

NorateL Datasheets

The data presented in this datasheet is approximate and offered as a guideline only for the various types and sizes of transformer available from Noratel. Such data can vary depending on the transformer configuration and application and where critical, information should always be obtained from the data sheets accompanying any specific product. Please contact Noratel if your application requires any specific performance criteria or if you need any application or performance advice on any of our products.

Low voltage 0,1-30kVA, IP23



Type 3LT-23

Capsulated three-phase non short circuit proof transformer with power range up to 30 kVA.

Designed and tested according to EN61558-2-4. Standard types supplied with separate primary and secondary windings. This generates "a new system" in which any earth faults are eliminated. Steel plate enclosure, degree of protection IP23.

Applications:

This is an ideal design for transforming voltage up or down or for installations which require a galvanic partition between the primary and secondary voltage. Protects installations and equipment by generating "a new system" in which any earth faults are eliminated. E.g. electric motor, compressor, cooling plants, automatic washing machines, and to uphold IT or TN-S systems. Custom designed types with other voltages, frequencies, electrostatic shield between primary and secondary, regulations, tappings, transport wheels or other features are available upon request.



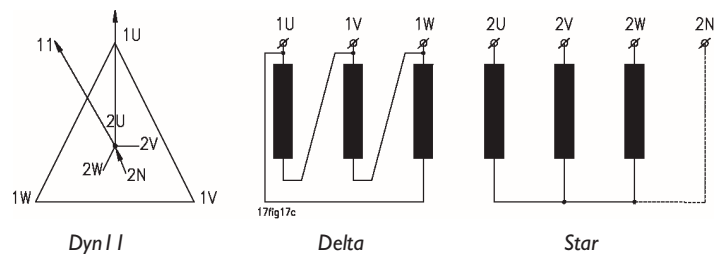
Noratel declare and guarantee that all transformers are designed according to the following standards; EN61558-2-4:1997, EN55014:1993 (EN55014-1:1997), EN61000-3-2:1995, EN61000-3-3:1995, EN55104:1995, (EN55014-2:1997), EN50081-1:1992, EN50082-2:1995 based on the following directives; LVD 2014/35/EU, EMC 2014/30/EU EcoDesign 2009/125/EC

Technical specifications

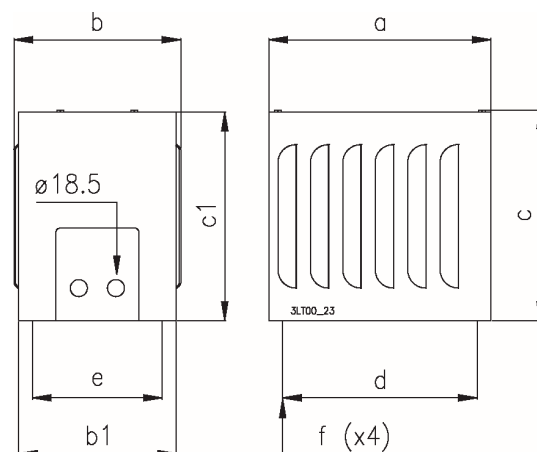
- Input voltage: 3x115 to 3x1000V
- Frequency: 47-63Hz
- Output voltage: 3x115 to 3x1000V
- Vector group: Dyn11 (standard)
Dyn5, Ynd1, Ynd5
- According to: EN61558-2-4
low voltage directive
- Test voltage: 3kV AC RMS
- Construction class: I
- Insulation class: B (130°C)
F (155°C)
- Ambient temp. (t_a): 40°C
- Degree of protection: IP23
- Type of termination: Terminal block

Can be supplied with Cu-bars termination depending on voltage/current.

Standard vector group

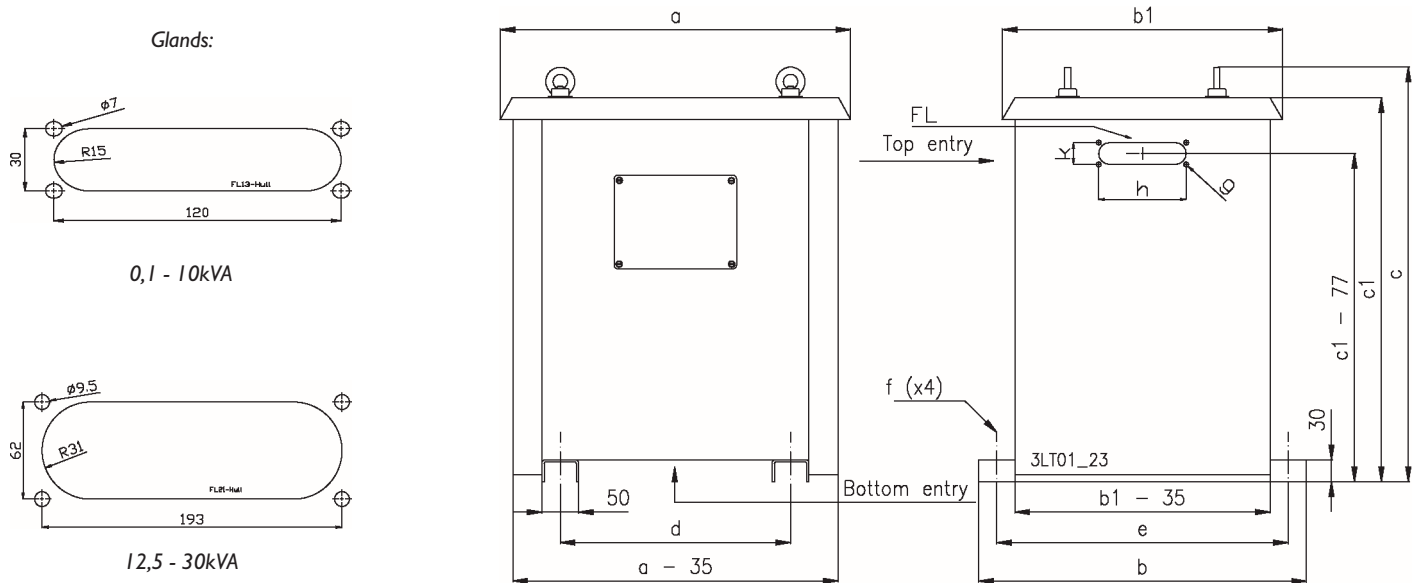


Dimensions



3LT 0.1 - 3LT 0.80

Dimensions



Standard types supplied with covers on top entry cable glands

3LT 1.25 - 3LT 30.0

Standard types 3LT-23

Power (kVA)	Type	Class	Dimensions (mm)								Weight (kg)
			a	b	c	b1	c1	d	e	f	
3LT-23											
0,1	3LT 0.10	B	240	180	228	170	225	210	140	8.0	5
0,15	3LT 0.15	B	240	180	228	170	225	210	140	8.0	5,6
0,25	3LT 0.25	B	280	210	248	200	245	250	170	8.0	7,8
0,4	3LT 0.40	B	280	210	248	200	245	250	170	8.0	9,5
0,5	3LT 0.50	B	280	210	248	200	245	250	170	8.0	11,5
0,63	3LT 0.63	B	280	210	248	200	245	250	170	8.0	13
0,8	3LT 0.80	B	280	210	248	200	245	250	170	8.0	14,5
1,25	3LT 1.25	B	309	290	401	223	362	176	240	12.0	21
2,0	3LT 2.00	B	309	290	401	223	362	176	240	12.0	26,5
2,5	3LT 2.50	B	343	320	431	253	392	200	270	12.0	34
3,0	3LT 3.00	B	343	320	431	253	392	200	270	12.0	38
3,5	3LT 3.50	F	377	350	461	283	422	224	300	12.0	39
4,0	3LT 4.00	F	377	350	461	283	422	224	300	12.0	45
5,0	3LT 5.00	F	377	350	461	283	422	224	300	12.0	50
6,3	3LT 6.30	F	427	400	515	333	467	264	350	15.0	63
8,0	3LT 8.00	F	427	400	515	333	467	264	350	15.0	73
10	3LT 10.0	F	427	400	515	333	467	264	350	15.0	83
12,5	3LT 12.5	F	481	450	590	383	542	316	400	15.0	96
16	3LT 16.0	F	481	450	590	383	542	316	400	15.0	122
20	3LT 20.0	F	481	450	590	383	542	316	400	15.0	148
25	3LT 25.0	F	599	550	630	480	582	356	500	15.0	170
30	3LT 30.0	F	599	550	630	480	582	356	500	15.0	212

3-phase low voltage 40-2000 kVA, IP23



Type 3LT-23

Capsulated three-phase non short circuit proof transformer with power range up from 40 to 2000 kVA. Designed and tested according to IEC60726/IEC60076. Standard types supplied with separate primary and secondary windings. This generates "a new system" in which any earth faults are eliminated. Steel plate enclosure, degree of protection IP23.

Applications:

This is an ideal design for transforming voltage up or down or for installations which require a galvanic partition between the primary and secondary voltage. Protects installations and equipment by generating "a new system" in which any earth faults are eliminated. E.g. electric motor, compressor, cooling plants, automatic washing machines, and to uphold IT or TN-S systems. Custom designed types with other voltages, frequencies, electrostatic shield between primary and secondary, regulations, tapplings, transport wheels or other features are available on request.

Technical specifications

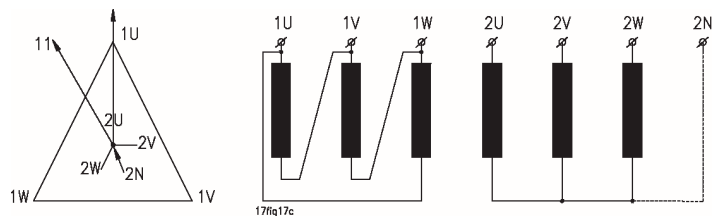
- Input voltage: 3x115 to 3x1000V
- Frequency: 47-63Hz
- Output voltage: 3x115 to 3x1000V
- Vector group: Dyn11 (standard)
Dyn5, Ynd1, Ynd5
- According to: IEC60726/IEC60076
D.N.V.
- Test voltage: 3kV AC RMS
- Construction class: I
- Insulation class: F (155°C) - standard
H (180°C)
- Ambient temp. (t_a): 45°C
- Degree of protection: IP23
- Type of termination: Cu-bars

Supplied with Al-bars for termination from 630 kVA with high currents.



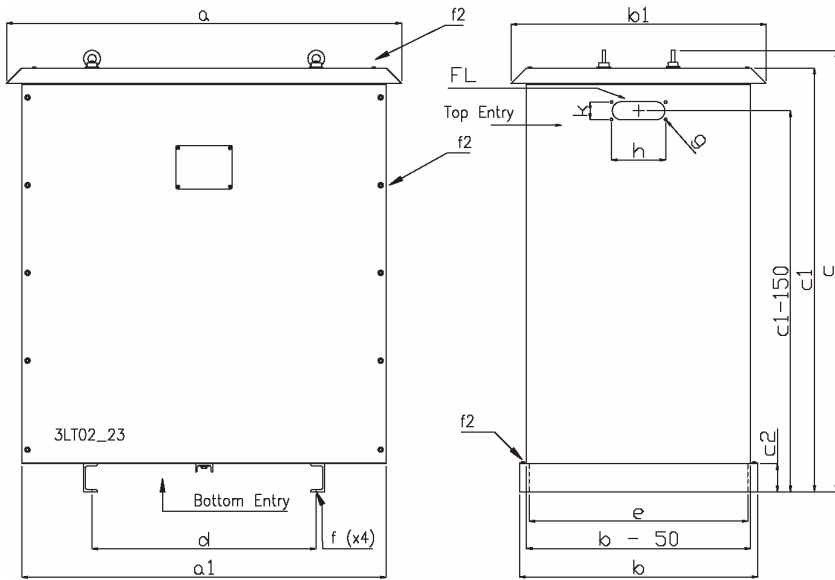
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Standard vector group

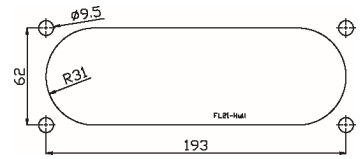


Accessories

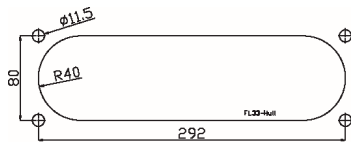
- Cable glands on primary/secondary [CG]
- Wheels for transport [WH]
- Temperature control units with alarm or trip [TC]
- PEN-link [PL]
- Top entry [TE]
- PT100 sensors [PT]
- RTD sensors [RTD]
- PTC sensors [PTC]
- Thermographic windows [TW]



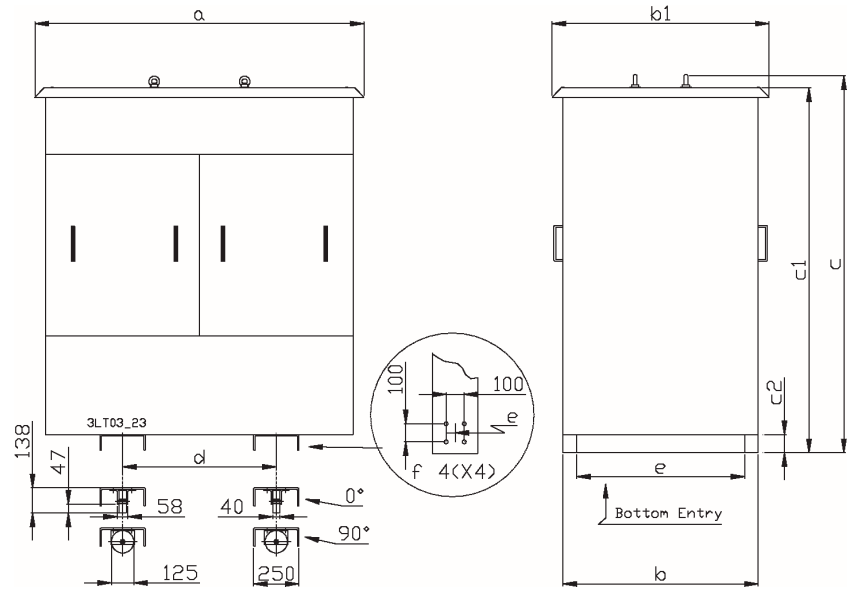
3LT 40 - 3LT 800



3LT 1000 - 3LT 2000



Standard types supplied with covers on top entry cable glands



Standard types 3LT-23

Power (kVA)		Type	Dimensions (mm)										Weight (kg)
Cl. F	Cl. H		a	b	c	a1	b1	c1	c2	d	e	f	
3LT-23													
40	45	3LT 40.0	670	520	827	600	540	770	50	340	470	14	187
50	56	3LT 50.0	670	520	827	600	540	770	50	340	470	14	225
63	70	3LT 63.0	700	520	877	630	540	820	50	360	470	14	258
80	89	3LT 80.0	700	520	877	630	540	820	50	360	470	14	317
100	110	3LT 100	930	630	1057	840	670	1000	100	590	580	18	380
125	138	3LT 125	930	630	1057	840	670	1000	100	590	580	18	452
160	175	3LT 160	1050	700	1137	960	740	1080	100	590	650	18	550
200	220	3LT 200	1050	700	1137	960	740	1080	100	590	650	18	635
250	275	3LT 250	1210	800	1517	1100	860	1450	100	600	750	18	842
315	350	3LT 315	1210	800	1517	1100	860	1450	100	600	750	18	977
400	440	3LT 400	1450	900	1557	1340	960	1490	100	760	850	18	1100
500	550	3LT 500	1450	900	1557	1340	960	1490	100	760	850	18	1260
630	700	3LT 630	1670	1050	1637	1560	1110	1570	100	880	1000	18	1670
800	888	3LT 800	1820	1080	2090	1700	1200	2015	100	850	850	4x11,0	2100
1000	1100	3LT 1000	1820	1080	2090	1700	1200	2015	100	850	850	4x11,0	3000
1250	1380	3LT 1250	1820	1080	2090	1700	1200	2015	100	850	850	4x11,0	3300
1600	1750	3LT 1600	2200	1080	2355	2080	1200	2265	100	850	850	4x11,0	3700
2000	2200	3LT 2000	2200	1080	2355	2080	1200	2265	100	850	850	4x11,0	5080

Losses / short circuit values / inrush current

Type	Losses (W)		e _z (%)	e _r (%)	I _c (xI _{nc})
	No-load	Load			
3LT					
3LT0.10	5	21	23,8	20,7	44
3LT0.15	12	27	19,8	17,5	46
3LT0.25	14	31	13,5	12,2	35
3LT0.40	21	39	10,6	9,7	35
3LT0.50	15	44	9,6	8,8	29
3LT0.63	23	40	6,7	6,3	35
3LT0.80	25	49	6,5	6,1	34
3LT1.25	36	57	4,8	4,6	25
3LT2.0	39	85	4,4	4,3	31
3LT2.5	56	70	2,9	2,8	27
3LT3.0	65	79	2,7	2,6	28
3LT3.5	75	199	5,8	5,7	20
3LT4.0	90	168	4,2	4,2	24
3LT5.0	98	205	4,2	4,1	22
3LT6.3	128	246	4,1	3,9	21
3LT8.0	129	245	3,4	3,1	21
3LT10	168	294	3,4	2,9	19
3LT12.5	186	415	3,8	3,3	15
3LT16	269	386	2,8	2,4	17
3LT20	280	371	2,2	1,9	20
3LT25	387	496	2,6	2	15
3LT30	494	472	2,1	1,6	16
3LT40M25	254	1122	3,7	2,8	16
3LT50M25	319	948	3,1	1,9	16
3LT63M25	361	1225	3,3	1,7	15
3LT80M25	444	1328	2,9	1,7	14
3LT100M25	486	2186	4,4	2,2	11
3LT125M25	604	2176	3,7	1,7	9
3LT160M25	733	2632	4,2	1,7	7
3LT200M25	878	3135	4,1	1,6	7
3LT250M25	1103	3705	4,8	1,5	6
3LT315M25	1260	4818	4,9	1,5	6
3LT400M13	822	6160	5,9	1,5	8
3LT500M13	864	8080	6,2	1,6	7
3LT630M13	1181	8535	5,7	1,4	7
3LT800	1650	10300	6,3	1,3	10
3LT1000	2000	9600	4,9	0,9	10
3LT1250	2400	10000	5	0,8	10
3LT1600	2520	12000	5	0,8	10
3LT2000	3300	15000	5,5	0,7	10

Type	Losses (W)		e _z (%)	e _r (%)	I _c (xI _{nc})
	No-load	Load			
3LTxxN					
3LT40.0N	321	1046	3,52	2,61	11
3LT50.0N	431	1098	3,09	2,20	12
3LT63.0N	404	1587	3,59	2,52	9
3LT80.0N	622	1362	2,96	1,70	10
3LT100N	673	1896	3,88	1,90	8
3LT125N	797	2133	3,91	1,71	8
3LT160N	901	3221	4,30	2,01	8
3LT200N	1283	3500	5,10	1,72	7
3LT250N	1590	3480	3,27	1,39	7
3RT-LI					
3RT4.0LI	15	180	4,63	4,5	
3RT6.3LI	27	259	4,19	4,11	
3RT10.0LI	47	372	3,73	3,72	
3RT12.5LI	39	381	3,09	3,04	
3RT16.0LI	48	468	2,94	2,92	
3RT20.0LI	60	532	2,68	2,66	
3RT25.0LI	71	549	2,31	2,2	
3RT30.0LI	83	560	1,91	1,87	

Type	Losses (W)		e _z (%)	e _r (%)	I _c (xI _{nc})
	No-load	Load			
3HT					
3HT40	300	1000	4,0	2	18
3HT50	300	1050	4,5	2	18
3HT63	300	1100	4,5	2	18
3HT80	400	1200	4,5	1,5	18
3HT100	550	1400	4,5	1,4	14
3HT125	550	1600	4,5	1,4	14
3HT160	600	2000	4,5	1,3	14
3HT200	800	2200	4,5	1,1	14
3HT250	900	3200	5,0	1,0	14
3HT315	1000	3300	5,0	0,9	12
3HT400	1200	3400	5,0	0,9	12
3HT500	1400	4500	5,0	0,9	12
3HT630	1600	5000	5,0	0,9	12
3HT800	1700	6000	5,0	0,8	10
3HT1000	2200	7500	5,0	0,8	10
3HT1250	2500	9500	5,0	0,8	10
3HT1600	2800	12000	5,0	0,8	10
3HT2000	3300	14000	5,0	0,7	10