TBDL Transformer

Product catalogue 2026



Oil-immersed and dry-type distribution transformers up to 35 kV · Compact substations · MV/LV switchgear · Cores and coils to your design

Shandong Tebian Electric Power Equipment Co., Ltd. · Tai'an, Shandong, China
www.tbdlpower.com · ming@tbdltransformer.com · WhatsApp +86 155 8857 0618

About TBDL Transformer

Shandong Tebian Electric Power Equipment Co., Ltd. (TBDL Transformer) is a transformer manufacturer in Tai'an, Shandong, China. Transformer manufacturing began in 2007; Daifeng® is the factory's registered product brand.

The range covers oil-immersed and dry-type distribution transformers up to 35 kV, compact substations, MV/LV switchgear and distribution cabinets, and semi-finished transformer cores and coils made to the buyer's design.

Cores and coils are made in house: a silicon steel slitting line and two cut-to-length lines for stacked cores, wound-core winding machines and an annealing furnace, six foil winding machines and six variable-speed winding machines, with grain-oriented silicon steel from Baowu Steel and Shougang.

Every transformer is routine-tested at the factory before shipment, and its test report comes with the order. Type test reports for specific models, certificates and export references are provided for a specific project. The factory exports to many countries, including the United States.

Management system certificates

ISO 9001, ISO 14001 and ISO 45001. Certificate copies are sent on request.


质量管理体系认证证书

山东特变电力设备有限公司

注 册 号：

统一社会信用代码

注 册 地 址： 中国山东省泰安泰山青春创业开发区卧虎山南街 P.C 271000

审 核 地 址： 中国山东省泰安泰山青春创业开发区卧虎山南街 P.C 271000

管理体系符合： GB/T 19001-2016/ISO 9001:2015

证书覆盖范围： 35kV 及以下油浸式及干式电力变压器、箱式变电站、铂装移开式交流金属封闭开关柜、低压成套开关设备（低压抽出式开关设备、交流低压配电柜、动力配电柜）、低压成套无功功率补偿装置的生产和销售（涉及行政许可的产品限资质范围内）

颁 证 日 期： 2025 年 02 月 14 日 证书有效期至： 2028 年 03 月 27 日

初次颁证日期： 2019 年 03 月 28 日 换 证 日 期： 2025 年 02 月 14 日

本证书颁发后，3年有效期内要至少接受2次监督审核，证书及时有效性可通过网站查询www.lajcc.cn或致电400-788-2300.
本证书信息可在国家认证认可监督管理委员会官方网站(www.cnca.gov.cn)或扫描右下角的二维码查询。

Issued by Niangao Li

山东利安捷国际认证服务有限公司

中国·山东·青岛崂山区海尔路63号数码科技中心B座4层 266100

http://www.lajcc.cn


环境管理体系认证证书

山东特变电力设备有限公司

注 册 号：

统一社会信用代码

注 册 地 址： 中国山东省泰安泰山青春创业开发区卧虎山南街 P.C 271000

审 核 地 址： 中国山东省泰安泰山青春创业开发区卧虎山南街 P.C 271000

管理体系符合： GB/T 24001-2016/ISO 14001:2015

证书覆盖范围： 35kV 及以下油浸式及干式电力变压器、箱式变电站、铂装移开式交流金属封闭开关柜、低压成套开关设备（低压抽出式开关设备、交流低压配电柜、动力配电柜）、低压成套无功功率补偿装置的生产和销售（涉及行政许可的产品限资质范围内）相关的环境管理活动

颁 证 日 期： 2025 年 02 月 14 日 证书有效期至： 2028 年 03 月 27 日

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中国·山东·青岛崂山区海尔路63号数码科技中心B座4层 266100

http://www.lajcc.cn


职业健康安全管理体系认证证书

山东特变电力设备有限公司

注 册 号：

统一社会信用代码

注 册 地 址： 中国山东省泰安泰山青春创业开发区卧虎山南街 P.C 271000

审 核 地 址： 中国山东省泰安泰山青春创业开发区卧虎山南街 P.C 271000

管理体系符合： GB/T 45001-2020/ISO 45001:2018

证书覆盖范围： 35kV 及以下油浸式及干式电力变压器、箱式变电站、铂装移开式交流金属封闭开关柜、低压成套开关设备（低压抽出式开关设备、交流低压配电柜、动力配电柜）、低压成套无功功率补偿装置的生产和销售（涉及行政许可的产品限资质范围内）相关的职业健康安全管理活动

颁 证 日 期： 2025 年 02 月 14 日 证书有效期至： 2028 年 03 月 27 日

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Issued by Niangao Li

山东利安捷国际认证服务有限公司

中国·山东·青岛崂山区海尔路63号数码科技中心B座4层 266100

http://www.lajcc.cn

How to read the tables

Values come from the factory's published product documents and are the same as on www.tbdlpower.com. Slash-separated entries are alternatives. Final ratings, voltage combinations, tapping range and connection group are confirmed for each order.

What to send for a quotation

Rating (kVA), primary and secondary voltage, vector group, impedance, cooling, the loss standard you need, the site conditions (altitude, ambient temperature, indoor or outdoor), quantity and destination port.



PRODUCT FAMILY

Oil-immersed transformers

S11, S13, S18, S20, S22 and SZ series. Distribution and power transformers for 10 kV and 35 kV systems.

S11 Oil-Immersed Transformer for 10 kV & 35 kV Networks

Oil-immersed transformer with off-circuit tap changing.

- 10 kV & 35 kV published voltage classes
- Off-circuit tap changing
- Oil-insulated construction
- 30–31,500 kVA across the published tables

S11-30-2500/10/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
30	0.10	0.63/0.60	1.50	4.0
50	0.13	0.91/0.87	1.30	4.0
80	0.18	1.31/1.25	1.20	4.0
100	0.20	1.58/1.50	1.10	4.0
125	0.24	1.89/1.80	1.10	4.0
160	0.28	2.31/2.20	1.00	4.0
200	0.34	2.73/2.60	1.00	4.0
250	0.40	3.20/3.05	0.90	4.0
315	0.48	3.83/3.65	0.90	4.0
400	0.57	4.52/4.30	0.80	4.0
500	0.68	5.41/5.15	0.80	4.0
630	0.81	6.20	0.60	4.5
800	0.98	7.50	0.60	4.5
1000	1.15	10.3	0.60	4.5
1250	1.36	12.0	0.50	4.5
1600	1.64	14.5	0.50	4.5
2000	1.94	18.3	0.40	5.0
2500	2.29	21.2	0.40	5.0

S11-30-2500/10/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
30–2500	6 / 6.3 / 10 / 10.5 / 11	±5%or ±2×2.5%	0.4	Yyn0 / Dyn11 / Yzn11

S11-50-2500/35/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
50	0.16	1.20/1.14	1.3	6.5
100	0.23	2.01/1.91	1.1	6.5
125	0.27	2.37/2.26	1.1	6.5
160	0.28	2.82/2.68	1.0	6.5
200	0.34	3.32/3.16	1.0	6.5
250	0.40	3.95/3.76	0.95	6.5

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
315	0.48	4.75/4.53	0.95	6.5
400	0.58	5.74/5.47	0.85	6.5
500	0.68	6.91/6.58	0.85	6.5
630	0.83	7.86	0.65	6.5
800	0.98	9.40	0.65	6.5
1000	1.15	11.5	0.65	6.5
1250	1.40	13.9	0.60	6.5
1600	1.69	16.6	0.60	6.5
2000	1.99	19.7	0.55	6.5
2500	2.36	23.2	0.55	6.5

S11-50-2500/35/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
50–2500	35 / 38.5	±5 / ±2×2.5	0.4	Dyn11 / Yyn0

S11-630-31500/35/10.5

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
630	0.83	7.86	0.65	6.5
800	0.98	9.4	0.65	6.5
1000	1.15	11.5	0.65	6.5
1250	1.40	13.9	0.55	6.5
1600	1.69	16.6	0.45	6.5
2000	2.17	18.3	0.45	6.5
2500	2.56	19.6	0.45	6.5
3150	3.04	23.0	0.45	7.0
4000	3.61	27.3	0.45	7.0
5000	4.32	31.3	0.45	7.0
6300	5.24	35.0	0.45	8.0
8000	7.20	38.4	0.35	8.0
10000	8.70	45.3	0.35	8.0
12500	10.0	53.8	0.30	8.0
16000	12.1	65.8	0.30	8.0
20000	14.4	79.5	0.30	8.0
25000	17.0	94.0	0.25	10.0
31500	20.2	112	0.25	10.0

S11-630-31500/35/10.5 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
630–2500	35	±5 / ±2×2.5	3.15 / 6.3 / 10.5	Yd11
3150–6300	35 / 38.5	±5 / ±2×2.5	3.15 / 6.3 / 10.5	Yd11
8000–31500	35 / 38.5	±2×2.5	3.15 / 3.3 / 6.3 / 6.6 / 10.5	YNd11

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

For oil-immersed ratings up to 500 kVA with paired load-loss figures, the first value applies to Dyn11 and the second to Yyn0. Voltage combinations, tapping range and connection group must be confirmed for the selected rating.

S13 Oil-Immersed Transformer for 10 kV & 35 kV Networks

Oil-immersed transformer with off-circuit tap changing.

- 10 kV & 35 kV published voltage classes
- Off-circuit tap changing
- Oil-insulated construction
- 30–31,500 kVA across the published tables

S13-30-2500/10/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
30	0.08	0.63/0.60	1.20	4.0
50	0.10	0.91/0.87	1.04	4.0
80	0.13	1.31/1.25	0.96	4.0
100	0.15	1.58/1.50	0.88	4.0
125	0.17	1.89/1.80	0.88	4.0
160	0.20	2.31/2.20	0.80	4.0
200	0.24	2.73/2.60	0.80	4.0
250	0.29	3.20/3.05	0.72	4.0
315	0.34	3.83/3.65	0.72	4.0
400	0.41	4.52/4.30	0.64	4.0
500	0.48	5.41/5.15	0.64	4.0
630	0.57	6.20	0.48	4.5
800	0.70	7.50	0.48	4.5
1000	0.83	10.3	0.48	4.5
1250	0.97	12.0	0.40	4.5
1600	1.17	14.5	0.40	4.5
2000	1.36	18.3	0.32	5.0
2500	1.60	21.2	0.32	5.0

S13-30-2500/10/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
30–2500	6 / 6.3 / 10 / 10.5 / 11	±5%or ±2×2.5%	0.4	Yyn0 / Dyn11 / Yzn11

S13-50-2500/35/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
50	0.130	1.14/1.08	1.0	6.5
100	0.185	1.91/1.81	0.88	6.5
125	0.215	2.25/2.15	0.88	6.5
160	0.225	2.68/2.55	0.80	6.5
200	0.270	3.15/3.00	0.80	6.5
250	0.320	3.75/3.57	0.76	6.5
315	0.385	4.51/4.30	0.76	6.5
400	0.465	5.45/5.20	0.68	6.5
500	0.545	6.56/6.25	0.68	6.5
630	0.665	7.47	0.52	6.5
800	0.785	8.93	0.52	6.5
1000	0.920	10.9	0.52	6.5

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
1250	1.12	13.2	0.48	6.5
1600	1.35	15.8	0.48	6.5
2000	1.59	19.7	0.44	6.5
2500	1.89	23.2	0.44	6.5

S13-50-2500/35/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
50–2500	35 / 38.5	±5 / ±2×2.5	0.4	Dyn11 / Yyn0

S13-630-31500/35/10.5

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
630	0.66	7.47	0.52	6.5
800	0.78	8.93	0.52	6.5
1000	0.92	10.9	0.52	6.5
1250	1.12	13.2	0.44	6.5
1600	1.35	15.8	0.36	6.5
2000	1.74	17.4	0.36	6.5
2500	2.05	18.6	0.36	6.5
3150	2.40	21.9	0.36	7.0
4000	2.90	25.9	0.36	7.0
5000	3.50	29.7	0.36	7.0
6300	4.20	33.3	0.36	8.0
8000	5.80	36.5	0.28	8.0
10000	7.00	43.0	0.28	8.0
12500	8.00	51.1	0.24	8.0
16000	9.70	62.5	0.24	8.0
20000	11.5	75.5	0.24	8.0
25000	13.6	89.3	0.20	10.0
31500	16.2	106.4	0.20	10.0

S13-630-31500/35/10.5 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
630–2500	35	±5 / ±2×2.5	3.15 / 6.3 / 10.5	Yd11
3150–6300	35 / 38.5	±5 / ±2×2.5	3.15 / 6.3 / 10.5	Yd11
8000–31500	35 / 38.5	±2×2.5	3.15 / 3.3 / 6.3 / 6.6 / 10.5	YNd11

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

For oil-immersed ratings up to 500 kVA with paired load-loss figures, the first value applies to Dyn11 and the second to Yyn0. Voltage combinations, tapping range and connection group must be confirmed for the selected rating.

Online: www.tbdlpower.com/s13

S18 Oil-Immersed Power Transformer for 35 kV Networks

Oil-immersed power transformer with off-circuit tap changing, 630 to 31,500 kVA at 35 kV.

- 35 kV published voltage class
- Off-circuit tap changing
- Oil-insulated construction
- 630–31,500 kVA in the published table

S18-630-31500/35

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
630	0.66	7.47	0.52	6.5
800	0.78	8.93	0.52	6.5
1000	0.92	10.9	0.52	6.5
1250	1.12	13.2	0.44	6.5
1600	1.35	15.8	0.36	6.5
2000	1.74	17.4	0.36	6.5
2500	2.05	18.6	0.36	6.5
3150	2.40	21.9	0.36	7.0
4000	2.90	25.9	0.36	7.0
5000	3.50	29.7	0.36	7.0
6300	4.20	33.3	0.36	8.0
8000	5.80	36.5	0.28	8.0
10000	7.00	43.0	0.28	8.0
12500	8.00	51.1	0.24	8.0
16000	9.70	62.5	0.24	8.0
20000	11.5	75.5	0.24	8.0
25000	13.6	89.3	0.20	10.0
31500	16.2	106.4	0.20	10.0

S18-630-31500/35 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
630–2500	35	±5 / ±2×2.5	3.15 / 6.3 / 10.5	Yd11
3150–6300	35 / 38.5	±5 / ±2×2.5	3.15 / 6.3 / 10.5	Yd11
8000–31500	35 / 38.5	±2×2.5	3.15 / 3.3 / 6.3 / 6.6 / 10.5	YNd11

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

Voltage combinations, tapping range and connection group must be confirmed for the selected rating.

Small ratings use a fully sealed corrugated tank. From 5,000 kVA the tank is a bell-type or conventional design with plate radiators, and cooling fans can be added on request.

Online: www.tbdlpower.com/s18

S20 Oil-Immersed Transformer for 10 kV & 35 kV Networks

Oil-immersed transformer with off-circuit tap changing.

- 10 kV & 35 kV published voltage classes
- Off-circuit tap changing
- Oil-insulated construction
- 30–31,500 kVA across the published tables

S20-30-2500/10/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
30	0.07	0.505/0.48	1.20	4.0
50	0.09	0.73/0.695	1.04	4.0
80	0.115	1.05/1.00	0.96	4.0
100	0.135	1.265/1.20	0.88	4.0
125	0.15	1.51/1.44	0.88	4.0
160	0.18	1.85/1.76	0.80	4.0

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
200	0.215	2.185/2.08	0.80	4.0
250	0.26	2.56/2.44	0.72	4.0
315	0.305	3.065/2.92	0.72	4.0
400	0.37	3.615/3.44	0.64	4.0
500	0.43	4.33/4.12	0.64	4.0
630	0.51	4.96	0.48	4.5
800	0.63	6.00	0.48	4.5
1000	0.745	8.24	0.48	4.5
1250	0.87	9.60	0.40	4.5
1600	1.05	11.6	0.40	4.5
2000	1.225	14.64	0.32	5.0
2500	1.44	16.96	0.32	5.0

S20-30-2500/10/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
30–2500	6 / 6.3 / 10 / 10.5 / 11	±5%or ±2×2.5%	0.4	Yyn0 / Dyn11 / Yzn11

S20-3150-31500/35/10.5

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
3150	2.0	20.7	0.36	7.0
4000	2.3	24.6	0.36	7.0
5000	2.8	28.2	0.36	7.0
6300	3.4	31.5	0.36	8.0
8000	4.7	34.6	0.28	8.0
10000	5.7	40.8	0.28	8.0
12500	6.5	48.4	0.24	8.0
16000	7.9	59.2	0.24	8.0
20000	9.4	71.6	0.24	8.0
25000	11.1	84.6	0.20	10.0
31500	13.1	100.8	0.20	10.0

S20-3150-31500/35/10.5 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
3150–6300	35 / 38.5	±5 / ±2×2.5	3.15 / 6.3 / 10.5	Yd11
8000–31500	35 / 38.5	±2×2.5	3.15 / 3.3 / 6.3 / 6.6 / 10.5	YNd11

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

For oil-immersed ratings up to 500 kVA with paired load-loss figures, the first value applies to Dyn11 and the second to Yyn0. Voltage combinations, tapping range and connection group must be confirmed for the selected rating.

Online: www.tbdlpower.com/s20

S22 Oil-Immersed Transformer for 10 kV & 35 kV Networks

Oil-immersed transformer with off-circuit tap changing.

- 10 kV & 35 kV published voltage classes
- Off-circuit tap changing
- Oil-insulated construction
- 30–31,500 kVA across the published tables

S22-30-2500/10/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
30	0.065	0.455/0.43	1.20	4.0
50	0.08	0.655/0.625	1.04	4.0
80	0.105	0.945/0.90	0.96	4.0
100	0.12	1.14/1.08	0.88	4.0
125	0.135	1.36/1.295	0.88	4.0
160	0.16	1.665/1.585	0.80	4.0
200	0.19	1.97/1.87	0.80	4.0
250	0.23	2.30/2.195	0.72	4.0
315	0.27	2.76/2.63	0.72	4.0
400	0.33	3.25/3.095	0.64	4.0
500	0.385	3.90/3.71	0.64	4.0
630	0.46	4.46	0.48	4.5
800	0.56	5.40	0.48	4.5
1000	0.665	7.415	0.48	4.5
1250	0.78	8.64	0.40	4.5
1600	0.94	10.44	0.40	4.5
2000	1.085	13.18	0.32	5.0
2500	1.28	15.27	0.32	5.0

S22-30-2500/10/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
30–2500	6 / 6.3 / 10 / 10.5 / 11	±5%or ±2×2.5%	0.4	Yyn0 / Dyn11 / Yzn11

S22-3150-31500/35/10.5

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
3150	1.7	20.7	0.36	7.0
4000	2.0	24.6	0.36	7.0
5000	2.4	28.2	0.36	7.0
6300	2.9	31.5	0.36	8.0
8000	4.0	34.6	0.28	8.0
10000	4.8	40.8	0.28	8.0
12500	5.5	48.4	0.24	8.0
16000	6.7	59.2	0.24	8.0
20000	7.9	71.6	0.24	8.0
25000	9.4	84.6	0.20	10.0
31500	11.1	100.8	0.20	10.0

S22-3150-31500/35/10.5 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
3150–6300	35 / 38.5	±5 / ±2×2.5	3.15 / 6.3 / 10.5	Yd11
8000–31500	35 / 38.5	±2×2.5	3.15 / 3.3 / 6.3 / 6.6 / 10.5	YNd11

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

For oil-immersed ratings up to 500 kVA with paired load-loss figures, the first value applies to Dyn11 and the second to Yyn0. Voltage combinations, tapping range and connection group must be confirmed for the selected rating.

Online: www.tbdlpower.com/s22

SZ11 Oil-Immersed Transformer for 10 kV & 35 kV Networks

Oil-immersed transformer with on-load tap changing.

- 10 kV & 35 kV published voltage classes
- On-load tap changing
- Oil-insulated construction
- 200–31,500 kVA across the published tables

SZ11-200-2500/10/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
200	0.38	2.90	1.0	4.0
250	0.44	3.42	0.9	4.0
315	0.53	4.10	0.9	4.0
400	0.64	4.95	0.8	4.0
500	0.76	5.89	0.8	4.0
630	0.96	7.26	0.6	4.5
800	1.12	8.89	0.6	4.5
1000	1.36	10.4	0.6	4.5
1250	1.56	12.3	0.5	4.5
1600	1.92	14.7	0.5	4.5
2000	2.27	18.6	0.4	5.0
2500	2.68	21.6	0.4	5.0

SZ11-200-2500/10/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
200–2500	6 6.3 / 10 10.5 11	±4X2.5%	0.4	Yyn0 Dyn11

SZ11-2000-31500/35/10.5

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
2000	2.30	19.2	0.50	6.5
2500	2.72	20.6	0.50	6.5
3150	3.23	24.7	0.50	7.0
4000	3.87	29.1	0.50	7.0
5000	4.64	34.2	0.50	7.0
6300	5.63	36.7	0.50	8.0
8000	7.87	40.6	0.40	8.0
10000	9.28	48.0	0.40	8.0
12500	10.9	56.8	0.35	8.0
16000	13.1	70.3	0.35	8.0
20000	15.5	82.7	0.35	8.0
25000	18.3	97.8	0.30	10.0
31500	21.8	116	0.30	10.0

SZ11-2000-31500/35/10.5 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
2000–2500	35	±3×2.5	6.3 / 10.5	Yd11

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
3150–6300	35 / 38.5	±3×2.5	6.3 / 10.5	Yd11
8000–31500	35 / 38.5	±3×2.5	6.3 / 6.6 / 10.5	YNd11

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

For oil-immersed ratings up to 500 kVA with paired load-loss figures, the first value applies to Dyn11 and the second to Yyn0. Voltage combinations, tapping range and connection group must be confirmed for the selected rating.

Online: www.tbdlpower.com/sz11

SZ13 Oil-Immersed Transformer for 10 kV & 35 kV Networks

Oil-immersed transformer with on-load tap changing.

- 10 kV & 35 kV published voltage classes
- On-load tap changing
- Oil-insulated construction
- 200–31,500 kVA across the published tables

SZ13-200-2500/10/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
200	0.305	2.90	0.80	4.0
250	0.350	3.42	0.72	4.0
315	0.425	4.10	0.72	4.0
400	0.510	4.95	0.64	4.0
500	0.610	5.89	0.64	4.0
630	0.770	7.26	0.48	4.5
800	0.895	8.89	0.48	4.5
1000	1.09	10.4	0.48	4.5
1250	1.25	12.3	0.40	4.5
1600	1.54	14.7	0.40	4.5
2000	1.82	18.6	0.32	5.0
2500	2.14	21.6	0.32	5.0

SZ13-200-2500/10/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
200–2500	6 6.3 / 10 10.5 11	±4X2.5%	0.4	Yyn0 Dyn11

SZ13-2000-31500/35/10.5

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
2000	1.84	18.2	0.40	6.5
2500	2.18	19.6	0.40	6.5
3150	2.60	23.5	0.40	7.0
4000	3.10	27.6	0.40	7.0
5000	3.70	32.5	0.40	7.0
6300	4.50	34.9	0.40	8.0
8000	6.30	38.6	0.32	8.0
10000	7.40	45.6	0.32	8.0
12500	8.70	54.0	0.28	8.0
16000	10.5	66.8	0.28	8.0
20000	12.4	78.6	0.28	8.0

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
25000	14.6	92.9	0.24	10.0
31500	17.4	110.2	0.24	10.0

SZ13-2000-31500/35/10.5 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
2000–2500	35	±3×2.5	6.3 / 10.5	Yd11
3150–6300	35 / 38.5	±3×2.5	6.3 / 10.5	Yd11
8000–31500	35 / 38.5	±3×2.5	6.3 / 6.6 / 10.5	YNd11

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

For oil-immersed ratings up to 500 kVA with paired load-loss figures, the first value applies to Dyn11 and the second to Yyn0. Voltage combinations, tapping range and connection group must be confirmed for the selected rating.

Online: www.tbdlpower.com/sz13

SZ18 Oil-Immersed Power Transformer for 35 kV Networks

Oil-immersed power transformer with on-load tap changing, 2,000 to 31,500 kVA at 35 kV.

- 35 kV published voltage class
- On-load tap changing
- Oil-insulated construction
- 2,000–31,500 kVA in the published table

SZ18-2000-31500/35

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
2000	1.84	18.2	0.40	6.5
2500	2.18	19.6	0.40	6.5
3150	2.60	23.5	0.40	7.0
4000	3.10	27.6	0.40	7.0
5000	3.70	32.5	0.40	7.0
6300	4.50	34.9	0.40	8.0
8000	6.30	38.6	0.32	8.0
10000	7.40	45.6	0.32	8.0
12500	8.70	54.0	0.28	8.0
16000	10.5	66.8	0.28	8.0
20000	12.4	78.6	0.28	8.0
25000	14.6	92.9	0.24	10.0
31500	17.4	110.2	0.24	10.0

SZ18-2000-31500/35 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
2000–2500	35	±3×2.5	6.3 / 10.5	Yd11
3150–6300	35 / 38.5	±3×2.5	6.3 / 10.5	Yd11
8000–31500	35 / 38.5	±3×2.5	6.3 / 6.6 / 10.5	YNd11

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

Voltage combinations, tapping range and connection group must be confirmed for the selected rating.

On-load tap changing lets the output voltage be regulated while the transformer carries load. Confirm the tap changer make and control requirements for your project.

Online: www.tbdlpower.com/sz18

SZ20 Oil-Immersed Transformer for 35 kV Networks

Oil-immersed transformer with on-load tap changing.

- 35 kV published voltage classes
- On-load tap changing
- Oil-insulated construction
- 3,150–31,500 kVA across the published tables

SZ20-3150-31500/35/10.5

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
3150	2.1	22.2	0.40	7.0
4000	2.5	26.2	0.40	7.0
5000	3.0	30.8	0.40	7.0
6300	3.7	33.0	0.40	8.0
8000	5.1	36.5	0.32	8.0
10000	6.0	43.2	0.32	8.0
12500	7.1	51.1	0.28	8.0
16000	8.5	63.3	0.28	8.0
20000	10.1	74.4	0.28	8.0
25000	11.9	88.0	0.24	10.0
31500	14.2	104.4	0.24	10.0

SZ20-3150-31500/35/10.5 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
3150–6300	35 / 38.5	Not stated; request confirmation	6.3 / 10.5	Yd11
8000–31500	35 / 38.5	Not stated; request confirmation	6.3 / 6.6 / 10.5	YNd11

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

For oil-immersed ratings up to 500 kVA with paired load-loss figures, the first value applies to Dyn11 and the second to Yyn0. Voltage combinations, tapping range and connection group must be confirmed for the selected rating.

Online: www.tbdlpower.com/sz20

SZ22 Oil-Immersed Transformer for 35 kV Networks

Oil-immersed transformer with on-load tap changing.

- 35 kV published voltage classes
- On-load tap changing
- Oil-insulated construction
- 3,150–31,500 kVA across the published tables

SZ22-3150-31500/35/10.5

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
3150	1.8	22.2	0.40	7.0
4000	2.1	26.2	0.40	7.0
5000	2.6	30.8	0.40	7.0
6300	3.1	33.0	0.40	8.0
8000	4.3	36.5	0.32	8.0
10000	5.1	43.2	0.32	8.0
12500	6.0	51.1	0.28	8.0
16000	7.2	63.3	0.28	8.0
20000	8.5	74.4	0.28	8.0
25000	10.1	88.0	0.24	10.0

Rated capacity (kVA)	No-load loss (kW)	Load loss at 75 °C (kW)	No-load current (%)	Impedance (%)
31500	12.0	104.4	0.24	10.0

SZ22-3150-31500/35/10.5 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
3150–6300	35 / 38.5	Not stated; request confirmation	6.3 / 10.5	Yd11
8000–31500	35 / 38.5	Not stated; request confirmation	6.3 / 6.6 / 10.5	YNd11

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

For oil-immersed ratings up to 500 kVA with paired load-loss figures, the first value applies to Dyn11 and the second to Yyn0. Voltage combinations, tapping range and connection group must be confirmed for the selected rating.

Online: www.tbdlpower.com/sz22



PRODUCT FAMILY

Dry-type transformers

SCB10, SCB11, SCB12, SCB13, SCB14 and SCB18 resin-insulated transformers, plus SZCB10 and SZCB12 (SCZB10 and SCZB12) with on-load tap changing, for indoor power distribution.

SCB10 Dry-Type Transformer for 10 kV & 35 kV Networks

Resin-insulated dry-type transformer for indoor distribution.

- 10 kV & 35 kV published voltage classes
- Off-circuit tap changing
- Epoxy resin insulation
- 30–2,500 kVA across the published tables

SCB10-30-2500/10/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss at 120 °C (kW)	No-load current (%)	Impedance (%)
30	0.19	0.71	2.0	4.0
50	0.27	1.00	2.0	4.0
80	0.37	1.38	1.5	4.0
100	0.40	1.57	1.5	4.0
125	0.47	1.85	1.3	4.0
160	0.54	2.13	1.3	4.0
200	0.62	2.53	1.1	4.0
250	0.72	2.76	1.1	4.0
315	0.88	3.47	1.0	4.0
400	0.98	3.99	1.0	4.0
500	1.16	4.88	1.0	4.0
630	1.30	5.96	0.85	6.0
800	1.52	6.96	0.85	6.0
1000	1.77	8.13	0.85	6.0
1250	2.09	9.69	0.85	6.0
1600	2.45	11.7	0.85	6.0
2000	3.05	14.4	0.7	6.0
2500	3.60	17.1	0.7	6.0

SCB10-30-2500/10/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
30–2500	6 / 6.3 / 10 / 10.5 / 11	±5%or ±2×2.5%	0.4	Yyn0 / Dyn11

SCB10-50-2500/35/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss at 120 °C (kW)	No-load current (%)	Impedance (%)
50	0.45	1.42	2.3	6.0
100	0.63	2.09	2.0	6.0
160	0.79	2.81	1.5	6.0
200	0.88	3.32	1.5	6.0
250	0.99	3.80	1.3	6.0
315	1.17	4.51	1.3	6.0

Rated capacity (kVA)	No-load loss (kW)	Load loss at 120 °C (kW)	No-load current (%)	Impedance (%)
400	1.37	5.41	1.1	6.0
500	1.62	6.65	1.1	6.0
630	1.86	7.69	1.0	6.0
800	2.16	9.12	1.0	6.0
1000	2.43	10.4	0.75	6.0
1250	2.83	12.7	0.75	6.0
1600	3.24	15.4	0.75	6.0
2000	3.82	18.2	0.75	6.0
2500	4.45	21.8	0.75	6.0

SCB10-50-2500/35/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
50–2500	35 / 36 / 37 / 38.5	±5 / ±2×2.5	0.4	Dyn11 / Yyn0

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

Cooling: natural air (AN); forced-air options should be confirmed for the intended duty. Request voltage combinations, tapping range and connection group for your selected rating.

Online: www.tbdlpower.com/scb10

SCB11 Dry-Type Transformer for 10 kV & 35 kV Networks

Resin-insulated dry-type transformer for indoor distribution.

- 10 kV & 35 kV published voltage classes
- Off-circuit tap changing
- Epoxy resin insulation
- 30–2,500 kVA across the published tables

SCB11-30-2500/10/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss (kW)	No-load current (%)	Impedance (%)
30	0.17	0.71	2.0	4.0
50	0.25	1.00	2.0	4.0
80	0.34	1.38	1.5	4.0
100	0.36	1.57	1.5	4.0
125	0.42	1.85	1.3	4.0
160	0.49	2.13	1.3	4.0
200	0.56	2.53	1.1	4.0
250	0.65	2.76	1.1	4.0
315	0.79	3.47	1.0	4.0
400	0.88	3.99	1.0	4.0
500	1.05	4.88	1.0	4.0
630	1.21	5.88	0.85	4.0
630	1.17	5.96	0.85	6.0
800	1.37	6.96	0.85	6.0
1000	1.59	8.13	0.85	6.0
1250	1.88	9.69	0.85	6.0
1600	2.21	11.7	0.85	6.0
2000	2.72	14.4	0.7	6.0
2500	3.20	17.1	0.7	6.0

SCB11-30-2500/10/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
30–2500	6 / 6.3 / 10 / 10.5 / 11	±5% or ±2×2.5%	0.4	Yyn0 / Dyn11

SCB11-50-2500/35/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss (kW)	No-load current (%)	Impedance (%)
50	0.41	1.42	2.1	6.0
100	0.57	2.09	1.8	6.0
160	0.71	2.81	1.4	6.0
200	0.80	3.32	1.4	6.0
250	0.89	3.80	1.2	6.0
315	1.06	4.51	1.2	6.0
400	1.24	5.41	1.0	6.0
500	1.46	6.65	1.0	6.0
630	1.68	7.69	0.9	6.0
800	1.95	9.12	0.9	6.0
1000	2.19	10.4	0.7	6.0
1250	2.55	12.7	0.7	6.0
1600	2.92	15.4	0.7	6.0
2000	3.44	18.2	0.7	6.0
2500	4.01	21.8	0.7	6.0

SCB11-50-2500/35/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
50–2500	35 / 36 / 37 / 38.5	±5 / ±2×2.5	0.4	Dyn11 / Yyn0

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

Load-loss reference temperature is stated on the datasheet. Cooling: natural air (AN); forced-air options should be confirmed for the intended duty. Request voltage combinations, tapping range and connection group for your selected rating.

Online: www.tbdlpower.com/scb11

SCB12 Dry-Type Transformer for 10 kV & 35 kV Networks

Resin-insulated dry-type transformer for indoor distribution.

- 10 kV & 35 kV published voltage classes
- Off-circuit tap changing
- Epoxy resin insulation
- 30–2,500 kVA across the published tables

SCB12-30-2500/10/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss at 120 °C (kW)	No-load current (%)	Impedance (%)
30	0.15	0.71	2.0	4.0
50	0.215	1.00	2.0	4.0
80	0.295	1.38	1.5	4.0
100	0.32	1.57	1.5	4.0
125	0.375	1.85	1.3	4.0
160	0.43	2.13	1.3	4.0
200	0.495	2.53	1.1	4.0
250	0.575	2.76	0.9	4.0
315	0.705	3.47	0.8	4.0

Rated capacity (kVA)	No-load loss (kW)	Load loss at 120 °C (kW)	No-load current (%)	Impedance (%)
400	0.785	3.99	0.8	4.0
500	0.93	4.88	0.8	4.0
630	1.04	5.96	0.7	6.0
800	1.21	6.96	0.7	6.0
1000	1.41	8.13	0.7	6.0
1250	1.67	9.69	0.7	6.0
1600	1.96	11.7	0.7	6.0
2000	2.44	14.4	0.6	6.0
2500	2.88	17.1	0.6	6.0

SCB12-30-2500/10/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
30–2500	6 / 6.3 / 10 / 10.5 / 11	±5%or ±2×2.5%	0.4	Yyn0 / Dyn11

SCB12-50-2500/35/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss at 120 °C (kW)	No-load current (%)	Impedance (%)
50	0.405	1.42	2.1	6.0
100	0.565	2.09	1.8	6.0
160	0.71	2.81	1.4	6.0
200	0.79	3.32	1.4	6.0
250	0.89	3.80	1.2	6.0
315	1.05	4.51	1.2	6.0
400	1.23	5.41	1.0	6.0
500	1.45	6.65	1.0	6.0
630	1.67	7.69	0.9	6.0
800	1.94	9.12	0.9	6.0
1000	2.18	10.4	0.7	6.0
1250	2.54	12.7	0.7	6.0
1600	2.91	15.4	0.7	6.0
2000	3.43	18.2	0.7	6.0
2500	4.00	21.8	0.7	6.0

SCB12-50-2500/35/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
50–2500	35 / 36 / 37 / 38.5	±5 / ±2×2.5	0.4	Dyn11 / Yyn0

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

Cooling: natural air (AN); forced-air options should be confirmed for the intended duty. Request voltage combinations, tapping range and connection group for your selected rating.

Online: www.tbdlpower.com/scb12

SCB13 Dry-Type Transformer for 10 kV Networks

Resin-insulated dry-type transformer with lower losses than SCB11, for indoor distribution.

- 10 kV published voltage class
- Off-circuit tap changing
- Epoxy resin insulation
- 30–2,500 kVA in the published table

SCB13-30-2500/10/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss (kW)	No-load current (%)	Impedance (%)
30	0.135	0.640	2.0	4.0
50	0.195	0.900	2.0	4.0
80	0.265	1.240	1.5	4.0
100	0.290	1.415	1.5	4.0
125	0.340	1.665	1.3	4.0
160	0.385	1.915	1.3	4.0
200	0.445	2.275	1.1	4.0
250	0.515	2.485	0.9	4.0
315	0.635	3.125	0.8	4.0
400	0.705	3.590	0.8	4.0
500	0.835	4.390	0.8	4.0
630	0.965	5.295	0.7	4.0
630	0.935	5.365	0.7	6.0
800	1.09	6.265	0.7	6.0
1000	1.27	7.315	0.7	6.0
1250	1.50	8.720	0.7	6.0
1600	1.76	10.555	0.7	6.0
2000	2.19	13.005	0.6	6.0
2500	2.59	15.445	0.6	6.0

SCB13-30-2500/10/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
30–2500	6 / 6.3 / 10 / 10.5 / 11	±5% or ±2×2.5%	0.4	Yyn0 / Dyn11

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

Load-loss reference temperature is stated on the datasheet. Cooling: natural air (AN); forced-air options should be confirmed for the intended duty. Request voltage combinations, tapping range and connection group for your selected rating.

Online: www.tbdlpower.com/scb13

SCB14 Dry-Type Transformer for 10 kV Networks

Resin-insulated dry-type transformer for indoor distribution.

- 10 kV published voltage classes
- Off-circuit tap changing
- Epoxy resin insulation
- 30–2,500 kVA across the published tables

SCB14-30-2500/10/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss at 120 °C (kW)	No-load current (%)	Impedance (%)
30	0.13	0.64	2.0	4.0
50	0.185	0.90	2.0	4.0
80	0.25	1.24	1.5	4.0
100	0.27	1.415	1.5	4.0
125	0.32	1.665	1.3	4.0
160	0.365	1.915	1.3	4.0
200	0.42	2.275	1.1	4.0
250	0.49	2.485	0.9	4.0

Rated capacity (kVA)	No-load loss (kW)	Load loss at 120 °C (kW)	No-load current (%)	Impedance (%)
315	0.60	3.125	0.8	4.0
400	0.665	3.59	0.8	4.0
500	0.79	4.39	0.8	4.0
630	0.885	5.365	0.7	6.0
800	1.035	6.265	0.7	6.0
1000	1.205	7.315	0.7	6.0
1250	1.42	8.72	0.7	6.0
1600	1.665	10.555	0.7	6.0
2000	2.075	13.005	0.6	6.0
2500	2.45	15.445	0.6	6.0

SCB14-30-2500/10/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
30–2500	6 / 6.3 / 10 / 10.5 / 11	±5%or ±2×2.5%	0.4	Yyn0 / Dyn11

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

Cooling: natural air (AN); forced-air options should be confirmed for the intended duty. Request voltage combinations, tapping range and connection group for your selected rating.

Online: www.tbdlpower.com/scb14

SCB18 Dry-Type Transformer for 10 kV Networks

Resin-insulated dry-type transformer for indoor distribution.

- 10 kV published voltage classes
- Off-circuit tap changing
- Epoxy resin insulation
- 30–2,500 kVA across the published tables

SCB18-30-2500/10/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss at 120 °C (kW)	No-load current (%)	Impedance (%)
30	0.105	0.64	2.0	4.0
50	0.155	0.90	2.0	4.0
80	0.21	1.24	1.5	4.0
100	0.23	1.415	1.5	4.0
125	0.27	1.665	1.3	4.0
160	0.31	1.915	1.3	4.0
200	0.36	2.275	1.1	4.0
250	0.415	2.485	0.9	4.0
315	0.51	3.125	0.8	4.0
400	0.57	3.59	0.8	4.0
500	0.67	4.39	0.8	4.0
630	0.75	5.365	0.7	6.0
800	0.875	6.265	0.7	6.0
1000	1.02	7.315	0.7	6.0
1250	1.205	8.72	0.7	6.0
1600	1.415	10.555	0.7	6.0
2000	1.76	13.005	0.6	6.0
2500	2.08	15.445	0.6	6.0

SCB18-30-2500/10/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
30–2500	6 / 6.3 / 10 / 10.5 / 11	±5%or ±2×2.5%	0.4	Yyn0 / Dyn11

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

Cooling: natural air (AN); forced-air options should be confirmed for the intended duty. Request voltage combinations, tapping range and connection group for your selected rating.

Online: www.tbdlpower.com/scb18

SZCB10 (SCZB10) Dry-Type Transformer for 10 kV Networks

Resin-insulated dry-type transformer with on-load tap changing for indoor distribution.

- 10 kV published voltage classes
- On-load tap changing
- Epoxy resin insulation
- 315–2,500 kVA across the published tables

SZCB10-315-2500/10/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss at 120 °C (kW)	No-load current (%)	Impedance (%)
315	0.99	3.61	1.10	4.0
400	1.12	4.27	1.10	4.0
500	1.29	5.20	1.10	4.0
630	1.44	6.36	1.00	6.0
800	1.71	7.50	1.00	6.0
1000	1.98	8.78	0.85	6.0
1250	2.34	10.4	0.85	6.0
1600	2.72	12.4	0.85	6.0
2000	3.42	15.2	0.70	6.0
2500	3.95	18.1	0.70	6.0

SZCB10-315-2500/10/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
315–2500	6 / 6.3 / 6.6 / 10 / 10.5 / 11	±4×2.5	0.4	Dyn11 / Yyn0

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

Cooling: natural air (AN); forced-air options should be confirmed for the intended duty. Request voltage combinations, tapping range and connection group for your selected rating.

Online: www.tbdlpower.com/szcb10

SZCB12 (SCZB12) Dry-Type Transformer for 10 kV Networks

Resin-insulated dry-type transformer with on-load tap changing for indoor distribution.

- 10 kV published voltage classes
- On-load tap changing
- Epoxy resin insulation
- 315–2,500 kVA across the published tables

SZCB12-315-2500/10/0.4

Rated capacity (kVA)	No-load loss (kW)	Load loss at 120 °C (kW)	No-load current (%)	Impedance (%)
315	0.79	3.61	0.80	4.0
400	0.89	4.27	0.80	4.0
500	1.03	5.22	0.80	4.0
630	1.15	6.36	0.70	6.0
800	1.36	7.50	0.70	6.0

Rated capacity (kVA)	No-load loss (kW)	Load loss at 120 °C (kW)	No-load current (%)	Impedance (%)
1000	1.58	8.78	0.70	6.0
1250	1.87	10.4	0.70	6.0
1600	2.17	12.4	0.70	6.0
2000	2.73	15.2	0.60	6.0
2500	3.16	18.1	0.60	6.0

SZCB12-315-2500/10/0.4 voltage and connection options

Rated capacity (kVA)	High voltage (kV)	HV tapping range (source notation)	Low voltage (kV)	Connection group
315–2500	6 / 6.3 / 6.6 / 10 / 10.5 / 11	±4×2.5	0.4	Dyn11 / Yyn0

Slash-separated entries are alternatives. Tapping notation is retained from the source; where a percent sign or value is absent, request confirmation before selection.

Cooling: natural air (AN); forced-air options should be confirmed for the intended duty. Request voltage combinations, tapping range and connection group for your selected rating.

Online: www.tbdlpower.com/szcb12



PRODUCT FAMILY

Compact substations

YB European-style and ZGS11 American-style substations, and PV box-type substations for solar projects.

YB european-style prefabricated substation for Distribution Projects

Discuss equipment selection, layout and project-specific ratings with the factory.

YB specification information

Parameter	Specification
Model / series	YB
Product type	European-style prefabricated substation
Rated voltage	Confirm for project
Rated current	Confirm for project
Frequency	Confirm for project
Protection rating	Confirm installation requirements

Online: www.tbdlpower.com/yb

ZGS11 american-style combined substation for Distribution Networks

Discuss equipment selection, layout and project-specific ratings with the factory.

ZGS11 specification information

Parameter	Specification
Model / series	ZGS11
Product type	American-style combined substation
Rated voltage	Confirm for project
Rated current	Confirm for project
Frequency	Confirm for project
Protection rating	Confirm installation requirements

Online: www.tbdlpower.com/zgs11

PV box-type substation for Solar Projects

Discuss equipment selection, layout and project-specific ratings with the factory.

PV specification information

Parameter	Specification
Model / series	PV
Product type	PV box-type substation
Rated voltage	Confirm for project
Rated current	Confirm for project
Frequency	Confirm for project
Protection rating	Confirm installation requirements

Online: www.tbdlpower.com/pv-substation



PRODUCT FAMILY

MV/LV switchgear and distribution cabinets

KYN28, XGN, HXGN ring main units, MNS, GGD, GGJ, XL-21, DFW cable branch boxes and JP distribution cabinets.

KYN28-12 Withdrawable Metal-Clad Switchgear for 3–12 kV Systems

Indoor medium-voltage switchgear with a withdrawable vacuum circuit breaker, for single busbar and sectionalised single busbar systems.

- Withdrawable vacuum circuit breaker truck
- Full mechanical interlocking against the common operating errors, including racking a breaker under load and closing onto an earthed circuit
- Separate breaker, busbar, cable and low-voltage compartments

KYN28-12 technical parameters

Parameter	Value
Rated voltage	12 kV (for 3–12 kV systems)
Rated frequency	50 / 60 Hz
1-min power-frequency withstand	42 kV (across the isolating gap: 48 kV)
Lightning impulse withstand	75 kV (across the isolating gap: 85 kV)
Rated current	630 / 1250 / 1600 / 2000 / 2500 / 3150 / 4000 / 5000 A
Rated short-time withstand current (4 s)	20 / 25 / 31.5 / 40 / 50 kA
Rated peak withstand current	50 / 63 / 80 / 100 / 125 kA
Rated short-circuit breaking current	20 / 25 / 31.5 / 40 / 50 kA
Rated short-circuit making current (peak)	50 / 63 / 80 / 100 / 125 kA
Degree of protection	IP4X enclosure; IP2X with the breaker compartment door open
Dimensions W × D × H	Up to 1250 A: 800 (650) × 1500 × 2300 mm (800 mm wide at 40 kA); 1600 A and above: 1000 × 1500 × 2300 mm

Online: www.tbdlpower.com/kyn28

XGN2-12 Fixed Metal-Enclosed Switchgear for 3, 6 and 10 kV Systems

Indoor box-type switchgear with fixed-mounted breakers, for receiving and distributing power in 3, 6 and 10 kV networks.

- Single busbar, or single busbar with bypass busbar; a double busbar arrangement can be derived
- Mechanical interlocks covering the standard five anti-misoperation functions
- Simple structure for straightforward operation and maintenance

XGN2-12 technical parameters

Parameter	Value
Rated voltage	12 kV (for 3, 6 and 10 kV systems)
Rated frequency	50 / 60 Hz
1-min power-frequency withstand	42 kV (across the disconnector: 48 kV)
Lightning impulse withstand	75 kV (across the disconnector: 85 kV)
Rated current	630 / 1250 / 1600 / 2000 / 2500 / 3150 / 4000 / 5000 A

Parameter	Value
Rated short-time withstand current (4 s)	20 / 25 / 31.5 / 40 / 50 / 63 kA
Rated short-circuit breaking current	20 / 25 / 31.5 / 40 / 50 / 63 kA
Degree of protection	IP4X enclosure
Dimensions W × D × H	Up to 1250 A: 1000 × 1200 × 2600 mm; 1600 A and above: 1200 × 1200 × 2600 mm

Online: www.tbdlpower.com/xgn

HXGN-12 Ring Main Unit for 10 kV Ring and Radial Networks

Compact metal-enclosed ring main switchgear for 10 kV, 50 Hz ring or radial supply, with load switches and fuse protection.

- Load switch or load switch–fuse combination
- Overload and short-circuit protection through high-voltage fuses
- Compact enclosure for kiosks and small switch rooms

HXGN-12 technical parameters

Parameter	Value
Rated voltage	12 kV
Rated frequency	50 / 60 Hz
1-min power-frequency withstand	42 kV (across the disconnector: 48 kV)
Lightning impulse withstand	75 kV (across the disconnector: 85 kV)
Rated current	630 / 1250 A; fuse combination 200 A
Rated short-time withstand current (4 s)	25 kA
Rated peak withstand current	63 kA
Largest high-voltage fuse	200 A
Rated transfer current	3150 A
Rated current breaking operations	100
Mechanical life	10,000 operations
Degree of protection	IP3X enclosure
Dimensions W × D × H	1000 × 1000 × 2200 mm

Online: www.tbdlpower.com/ring-main-unit

MNS Low-Voltage Withdrawable Switchgear for Power and Motor Control Centres

Modular low-voltage switchgear with withdrawable units, for power distribution centres (PC) and motor control centres (MCC).

- Standard modules, so feeder and motor units can be combined to suit the scheme
- Withdrawable functional units for quick replacement
- Three-phase four-wire and five-wire systems

MNS technical parameters

Parameter	Value
Rated voltage	AC 380 V / 660 V
Rated frequency	50 Hz
Horizontal busbar current	up to 5500 A
Vertical busbar current	up to 1000 A
Rated short-time withstand current	100 kA
Rated peak withstand current	220 kA
Rated insulation voltage	660 V

Parameter	Value
Power-frequency withstand	2500 V for 1 min
Motor control range	0.5–155 kW
Degree of protection	IP30 / IP40
Dimensions W × D × H	600 (800, 1000) × 600 (800, 1000) × 2200 mm

Online: www.tbdlpower.com/mns

GGD Low-Voltage Distribution Switchgear for 380 V Systems

Fixed low-voltage switchboard for power conversion, distribution and control in 380 V, 50 Hz systems.

- High breaking capacity with good dynamic and thermal stability
- Flexible electrical schemes and easy combination of panels
- Fixed-mounted components for a robust, economical board

GGD technical parameters

Parameter	Value
Rated voltage	AC 380 V
Rated frequency	50 Hz
Horizontal busbar current	up to 4000 A
Vertical busbar current	800 / 1600 A
Rated short-time withstand current (1 s)	15 / 30 / 50 kA
Rated peak withstand current	30 / 63 / 105 kA
Rated insulation voltage	660 V
Power-frequency withstand	2500 V for 1 min
Degree of protection	IP30 / IP40
Dimensions W × D × H	600 (800, 1000) × 600 (800, 1000) × 2200 mm

Online: www.tbdlpower.com/ggd

GGJ Low-Voltage Distribution and Reactive Power Compensation Cabinet

Combined cabinet for 380 V, 50 Hz distribution with built-in reactive power compensation and energy metering.

- Distribution, control, protection, reactive power compensation and metering in one cabinet
- Residual-current protection can be added on request
- Easy installation, commissioning and maintenance

GGJ technical parameters

Parameter	Value
Rated voltage	AC 380 V
Rated frequency	50 Hz
Main busbar current	up to 433 A
Rated short-time withstand current (1 s)	15 / 30 / 50 kA
Rated peak withstand current	30 / 63 / 105 kA
Rated insulation voltage	500 V
Power-frequency withstand	2500 V for 1 min
Degree of protection	IP30

Online: www.tbdlpower.com/ggj

XL-21 Low-Voltage Power Distribution Box

Wall-standing indoor distribution box for power, lighting and control circuits in 380 V, 50 Hz systems.

- Components mounted on beams or plates
- Installed against the wall with all maintenance from the front
- Flexible circuit schemes for easy installation and service

XL-21 technical parameters

Parameter	Value
Rated voltage	AC 380 V
Rated frequency	50 Hz
Rated current	up to 630 A (busbar rating confirmed per configuration)
Rated insulation voltage	660 V
Power-frequency withstand	2500 V for 1 min
Degree of protection	IP30
Dimensions W × D × H	400 × 700 × 1700 mm

Online: www.tbdlpower.com/xl21

DFW Cable Branch Box for 12 kV Outdoor Networks

Outdoor cable junction and branch box for connecting and tapping 12 kV power cables, with or without a switch.

- Versions with a switch (SF6 load switch, ring main unit or vacuum breaker) or without a switch
- Fully insulated, fully sealed design with shielded separable cable connectors
- Enclosure in painted cold-rolled steel, stainless steel or SMC composite

DFW technical parameters

Parameter	Value
Rated voltage	12 / 24 kV
Rated current	630 A
1-min power-frequency withstand	42 / 65 kV
Lightning impulse withstand	75 / 125 kV
Thermal stability current	20 kA for 2 s
Main circuit resistance	≤ 100 μΩ
Degree of protection	IP43

Online: www.tbdlpower.com/dfw

JP comprehensive distribution cabinet for Rural Distribution Networks

Discuss equipment selection, layout and project-specific ratings with the factory.

JP specification information

Parameter	Specification
Model / series	JP
Rated voltage	400 V
Rated frequency	50 Hz / 60 Hz
Associated transformer capacity (kVA)	10, 20, 30, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400
Compensation method	Three-phase compensation
Functions	Metering, distribution and reactive power compensation
Capacitor stages	2–5 stages; configured to project requirements
Outgoing feeders	Generally 2 circuits

Parameter	Specification
Control quantities	Reactive power or reactive current
Fastest response time	≤20 ms
Indoor protection	≥ IP30
Outdoor protection	≥ IP65

Online: www.tbdlpower.com/jp



SEMI-FINISHED PARTS

Transformer cores and coils

Cores and coils made to your design, for transformer makers, assemblers and rewinders who build in their own country. There is no standard catalogue for these parts: each order follows your drawings and specification.

Cores

- Stacked cores from grain-oriented silicon steel, cut on our own slitting line and two cut-to-length lines
- Wound cores, made on wound-core winding machines and stress-relieved in our own annealing furnace
- Grain-oriented silicon steel from Baowu Steel and Shougang

Coils

- Foil-wound coils on six foil winding machines
- Wire-wound coils on six variable-speed winding machines
- Copper, aluminium or copper-aluminium windings, with copper strip and foil from domestic mills
- For oil-immersed and dry-type designs up to the 35 kV class

What to send for a proposal

Online: www.tbdlpower.com/cores-coils

Contact

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Website
www.tbdlpower.com: every series with its parameters, and an enquiry form.

Factory visits are welcome by appointment.