TAIYO BRUSHLESS AC GENERATOR

LX-G
LX-E
LX-H SERIES

11.5kVA THROUGH 2250kVA

Dependable, high quality power.

TAIYO ELECTRIC CO.,LTD.

TAIYO LX SERIES

FEATURES

1 EXCELLENT ELECTRICAL CHARACTERISTICS

The excellent electrical characteristics can be provided by actively introducing the latest technology, adopting high quality insulating materials and theoretical design.
In particular, by improving the generator constants and adopting high-performance AVR, the stable power can be supplied to non-linear loads (thyristor, rectifier load, etc.).

2 HIGHLY RELIABLE & LONG LIFE

Based on the quality system conforming to ISO9001, we manufacture our products with the latest production technology.
Therefore, we guarantee high reliability and long life.

3 COMPACT & LIGHT DESIGN

With many years of experience and achievements and the latest technology, we are designing optimally for miniaturization and weight reduction.

4 SELECTABLE LINE-UP & HIGHLY PERFORMANCE

The LX series is available in three models, LX-G, LX-E, and LX-H.
We have prepared the optimum performance and abundant lineup according to the output.

5 EASY MAINTENANCE

By adopting a brushless excitation method, the maintenance and inspection can be carried out very easily.

● LX-G／LX-E MODEL ●

● LX-H MODEL ●

ELECTRICAL CHARACTERISTICS

1 VOLTAGE REGULATION

The voltage regulation when the load is varied gradually from full load to no load at the rated power factor is within ± 1.0% of the rated voltage.

2 TRANSIENT VOLTAGE REGULATION

The maximum voltage drop is within 25% and returns to within -3% of the final steady voltage within 2 seconds when a load (100% impedance) equivalent to 100% of the rated current (power factor 0.4 or less) is suddenly applied at the rated voltage during no-load operation at the rated frequency.

3 ADJUSTABLE RANGE OF VOLTAGE

The generator voltage can be adjusted over ± 5% of the rated voltage at the rated rotation speed and no load.

4 MOMENTARY OVERCURRENT

The generator can be of a construction capable of mechanically withstanding a current to 1.5 times of rated current for not less than 30 sec.

5 OVERSPEED

The rotor can be of construction capable of mechanically with standing a over speed to 120% of rated speed for not less than 2 min.

6 UNBALANCED LOAD

The generator can withstand the negative-phase-sequence current that is equivalent to 20% of the rated current of the generator.

7 WAVE FORM

The deviation factor of wave form does not exceed 10% with no load voltage.

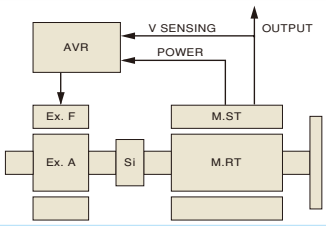
8 SUSTAINED SHORT-CIRCUIT

The excitation system will sustain a short circuit current as follow.
50Hz: 250% 2 sec.
60Hz: 300% 2 sec.
Note: LX-G type can not supply it.

EXCITATION SYSTEM

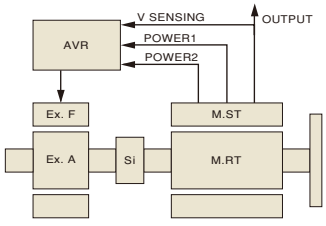
LX-G

A part of the main stator (armature winding) output is supplied to the AVR as the power supply and voltage detection of the AVR, and the exciting current corresponding to the load is supplied from the AVR.



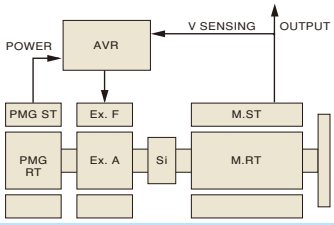
LX-E

When the heavy load is applied, the exciting current required to supply the continuous short-circuit current is supplied from the auxiliary winding wound in the main stator. Therefore, the excellent voltage characteristics can be obtained without exciting parts such as current transformers.



LX-H

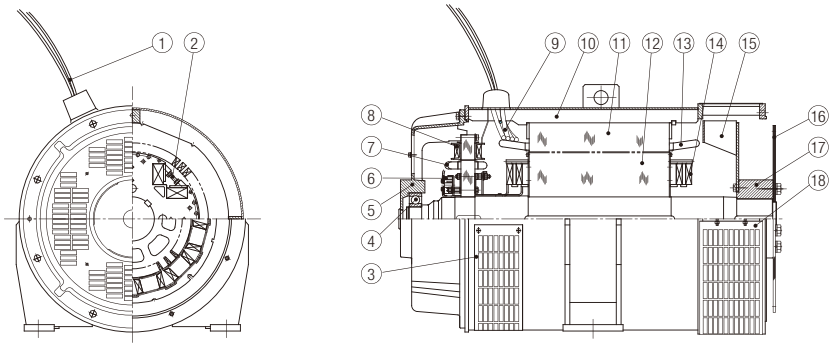
The voltage generated by the PMG is stably supplied as the power supply voltage for AVR. Therefore, the excellent voltage characteristics can be obtained even for harmonic loads such as thyristors.



M.ST : MAIN STATOR WINDING M.RT : MAIN ROTOR WINDING Ex.F : FIELD COIL FOR EX Ex.A : AMATURE COIL FOR EX Si : ROTATING RECTIFIER
AVR : AUTOMATIC VOLTAGE REGULATOR PMG.ST : PERMANENT MAGNET GENERATOR STATOR PMG.RT : PERMANENT MAGNET GENERATOR ROTOR

COMPONENT PARTS

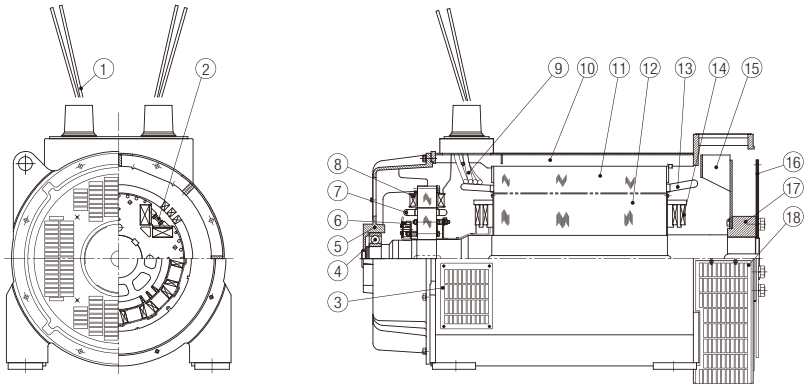
26B~46C



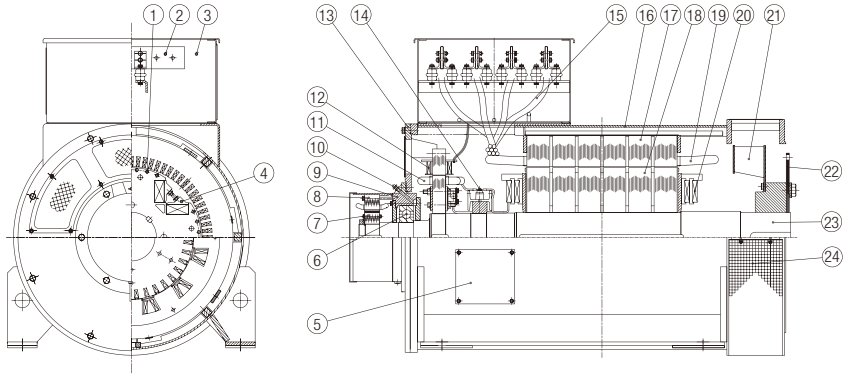
No.		Name of Parts
	1	OUTPUT CABLE
	2	COIL SUPPORTER
	3	VENTILATION COVER
	4	BEARING
※	5	END BRACKET & BEARING SHIELD
	6	ROTATING RECTIFIER
	7	ARMATURE COIL FOR EX
	8	FIELD COIL FOR EX
	9	LEAD WIRE
	10	FRAME
	11	STATOR CORE
	12	ROTOR CORE
	13	STATOR WINDING
	14	ROTOR WINDING
	15	FAN
	16	COUPLING PLATE
	17	FAN & COUPLING BOSS
	18	VENTILATION COVER(OUT AIR)

※BEARING SHIELD, SEPALATED : 26B~40CS

53BL~61BL



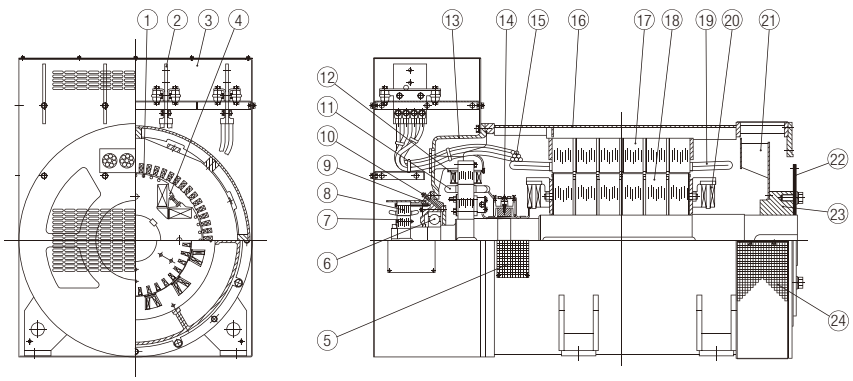
69A~69B



No.		Name of Parts
	1	DUMPER BAR
★	2	TERMINAL BAR
★	3	TERMINAL BOX
	4	COIL SUPPORTER
	5	VENTILATION COVER
	6	BEARING
	7	PMG(ROTOR)
	8	PMG(STATOR)
	9	BEARING SHIELD
	10	GREASE NIPPLE
	11	ARMATURE COIL FOR EX
	12	FIELD COIL FOR EX
	13	END BRACKET
	14	ROTATING RECTIFIER
	15	LEAD WIRE
	16	FRAME
	17	STATOR CORE
	18	ROTOR CORE
	19	STATOR WINDING
	20	ROTOR WINDING
	21	FAN
	22	COUPLING PLATE
	23	FAN & COUPLING BOSS
	24	VENTILATION COVER(OUT AIR)

★OPTION

77A~87E



OUTPUT RATING LIST

MODEL		60Hz 440V/220V				50Hz 400V/200V			
		STANDBY		CONTINUOUS		STANDBY		CONTINUOUS	
		kVA	kW	kVA	kW	kVA	kW	kVA	kW
LX-G・E	26B	15.5	12.4	14	11.2	12.5	10	11.5	9.2
	26D	18.5	14.8	17	13.6	15.5	12.4	14	11.2
	26G	26.5	21.2	24	19.2	22	17.6	20	16
	30CL	37	29.6	34	27.2	31	24.8	28	22.4
	30DL	47	37.6	43	34.4	39	31.2	35	28
	34DL	64	51.2	58	46.4	53	42.4	48	38.4
	40A	80	64	73	58.4	67	53.6	61	48.8
	40BL	105	84	95	76	84	67.2	77	61.6
	40CS	130	104	120	96	110	88	100	80
	40D	150	120	130	104	125	100	110	88
	46AS	170	136	155	124	140	112	130	104
	46B	210	168	190	152	175	140	160	128
	46C	225	180	200	160	200	160	170	136
	53BL	300	240	265	212	250	200	225	180
	53CL	350	280	315	252	300	240	270	216
	53DL	400	320	360	288	350	280	315	252
	53ES	450	360	410	328	400	320	360	288
	53EL	500	400	450	360	450	360	400	320
	61AS	570	456	520	416	500	400	450	360
	61AL	625	500	580	464	550	440	510	408
	61BL	750	600	680	544	650	520	590	472
LX-H	69A	850	680	800	640	750	600	700	560
	69B	900	720	850	680	785	628	750	600
	77A	975	780	900	720	820	656	785	628
	77B	1250	1000	1175	940	975	780	890	712
	77C	1425	1140	1300	1040	1175	940	1075	860
	87A	1590	1272	1450	1160	1325	1060	1215	972
	87B	1750	1400	1600	1280	1465	1172	1340	1072
	87C	1975	1580	1800	1440	1625	1300	1490	1192
	87D	2075	1660	1900	1520	1790	1432	1640	1312
	87E	2250	1800	2065	1652	1965	1572	1800	1440

STANDARD SPECIFICATIONS

Type:	Self Ventilated(IP20)
Excitation:	Brushless
Ratings:	Continuous/Standby
Frequency:	50Hz and 60Hz
No. of Pole	4-Pole
Insulation	Class F
No. of phase:	3 Phase
No. of Wire	3 or 4 Wires
Power Factor:	80% (Lagging)
Coupling:	SAE Adaptor and Coupling
Ambient Temp:	-5℃～40℃
Altitude:	1000m
Applicable Standards:	IEC
Bearing:	Ball or Roller Bearing
Output Wire:	Free Cable End

OPTIONS

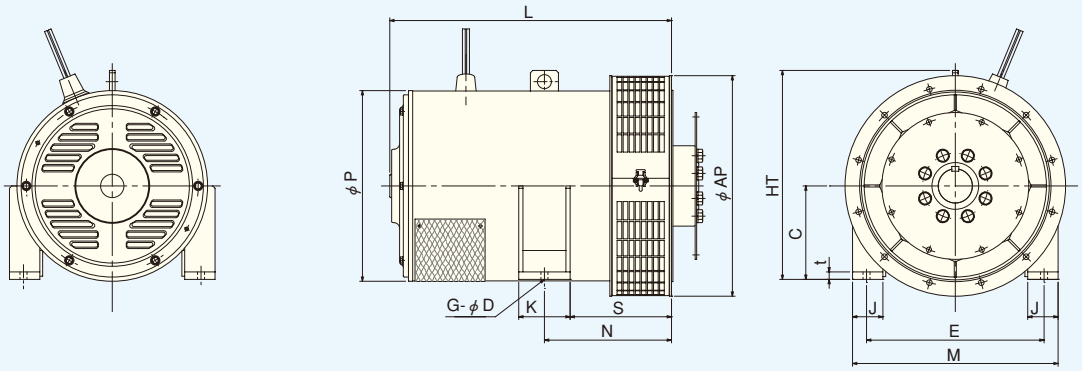
- Protection Mode（IP21～23）
- Paralell Operation Parts(AVR etc)
- Bearing/Stator Temp. Sensor & Indicator
- Space Heater for Condensation Prevention
- Coil Taping for High Humidity and Salt Damage Prevention
- Cold Region Countermeasure（-5℃～-20℃）
- Taco-Generator
- Double Bearings
- Special Coupling Size
- Terminal Box
- Extension Lead Wire Length（～2.5m）
- Single-Phase Wiring(Model 46C & Under)
- Another Output Cable for Single-Phase Outlet
- H-Insulation
- Special Voltage（To be Confirmed）

【STANDARD VOLTAGE SELECTION TABLE】

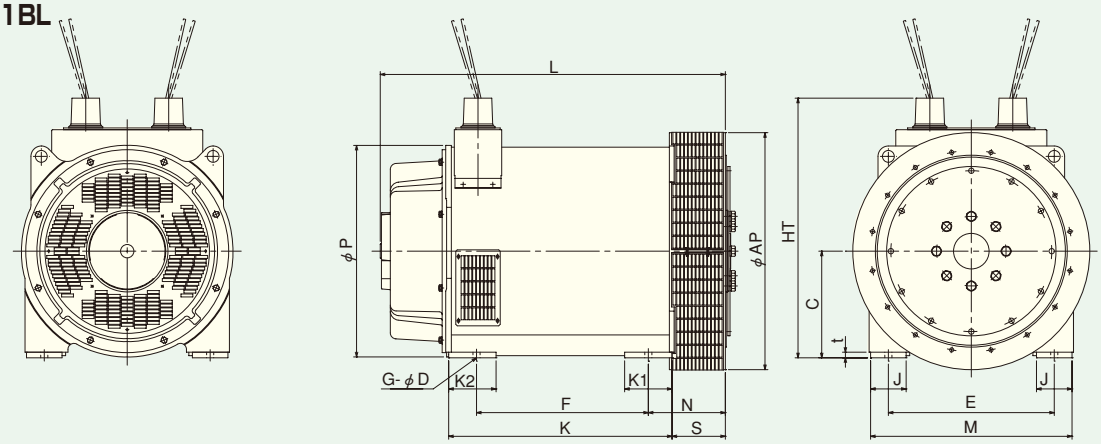
Hz	50Hz	60Hz	Model
200V Class	190～208V	220～240V	69B & Under
400V Class	380～416V	440～480V	All

OUTLINE

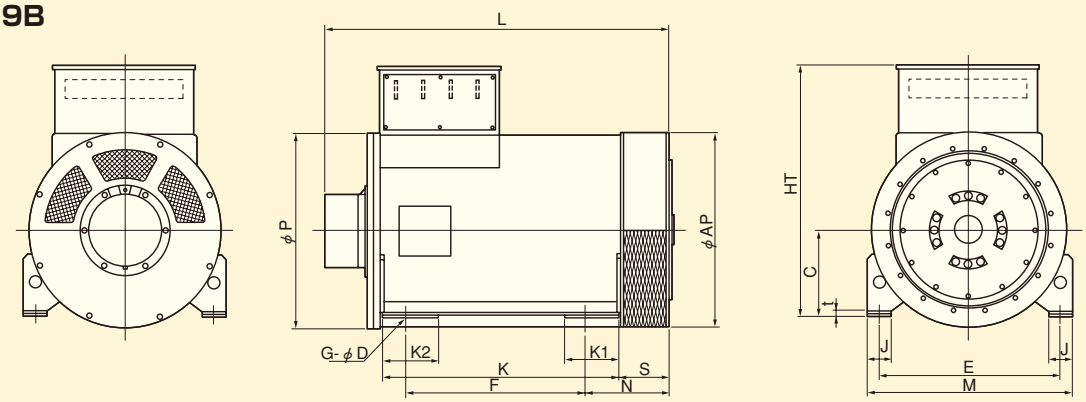
26B~46C



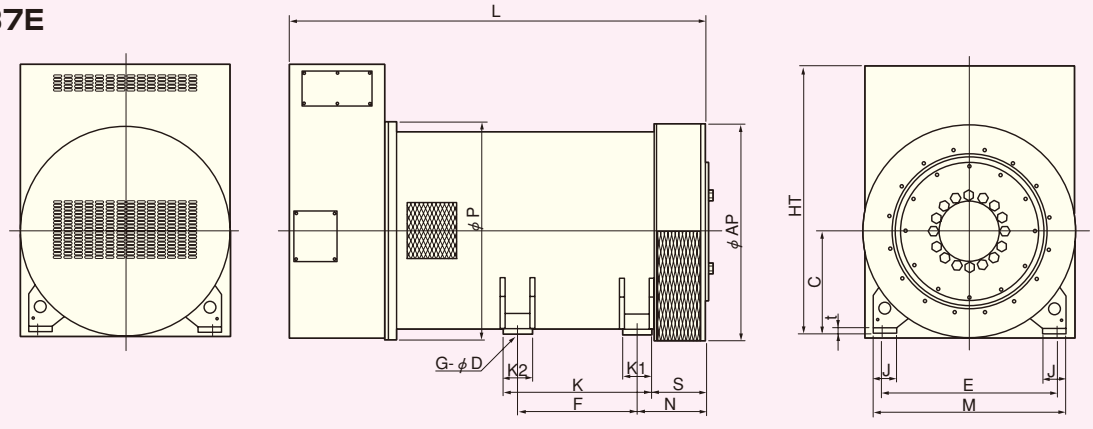
53BL~61BL



69A~69B



77A~87E



OUTLINE DIMENSION LIST

(mm)

MODEL	SAE COUPLING SIZE	L	M	C	E	J	t	N	F	S	K	K1	K2	AP	P	HT	G	D	MASS (kg)
26B	#4-7½	427	320	165	260	-	6	195	-	140	110	-	-	414	320	369	2	15	100
	#5-7½													365					95
26D	#4-7½	502	320	165	260	-	6	225	-	170	110	-	-	414	320	369	2	15	110
	#5-7½													365					105
26G	#4-7½	502	320	165	260	-	6	225	-	170	110	-	-	414	320	369	2	15	125
	#5-7½													365					120
30CL	#3-10,#3-11½	507	340	180	279	65	16	215	-	160	110	-	-	460	362	402	2	15	185
30DL	#3-10	537	340	180	279	65	16	234	-	179	110	-	-	460	356	417	2	19	205
	#3-11½																	15	
34DL	#3-10,#3-11½	603	440	200	380	65	16	272	-	217	110	-	-	472	408	448	2	15	270
40A	#2-11½, #3-11½	609	500	225	410	75	16	278	-	213	130	-	-	493	460	504	2	19	305
40BL	#2-11½, #3-11½	664	500	225	410	75	16	305	-	240	130	-	-	493	460	504	2	19	360
40CS	#2-11½, #3-11½	776	500	225	410	75	16	350	-	275	150	-	-	493	460	514	2	19	445
40D	#1-14	827	470	225	410	65	16	354	-	279	150	-	-	560	460	510	2	19	485
	#2-11½													515					
46AS	#1-14	770	540	280	470	75	16	365	-	290	150	-	-	575	565	620	2	24	510
	#2-11½	785						380		305									520
46B	#1-14	865	540	280	470	75	16	405	-	330	150	-	-	575	565	620	2	24	650
	#2-11½	880						420		345									660
46C	#1-14	915	540	280	470	75	16	430	-	355	150	-	-	575	565	620	2	24	670
	#2-11½	930						445		370									690
53BL	#0-18	847	640	320	540	100	19	230	345	164	479	125	125	720	620	765	4	24	750
	#1-14	864						247		181									780
53CL	#0-18	927	640	320	540	100	19	230	425	164	559	125	125	720	620	765	4	24	880
	#1-14	944						247		181									910
53DL	#0-18	977	640	320	540	100	19	230	475	164	609	125	125	720	620	765	4	24	970
	#1-14	994						247		181									1000
53ES	#0-18	1087	640	320	540	100	19	230	585	164	719	125	125	720	620	765	4	24	1170
	#1-14	1104						247		181									1200
53EL	#0-18	1132	640	320	540	100	19	230	630	164	764	125	125	720	620	765	4	24	1190
	#1-14	1149						247		181									1220
61AS	#0-18	1058	680	360	560	120	19	260	487	180	647	160	160	800	714	880	4	24	1380
	#1-14	1077						279		199									1420
61AL	#0-18	1078	680	360	560	120	19	260	507	180	667	160	160	800	714	880	4	24	1400
	#1-14	1097						279		199									1440
61BL	#0-18	1165	680	360	560	120	19	260	580	180	754	160	160	800	714	880	4	24	1550
	#1-14	1184						279		199									1590
69A	#0-18	1398	840	375	740	100	20	277	806	205	950	175	175	800	775	1030	4	26	2110
69B	#0-18	1478	840	375	740	100	20	277	806	205	1030	175	175	800	775	1030	4	26	2320
77A	#0-18	1473	838	394	762	100	20	292	640	220	784	175	175	890	880	1088	4	26	2580
77B	#0-18	1583	838	394	762	100	20	292	750	220	894	175	175	890	880	1088	4	26	2950
77C	#00-21	1691	838	394	762	100	20	310	840	238	984	175	175	890	880	1088	4	33	3210
87A	#00-21	1883	838	483	762	100	23	305	935	235	1075	180	180	1000	994	1293	4	36	3680
87B	#00-21	1993	838	483	762	100	23	305	1045	235	1185	180	180	1000	994	1293	4	36	4150
87C	#00-21	1993	838	483	762	100	23	305	1045	235	1185	180	180	1000	994	1293	4	36	4150
87D	#00-21	2083	838	483	762	100	23	305	1135	235	1275	180	180	1000	994	1293	4	36	4580
87E	#00-21	2083	838	483	762	100	23	305	1135	235	1275	180	180	1000	994	1293	4	36	4580

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Please note: Continuous development of our products entitles us to change the specification details without notice.

JUL 2024 GEN-LX-EN 02 ST