



## Drive Technology

2022

Soft starters and variable frequency drives for every drive application

With SIRIUS soft starters and SINAMICS frequency converter technology, you can address each and every drive application – whether low voltage, medium voltage or DC.. Cuthbert Stewart Ltd are proud to bring a complete range of SINAMICS drives from world renowned manufacturer Siemens to the New Zealand market.



NATIONAL DISTRIBUTORS OF  
**SIEMENS**  
csl-online.nz



## Drive Technology CONTENTS

### SIRIUS 3RW softstarters

Overview	
Applications .....	3
SIRIUS 3RW52 .....	4
SIRIUS 3RW55 .....	5
Accessories.....	6

### SINAMICS variable frequency drives

Overview .....	7
Selection by Performance and Application .....	9
SINAMICS V20 Series - Compact, basic performance converter.....	10
SINAMICS G120P Series.....	12
SINAMICS G120C Series .....	14
SINAMICS G120X Series .....	16





## SIRIUS 3RW Soft starters

Electric motors are significant in most industries; without them, your applications wouldn't work. Motors pump liquids, transport heavy materials, move air masses and support the processing of raw materials. Since motors are the leading unit in your facility, they should be durable and reliable with no chances of failure. SIRIUS soft starters do just this! They help limit the starting current and torque to best fit your application.

This prevents mechanical load and voltage dips. The motor is adjusted to the load of the driven machine by means of stepless control of the voltage supply. Mechanical equipment is accelerated softly, which highly influences operating characteristics, and extends service life. The comprehensive range offers the appropriate soft alternative for almost every application, whether for simple or demanding motor requirements.

Optimized and reliable machine concepts can be implemented simply and economically thanks to the jerk-free start of three-phase motors.



Automatic parameterization	High Performance	3RW55 5.5 ... 710/1,200 kW ( $\sqrt{3}$ )		$(\sqrt{3})$	3-phase control
Condition Monitoring					
Torque control					
Soft Torque	General Performance	3RW52 5.5 ... 315/560 kW ( $\sqrt{3}$ )		$(\sqrt{3})$	
HMI and communication modules as accessories					
Analog output 0...10 V or 4...20 mA					

Typical applications for SIRIUS 3RW Softstarters

-  Pumping
-  Ventilating
-  Compressing
-  Conveying
-  Processing



### Pump cleaning and pump stopping mode

The pump cleaning function prevents pumps from blocking, therefore, increasing your productivity and system availability. The pump stopping mode avoids mechanical loading in the piping system and extends the service life of the equipment.



### Electrical Ruggedness

The pump cleaning function prevents pumps from blocking, therefore, increasing your productivity and system availability. The pump stopping mode avoids mechanical loading in the piping system and extends the service life of the equipment.



### Condition monitoring

The condition monitoring function supports optimal planning of maintenance work on bearings or seals, therefore maximizing availability.



### Automatic parameterization

Automatic parameterization simplifies the commissioning and operation of critical applications, even in the case of highly dynamic load characteristics.



### Integrated braking functions

Intelligent functions such as soft starter braking ensure a fast and reliable stop without engineering and configuration work.

## Soft starters SIRIUS 3RW - Applications

SIRIUS 3RW soft starters are a cost-effective alternative to using direct or star-delta starters for starting three-phase motors. They avoid undesirable side effects such as mechanical stresses or voltage drops in the mains supply. The soft start in control cabinets can be implemented in almost any application in a simple and practical way with our complete soft starter range.



Application	Standard applications			High-feature applications	
	3RW30	3RW40/50	3RW52	3RW44	3RW55
<b>Normal starting (CLASS 10)</b>					
Pumps	●	●	●	●	●
Pumps with special pump ramp-down (to prevent water hammer)			~	●	●
Heat pumps	●	●	●	●	●
Hydraulic pumps	~	●	●	●	●
Presses	~	●	●	●	●
Conveyor belts	~	●	●	●	●
Roller conveyors	~	●	●	●	●
Screw conveyors	~	●	●	●	●
Escalators		●	●	●	●
Piston compressors		●	●	●	●
Screw compressors		●	●	●	●
Small fans <sup>1)</sup>		●	●	●	●
Centrifugal blowers		●	●	●	●
Bow thrusters		●	●	●	●
<b>Heavy starting (CLASS 20)</b>					
Stirrer		~	~	●	●
Extruders		~	~	●	●
Lathes		~	~	●	●
Milling machines		~	~	●	●
<b>Very heavy starting (CLASS 30)</b>					
Large fans <sup>2)</sup>				●	●
Circular saws/bandsaws				●	●
Centrifuges				●	●
Mills				●	●

● Recommended soft starter

~ Possible soft starter

- 1) The mass inertia of the fan is <10 times the mass inertia of the motor
- 2) The mass inertia of the fan is ≥ 10 times the mass inertia of the motor

## Soft starters SIRIUS 3RW52

SIRIUS 3RW52 soft starters provide true 3 phase control combined with minimal heat dissipation. As with all SIRIUS soft starters in-built bypass is included. Simple control allow for fast setup of motor start/stop as well as protection parameters. The 3RW52 can be ordered with either thermistor input or an analogue output.



- Choice of analogue outor or thermistor input card
- Choice of Standard or High Feature operator panel mounted on the 3RW52 or the door
- Simple parameterization
- Pump stopping function

Type	3RW521.	3RW522.	3RW523.	3RW524.
Installation dimensions (W x H x D)mm	Frame Size 1 170 x 275 x 152	Frame Size 2 185 x 306 x 203	Frame Size 3 185 x 306 x 203	Frame Size 4 210 x 393 x 203



AMPS at 40 Deg C	Inline Circuit kW Rating	Frame size	Part Number
13	5.5	1	3RW5213-1●C●4
18	7.5	1	3RW5214-1●C●4
25	11	1	3RW5215-1●C●4
32	15	1	3RW5216-1●C●4
38	18.5	1	3RW5217-1●C●4
47	22	2	3RW5224-1●C●4
63	30	2	3RW5225-1●C●4
77	37	2	3RW5226-1●C●4
93	45	2	3RW5227-1●C●4
113	55	3	3RW5234-2●C●4
143	75	3	3RW5235-2●C●4
171	90	3	3RW5236-2●C●4
210	110	4	3RW5243-2●C●4
250	132	4	3RW5244-2●C●4
315	160	4	3RW5245-2●C●4
370	200	4	3RW5246-2●C●4
470	250	4	3RW5247-2●C●4
570	315	4	3RW5248-2●C●4

With analogue output	A	[Terminal Block Diagram]
With thermistor input	T	
24VAC/DC control voltage	0	[Terminal Block Diagram]
110...240VAC control voltage	1	

STOCKED ITEM

NON STOCKED ITEM

## Soft starters SIRIUS 3RW55

SIRIUS 3RW55 is a high feature soft starter offering maximum flexibility for motor starting applications. As with all SIRIUS soft starters in-built bypass is included. To ensure correct setup, this softstarter includes an auto parameterization feature which optimizes the parameters with every start. This ensures soft and smooth starting every time.

- Condition Monitoring
- Pump Stopping/cleaning function
- Motor Protection acc to ATEX/IECEX
- Torque Control Function
- Auto-parameterization
- Profinet module with integrated ethernet switch
- Safety function STO (SIL2/PLd)



Type	3RW551.	3RW552.	3RW553.	3RW554.
Installation dimensions (W x H x D)mm	Frame Size 1 170 x 275 x 152	Frame Size 2 185 x 306 x 203	Frame Size 3 185 x 306 x 203	Frame Size 4 210 x 393 x 203

AMPS at 40 Deg C	Inline Circuit kW Rating	Frame size	Part Number
13	5.5	1	3RW5513-1HA●4
18	7.5	1	3RW5514-1HA●4
25	11	1	3RW5515-1HA●4
32	15	1	3RW5516-1HA●4
38	18.5	1	3RW5517-1HA●4
47	22	2	3RW5524-1HA●4
63	30	2	3RW5255-1HA●4
77	37	2	3RW5526-1HA●4
93	45	2	3RW5527-1HA●4
113	55	3	3RW5534-6HA●4
143	75	3	3RW5535-6HA●4
171	90	3	3RW5536-6HA●4
210	110	4	3RW5543-6HA●4
250	132	4	3RW5544-6HA●4
315	160	4	3RW5545-6HA●4
370	200	4	3RW5546-6HA●4
470	250	4	3RW5547-6HA●4
570	315	4	3RW5548-6HA●4
630	355	5	3RW5552-6HA●4
720	400	5	3RW5553-6HA●4
840	450	5	3RW5554-6HA●4
1100	560	5	3RW5556-6HA●4
1280	710	5	3RW5558-6HA●4

<b>STOCKED ITEM</b>
NON STOCKED ITEM

24VAC/DC control voltage	0
110...240VAC control voltage	1

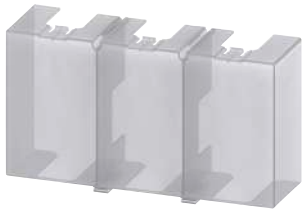
## Soft starters SIRIUS 3RW5 Accessories



Communications modules	
3RW5980-0CP00	Profibus
3RW5980-0CS00	Profinet standard
3RW5950-0CH00	Profinet High - Feature with integrated switch for 3RW55 only
3RW5980-0CE00	Ethernet IP



HMI modules and connection cables	
3RW5980-0HF00	"HMI high feature HMI with colour LCD display for softstarter control and monitoring of all measured variables and faults. Can be mounted on the softstarter or on cabinet door"
3RW5980-0HL00	Interface cover (spare part)
3RW5980-0HS00	"HMI standard (for 3RW50 & 52 Only) HMI with LED display for softstarter control and monitoring. Can be mounted on the 3RW52 softstarter or on cabinet door"
3RW5980-0HD00	Door mounting kit IP65
3RW5980-0HC60	5m round cable for door mounting
3UF7933-0BA00-0	2.5m round cable for door mounting
3UF7937-0BA00-0	1m round cable for door mounting
3UF7932-0BA00-0	0.5m round cable for door mounting
3ZY1311-0AA00	Push in lugs for wall mounting (qty 2 required)



Terminal covers	
3RW5983-0TC20	3RW552, 3RW553 (qty 2 required)
3RW5984-0TC20	3RW554 (qty 2 required)



Housing parts	
3RW5954-0GF00	Front cover frame size 4
3RW5950-0GL20	Hinged door without cut out
3RW5950-0GL30	Hinged door with cut out for HF HMI
3RW5950-0GL40	Hinged door with cut out for Standard HMI (3RW52)
3RW5950-0GD20	Control-circuit duct cover



Fans	
3RW5983-0FF00 *	Fan for frame size 1, 2 and 3
3RW5984-0FF00 *	Fan for frame size 4
3RW5983-0FC00 *	Fan cover for frame size 1, 2 and 3
3RW5984-0FC00 *	Fan cover for frame size 4

\*refer to manual for quantity required for each 3RW softstarter

STOCKED ITEM

NON STOCKED ITEM



## SINAMICS variable frequency drives

With the SINAMICS family of converters from Siemens, you can simply and efficiently address each individual drive application – in the low, medium and DC voltage domains. All of the drive components are perfectly harmonized and coordinated with one another. Siemens converters, motors and control systems can be immediately and seamlessly integrated into the drive train and into existing automation landscapes. Simply select the appropriate drive components and start to commission your drive system. Smart financing solutions for industry Fit for a digital future – with SINAMICS, you have the optimum basis to address all of the requirements relating to digitalization. As a result of the convenient connection to MindSphere – the Cloud-based solution – you can simply boost the efficiency of your production and reduce downtimes to a minimum based on innovative maintenance concepts. The optimum converter for each and every application

## The optimum converter for every application

Standard performance converters

Converters for specific industries

High performance converters

Servo converters

Distributed converters



### Pumping/ventilating/compressing

SINAMICS supports the continuous and energy-efficient operation of pumps, fans and compressors – either running continuously or requiring a high dynamic performance. The advantages include especially precise flow control, short response times – and the avoidance of damaging vibration levels and cavitation.

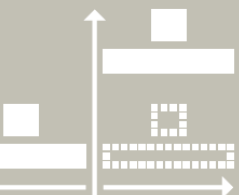
- SINAMICS V20
- SINAMICS G120X
- SINAMICS G130 / G150
- SINAMICS G180



### Moving

Energy-efficient and rugged solutions for basic conveyor technology with roller or chain conveyors, for hoisting gear and elevators – as well as for storage and retrieval machines that demand a high dynamic performance – and always with Safety Integrated onboard.

- SINAMICS G120C
- SINAMICS G120D
- SINAMICS G115D
- SINAMICS DCM

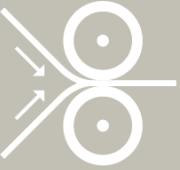


### Positioning

When high dynamic performance and precision are demanded: SINAMICS ensures precise positioning of individual axes, allows several axes to be interpolated in a coordinated fashion – for example as required in complex robotic applications.

- SINAMICS G120
- SINAMICS G120D
- SINAMICS S210
- SINAMICS S120





**Processing**

SINAMICS is the ideal solution for continuously running processes de-manding high speed and torque precision, for instance, for extruders, centrifuges, agitators and all types of production machines – motion control, isochronous communication and Safety Integrated.

- SINAMICS G120
- SINAMICS S210
- SINAMICS S120
- SINAMICS S150
- SINAMICS DCM



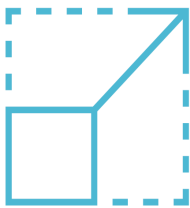

**Machining**

Whether high-speed spindles or feed and auxiliary axes for turning, milling, drilling and sawing: SINAMICS is the perfect drive for all applications in material processing. Fast adaptability and minimum equipping times play a decisive role when it comes to achieving high productivity.

■ SINAMICS S120



## SINAMICS – versatility for maximum efficiency



### Extensive Portfolio

Customized power, performance and functionality: SINAMICS converters have a huge degree of flexibility – and also provide future-proof solutions for your applications.



### Digitalisation

SINAMICS converters are ready & prepared for the digital era: Operating data can be directly transferred to Cloud platforms via MindConnect. The information collected there can help to make your plant or system more productive in the future and reduce



### Efficient Engineering

Powerful tools support you over the complete lifecycle when configuring, engineering, commissioning and troubleshooting your SINAMICS drive solution. Further, these tools also help you optimize your processes.



### Safety Integrated

Maximum safety for operating and maintenance personnel: Safety functions are already integrated in our SINAMICS drives. You benefit from shorter response times, a higher degree of cost-effectiveness and lower wiring costs.



### Drive-System solution

Profit from our modular automation concept that can be scaled as required: SINAMICS converters operate perfectly with SIMOTICS motors, SIMOGEAR geared motors – as well as SIMATIC, SINUMERIK and SIMOTION control systems. All of the components communicate seamlessly via PROFINET.

## SINAMICS variable frequency drives -Selection by Performance and Application

PURPOSE	PERFORMANCE					
	CONTINUOUS MOTION			DISCONTINUOUS MOTION		
	BASIC	MEDIUM	HIGH	BASIC	MEDIUM	HIGH
PUMPING VENTILATION COMPRESSING	Centrifugal pumps Radial/Axial Fans Compressors		Eccentric Worm Pump	Hydraulic Pump Dosing Pump		Descaling Pump Hydraulic Pump
	V20 G120C G120P G120X	G120P G120X G130 G150	S120	G120	S210	S120
MOVING	Belt Conveyors Roller Conveyors Chain Conveyors	Belt Conveyors Roller Conveyors Chain Conveyors Vertical/Horizontal Material Handling Elevators/Escalators Gantry Cranes Ship's Drives Cable Railways	Elevators Container cranes Mine hoists Open cast mine excavators Test stands	Accelerating Conveyers Rack Feeders	Accelerating Conveyers Rack Feeders Crosscutters Roll Changers	Rack Feeders Robotics Pick-and-place Indexing tables Crosscutters Roller Feeds Engaging/disengaging
	V20 G120C	G120 G130 G150	S120 S150 DCM	V90 G120	S210 DCM	S120 DCM
PROCESSING	Mills Mixers Kneaders Crushers Agitators Centrifuges	Mills Mixers Kneaders Crushers Agitators Centrifuges Extruders Rotary Furnaces	Extruders Winders/unwinders Leading/following drives Colanders Medical Presses Printing Machines	Tubular bagging machines Single Axis motion control		Servo Presses Rolling Mill drives Multi-axis machine control
	V20 G120C	G120 G130 G150	S120 S150 DCM	V90 G120	S210	S120 DCM

## SINAMICS V20 SERIES

### The compact basic performance converter

The compact SINAMICS V20 is the frequency converter for simple motion sequences. It is characterized by its short commissioning times, easy handling, and energy-saving functions. The converter with its nine sizes covers the power range from 0.12 kW to 30 kW.



<b>Voltage range:</b>	1Ø 200–240 V ±10 %, 3Ø 380–480 V ±10 %, 47–63 Hz
<b>Power Range:</b>	1Ø 0.12kW - 3kW 3Ø 0.37kW - 30kW
<b>Frequency Range:</b>	47–63 Hz
<b>Degree of Protection:</b>	IP20
<b>Overload power:</b>	150% x I for 60s and then 94.5% x I for 240s (average 100% rated)
<b>Ambient temperature:</b>	0° to 40 °C without derating/up to 60 °C with derating
<b>EMV:</b>	Acc. to IEC 61800-3, Category 2 for AC1 and Class 3 for AC3
<b>Motor cable lengths:</b>	25 m shielded/50 m unshielded
<b>Standards:</b>	CE, UL, C-tick
<b>Signal inputs/outputs:</b>	Varied, dependant on choice of control unit.
<b>Control modes:</b>	V/f, V/f ECO, V <sup>2</sup> /f, V/f Multi-point
<b>Functions:</b>	Fixed velocity/speed setpoint, 2/3 wire control PID controller, motor holding brake control
<b>Braking (0.12kW to 5.5kW):</b>	Braking chopper unit available as spare part
<b>Braking (7.5kW to 15kW):</b>	Brake chopper unit built in.
<b>EMC Filter:</b>	Integrated
<b>Basic Operator Panel:</b>	Built-in
<b>Communications:</b>	Modbus RTU onboard

FRAME SIZE	DIMENSIONS
AA	68 x 142 x 108
AB	68 x 142 x 128
AC	160 x 90 x 147
AD	176 x 136 x 160
A	90 x 150 x 46
B	140 x 160 x 165
C	184 x 182 x 169
D	240 x 207 x 173

## SINAMICS V20 SERIES

### The compact basic performance converter



Siemens SINAMICS V20 Series VSD with 1AC , 230V input and integrated category 2 EMC filter

PART NUMBER	KW RATING LO	KW RATING HI	Rated Current LO	FRAME SIZE
6SL3210-5BB11-2BV1	0.12kW	0.12kW	0.9A	AA
6SL3210-5BB12-5BV1	0.25kW	0.25kW	1.7A	AA
6SL3210-5BB13-7BV1	0.37kW	0.37kW	2.3A	AA
6SL3210-5BB15-5BV1	0.55kW	0.55kW	3.2A	AB
6SL3210-5BB17-5BV1	0.75kW	0.75kW	3.9A	AB
6SL3210-5BB21-1BV1	1.1kW	1.1kW	6A	AC
6SL3210-5BB21-5BV1	1.5kW	1.5kW	7.8A	AC
6SL3210-5BB22-2BV1	2.2kW	2.2kW	11A	AD
6SL3210-5BB23-0BV1	3kW	3kW	13.6A	AD

Siemens SINAMICS V20 Series VSD with 3AC, 400V input and integrated category 3 EMC filter

PART NUMBER	KW RATING LO	KW RATING HI	Rated Current LO	FRAME SIZE
6SL3210-5BE13-7CV0	0.37kW	0.37kW	1.3A	A
6SL3210-5BE15-5CV0	0.55kW	0.55kW	1.7A	A
6SL3210-5BE17-5CV0	0.75kW	0.75kW	3.1A	A
6SL3210-5BE21-1CV0	1.1kW	1.1kW	3.1A	A
6SL3210-5BE21-5CV0	1.5kW	1.5kW	4.1A	A
6SL3210-5BE22-2CV0	2.2kW	2.2kW	4.8A	A
6SL3210-5BE23-0CV0	3kW	3kW	7.3A	B
6SL3210-5BE24-0CV0	4kW	4kW	8.24A	B
6SL3210-5BE25-5CV0	5.5kW	5.5kW	11A	C
6SL3210-5BE27-5CV0	7.5kW	7.5kW	16.5A	D
6SL3210-5BE31-1CV0	11kW	11kW	21A	D
6SL3210-5BE31-5CV0	15kW	15kW	31A	D
6SL3210-5BE31-8CV0	22kW	18.5kW	54A	E
6SL3210-5BE32-2CV0	30kW	22kW	72A	E

Operator accessories for SINAMICS V20 Drives

PART NUMBER	SHORT CODE	DESCRIPTION
6SL3255-0VE00-0UA1	PL	Parameter Loader For V20
6SL3255-0VA00-2AA1	BOP	BOP Interface For Door Mount BOP
6SL3255-0VA00-4BA1	BOP	Door Mount BOP
6SL3255-0VC00-0HA0	RS485	RS485 Terminators (50PCS)
6SL3054-4AG00-2AA0	MEM	Memory Card For V20

STOCKED ITEM

NON STOCKED ITEM

## SINAMICS G120P SERIES

### The converter for building technology and process industries

The converter series SINAMICS G120P offers tailor-made solutions for building technology and process industries. With a particularly large power range from 0.37 kW to 630 kW, available in nine different sizes, with built in wall mounting and cabinet units - all tasks are mastered individually. The converters SINAMICS G120P are designed for operation with SIMOTICS GP and SIMOTICS SD motors of the VSD10 and SIMOTICS FD motors line.



<b>Voltage range:</b>	3Ø 400 V ±10 %, 47-63 Hz
<b>Power Range:</b>	3Ø 0.75kW - 90kW
<b>Frequency Range:</b>	47-63 Hz
<b>Degree of Protection:</b>	IP55 (IP20 also available)
<b>Overload power:</b>	110% for 57 sec. and 150% for 3 sec. every 300 sec
<b>Ambient temperature:</b>	0° to 40 °C without derating/up to 60 °C with derating
<b>EMV:</b>	Acc. to IEC 61800-3, Category 2 for AC1 and Class 3 for AC3
<b>Motor cable lengths:</b>	25 m shielded/50 m unshielded
<b>Standards:</b>	CE; RCM; EAC
<b>Signal inputs/outputs:</b>	Varied, dependant on choice of control unit.
<b>Control modes:</b>	V/f, V/f ECO, V <sup>2</sup> /f, V/f Multi-point
<b>Functions:</b>	Fixed velocity/speed setpoint, 2/3 wire control PID controller, motor holding brake control
<b>Braking (0.12kW to 5.5kW):</b>	Braking chopper unit available as spare part
<b>Braking (7.5kW to 15kW):</b>	Brake chopper unit built in.
<b>EMC Filter:</b>	Integrated
<b>Operator Panel:</b>	Purchased seperately
<b>Communications:</b>	Modbus/RTU; RS485/US\$; BACnet MS/TP; PROFIBUS (optional); PROFINET (optional); CANopen (optional)

FRAME SIZE	DIMENSIONS
A	154 x 460 x 249 mm
B	180 x 540 x 249 mm
C	230 x 620 x 249 mm
D	320 x 640 x 329 mm
E	320 x 751 x 329 mm
F	410 x 915 x 416 mm

## SINAMICS G120P SERIES

The converter for building technology and process industries



Siemens SINAMICS G120P Series VSD IP55 3AC, 400V input and integrated Class A EMC filter

PART NUMBER	kW RATING LO	kW RATING HI	FRAME SIZE
6SL3200-6AM13-1AH0	1.1 kW	3.1 A	A
6SL3200-6AM14-1AH0	1.5 kW	4.1 A	A
6SL3200-6AM15-8AH0	2.2 kW	5.9 A	A
6SL3200-6AM17-7AH0	3.0 kW	7.7 A	A
6SL3200-6AM21-0AH0	4.0 kW	10.2 A	B
6SL3200-6AM21-3AH0	5.5 kW	13.2 A	B
6SL3200-6AM21-8AH0	7.5 kW	18 A	B
6SL3200-6AM22-6AH0	11 kW	26 A	C
6SL3200-6AM23-2AH0	15 kW	32 A	C
6SL3200-6AM23-8AH0	18.5 kW	38 A	C
6SL3200-6AM24-5AH0	22 kW	45 A	D
6SL3200-6AM26-0AH0	30 kW	60 A	D
6SL3200-6AM27-5AH0	37 kW	75 A	E
6SL3200-6AM28-8AH0	45 kW	90 A	E
6SL3200-6AM31-1AH0	55 kW	110 A	F
6SL3200-6AM31-4AH0	75 kW	145 A	F
6SL3200-6AM31-7AH0	90 kW	178 A	F

Operator accessories for SINAMICS G120P Drives

PART NUMBER	SHORT CODE	DESCRIPTION	IP RATING
<b>6SL3255-6AA00-4CA0</b>	<b>IOP</b>	<b>Intelligent Operator Panel</b>	<b>IP54</b>
<b>6SL3255-6AA00-4JA2</b>	<b>BOP</b>	<b>Basic Operator Panel</b>	<b>IP55</b>
6SL3255-0AA00-5AA0	SAM	Wireless Smart Access Module	IP20

BASIC OPERATOR PANEL



INTELLIGENT OPERATOR PANEL



WIRELESS SMART ACCESS MODULE



STOCKED ITEM

NON STOCKED ITEM

## SINAMICS G120C SERIES

### The compact versatile frequency converter

The SINAMICS G120C combines an extremely compact design with integrated safety function and a wide range of functions for diverse applications. With seven frame sizes, it covers a power range from 0.55 to 132 kW.



<b>Voltage range:</b>	1Ø 200–240 V ±10 %, 3Ø 380–480 V ±10 %, 47–63 Hz
<b>Power Range:</b>	1Ø 0.12kW - 3kW 3Ø 0.37kW - 15kW
<b>Frequency Range:</b>	47–63 Hz
<b>Degree of Protection:</b>	IP20
<b>Overload power:</b>	150% x I for 60s and then 94.5% x I for 240s (average 100% rated)
<b>Ambient temperature:</b>	0° to 40 °C without derating/up to 50 °C with derating
<b>EMV:</b>	Acc. to IEC 61800-3, Category 2 for AC1 and Class 3 for AC3
<b>Motor cable lengths:</b>	50 m shielded/100 m unshielded
<b>Standards:</b>	CE, UL, cUL, RCM, SEMI F47, RoHS, EAC
<b>Signal inputs/outputs:</b>	Varied, dependant on choice of control unit.
<b>Control modes:</b>	V/f, V/f ECO, V <sup>2</sup> /f, V/f Multi-point
<b>Functions:</b>	Fixed velocity/speed setpoint, 2/3 wire control PID controller, motor holding brake control
<b>Braking (0.12kW to 5.5kW):</b>	Braking chopper unit available as spare part
<b>Braking (7.5kW to 15kW):</b>	Brake chopper unit built in.
<b>EMC Filter:</b>	Integrated
<b>Basic Operator Panel:</b>	Built-in
<b>Communications:</b>	Profnet PN
<b>Safety:</b>	STO (Safe Torque Off) SBC (Safe Brake Control module extra)

FRAME SIZE	DIMENSIONS
A	154 x 460 x 249 mm
B	180 x 540 x 249 mm
C	230 x 620 x 249 mm
D	320 x 640 x 329 mm
E	320 x 751 x 329 mm
F	410 x 915 x 416 mm



## SINAMICS G120C SERIES

### The compact versatile frequency converter



Siemens SINAMICS G120C Series VSD IP20 3AC, 400V input and integrated Class A EMC filter

0.37 to 15.0 kW - Power Module and Control Card included:

PART NUMBER	POWER 150% OVERLOAD (HO)	CURRENT 150% OVERLOAD (HO)	FRAME SIZE
6SL3210-1KE11-8AF2	0.37 kW	1.30 A	AA
6SL3210-1KE12-3AF2	0.55 kW	1.70 A	AA
6SL3210-1KE13-2AF2	0.75 kW	2.20 A	AA
6SL3210-1KE14-3AF2	1.10 kW	3.10 A	AA
6SL3210-1KE15-8AF2	1.50 kW	4.10 A	AA
6SL3210-1KE17-5AF1	2.20 kW	5.60 A	A
6SL3210-1KE18-8AF1	3.0 kW	7.30 A	A
6SL3210-1KE21-3AF1	4.0 kW	8.80 A	B
6SL3210-1KE21-7AF1	5.50 kW	12.5 A	B
6SL3210-1KE22-6AF1	7.50 kW	7.50 A	C
6SL3210-1KE23-2AF1	11.00 kW	25.00 A	C
6SL3210-1KE23-8AF1	15.0 kW	31.00 A	C

Siemens SINAMICS G120C Series VSD IP20 3AC, 400V input and integrated Class A EMC filter

18.5 to 90kW - Power Modules (order Control Card separately)

6SL3210-1PE24-5AL0	18.5 kW	38.00 A	D
6SL3210-1PE26-0AL0	22 kW	45.00 A	D
6SL3210-1PE27-5AL0	30 kW	60.00 A	D
6SL3210-1PE28-8AL0	37 kW	75.00 A	E
6SL3210-1PE31-1AL0	45 kW	90.00 A	E
6SL3210-1PE31-5AL0	55 kW	110.00 A	F
6SL3210-1PE31-8AL0	75 kW	145.00 A	F
6SL3210-1PE32-1AL0	90 kW	178.00 A	F

Control Cards - required for 18.5kW and upward (order Power Module separately)

PART NUMBER	DESCRIPTION
6SL3246-0BA22-1BA0	Control module RS485/STO
6SL3246-0BA22-1PA0	Control module Profibus DP/STO
6SL3246-0BA22-1FA0	Control module Profinet /STO
6SL3246-0BA22-1CA0	Control module CAN Open /STO

Operator accessories for SINAMICS G120C Drives

PART NUMBER	SHORT CODE	DESCRIPTION	IP RATING
6SL3255-6AA00-4CA0	IOP	Intelligent Operator Panel	IP54
6SL3255-6AA00-4JA2	BOP	Basic Operator Panel	IP55
6SL3255-0AA00-5AA0	SAM	Wireless Smart Access Module	IP20

STOCKED ITEM

NON STOCKED ITEM

## SINAMICS G120X SERIES

### The compact versatile frequency converter

The SINAMICS G120X converter is optimized for pump and fan applications in the water/wastewater industry as well as HVAC applications in building automation. This makes SINAMICS G120X the first choice for users who want to tap on the power of the elements to improve the quality of people's lives. Part of a complete and seamless family of products, the frequency converter meets practically every requirement.



<b>Voltage range:</b>	1Ø 200–240 V ±10 %, 3Ø 380–480 V ±10 %, 47–63 Hz
<b>Power Range:</b>	1Ø 0.12kW - 3kW 3Ø 0.37kW - 15kW
<b>Frequency Range:</b>	47–63 Hz
<b>Degree of Protection:</b>	IP20
<b>Overload power:</b>	150% x I for 60s and then 94.5% x I for 240s (average 100% rated)
<b>Ambient temperature:</b>	0° to 40 °C without derating/up to 60 °C with derating
<b>EMV:</b>	Acc. to IEC 61800-3, Category 2 for AC1 and Class 3 for AC3
<b>Motor cable lengths:</b>	150 m Shielded
<b>Standards:</b>	CE, UL, C-tick
<b>Signal inputs/outputs:</b>	Varied, dependant on choice of control unit.
<b>Control modes:</b>	V/f, V/f ECO, V <sup>2</sup> /f, V/f Multi-point
<b>Functions:</b>	Fixed velocity/speed setpoint, 2/3 wire control PID controller, motor holding brake control
<b>Braking (0.12kW to 5.5kW):</b>	Braking chopper unit available as spare part
<b>Braking (7.5kW to 15kW):</b>	Brake chopper unit built in.
<b>EMC Filter:</b>	Integrated
<b>Operator Panel:</b>	Built-in
<b>Communications:</b>	PROFINET, ETHERNET/IP
<b>Safety:</b>	STO (Safe Torque Off) SBC (Safe Brake Control module extra)

FRAME SIZE	DIMENSIONS
A	154 x 460 x 249 mm
B	180 x 540 x 249 mm
C	230 x 620 x 249 mm
D	320 x 640 x 329 mm
E	320 x 751 x 329 mm
F	410 x 915 x 416 mm

## SINAMICS G120X SERIES

The compact versatile frequency converter



### SIEMENS SINAMICS G120X 3 phase 380 – 480 VAC with Intelligent Operator Panel

PART NUMBER	POWER 110% OVERLOAD	CURRENT 110% OVERLOAD	FRAME SIZE
6SL3230-2YE12-1AF0	1.1kW	3.1 A	A
6SL3230-2YE14-1AF0	1.5kW	4.1 A	A
6SL3230-2YE16-1AF0	2.2kW	5.9 A	A
6SL3230-2YE18-1AF0	3.0kW	7.7 A	A
6SL3230-2YE20-1AF0	4.0kW	10.2 A	B
6SL3230-2YE22-1AF0	5.5kW	13.2 A	B
6SL3230-2YE24-1AF0	7.5kW	18 A	B
6SL3230-2YE26-1AF0	11kW	26 A	C
6SL3230-2YE28-1AF0	15kW	32 A	C
6SL3230-2YE30-1AF0	18kW	38 A	D
6SL3230-2YE32-1AF0	22kW	45 A	D
6SL3230-2YE34-1AF0	30kW	60 A	D
6SL3230-2YE36-1AF0	37kW	75 A	D
6SL3230-2YE38-1AF0	45kW	90 A	E
6SL3230-2YE40-1AF0	55kW	110 A	E
6SL3230-2YE42-1AF0	75kW	145 A	F
6SL3230-2YE44-1AF0	90kW	178 A	F
6SL3230-2YE46-1AF0	110kW	205 A	F
6SL3230-2YE48-1AF0	132kW	250 A	F
6SL3230-2YE50-1AF0	160kW	302 A	G
6SL3230-2YE52-1AF0	200kW	370 A	G
6SL3230-2YE54-1AF0	250kW	477 A	G

### Operator accessories for SINAMICS G120X Drives

PART NUMBER	SHORT CODE	DESCRIPTION	IP RATING
<b>6SL3255-6AA00-4CA0</b>	<b>IOP</b>	<b>Intelligent Operator Panel</b>	<b>IP54</b>
<b>6SL3255-6AA00-4JA2</b>	<b>BOP</b>	<b>Basic Operator Panel</b>	<b>IP55</b>
6SL3255-0AA00-5AA0	SAM	Wireless Smart Access Module	IP20

BASIC OPERATOR PANEL



INTELLIGENT OPERATOR PANEL



WIRELESS SMART ACCESS MODULE



STOCKED ITEM

NON STOCKED ITEM



**AUCKLAND HEAD OFFICE**

22 Fisher Crescent,  
Mt Wellington, Auckland.  
PO Box 62293, Sylvia Park 1644,  
Auckland, New Zealand.

**CONTACT US**

Ph: 09 928 1000  
Email: [support@csl-online.nz](mailto:support@csl-online.nz)

**CUSTOMER SERVICES**

FREEPHONE 0800 288 423  
[support@csl-online.nz](mailto:support@csl-online.nz)

