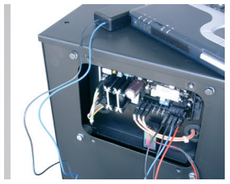
SINCRO INDUSTRIAL ALTERNATORS AT A GLANCE

Sincro 4 pole Brushless / AVR alternators are developed with **user friendly** approach and technologies, providing **compactness, versatility, easy installation and maintenance**







AN INCREDIBLE RANGE

Sincro SK range of industrial brushless / AVR low and medium voltage alternators, with powers from **65 to 2,600 kVA/50Hz**, is made of **over 30 models** on **8 series: SK160, SK225, SK250, SK315, SK355, SK400, SK450, SK500.**

QUALITY MADE IN EUROPE

We are a pure **European manufacturer**. Our alternators are Made in Europe in our production sites spread throughout the **Italian Northeast** (Sincro plant in the hinterland of Vicenza city) and neighboring **Croatia** (factory Sincro d.o.o. in Rijeka, held by the headquarter Soga S.p.A.), at just 100 Kms from the Italian border. We do not delocalize out of Europe. Our companies are **ISO 9001:2008** certified (Quality management systems).

COMPACTNESS

SK alternators are among **the most compact solutions today available in the market** thanks to accurate studies on their design, developed through FEM systems to optimize the electromagnetic circuit and increase both efficiencies and performances. For OEMs, this brings to a strong reduction in the gen-sets manufacturing (canopies and basements) and logistic costs (storage and shipping).

SOLUTIONS FOR MARINE, OIL & GAS AND OTHER APPLICATIONS

While IP23 is supplied as standard, models with a higher protection are also available: TEFC (IP44) and TEAAC (air to air cooled) executions. For marine applications the models are BV (Bureau Veritas), RRR (Russian River Register), RMRS (Russian Maritime Register of Shipping) certified.

EASY INSTALLATION

The protection grids have special hooks that allow an easy and quick assembly and disassembly. Thanks to the lay-out of the terminal boxes, the cables exit is possible from both sides of the alternator for easier connection operations. The AVR can be accessed through a small opening on the terminal box, to carry out setting operations in a safe way. It can be moved on the opposite side of the terminal box.

AVRs: PERFECT VOLTAGE REGULATION, AND REMOTE CONTROL

Just two types of AVR are covering the whole range, to be used on more models: the **BL4-U analogic** regulator up to 300 kVA (voltage regulation accuracy of 1% and single-phase sensing), and the **DBL1 digital** AVR from 350 up (accuracy of 0,25% and three-phase sensing).

Thanks to a microprocessor, the digital AVRs can be connected to a pc for supervision, both locally and remotely, of all measurements, states and registered alarms.
The feeding voltage of the AVR is supplied by an auxiliary winding up to 720 kVA. From 800 kVA it is supplied by a PMG system that assures better stability of the output voltage even with unbalanced and distorting loads; it can be applied already from 65 kVA.

WINDINGS: 2/3 PITCH AND TROPICALIZATION

Except for SK160 models, all windings have 2/3 pitch and are impregnated with resins standing up to high temperatures (primary impregnation). Always as a standard, all SK are tropicalized.

OPTIONALS AND CUSTOM EXECUTIONS

SK models can be supplied with a wide possibility of optionals (space heaters, drop-kit...), besides with custom-made executions (12 leads, encapsulation of the windings, specific external painting for extreme environments...). Ask us!

CSA / UL INDUSTRIAL ALTERNATORS RANGE 03.2016

sincro®

Sincro® is a brand of Soga S.p.A.
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ISO 9001
BUREAU VERITAS Certification
N. 229580

4 pole alternators
for industrial gen-sets
certified for North America

CSA / UL

C US

sincro®

Synchronous low voltage AC alternators | IP23

sincro®

4 POLES
1800 RPM

BRUSHLESS / AVR

- **Standards:** EN 60034-1, IEC 60034-1, ISO 8528-3
- **Electromagnetic compatibility:** EN 61000-6-2, EN 61000-6-4
- **Tropicalization:** standard
- **Winding pitch:** SK225, SK250: 2/3. SK160: full pitch
- **Excitation system:** brushless
- **Enclosure:** IP23 - IC01

SK250, SK225

SK160

SINGLE PHASE | SUPERCOMPACT

model	ELECTRICAL PERFORMANCES kVA (S1) F class 40/105°C 240V 60 Hz	kVA (S1) H class 40/125°C 240V 60 Hz	efficiency 4/4 F class p.f. 0,8 60 Hz	efficiency 4/4 H class p.f. 0,8 60 Hz	AVR type	AVR power supply	AVR leads	MAIN OVERALL DIMENSIONS F mm	L mm	W mm	H mm	mass SAE KG (approx)
SK 160 SZ 1	8,2	9	83,4	83,6	analogic	from auxiliary winding	4	160	258	295	335	60
SK 160 SA 1	11	12	84,8	85	analogic		4	160	258	295	335	63
SK 160 CA 1	13,3	14,5	86,6	86,8	analogic		4	160	303	295	335	79
SK 160 CB 1	16	17,5	87,4	87,6	analogic		4	160	303	295	335	86
SK 160 MA 1	20,2	22	89,3	89,5	analogic		4	160	348	295	335	104
SK 160 LA 1	24,8	27	90,4	90,6	analogic		4	160	415	295	335	117

THREE PHASE | SUPERCOMPACT

model	ELECTRICAL PERFORMANCES kVA (S1) F class 40/105°C 480V 60 Hz	kVA (S1) H class 40/125°C 480V 60 Hz	efficiency 4/4 F class p.f. 0,8 60 Hz	efficiency 4/4 H class p.f. 0,8 60 Hz	AVR type	AVR power supply	AVR leads	MAIN OVERALL DIMENSIONS F mm	L mm	W mm	H mm	mass SAE KG (approx)
SK 160 SA	10,1	11	79,4	79,3	analogic	from auxiliary winding	12	160	258	295	335	62
SK 160 CA	12,8	14	81,9	81,8	analogic		12	160	303	295	335	73
SK 160 CB	16	17,5	84,4	84,3	analogic		12	160	303	295	335	80
SK 160 MA	20,2	22	85,6	85,5	analogic		12	160	348	295	335	89
SK 160 MB	22,3	25	87,3	87,2	analogic		12	160	348	295	335	99
SK 160 LA	27,5	30	88,1	88	analogic		12	160	415	295	335	103
SK 160 LB	34,8	36	88,3	88,2	analogic		12	160	415	295	335	118
SK 160 WA	42,2	43	88,5	88,4	analogic		12	160	516	254	376	125
SK 160 WB	44,9	49	88,7	88,6	analogic		12	160	516	254	376	136

THREE PHASE

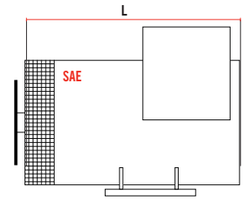
model	ELECTRICAL PERFORMANCES kVA (S1) F class 40/105°C 480V 60 Hz	kVA (S1) H class 40/125°C 480V 60 Hz	efficiency 4/4 F class p.f. 0,8 60 Hz	efficiency 4/4 H class p.f. 0,8 60 Hz	AVR type	AVR power supply	AVR leads	MAIN OVERALL DIMENSIONS F mm	L mm	L1 mm	W mm	H mm	mass SAE KG (approx)
SK 225 SM	72	78	90,1	90	analogic	from auxiliary winding	6*	225	558	673	330	555	215
SK 225 MS	88	96	90,8	90,7	analogic		6*	225	693	808	330	555	264
SK 225 MM	103	112	91,6	91,5	analogic		6*	225	693	808	330	555	280
SK 225 ML	121	132	92	91,9	analogic		6*	225	693	808	330	555	308
SK 225 LS	138	150	92,4	92,3	analogic		6	225	803	918	330	555	350
SK 225 LM	156	168	92,5	92,4	analogic		6*	225	803	918	330	555	388
SK 250 SL	176	192	91,7	91,5	analogic		6*	250	677	801	405	665	459
SK 250 MS	197	216	92	91,9	analogic		6*	250	787	911	405	665	507
SK 250 MM	220	240	92,4	92,3	analogic		6*	250	787	911	405	665	540
SK 250 ML	252	275	92,8	92,6	analogic		6*	250	787	911	405	665	601
SK 250 LS	275	300	92,9	92,7	analogic		6	250	887	1011	405	665	647
SK 250 LM	302	330	93	93,1	analogic		6*	250	887	1011	405	665	680
SK 250 LL	330	360	93,1	93	analogic		6	250	887	1011	405	665	725

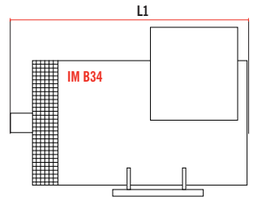
**12 leads on request*

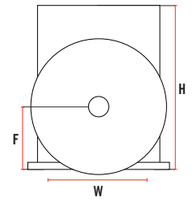
STANDARD COUPLINGS (SAE)

disk joint	series	SK160			SK225				SK250		
	flange	5	4	3	4	3	2	1	3	2	1
	6,5	•	•								
	7,5	•	•								
	8		•	•	•	•	•				
	10		•	•	•	•	•				
	11,5			•		•	•	•	•	•	•
	14							•			•

Other executions on request







FOR REACTANCES AND INERTIA SEE THE DATA SHEETS FOR EACH MODEL

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