformer is designed to operate under the following conditions
 - Altitude : Up to 1000 m above sea level
 - Ambient air temperature : 40 °C maximum
2. Limits of temperature rise (top oil) : not exceeding 60 °C
 (winding) : not exceeding 65 °C
3. Insulation class : A
4. Connection symbol : Dyn 11
5. Reference standard : IEC 60076
6. Special vector group and other primary voltage available upon request

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