Inrush-Limiter T1

Transformer inrush current limiter

Supply List

List of Field Application of Inrush-Limiter	Qty
1. Factory (Extra high-voltage substation)	61
2. Wind Power Station	15
3. Photovoltaic Power Station	24
4. Biomass Power Station	12
5. Smart Grid Community	2
6. Hydro Power Station	8
7. Power Company's Substation	19
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10. Railway Company's Substation	27
11. Ship	2
12. Overseas	3
Total	181

Electric Technology for Society
Kodensya

1 Factory (Extra high-voltage substation)

No.	Client／End user	Application【Installed: yyyy/mm】	Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
1	Asahikasei Co., Ltd. Nobeoka factory	Chemical factory: Heavy electrical power user. Using for an own extra high-voltage substation. （2005/03）	GCB	60/12 33	Y-Δ	1
2	Asahikasei Co., Ltd. Nobeoka factory	Chemical factory: Heavy electrical power user. Using for an own extra high-voltage substation.（2007/06）	GCB Fuji	66/11 17.1×2	Y-Δ	1
3	Asahikasei Co., Ltd. Nobeoka factory	Chemical factory: Heavy electrical power user. Using for an own extra high-voltage substation.（2009/12）	ABB Toshiba	60/11 30/40	Y-Δ	1
4 ~ 7	SHIHEN TECHNICAL Corporation／ Asahi Glass Co., Ltd. Chiba factory	Glass manufacturing factory: Heavy electrical power user, using electric furnace for glass manufacturing. （2013/03）	VCB Fuji	11/0.534 2×14.38	Δ-Y-Δ	4
8 ~ 10	Showa Denko K.K. Omachi factory	Electric furnace for manufacturing factory: Heavy electrical power user, using electric furnace for graphite electrodes manufacturing.（2013/10）	GCB	44/14 41.5	Δ-Δ	3
11 ~ 14	JNC Corporation Minamata factory The First Substation	Chemical company: Switching electrical power source between own powerhouse and power company. （2014/10）	Station # 1 VCB	66/18.4 25	Y-Δ	1
			Station # 2 VCB	66/18.4 8	Y-Δ	1
			Station#3,4 VCB	18.4/3.3 12.5	Δ-Δ	2
15	Showa Denko K.K. Omachi factory	Electric furnace for manufacturing factory: Heavy electrical power user, using electric furnace for graphite electrodes manufacturing. （2014/10）	GCB	44/11 22	Δ-Y	1
16	Showa Denko K.K. Omachi factory	Electric furnace for manufacturing factory: Heavy electrical power user, using electric furnace for graphite electrodes manufacturing. （2015/03）	GCB	39/0.57/0.57 22	Δ-Δ-Y	1
17	Denka Company Limited Omuta factory	Electric furnace for manufacturing factory: Heavy electrical power user,. （2015/07）	GCB	66/0.18 9x3	Y-Δ⇔ Δ-Δ	1
18	Showa Denko K.K. Omachi factory	Electric furnace for manufacturing factory: Heavy electrical power user, using electric furnace for graphite electrodes manufacturing. （2015/10）	GCB	44/0.31 24.1×4	Y-Δ	1

No.	Client／End user	Application (Installed: yyyy/mm)	Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
19	DAIDO SHIZAI SERVICE Co., Ltd.／ Daido Steel Co., Ltd. Shibukawa factory	Electric furnace for manufacturing factory: Heavy electrical power user. (2015/05)	VCB Mitsubishi	6.6/0.593 5.9	Y-Δ	1
20	Showa Denko K.K. Omachi factory	Electric furnace for manufacturing factory: Heavy electrical power user, using electric furnace for graphite electrodes manufacturing (2016/02)	GCB	44/42～29 32.3	Y-Y	1
21	Denka Company Limited Omi plant	Electric furnace for manufacturing factory: Heavy electrical power user. (2016/09)	GCB	60/0.255~ 0.145 10×3	Y orΔ/Δ 50/60 Hz	1
22 ~ 24	NASU ENERGY CO., LTD. / Toray Battery Separator Film Co., Ltd	Battery film factory: Heavy electrical power user. Using for an own high-voltage substation. (2016/11)	VCB	6.6/0.415~ 0.240 2/0.5	Δ-Y	3
25	KINDEN CORPORATION / Central Glass Co., Ltd. Ube factory	Tie transformer for manufacturing factory: Heavy electrical power user. (2016/12)	VCB	6.6/3.3 20	Δ-Δ	1
26	DAIDO SHIZAI SERVICE Co., Ltd.／ Daido Steel Co., Ltd. Chita factory	Electric furnace for manufacturing factory: Heavy electrical power use. (2016/12)	VCB	22/1.0 45	Δ-Δ	1
27	Asahikasei Co., Ltd. Nobeoka factory	Chemical factory: Heavy electrical power user. Using for an own high-voltage substation. (2016/12)	GCB	66/11 30 (40)	Y-Δ	1
28 ~ 29	Denka Company Limited Omi plant	Electric furnace for manufacturing factory: Heavy electrical power user. (2017/07)	GCB	63/0.340~ 0.140 58	Y orΔ/Δ 50/60 Hz	2
30	DAIDO SHIZAI SERVICE Co., Ltd.／ Daido Steel Co., Ltd. Chita factory	Electric furnace for manufacturing factory: Heavy electrical power use. (2017/11)	VCB	22/1.0 24	Δ-Δ	1
31 ～ 32	MEIDENSHA CORPORATION／ US ARMY SASEBO BASE	Heavy electrical power user. Using for an own high-voltage substation. (2019/3)	VCB Meidensya	6.6/4.16 7.5	Δ-Δ	2
33	TOSHIBA MITSUBISHI-ELECTRIC INDUSTRIAL SYSTEMS CORPORATION／ COSMO OIL CO.,LTD.	Cogeneration system. Using for an own high-voltage substation. (2019/9)	VCB Toshiba	11/6.6 17	Δ-Δ	1
34	Showa Denko K.K. Omachi factory	Electric furnace for manufacturing factory: Heavy electrical power user, using electric furnace for graphite electrodes manufacturing. (2019/9)	GCB	44/11 22	Δ-Y	1

No.	Client／End user	Application (Installed: yyyy/mm)	Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
35	Nissin Electric Co., Ltd.／ NIPPON STEEL CORPORATION Kashima Works	Heavy electrical power user. Using for an own high-voltage substation. (2019/11)	GCB Nissin	33/11 33/3.3 33/3.3 40 20 20	Δ-Δ Δ-Δ Δ-Δ	1
36	Nissin Electric Co., Ltd.／ TBM Co., Ltd Tagajo factory	Heavy electrical power user. Using for an own high-voltage substation. (2020/09)		31.5/6.6 10	Y-Δ	1
37	Hitachi, Ltd.／ Asahikasei Co., Ltd. Nobeoka factory	Chemical factory: Heavy electrical power user. Using for an own high-voltage substation. (2021/11)	VCB Hitachi	11/3.15 5.5	Y-Δ	1
38 ～ 39	AGC Inc.／Chiba Plant	Glass manufacturing factory: Heavy electrical power user, using electric furnace for glass manufacturing. (2021/02)	GCB Nissin	66/11 60	Δ-Y	2
40 ～ 42	FUJI ELECTRIC CO., LTD.,／ AGC Inc.／Kashima Plant	Glass manufacturing factory: Heavy electrical power user, using electric furnace for glass manufacturing. (2021/11)	VCB Fuji	22/0/587 2×0.9952	Y-ΔΔ ΔY	3
43	SOK Co., Ltd／ JFE Bars & Shapes Corporation	Heavy electrical power user. Using for an own high-voltage substation. (2021/05)	VCB Mitsubishi	3.3/0.63 3.2		1
44 ～ 45	Asahikasei Co., Ltd. Nobeoka factory	Chemical factory: Heavy electrical power user. Using for an own high-voltage substation. (2021/08)		66/6.6 17.11	Y-Δ	2
46 ～ 47	TOKAI CARBON CO., LTD. Tanoura Plant	Electric furnace for manufacturing factory: Heavy electrical power user, using electric furnace for graphite electrodes manufacturing. (2021/08)	VCB	22/0.212 24 23.32	1Φ	2
48 ～ 51	FUJI ELECTRIC CO., LTD.,／ Asahikasei Co., Ltd. Nobeoka factory	Chemical factory: Heavy electrical power user. Using for an own high-voltage substation. (2021/10	Station # 0	66/66	Y-Y-Δ	2
			Station # 5	66/11	Y-Δ	1
			Station # 8	66/11	Y-Δ	1
52	Asahikasei Co., Ltd. Okatomi factory	Chemical factory: Heavy electrical power user. Using for an own high-voltage substation. (2021/10)	GCB	66/11 22.5	Y-Δ	1

No.	Client／End user	Application（Installed: yyyy/mm）		Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
53 ~ 54	SUGAHARA Co., Ltd.／ TOYOTA MOTOR KYUSHU, INC. Miyata Plant	Motor factory: Heavy electrical power user. Using for an own high-voltage substation. （2021/12）	Station # 1	VCB / Hitachi	6.6 / Total 4.8		1
			Station # 2	VCB / Hitachi	6.6 / Total 4		1
55	JX Nippon Mining & Metal Corporation Isohara Works	Heavy electrical power user. Using for an own high-voltage substation. （2022/08 ）			0.42/6.6 / 0.5	Y-Δ	1
56 ~ 57	Shinko Engineering & Maintenance Co., Ltd／KOBELCO & MATERIALS COPPER TUBE CO., LTD	Heavy electrical power user. Using for an own high-voltage substation. （2022/08 ）			3.3/011 / 3.425	1Φ	2
58 ~ 59	Nissin Electric Co., Ltd.／ Maruho Co., Ltd. Hikone Plant	Medical Factory Heavy electrical power user. Using for an own high-voltage substation. （2022/11 ）		GCB / Nissin	22/6.6 / 5	Y-Δ	2
60 ~ 61	TOKAI CARBON CO., LTD. Hofu Plant	Electric furnace for manufacturing factory: Heavy electrical power user, using electric furnace for graphite electrodes manufacturing. （2023/04 ）			22/0.24～0.08 / 26.4	1Φ	2

２． Wind Power Station

No.	Client／End user	Application（Installed: yyyy/mm）	Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
1	Goto Tamanoura Wind PowerCo.,Ltd.	Wind power generating station : Electrical power transmission. （2009/10）	VCB / Toshiba	66/22 / 14	Y-Δ	1
2	CHIYODA CORPORATION／ Kyusyu Wind Power Co., Ltd. 〔Nishinippon Plant Engineering and Construction Co., Ltd.via shipped〕	Wind power generating station : Electrical power transmission. （2009/11）	VCB / Toshiba	66/22 / 20	Y-Δ	1
3	Shin Enerugikikaku Co.,Ltd	Wind power generating station : Electrical power transmission. （2012/06）	VCB / Toshiba	66/22 / 20	Y-Δ	1

No.	Client／End user	Application (Installed: yyyy/mm)	Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
4	J-POWER Electric Power Development Co., Ltd.	Wind power generating station : Electrical power transmission. (2013/11)	VCB Toshiba	66/33 29.5	Y-Δ	1
5	J-POWER Electric Power Development Co., Ltd.	Wind power generating station : Electrical power transmission. (2015/08)	VCB Toshiba	72/22 23	Y-Δ	1
6	CHIYODA CORPORATION／ Kushima Wind Hill Co.,Ltd.	Wind power generating station : Electrical power transmission. (2019/04)	VCB Toshiba	66/22 73	Y-Y-Δ	1
7	TAKAOKA TOKO CO., LTD.	Wind power generating station : Electrical power transmission. (2020/03)	VCB	66/22/6.6 40	Y-Y-Δ	1
8 ~ 9	C-TECH CORPORATION WP Hisai Sakakibara Wind Power	Wind power generating station : Electrical power transmission. (2021/01)	VCB	22/0.69 2.3	Δ-Y	2
10	FUJI ELECTRIC CO., LTD.,／ Eurus Energy Holdings Corporation Eurus Tomamae Wind Farm	Wind power generating station : Electrical power transmission. (2021/11)	GCB Fuji	66/6.6 25	Y-Δ	1
11	KITASHIBA ELECTRIC CO., LTD. ／ Hiradominami Wind Power	Wind power generating station : Electrical power transmission. (2022/06)	VCB	66/33/6.6 40	Y-Y-Δ	1
12	Meiden Plant Systems Corporation／ Kamiyuuchi Wind Farm	Wind power generating station : Electrical power transmission. (2022/10)	VCB	66/33 52	Δ-Y	1
13	J-POWER Electric Power Development Co., Ltd.	Wind power generating station : Electrical power transmission. (2022/09)	GCB	66/33 38	Y-Δ	1
14	TAKAOKA TOKO CO., LTD.／ YURTEC CORPORATION	Wind power generating station : Electrical power transmission. (2022/12)	VCB	33/0.63 4.6	Δ-Y	1
15	Meiden Plant Systems Corporation／ Kawanishi Wind Power	Wind power generating station : Electrical power transmission. (2023/8)	VCB	66/33 20	Δ-Y	1

３． Photovoltaic Power Station

No.	Client／End user	Application (Installed: yyyy/mm)	Breaker Type / Maker	Transformer type Voltage[Kv] / Capacity[MVA]	Windings	Installed units
1	KYOCERA Communication Systems Co., Ltd.／ Green Power Investment Corporation	Photovoltaic power generating station : Electrical power transmission. （2015/05）	VCB Hitachi	66/22 30	Δ-Y	1
2	Meiden Plant Systems Corporation／ Gestamp Asetym Solor Japan K.K.	Photovoltaic power generating station : Electrical power transmission. （2015/09）	VCB Meidensya	66/22 21	Y-Δ	1
3	Suzuka Electric Works Co., Ltd. 〔Hitachi IE Sysutemu Co., Ltd. Via shipped〕	Photovoltaic power generating station : Electrical power transmission. （2015/10）	VCB Hitachi	22/6.6 10	Δ-Δ	1
4	Kyudenko Corporation / SB Energy Corp., Hiroshima Solar park	Photovoltaic power generating station : Electrical power transmission. （2016/12）	VCB Seikou	22/6.6 5.0	Δ-Δ	1
5	Meiden Plant Systems Corporation／ Solar park in Shirakawa, Fukushima	Photovoltaic power generating station : Electrical power transmission. （2017/03）	VCB Meidensya	66/33 34	Δ-Y	1
6 ～ 7	Meiden Plant Systems Corporation／ Cherry Lake CC Mega Solar	Photovoltaic power generating station : Electrical power transmission. （2019/01）	GCB ABB	154/22 #1 36 #2 34	Y-Δ	2
8	Meiden Plant Systems Corporation／ Gifu Minami Mega Solar	Photovoltaic power generating station : Electrical power transmission. （2019/04）	GCB ABB	154/33 42	Δ-Y	1
9 ～ 10	JGC CORPORETION／ Pacifico Energy Sakuto Mega Solar	Photovoltaic power generating station : Electrical power transmission. （2019/06）	GCB Toshiba	110/77/6.6 76	Y-Y-Δ	2
11	Meiden Plant Systems Corporation／ JAIC Mie Toba Mega Solar	Photovoltaic power generating station : Electrical power transmission. （2019/10）	GCB	77/6.6 10.5	Y-Δ	1
12	Meiden Plant Systems Corporation／ Toyota Mega Solar	Photovoltaic power generating station : Electrical power transmission. （2019/10）	GCB	154/22 42	Y-Δ	1

No.	Client／End user	Application (Installed: yyyy/mm)	Breaker Type / Maker	Transformer type Voltage[Kv] / Capacity[MVA]	Windings	Installed units
13 ~ 14	Meiden Plant Systems Corporation／ Bizen Mega Solar	Photovoltaic power generating station : Electrical power transmission. (2020/05)	GCB / ABB	110/33 / 35	Δ-Y	2
15	Nissin Electric Co., Ltd.／ Tonoshi Kotomomachi Solar Park	Photovoltaic power generating station : Electrical power transmission. (2020/01)	GCB	66/22 / 36	Δ-Y	1
16	Meiden Plant Systems Corporation／ Akou Mega Solar	Photovoltaic power generating station : Electrical power transmission. (2020/12)	GCB	77/22 / 60	Δ-Y	1
17	Nissin Electric Co., Ltd.／ Urushibara Izumisawa Mega Solar	Photovoltaic power generating station : Electrical power transmission. (2020/08)	GCB	66/22 / 42	Y-Δ	1
18	Nissin Electric Co., Ltd.／ Kenashiyama Mega Solar	Photovoltaic power generating station : Electrical power transmission. (2021/12)	VCB	66/22 / 10	Y-Δ	1
19	CHIYODA CORPORATION／ Beppu uchinari Mega Solar	Photovoltaic power generating station : Electrical power transmission. (2021/06)	VCB	66/22 / 35	Δ-Y	1
20	CHIYODA CORPORATION／ Kyuden Mirai Energy Co., Inc. Oomuta Mega Solar	Photovoltaic power generating station : Electrical power transmission. (2021/02)	VCB	6.6/0.44 / 3.2	Δ-Y	1
21	Nissin Electric Co., Ltd. ／ Blue Power Energy Co., Ltd. Kenashiyama Mega Solar	Photovoltaic power generating station : Electrical power transmission. (2021/01)	GCB	66/22 / 31	Δ-Y	1
22	TAKAOKA TOKO CO., LTD. Iizaka Mega Solar	Photovoltaic power generating station : Electrical power transmission. (2022/04)	VCB	33/22 / 8.5	Δ-Y	1
23	TAKAOKA TOKO CO., LTD. Coop Iwaki Mega Solar	Photovoltaic power generating station : Electrical power transmission. (2022/10)	VCB	33/6.6 / 6	Δ-Y	1
24	SHIHEN TECHNICAL Corporation／ ENEOS Wakayama Mega Solar	Photovoltaic power generating station : Electrical power transmission. (2023/3)	VCB	33/6.6 / 6.6	Δ-Y	1

4． Biomass Power Station

No.	Client／End user	Application（Installed: yyyy/mm）	Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
1	Oji Paper Co., Ltd ,／ Oji Green Energy Nichinan Co., Ltd. [Meidensha Corp. via shipped]	Paper-manufacturing factory: Switching electrical power source between own powerhouse and power company. （2014/08）	VCB Meidensya	66/11/3.3 32/32/15	Y-Y-Δ	1
2	Oosakishoji Co., Ltd ,／ Nissin Biomass Power Co., Ltd. [The Chugoku Electric Manufacturing Company, Inc. via shipped]	Electric power selling: Switching electrical power transmission between own biomass power station and power company. （2013/11）	VCB Fuji	22/6.6 7	Δ-Δ	1
3	Mitsubishi Electric Trading Co., Ltd.／ Hibikinada Energy Park	Electric power selling: Switching electrical power transmission between own biomass power station and power company. （2017/09）	GCB Mitsubishi	66/14.1 115	Δ-Δ	1
4	Mitsubishi Electric Trading Co., Ltd.／ IDI Hibikinada	Electric power selling: Switching electrical power transmission between own biomass power station and power company. （2017/09）	GCB Mitsubishi	66/14.1 115	Δ-Δ	1
5	Asahikasei Co., Ltd. Nobeoka factory	Electric power selling: Switching electrical power transmission between own biomass power station and power company. （2018/03）	VCB Mitsubishi	66/13.4 61	Δ-Δ	1
6	CHIYODA CORPORATION／ Universal Technics Co., Ltd.	Electric power selling: Switching electrical power transmission between own biomass power station and power company. （2019/08）	VCB	22/6.6 7.5	Y-Δ	1
7	FUJI ELECTRIC CO., LTD.,／ Ako No.2 Biomass Power Plant	Electric power selling: Switching electrical power transmission between own biomass power station and power company. （2020/06）	VCB	77/11 35	Δ-Δ	1
8	NIPPON STEEL ENGINEERING CO., LTD.／ ORIX Corporation Minamikayabe Biomass Power Plant	Electric power selling: Switching electrical power transmission between own biomass power station and power company. （2021/08）	VCB	33/6.6 6	Y-Δ	1
9 ~ 10	Nissin Electric Co., Ltd.／ Omaezakikou Biomass Energy	Electric power selling: Switching electrical power transmission between own biomass power station and power company. （2022/07 ）	GCB	77/16.5 77.8	Y-Δ	2
11	TAKAOKA TOKO CO., LTD.／ Kanda Biomass Power Plant	Electric power selling: Switching electrical power transmission between own biomass power station and power company. （2022/10 ）	GCB	66/11 55	Y- Y	1

No.	Client／End user	Application (Installed: yyyy/mm)	Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
12	FUJI ELECTRIC CO., LTD.,／ Appi Geothermal Energy Corporation	Electric power selling: Switching electrical power transmission between own biomass power station and power company. （2023/10）	VCB Fuji	33/6.6 16	Δ-Δ	1

５． Smart Grid Community

No.	Client／End user	Application (Installed: yyyy/mm)	Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
1 ～ 2	NITTO Electric Manufacture／ Niijima Toko Takaoka Power Dept.	Heavy electrical power user. Using for an own high-voltage substation. （2018/10）	VCB Fuji	6.6/210-105 0.15	Y-Δ	2

６． Hydro Power Station

No.	Client／End user	Application (Installed: yyyy/mm)	Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
1	JNC Corporation Minamata Factory Tsuru Hydroelectric Power Plant	Hydroelectric generating station : Electrical power transmission. （2014/10）	VCB Meidensya	63/6.6 12	Y-Δ	1
2	KITASHIBA ELECTRIC CO., LTD. ／ Yamagata Prefectural Government Kamimuro Hydroelectric Power Plant	Hydroelectric generating station : Electrical power transmission. （2017/01）	VCB Toshiba	6.6/0.420 0.75	Δ-Y	1
3 ～ 4	Kyushu Electric Power Company, Inc Miyazaki Hydroelectric Power Office	Applied as a portable （2018/03）				2
5	Moritani & Co., Ltd／ Tohoku Sustainable & Renewable Energy Co.Inc. Ookoshi Hydroelectric Power Plant	Hydroelectric generating station : Electrical power transmission. （2018/09）	VCB	66/6.3 5.4	Y-Δ	1
6	Nippon Koei Co., Ltd. Sirakawa Hydroelectric Power Plant	Hydroelectric generating station : Electrical power transmission. （2019/12）	VCB	33/6.6 10	Y-Δ	1
7	HOKURIKUELECTRICAL CONSTRUCTION Co., Ltd.／ Denka Co., Ltd Sinoumi Hydroelectric Power Plant	Hydroelectric generating station : Electrical power transmission. （2020/12）	VCB	33/6.6 9	Y-Δ	1

No.	Client／End user	Application（Installed: yyyy/mm）	Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
8	Moritani & Co., Ltd／ Tohoku Electric Power Company, Inc Tachiyazawagawadaiichi Hydroelectric Power Plant	Hydroelectric generating station : Electrical power transmission. （2021/03）	VCB	66/10.5 18	Δ-Δ	1

７． Power Company’s Substation

No.	Client／End user	Application（Installed: yyyy/mm）		Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
1 ~ 3	Kyushu Electric Power Company, Inc Asetsu Substation, Nakadori Island	Utility substation for island: 6.6kV to 66kV Receiving substation （2007/03）	Station # 1	OCB	6.6/66 25	Y-Δ	3
			Station # 2	GCB			
			Station # 4	OCB			
4		Utility substation for island: 66kV to 22kV Receiving substation （2008/12）	Station # 3	GCB	66/22 20	Y-Y	1
5	Kyushu Electric Power Company, Inc Urakuwa Substation, Nakadoori Island	Utility substation for island: 6.6kV to 22kV Receiving substation. （2014/07）		VCB	6.6/22 15	Y-Y	1
6 ~ 7	Kyushu Electric Power Company, Inc Ojika Substation, Ojika Island	Utility substation for island: 22kV to 6.6kV Receiving substation （2014/07）	Station #1	VCB	22/6.6 10	Y-Y	1
			Station# 2	VCB	22/6.6 6	Y-Y	1
8 ~ 10	Kyushu Electric Power Company, Inc Toyotama Power Station, Tsushima Island	Utility substation for island. （2019/10） （2019/10） （2020/03）	Station #1	VCB	6.6/22/6.6 15	Δ-Y-Y	3
			Station# 2	OCB	66/6.6 25	Y-Δ	
			Station #3	GCB	66/6.6/6.6 25	Y-Δ-Y	
11	Kyushu Electric Power Company, Inc Shinkikai Power Station, Kikaijima Island	Utility substation for island. （2020/03）		VCB	6.6/22 6	Y-Y	1
12 ~ 13	Kyushu Electric Power Transmission and Distribution Co., Inc. Shiniki Power Station, Iki Island	Utility substation for island. （2021/10）	Station #1	VCB	22/6.6 15	Y-Y	2
			Station# 2	VCB	22/6.6 15		

No.	Client／End user	Application (Installed: yyyy/mm)		Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
14 ~ 15	Kyushu Electric Power Transmission and Distribution Co., Inc. Sasuna Power Station, Tsushima Island	Utility substation for island. (2020/11) (2021/04)	Station #1	VCB	22/6.6	Δ-Δ	2
					15		
			Station# 2	GCB	66/6.6		
					15		
16 ~ 17	Kyushu Electric Power Transmission and Distribution Co., Inc. Hayami Substation	Substation for grid Electrical power transmission. (2021/11)	Station #1	GCB	220/66	Y-Δ	2
				Mitsubishi	250		
			Station# 2	GCB	220/66		
				Mitsubishi	250		
18 ~ 19	Kyushu Electric Power Transmission and Distribution Co., Inc. Shin-Tanegashima Power Station, Tsushima Island	Utility substation for island. (2022/11)	Station #1	GCB	66/6.6	Y-Y	2
					15		
			Station# 2	GCB	66/6.6		
					15		

8． Public Facility

No.	Client／End user	Application (Installed: yyyy/mm)		Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
1	FUJI ELECTRIC CO., LTD. Kansai branch office／ Shimonoseki City Okuyama Factory 〔TAKUMA CO., LTD. via shipped〕	Incineration system, Shimonoseki City: (2015/03)		VCB	22/6.6	Δ-Δ	1
				Fuji	3.5		
2	FUJI ELECTRIC CO., LTD. Kansai branch office／ Shimonoseki City Okuyama Factory 〔KOBELCO ECO-SOLUTIONS CO., LTD. via shipped〕	Incineration system, Shimonoseki City: (2015/10)		VCB	22/6.6	Δ-Δ	1
				Fuji	3		
3	Nissin Electric Co., Ltd.／ Kyoto City Southern Clean Senter 〔Hitachi Zosen CO., LTD. via shipped〕	Incineration system, Kyoto City: (2019/03)		VCB	22/6.6	Δ-Δ	1
				Mitsubishi	15		
4 ~ 5	EBARA ENVIRONMENTAL PLANT CO., LTD. Fujisawa City Northern Environmental Office	Incineration system, Fujisawa City (2022/07)	Station #1	VCB	66/6.6	Δ-Δ	2
				Toshiba	5		
			Station# 2	VCB	6.6/66	Δ-Y	
				Toshiba	5		

９． Research Institute

No.	Client／End user	Application（Installed: yyyy/mm）	Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Transformer type Windings	Installed units
1	Kyushu Electric Power Company, Inc Research Institute	Applied as a portable （2006/03）		－	－	1
2	Moritani & Co., Ltd／ Railway Technical Research Institute	R&D center: Research and development for power transmission into railway technologies and labor science. （2014/01）		for R&D		1
3	University of Miyazaki Faculty of Engineering Department of Electrical and System Engineering	Academic research for electric power （2021.06）		for R&D		1

１０． Railway Company’s Substation

No.	Client／End user	Application（Installed: yyyy/mm）		Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Transformer type Windings	Installed units
1	Central Japan Railway Co., Ltd Honnagashino Substation	Railway substation : Electrical power transmission. （2017/11）		VCB Meidensya	6.6/1.2 2.2	Δ-Δ-Y	1
2 ~ 3	EIRAKU ERECTRIC CO., LTD. East Japan Railway Company Kawasaki Power Station	Railway substation : Electrical power transmission. （2019/11） （2019/05）	Station# 2 Station #3	GCB Hitachi GCB Mitsubishi	154/15 18.8 154/11 19.5	Y-Δ	2
4 ~ 8	EIRAKU ERECTRIC CO., LTD. East Japan Railway Company Musashisakai Substation	Railway substation : Electrical power transmission. （2020/03）	Station #1 Station #3 Station #4 Station #1 Station# 2	GCB Toshiba GCB Mitsubishi GCB Hitachi GCB Hitachi GCB Hitachi	154/66/11 100 66/22 35	Y-Y-Δ Y-Y	5
9	EIRAKU ERECTRIC CO., LTD. East Japan Railway Company Kawasaki Power Station	Railway substation : Electrical power transmission. （2020/02）		GCB Hitachi	154/66/6.6 140	Y-Y-Δ	1

No.	Client／End user	Application (Installed: yyyy/mm)		Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
10 ~ 11	EIRAKU ERECTRIC CO., LTD. East Japan Railway Company Kawasaki Power Station	Railway substation : Electrical power transmission. (2021/01) (2021/05)	Station # 1	GCB Mitsubishi	154/13.2 217	Y-Δ	2
			Station # 4	GCB Mitsubishi	154/66/13.2 222	Y-Y-Δ	
12 ~ 13	EIRAKU ERECTRIC CO., LTD. East Japan Railway Company Shinjyuku Substation	Railway substation : Electrical power transmission. (2020/11)	Station # 1	GCB Toshiba	154/66/22/22 100	Y-Y-Y-Δ	2
			Station #2	GCB Toshiba	154/66/22/22 100		
14 ~ 15	EIRAKU ERECTRIC CO., LTD. East Japan Railway Company Tokyo Substation	Railway substation : Electrical power transmission. (2021/01)	Station #1	GCB Toshiba	66/22 50	Y-Y	2
			Station #2	GCB Toshiba	66/22 50		
16 ~ 17	EIRAKU ERECTRIC CO., LTD. East Japan Railway Company Oimachi Substation	Railway substation : Electrical power transmission. (2021/09)	Station #1	GCB Hitachi	66/22/22 80	Y-Y-Δ	2
			Station #2	GCB Hitachi	66/22/22 80		
18	EIRAKU ERECTRIC CO., LTD. East Japan Railway Company Kanda Substation	Railway substation : Electrical power transmission. (2021/09)		GCB Hitachi	66/22/6.6 50	Y-Y-Δ	1
19 ~ 23	EIRAKU ERECTRIC CO., LTD. East Japan Railway Company Hamamatsucyou Substation	Railway substation : Electrical power transmission. (2022/06)	Station #1	GCB Hitachi	154/66/11 110	Y-Y-Δ	5
			Station #2	GCB Hitachi	154/66/11 110		
			Station #3	GCB Hitachi	154/66/22 110		
			Station #1	GCB Hitachi	66/22 50		
			Station #2	GCB Hitachi	66/22 50		
24 ~ 27	EIRAKU ERECTRIC CO., LTD. East Japan Railway Company Shintsurumi Substation	Railway substation : Electrical power transmission. (2022/05)	Station #1	GCB Hitachi	154/66/22 100	Y-Y-Δ	4
			Station #3	GCB Hitachi	154/66/22 100		
			Station#1	GCB Hitachi	66/22 70		
			Station#2	GCB Hitachi	66/22 70		

１１． Ship

No.	Client／End user	Application（Installed: yyyy/mm）	Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
1	Dhowa Technos Co., Ltd／ Penta-Ocean Construction Co., Ltd	Ship substation : Electrical power transmission. （2018/11）	ACB Mitsubishi	0.44/0.69 1.8	Δ-Δ	1
2	Dhowa Technos Co., Ltd／ PENTA TECHNO SERVICE Co., Ltd	Ship substation : Electrical power transmission. （2022/07 ）	ACB			1

１２． Overseas

No.	Client／End user	Application（Installed: yyyy/mm）		Breaker Type / Maker	Transformer type Voltage[kV] / Capacity[MVA]	Windings	Installed units
1	Sinfonia Technology Co., Ltd／ PT ASAHIMASU FLAT GLASS INDONESIA	Heavy electrical power user. Using for an own high-voltage substation. （2018/11）		VCB	3.3/20 8	Δ-Y	1
2 ～ 3	Oji Engineering Co., Ltd.／ GS Paperboard & Packaging Group Malaysia	Heavy electrical power user. Using for an own high-voltage substation. （2021/3）	Station # 1	GCB ABB	33/6.6		2
			Station # 2	GCB ABB	33/6.6		