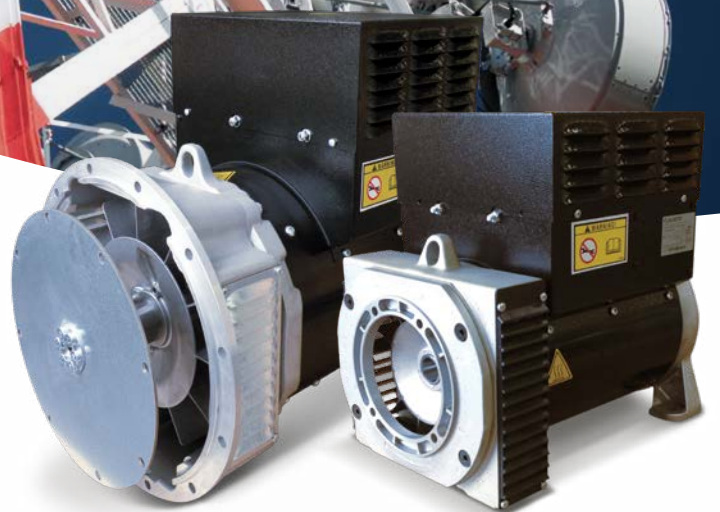




*24 & 48 VDC
direct current alternators
up to 800A
for battery charging,
lighting towers and telecoms*



 **sincro®**

24/48 VDC alternators from 60A to 800A with digital AVR

SINCRO IS ONE OF THE FIRST EUROPE-BASED PLAYERS IN HAVING DEVELOPED A DEDICATED RANGE OF DC ALTERNATORS, SPECIFICALLY MADE FOR DC GEN-SETS REQUIRING 24 & 48 VDC LOW VOLTAGE SUPPLY, WITH DIGITAL AVR AND INTEGRATED RECTIFIER BRIDGE: **A TURN-KEY SOLUTION FOR OEMs.**

Applications

- Hybrid telecom applications
- Battery chargers
- APU (auxiliary power units)
- Low voltage LED lighting towers

Highlights

- Integrated AC/DC rectifier bridge providing more compactness and a simpler mounting of the gen-sets
- Wound-type rotor, 2 or 4 poles, large operating speed range
- High efficiency

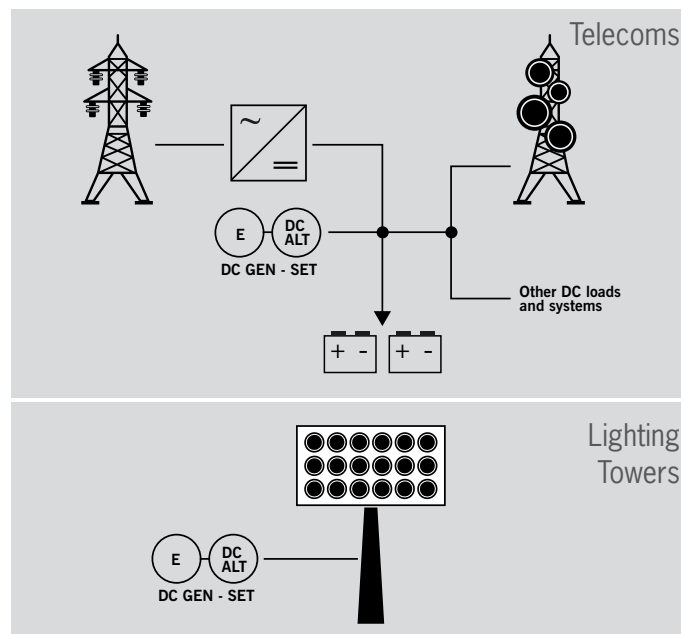
Voltage

- DC constant voltage
- High stability of the voltage in a large speed operation range
- Digital AVR
- Adjustable voltage set-point by trimmer, or external potentiometer, or outer controller
- Low ripple

Savings €

- No need for inverter / stabilizer
- Reduced fuel consumption
- Minimized need for maintenance
- Optimized assembling costs

Typical applications



Data

	E3 - FT (3ph)	FB (3ph or 9ph) IB (9ph)
Alternator type	Synchronous	
Technology	Wound-rotor 3-phase 9-Phase AC alternators with AC/DC rectifier bridge	
Regulation	Digital AVR	
Rectifier	Diode 3-phase (9-phase on FB-IB models & on request)	
Nominal speed	3000 rpm (2 poles) - 1500 rpm (4 poles)	
Operating speed	2700 ÷ 3900 (2 poles) - 1350 ÷ 2400 (4 poles)	
Nominal voltage	24 or 48 VDC	
Operating output voltage (settable)	From 22 to 30 VDC or from 46 VDC to 58 VDC	
Dynamic behaviour	Fast recovery time during transient by step load variation	
External voltage input for voltage regulation	0-10 VDC	
Efficiency (@ ¾ load)	0,75 ÷ 0,85 depending on model	
Current overload protection	Included	
Underspeed protection	Included	
Ripple ¹	< 2% standard on 9-ph versions (<0,5% with filter) < 8% standard on 3-ph versions	
Insulation class	F/H	H
Temperature rise class	F	H
Operating temperature	-20°C to +40°C (+55°C with derating)	
EMI/RFI	EN 61000-6-2 – EN 61000-6-4	
Protection degree	IP23	
Standards	EN 60034-1, IEC 60034-1, ISO 8528-3	
Cooling system	Axial fan cooling ventilation	

(1) On request reinforced filter for ripple reduction
Ripple factor is ratio between Volt RMS value and DC component of nominal voltage

24
VDC

2 POLES 3000/3600 RPM BRUSHES/AVR

models	A	kW
E3 2-24/120	120	2,9
E3 2-24/180	180	4,3
FT 2-24/350	350	8,4
FT 2-24/500	500	12
FT 2-24/600	600	14,4

BRUSHLESS/AVR

model	A	kW
FB 2-24/300	300	7,2

4 POLES 1500/1800 RPM BRUSHES/AVR

models	A	kW
FT 4-24/200	200	4,8
FT 4-24/300	300	7,2
FT 4-24/400	400	9,6

BRUSHLESS/AVR

models	A	kW
FB 4-4/200	200	4,8
FB 4-24/250	250	6
IB 4-24/500	500	12

48
VDC

2 POLES 3000/3600 RPM BRUSHES/AVR

models	A	kW
E3 2-48/60	60	2,9
E3 2-48/100	100	4,8
E3 2-48/150	150	7,2
FT 2-48/250	250	12
FT 2-48/300	300	14,4

BRUSHLESS/AVR

models	A	kW
FB 2-48/250	250	12
FB 2-48/300	300	14,4

4 POLES 1500/1800 RPM BRUSHES/AVR

models	A	kW
FT 4-48/100	100	4,8
FT 4-48/150	150	7,2
FT 4-48/200	200	9,6

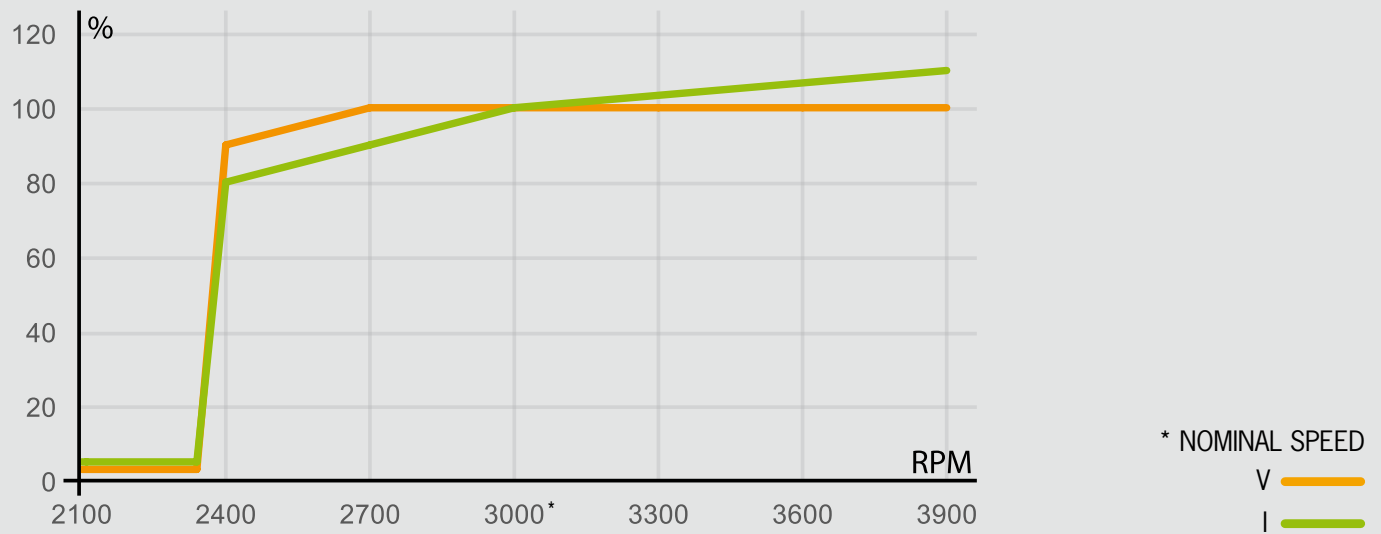
BRUSHLESS/AVR

models	A	kW
FB 4-48/100	100	4,8
FB 4-48/125	125	6
FB 4-48/150	150	7,2
FB 4-48/200	200	9,6
IB 4-48/500	500	24
IB 4-48/800	800	40

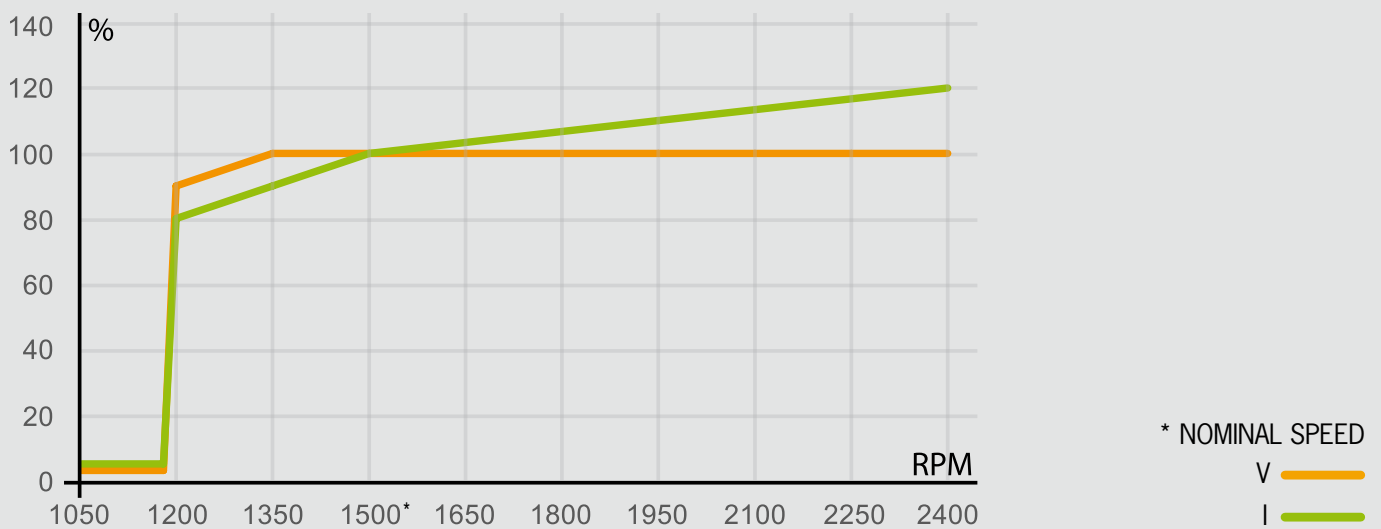


CONSTANT VOLTAGE IN A LARGE SPEED RANGE

2 POLES



4 POLES



Overall dimensions

	D	B *	H	mass
models @ 24V	mm	mm	mm	Kg
E3 2-24/120	283	377,5	336	20,2
E3 2-24/180	283	377,5	336	23,7
models @ 48V				
E3 2-48/60	283	377,5	336	20,2
E3 2-48/100	283	377,5	336	23,7
E3 2-48/150	338	432,5	336	37,5

	D	B *	mass
models @ 24V	mm	mm	Kg
FT 2-24/350	345	431,5	48
FT 2-24/500	345	431,5	52,3
FT 2-24/600	345	431,5	69,4
FT 4-24/200	345	431,5	47
FT 4-24/300	345	431,5	48,3
FT 4-24/400	345	431,5	59,2
models @ 48V			
FT 2-48/250	345	431,5	52,3
FT 2-48/300	345	431,5	69,4
FT 4-48/100	345	431,5	31,3
FT 4-48/150	345	431,5	48,3
FT 4-48/200	345	431,5	59,2

	D	B *	mass
models @ 24V	mm	mm	Kg
FB 2-24/300	329	437	70,6
FB 4-24/200	329	437	59,2
FB 4-24/250	329	437	63,2
models @ 48V			
FB 2-48/250	329	437	70,6
FB 2-48/300	389	497	84,7
FB 4-48/100	329	437	59,2
FB 4-48/125	329	437	63,2
FB 4-48/150	389	497	77,7
FB 4-48/200	389	497	83,2

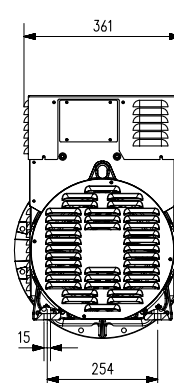
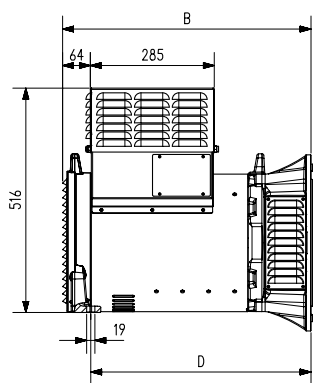
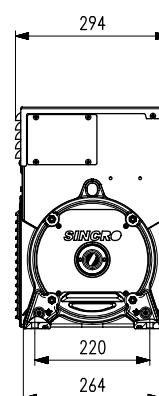
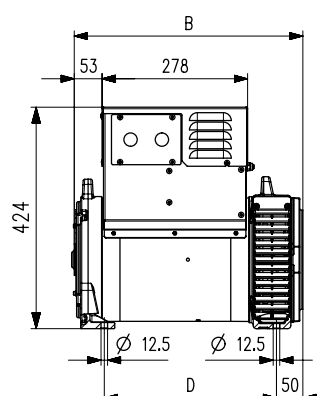
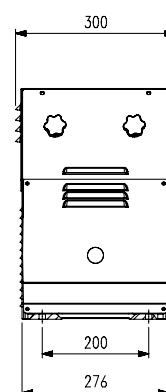
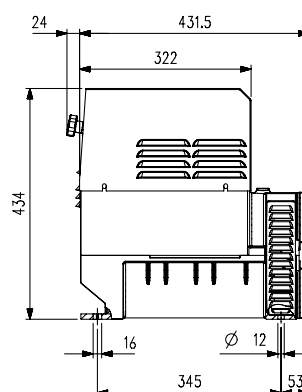
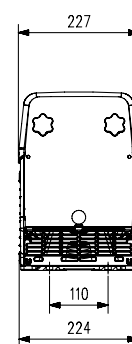
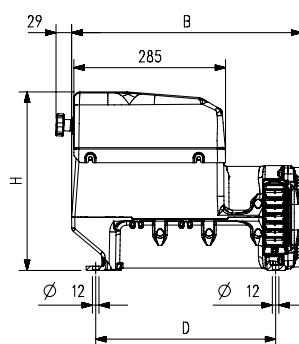
	D	B **	mass
model @ 24V	mm	mm	Kg
IB 4-24/500	506	570	160
models @ 48V			
IB 4-48/500	506	570	160
IB 4-48/800	576	640	210

* B quote refers to J609B coupling.

For other couplings please refer to E3 - FT - FB series data sheets

** B quote refers to SAE 4 7½ coupling.

For other couplings please refer to IB series data sheets



EES Energie-Erzeugung-Systeme GmbH

Gartenfelder Str. 29-37 / Geb. 39, Workbox 6,
13599 Berlin, Germany

T: +49 30 70016272

contact@eesystem.de

