

Performance and core specifications

4-pole alternators for continuous or standby diesel generator sets in buildings, hospitals, airports, telecoms and industry.

750–1500 kVA

50 Hz continuous

4 POLES

1500 / 1800 rpm

50 / 60 Hz

B31 / B32 winding

IP23

Class H insulation

EXCITATION AND DYNAMIC PERFORMANCE

Transistor-based AVR regulation (KR440). Self-excitation has no sustained short-circuit capability; optional PMG supplies 3 times nominal current for 10 seconds.

At 60% rated current and PF 0.4: transient voltage dip <15%; recovery from a 15% dip <1.5 s.

Parallel operation with alternators or mains requires suitable AVR and current transformers.

Overload capability follows NEMA.

WINDING AND POWER QUALITY

Standard B31 / B32 windings operate at 50 or 60 Hz. Single-phase reconnection or dedicated windings are available. Operating PF: 0.8–1.0; derating is required below 0.8.

THD 1.2%~2.5% at no-load or linear load per IEC; TIF <50 per NEMA.

MECHANICAL CONSTRUCTION

Single- or double-bearing configurations with engine adaptors and coupling discs. Rotors balanced to ISO 1940; double-bearing rotors use half-key balancing. Heavy-duty regreasable bearings; steel frame with cast-iron or steel housings and flanges, depending on model.

Class H insulation; winding protection accepts up to 95% relative humidity. Additional coatings are available for harsh environments. Accessible terminal box accommodates AVR, reconnection, CTs and optional modules.

Bidirectional operation is stated in the source; its general-parameter table specifies clockwise rotation. Maximum overspeed: 2250 rpm, or $1.25 \times$ rated speed at 60 Hz.

STANDARDS

GB 755, BS 5000, IEC 60034, VDE 0530, CSA C22.2-100 and NEMA MG-1.22. Design, manufacture and marking under ISO 9001.

General parameters and efficiency

Parameter	Value	Parameter	Value
Ambient temperature	40°C	Temperature rise	125K
Short-circuit current multiple	$\geq 300\%$	Altitude	1000 m
Voltage regulation	$\pm 1\%$	Cooling method	IC01
Insulation class	Class H	Exciter system	Brushless self-excitation
Direction of rotation	Clockwise	Duty type	S1
Winding pitch	2/3	Maximum speed	2250 rpm
Phases	3	Power factor	0.8
Protection grade	IP23	Number of poles	4
TIF	<50	Frequency	50/60 Hz
AVR model	KR440	THF	<2%
THD	1.2%~2.5%		

MOMENT OF INERTIA AND FULL LOAD EFFICIENCY

Model	Inertia J kg·m ²	50 Hz / 400 V Efficiency %	60 Hz / 440 V Efficiency %
KR634B	16.445	95.0	95.1
KR634C	16.837	95.2	95.4
KR634D	18.283	95.5	95.5
KR634E	19.945	95.8	95.9
KR634F	22.724	95.8	95.9
KR634G	27.481	95.9	96.0
KR634H	31.031	96.1	96.0
KR634K	31.956	96.2	96.2

Inertia values apply to single-bearing units. Efficiency values are at 100% load.

50 Hz electrical ratings

1500 rpm • Standard winding: 3-phase, power factor 0.8.

Continuous: 125K rise / 40°C ambient.

Standby: 163K rise / 27°C ambient.

Model	Unit	Continuous				Standby			
		380V	400V	415V	440V	380V	400V	415V	440V
KR634B	kVA	750	750	750	713	840	840	840	784
	kW	600	600	600	570	672	672	672	627
KR634C	kVA	800	800	800	760	896	896	896	836
	kW	640	640	640	608	717	717	717	669
KR634D	kVA	910	910	910	865	1019	1019	1019	951
	kW	728	728	728	692	815	815	815	761
KR634E	kVA	1000	1000	1000	950	1120	1120	1120	1045
	kW	800	800	800	760	896	896	896	836
KR634F	kVA	1125	1125	1125	1069	1260	1260	1260	1176
	kW	900	900	900	855	1008	1008	1008	941
KR634G	kVA	1250	1250	1250	1188	1400	1400	1400	1306
	kW	1000	1000	1000	950	1120	1120	1120	1045
KR634H	kVA	1375	1375	1375	1306	1540	1540	1540	1437
	kW	1100	1100	1100	1045	1232	1232	1232	1150
KR634K	kVA	1500	1500	1500	1425	1680	1680	1680	1568
	kW	1200	1200	1200	1140	1344	1344	1344	1254

WINDING CONNECTION VOLTAGES

Connection	Voltage options
Star Y	380V / 400V / 415V / 440V
Delta Δ	220V / 230V / 240V
Parallel star YY	220V (Y = 440 V)

Only 12-wire alternators can realise these connections. For other voltages, consult the factory.

60 Hz electrical ratings

1800 rpm • Standard winding: 3-phase, power factor 0.8.

Continuous: 125K rise / 40°C ambient.

Standby: 163K rise / 27°C ambient.

Model	Unit	Continuous				Standby			
		416V	440V	460V	480V	416V	440V	460V	480V
KR634B	kVA	806	863	900	900	887	949	990	990
	kW	645	690	720	720	710	759	792	792
KR634C	kVA	860	920	960	960	946	1012	1056	1056
	kW	688	736	768	768	757	810	845	845
KR634D	kVA	978	1047	1092	1092	1076	1151	1201	1201
	kW	783	837	874	874	861	921	961	961
KR634E	kVA	1075	1150	1200	1200	1183	1265	1320	1320
	kW	860	920	960	960	946	1012	1056	1056
KR634F	kVA	1209	1294	1350	1350	1330	1423	1485	1485
	kW	968	1035	1080	1080	1064	1139	1188	1188
KR634G	kVA	1344	1438	1500	1500	1478	1581	1650	1650
	kW	1075	1150	1200	1200	1183	1265	1320	1320
KR634H	kVA	1478	1581	1650	1650	1626	1739	1815	1815
	kW	1183	1265	1320	1320	1301	1392	1452	1452
KR634K	kVA	1613	1725	1800	1800	1774	1898	1980	1980
	kW	1290	1380	1440	1440	1419	1518	1584	1584

WINDING CONNECTION VOLTAGES

Connection	Voltage options
Star Y	416V / 440V / 460V / 480V
Delta Δ	240V (Y = 416 V)
Parallel star YY	208V / 220V / 230V / 240V

Only 12-wire alternators can realise these connections. For other voltages, consult the factory.

Reactance and time constants

Reactance in %; time constants in ms. Kcc is the short-circuit ratio.

50 HZ AT 400 V

Model	Kcc	Xd	X'd	X''d	Xq	X''q	X2	X0	T'd	T''d	T'do	Ta
KR634B	0.28	362	22.3	16.4	226	22.9	1.96	1.29	46	6	2075	125
KR634C	0.26	386	23.8	17.5	241	24.4	2.10	1.38	49	6	2213	146
KR634D	0.24	424	25.2	18.3	264	26.0	2.21	1.39	49	6	2283	181
KR634E	0.26	388	22.8	16.5	242	23.3	1.99	1.20	41	5	1958	192
KR634F	0.27	369	21.6	15.5	230	21.7	1.86	1.10	35	4	1664	233
KR634G	0.27	364	20.5	14.5	226	20.7	1.76	0.95	31	4	1535	255
KR634H	0.27	375	22.4	16.2	234	22.3	1.92	1.23	31	4	1433	401
KR634K	0.24	415	24.8	17.9	259	24.7	2.13	1.36	34	4	1570	439

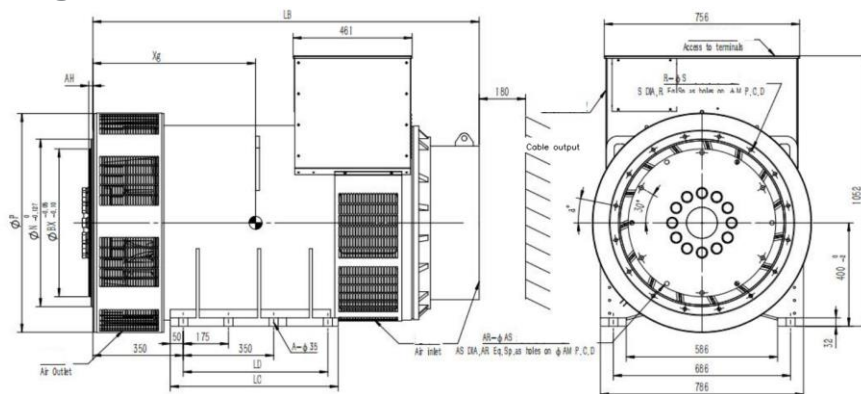
60 HZ AT 440 V

Model	Kcc	Xd	X'd	X''d	Xq	X''q	X2	X0	T'd	T''d	T'do	Ta
KR634B	0.24	419	25.8	18.9	261	26.5	2.27	1.49	44	6	2400	121
KR634C	0.23	443	27.2	20.0	276	28.0	2.40	1.58	47	6	2537	139
KR634D	0.20	491	29.2	21.2	306	30.1	2.56	1.61	47	6	2645	175
KR634E	0.22	447	26.3	19.0	278	26.9	2.29	1.38	40	5	2258	185
KR634F	0.23	427	24.9	17.9	266	25.2	2.15	1.28	34	4	1925	224
KR634G	0.24	418	23.6	16.7	260	23.9	2.03	1.09	30	4	1766	245
KR634H	0.23	433	25.8	18.6	270	25.7	2.22	1.43	30	4	1653	317
KR634K	0.21	481	28.7	20.7	299	28.5	2.46	1.57	32	4	1817	423

SYMBOL DEFINITIONS

Code	Parameter	Code	Parameter
Kcc	Short circuit ratio	X2	Negative sequence saturation reactance
Xd	Direct axis synchronous unsaturated reactance	X0	Zero sequence unsaturated reactance
X'd	Direct Axis Transient Saturation Reactance	T'd	Short-circuit transient time constant
X''d	Direct Axis Subtransient Saturation Reactance	T''d	Subtransient time constant
Xq	Quadrature axis Synchronous Unsaturated Reactance	T'do	Open circuit time constant
X''q	Quadrature Subtransient Saturation Reactance	Ta	Armature time constant

Single bearing outline and dimensions



MOUNTING DIMENSIONS

Model	LB	LC	LD	A	Xg mm	Weight kg	Package L × W × H mm
KR634B	1266	450	/	6	545	1370	1590*1000* 1250
KR634C	1266	450	/	6	545	1575	1590*1000* 1250
KR634D	1351	450	/	6	565	1693	1680*1000* 1250
KR634E	1351	450	/	6	588	1817	1680*1000* 1250
KR634F	1491	650	560	8	630	2063	1820*1000* 1250
KR634G	1491	650	560	8	658	2221	1820*1000* 1250
KR634H	1586	650	560	8	700	2453	1910*1000* 1250
KR634K	1586	650	560	8	705	2480	1910*1000* 1250

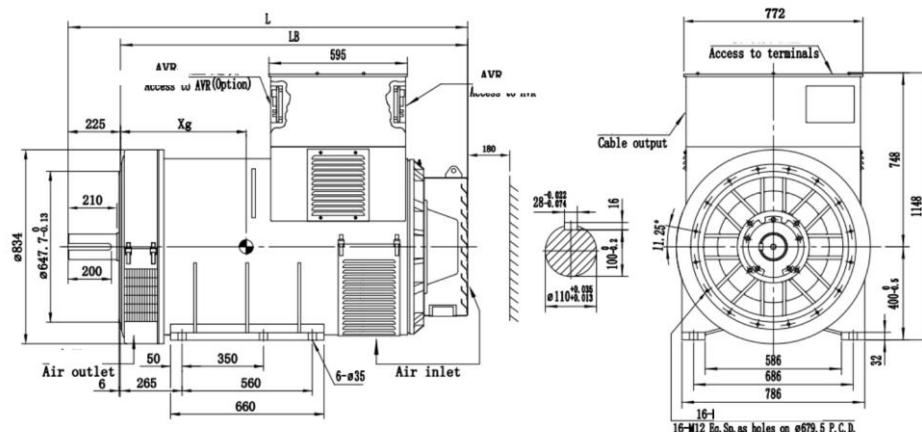
FLANGE DIMENSIONS IN mm

S.A.E	P	N	M	R-ØS	W	a°
#00	914	787.4	850.9	16-Ø14	6	11.25°
#0	846	647.7	679.45	12-Ø14	6	11.25°
#1/2	846	584.2	619.1	12-Ø14	6	15°
#1	846	511.2	530.2	12-Ø14	6	15°

COUPLING DISC DIMENSIONS IN mm

S.A.E	BX	AM	AR-ØAS	AH
#14	466.7	438.15	8-Ø14	25.4
#18	571.5	542.925	12-Ø17	15.7
#21	673.1	641.35	12-Ø17	0
#24	733.3	692	12-Ø21	0

Double bearing outline and dimensions



MOUNTING DIMENSIONS IN mm

Model	L	LB	Xg mm
KR634B	1718	1493	587
KR634C	1718	1493	591
KR634D	1718	1493	597
KR634E	1718	1493	607
KR634F	1718	1493	625
KR634G	1904	1679	753
KR634H	1904	1679	788
KR634K	1904	1679	808

WEIGHT AND PACKAGING

Model	Weight kg	Package L × W × H mm
KR634B	1756	1760*1000*1230
KR634C	1787	1760*1000*1230
KR634D	1874	1850*1000*1230
KR634E	2050	1850*1000*1230
KR634F	2125	1990*1000*1230
KR634G	2241	1990*1000*1230
KR634H	2542	2080*1000*1230
KR634K	2632	2080*1000*1230