

System overview

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SINAMICS G220 built-in and wall-mounted units

Overview



Example: SINAMICS G220 built-in units, degree of protection IP20 / UL Open Type, frame sizes FSA, FSB, FSC, FSD1, FSD2 and FSE



Example: SINAMICS G220 wall-mounted units, degree of protection IP55 / UL Type 12, version without a maintenance switch, frame sizes FSB, FSC, FSD1, FSD2 and FSE

The SINAMICS G220 built-in and wall-mounted units are efficient, secure, and future-proof frequency converters that have been specifically developed for high-performance applications in manufacturing, process industries, and marine.

This converter series sets itself apart, especially as a result of its advanced motor control, high flexibility, very simple selection and operation, as well as fast commissioning, low harmonics, and long cable lengths. SINAMICS G220 built-in and wall-mounted units allow for increased availability of the plant or system and optimize energy efficiency.

SINAMICS G220 converter series provides a complete and seamless range of products:

- Voltage versions and power ratings:
 - 200 V to 240 V 3 AC: 0.55 kW to 30 kW (0.75 hp to 40 hp)
 - 380 V to 500 V 3 AC: 1.1 kW to 55 kW (1.5 hp to 40 hp)
 - 525 V to 690 V 3 AC (available in the future)
- Degrees of protection (IP20 / UL Open Type and IP55 / UL Type 12)
- Clean Power to reduce line harmonics
 - 380 V to 500 V 3 AC: 7.5 kW to 55 kW
- Power ratings from 55 kW up to 1 MW available in the future

Overview



SINAMICS G220 starter kit incl. SINAMICS Smart Adapter

A SINAMICS G220 starter kit comprises a SINAMICS G220 converter (200 V or 400 V 3 AC; PROFINET / Modbus TCP/IP, EtherNet/IP) with SINAMICS Smart Adapter for Wi-Fi access to the integrated web server of the converter.

The delivery quantity is limited to three units per customer.

The SINAMICS G220 starter kits can be combined with the SIMATIC starter kits. In this way, simple drive tasks up to motion control applications can be quickly implemented.

Selection and ordering data

Description	Article No.
SINAMICS G220 starter kits SINAMICS G220 converter (3 AC, PROFINET / Modbus TCP/IP, EtherNet/IP) with SINAMICS Smart Adapter for Wi-Fi access to the integrated web server.	
• 200 V to 240 V 3 AC, IP20 / UL Open Type, 2.2 kW, FSA, without integrated line filter	6SL4990-0AE10-0AA0
• 380 V to 500 V 3 AC, IP20 / UL Open Type, 4 kW, FSA, with integrated line filter Category C2 (removable)	6SL4990-0AE11-0AA0
• 380 V to 500 V 3 AC, IP20 / UL Open Type, 7.5 kW, FSB, with integrated line filter Category C2 (removable), SINAMICS SDI Pro 5.5" handheld kit	Available soon
• 380 V to 500 V 3 AC, IP55 / UL Type 12, 5.5 kW, FSB, with integrated line filter Category C2 (removable)	Available soon
• 380 V to 500 V 3 AC, Clean Power, IP20 / UL Open Type, 7.5 kW, FSD1, with integrated line filter Category C2 (removable)	Available soon
• 380 V to 500 V 3 AC, Clean Power, IP55 / UL Type 12, 15 kW, FSD1, with integrated line filter Category C2 (removable), SINAMICS SDI Pro 5.5" with SINAMICS IP55 panel mounting frame	Available soon

System overview

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SINAMICS G220 built-in and wall-mounted units



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Further information about SINAMICS G220

can be found on the internet at
www.siemens.com/sinamics-g220

Technical data and configuration
 can be found on the internet at
[www.siemens.com/sinamics-g220/
documentation](http://www.siemens.com/sinamics-g220/documentation)

and concerning ordering and configuration
 via the Siemens Product Configurator in
 SiePortal:

[www.siemens.com/sinamics-g220/
configuration](http://www.siemens.com/sinamics-g220/configuration)

SINAMICS G220 built-in and wall-mounted units

Overview



Example: SINAMICS G220 built-in units, degree of protection IP20 / UL Open Type, frame sizes FSA, FSB, FSC, FSD1, FSD2 and FSE



Example: SINAMICS G220 wall-mounted units, degree of protection IP55 / UL Type 12, version without a maintenance switch, frame sizes FSB, FSC, FSD1, FSD2 and FSE

The SINAMICS G220 built-in and wall-mounted units are efficient, secure, and future-proof frequency converters that have been specifically developed for high-performance applications in manufacturing, process industries, and marine.

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 - 380 V to 500 V 3 AC: 7.5 kW to 55 kW
- Power ratings from 55 kW up to 1 MW available in the future

SINAMICS G220 built-in and wall-mounted units

Overview

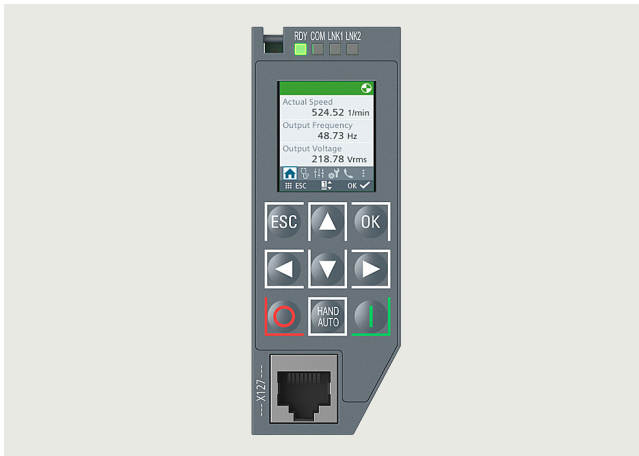
Enjoy a new efficiency level and let your technology do the work for you

The SINAMICS G220 is a compact and efficient converter solution for a wide range of applications. It offers highly efficient commissioning, diagnostics and maintenance thanks to the engineering tools.

SINAMICS web server for SINAMICS G220

Web server for efficient commissioning, diagnostics, maintenance and operator control and monitoring, any time, from anywhere.

SINAMICS SDI Standard (Smart Drive Interface)



The SINAMICS SDI Standard is a highly user-friendly Operator Panel for the SINAMICS G220. The SDI Standard supports newcomers and drive experts alike with essential tasks locally on the device. Thanks to its high-contrast 1.4" color display and membrane keyboard, the device can assist with diagnosing faults in plain text, operation and monitoring, and with maintenance and servicing of the converter on site. The SINAMICS SDI Standard is included in the scope of delivery of the converters.

SINAMICS SDI Pro 5.5" (Smart Drive Interface)



SINAMICS SDI Pro 5.5", Handheld

The SINAMICS SDI Pro 5.5" represents a powerful and user-friendly Operator Panel for SINAMICS G220. The SDI Pro supports both newcomers and drive experts. Thanks to its touch interface and high-contrast 5.5" color display, it goes hand-in-glove for commissioning, diagnostics, operator control and monitoring as well as on-site maintenance and servicing of converters.

The additional available options, such as the SINAMICS SDI Pro 5.5" handheld kit and SINAMICS SDI Pro 5.5" door mounting kit, extend the operating range of the device. With the SDI Pro 5.5" handheld kit, the device can be equipped with a rubber overshoe for mobile use. The SINAMICS SDI Pro 5.5" door mounting kit enables the SINAMICS SDI Pro to be installed in control cabinet doors.

SINAMICS Smart Adapter



SINAMICS Smart Adapter

SINAMICS Smart Adapter is a Wi-Fi solution for engineering, service and maintenance tasks with the next generation of SINAMICS converters. The adapter is designed to be plugged into and powered from the service interface (X127) on the converter.

SINAMICS Startdrive commissioning tool in TIA Portal

Integration via PROFINET communication, Modbus TCP or EtherNet/IP into a higher-level control system has never been so easy thanks to the full integration of SINAMICS G220 into the SINAMICS Startdrive commissioning tool in TIA Portal. In combination with SIMATIC S7-1500, the SINAMICS G220 drive with PROFINET communication is a harmonized and coordinated motion control solution in TIA Portal. The connection to the SINAMICS G220 converter is made via clock-synchronous PROFINET IRT and the safety connection (in case of faulty SIMATIC S7-1500F) directly via PROFIsafe. This approach reduces engineering times and increases productivity.

SINAMICS G220 built-in and wall-mounted units

Overview

More efficient and sustainable due to minimized harmonics



The SINAMICS G220 is the first choice for anyone seeking an energy efficient converter. The innovative **SINAMICS G220 Clean Power** effectively reduces line harmonics. With its revolutionary and integrated active infeed unit, harmonics are reduced to the minimum and the total harmonic current distortion is typically less than 2 %. No additional options are required to comply with IEEE 519 reducing the material footprint for a more sustainable industry.

In addition, the advanced hardware and software functions of SINAMICS G220 provide reliable motor control of high efficiency motors such as synchronous reluctance motors and permanent magnet synchronous motors.

SINAMICS G220 is designed for long cable lengths and it can reach to up to 150 m according to C2 EMC Category. Integrated DC link reactor is also available in all power ratings and a wide portfolio of energy saving functions.

Master tomorrow's challenges today with safe and secure technology

SINAMICS G220 provides Security Integrated functions increasing the level of data security to comprehensively protect industrial plants and systems from cyber attacks – from both inside and outside. SINAMICS G220 "Defense in Depth" security concept ensures and provides individual user management including access control along with secure communication between the variable frequency converter and the TIA Portal engineering system or web client. It reliably protects availability through Security Integrated functions.

Furthermore, this new variable frequency converter is equipped with Safety Integrated functions up to SIL3 (safety integrity level) and PL e (performance level) according to IEC 62061 and ISO 13849-1 standards. This means that the system and the machine comply with strict safety requirements.

Local safety concepts can be implemented by controlling the integrated safety functions via fail-safe terminals as well as integrated in the automation via fail-safe PROFIsafe communication profile.

The variable frequency converter is equipped with the following safety functions as standard:

- Safe Torque Off (STO)
- Safe Stop 1 time-controlled (SS1-t)
- Safe Motor Temperature (SMT) in combination with the optional OM-SMT Option Module Safe Motor Temperature → New functionality, which allows an easy integration of safe motor temperature monitoring for ATEX applications. Option module OM-SMT Safe Motor Temperature is required.

Extended safety functions can be simply added via the Safety Integrated Extended software option:

- Safe Stop 1 (SS1) with SBR/SAM
- Safely Limited Speed (SLS)
- Safe Direction (SDI)
- Safe Speed Monitor (SSM)

From firmware V6.4 the following additional Safety Integrated Functions are available:

- Basic functions (no additional license is required): SS1E
- Extended functions (an additional license is required): SS2, SS2E, SOS and SLA

Thanks to the high degree of protection IP55 / UL Type 12 and the 3C3 coating on the electronics, the SINAMICS G220 is ready to work in harsh environments ensuring longer lifetimes and rugged operation.

In addition, SINAMICS G220 secures the availability of processes and machines thanks to the support of PROFINET media redundancy protocol and S2 system redundancy.



Example: SINAMICS G220, degree of protection IP55 / UL Type 12, version without a maintenance switch, frame size FSD1

Siemens EcoTech Profile (SEP) for SINAMICS G220

Siemens introduces a new label: Siemens EcoTech. It is an environmental declaration for products based on product-specific evaluations of sustainability relevant KPIs. To provide maximum transparency, the Siemens EcoTech Profile (SEP) were created for all Siemens EcoTech products.

It is a Siemens-created, standardized product data sheet which gives insight about the product performance in environmental relevant criteria as well as about interpretation and comparison of data against an existing norm, standard or predecessor product.

You can find more information on the internet at:

<https://support.industry.siemens.com/cs/ww/en/ps/28308/cert?ci=5702>

www.siemens.com/SiemensEcoTech

**Siemens
EcoTech**

Overview

Future-proof your applications by accelerating the digital transformation

SINAMICS G220 is ready for digitalization in every phase of the life cycle: Design – Realize – Optimize.

In the design phase, the **SINAMICS G220 digital twin** integrated in SINAMICS Startdrive commissioning tool in TIA Portal via **DriveSim Engineer** makes it possible to virtualize, simulate and test the drive behavior, identify issues and make changes ahead of time in order to speed up the development of machines and plants.

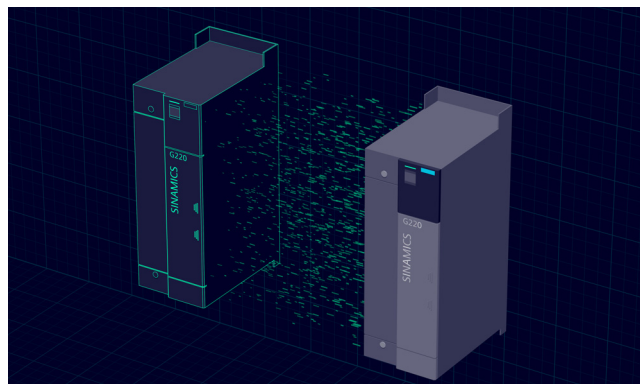
During the realization phase, our powerful digitalization engineering tools, for example SINAMICS Startdrive commissioning tool in TIA Portal and Drive Connector SINAMICS, speed up the implementation, commissioning and connectivity of SINAMICS G220. Thanks to the IIoT (Industrial Internet of Things) option module together with the edge application Drive Connector SINAMICS, high frequency data can be transferred from the drive to the Industrial Edge and to the cloud. Finally, in the optimization phase, the acquired data can be analyzed on Industrial Edge or in the Cloud for example with the application Drivetrain Analyzer ¹⁾. The result is improved machine capacity utilization, higher availability, enhanced productivity and optimized energy efficiency.

Attain a high level of flexibility and seamlessly integrate your solutions globally

SINAMICS G220 offers a high-performance drive solution that can be matched to the customer-specific requirements using the wide range of available option modules and software functions.

- Different option modules can be easily plugged beneath the converter. This allows you to customize the SINAMICS G220 by adding DRIVE-CLiQ interface, ATEX certified sensor temperature connection and the gateway to digitalization via the IIoT module.
Same flexibility concept applies to the communication of the converter. The communication modules can be simply exchanged to meet the requirements of the standard field-buses. In the first step, PROFINET, Modbus TCP and EtherNet/IP communication protocols are available. PROFIBUS and Modbus RTU will be added to the portfolio soon.
- The SINAMICS Drive Software ensures that SINAMICS G220 frequency converters operate smoothly and reliably. It offers an easy to expand comprehensive software portfolio and enables high flexibility for a wide range of applications. For example, SINAMICS Motor Control Extended for an optimal motor control near standstill, or an extension of the Safety Integrated functions with Safety Extended option.

The SINAMICS G220 is compliant with all the global standards. This frequency converter offers a wide range of power ratings based on a seamlessly integrated system, for all common voltages, line supplies as well as degrees of protection IP20 / UL Open Type and IP55 / UL Type 12.



Option Modules



SINAMICS G220 OM-DQ Option Module DRIVE-CLiQ



SINAMICS G220 OM-SMT Option Module Safe Motor Temperature



SINAMICS G220 OM-IIoT Option Module IIoT

¹⁾ Available soon.

SINAMICS G220 built-in and wall-mounted units

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Extended warranty

For SINAMICS G220, Siemens offers an optional extended warranty of up to 8 years via **Service Protect**:

- Free for the first 36 months after registering the product at: www.siemens.com/serviceprotect
- Subject to a charge for a further 3 or 5 years of extended warranty.
You can find detailed information here: <https://support.industry.siemens.com/cs/ww/en/sc/4842>

You can find the correct Service Protect product number for your SINAMICS G220 converter using our simple configurator www.siemens.com/serviceprotect

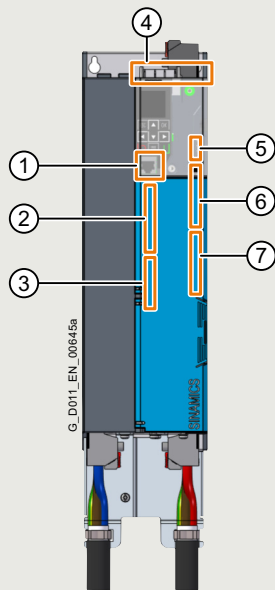
Concerning standard warranty please ask your partner at Siemens.

Your partner can be found in our Personal Contacts Database at: www.siemens.com/automation-contact

Benefits

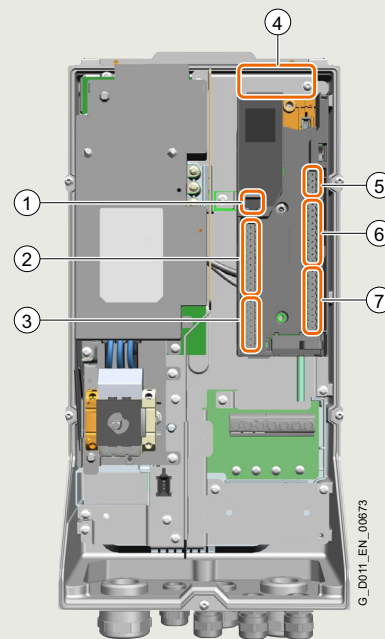
- **Reduce energy consumption** with the ultimate Clean Power technology in low harmonics and high efficiency motors control.
- **Protect know-how** and ensure safe personnel, machines and systems with Safety Integrated and Security Integrated.
- **Accelerate time-to-market** by using the digital twin of the drive during design, test and optimization phase.
- **Boost productivity** thanks to easy commissioning, diagnostics, service and the integration into TIA Portal.
- **Safeguard system availability** even in harsh environments thanks to S2 redundancy, IP55 / UL Type 12, ATEX-certified input and Edge and Cloud connectivity.
- **Maximize system flexibility** thanks to a configurable drive solution via hardware and software options.

Integration



- ① X127 Service interface (e. g. connection for the operation unit)
- ② X132 Analog inputs, analog outputs and temperature sensors
- ③ X133 Digital outputs
- ④ X1xx Communications module
- ⑤ X124 External power supply
- ⑥ X130 Fail-safe digital input, fail-safe digital output
- ⑦ X131 Digital inputs

Example: SINAMICS G220, Interface overview, IP20

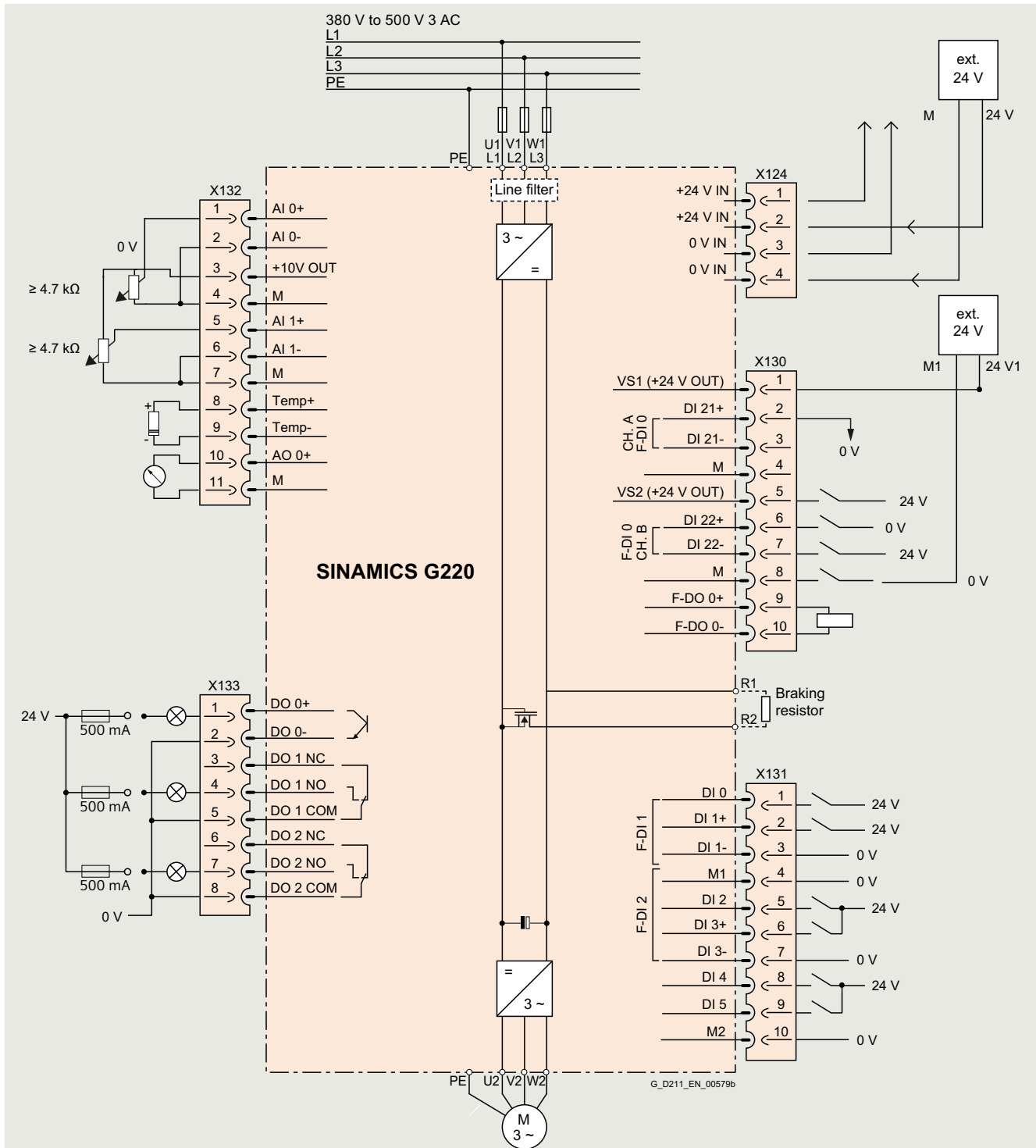


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- ⑦ X131 Digital inputs

Example: SINAMICS G220, Interface overview, IP55

SINAMICS G220 built-in and wall-mounted units

Integration



Example: SINAMICS G220, Connection diagram

SINAMICS G220 built-in and wall-mounted units

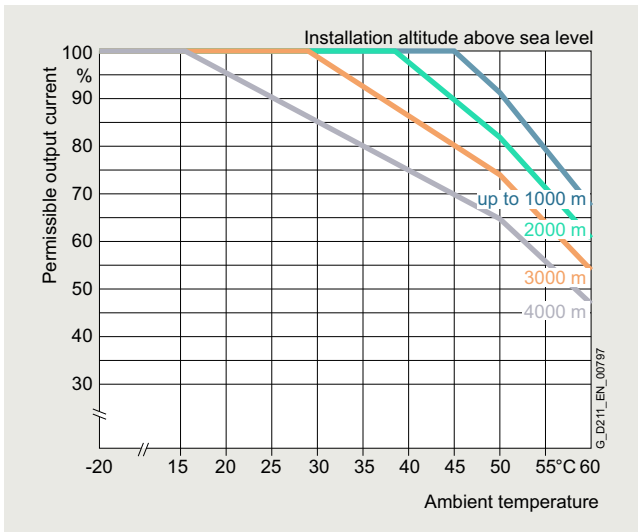
Characteristic curves

Permissible output current depending on pulse frequency

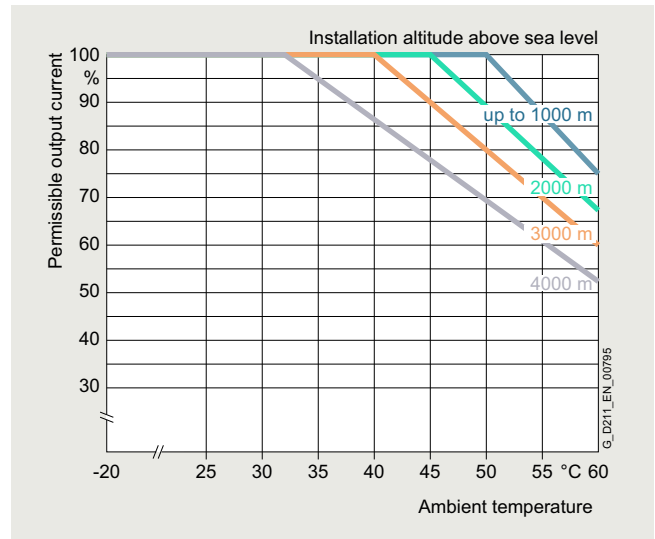


Permissible output current as a function of the pulse frequency, SINAMICS G220, at low overload (LO)

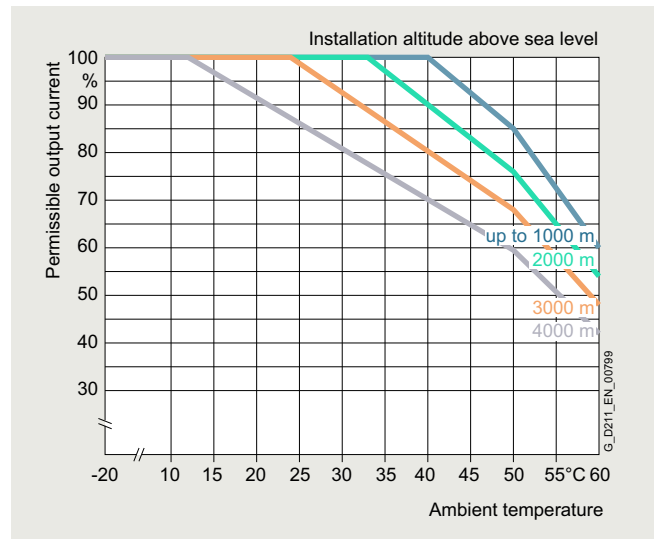
Permissible output current depending on installation altitude and ambient temperature, SINAMICS G220 degree of protection IP20 / UL Open Type



Permissible output current as a function of the installation altitude and the ambient temperature, SINAMICS G220 degree of protection IP20 / UL Open Type, at low overload (LO)



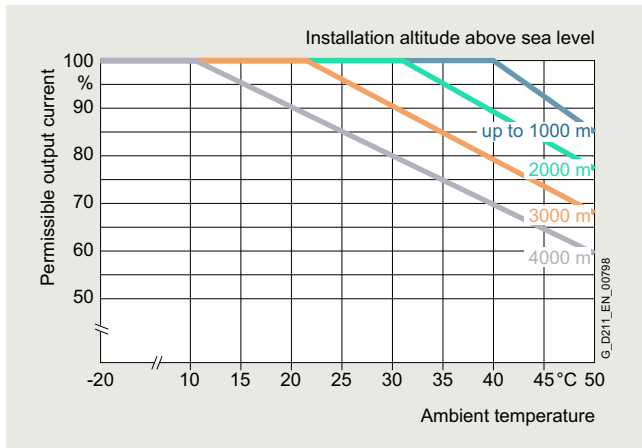
Permissible output current as a function of the installation altitude and the ambient temperature, SINAMICS G220 degree of protection IP20 / UL Open Type, at high overload (HO)



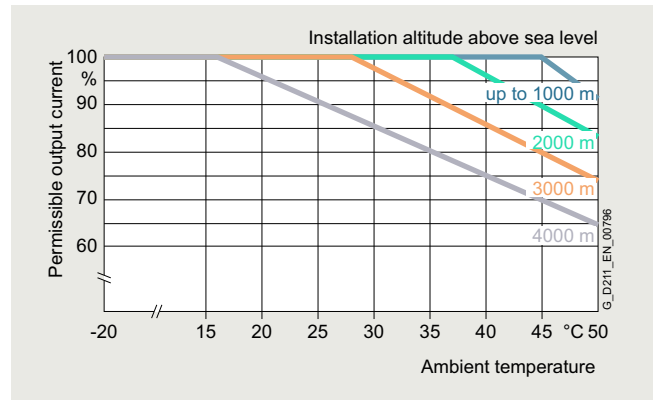
Permissible output current as a function of the installation altitude and the ambient temperature, SINAMICS G220 degree of protection IP20 / UL Open Type, at operation with synchronous reluctance motor

Characteristic curves

Permissible output current depending on installation altitude and ambient temperature, SINAMICS G220 degree of protection IP55 / UL Type 12



Permissible output current as a function of the installation altitude and the ambient temperature, SINAMICS G220 degree of protection IP55 / UL Type 12, at low overload (LO)



Permissible output current as a function of the installation altitude and the ambient temperature, SINAMICS G220 degree of protection IP55 / UL Type 12, at high overload (HO)

Notes

Continuous operation above the permissible output current leads to an converter fault due to overtemperature.

The permissible output current in % is the quotient of the permissible output current and the rated output current.

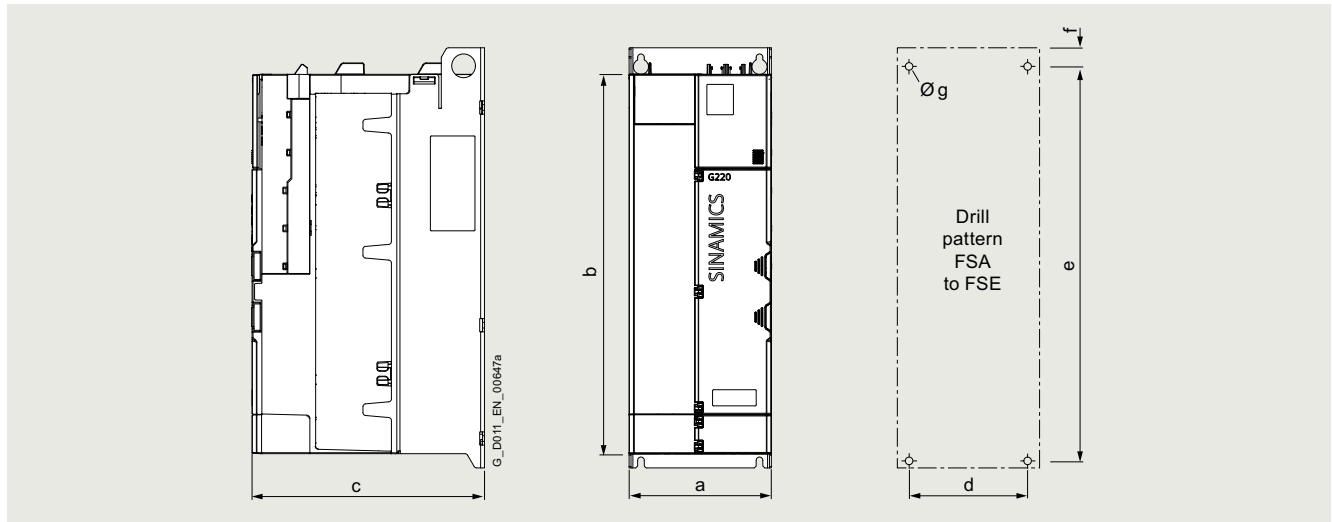
More information on the derating data of SINAMICS G220 is available in the manual on the internet at:

www.siemens.com/sinamics-g220/documentation

SINAMICS G220 built-in and wall-mounted units

Dimensional drawings

SINAMICS G220 degree of protection IP20 / UL Open Type



Principle dimension drawing and drill pattern for SINAMICS G220 degree of protection IP20 / UL Open Type

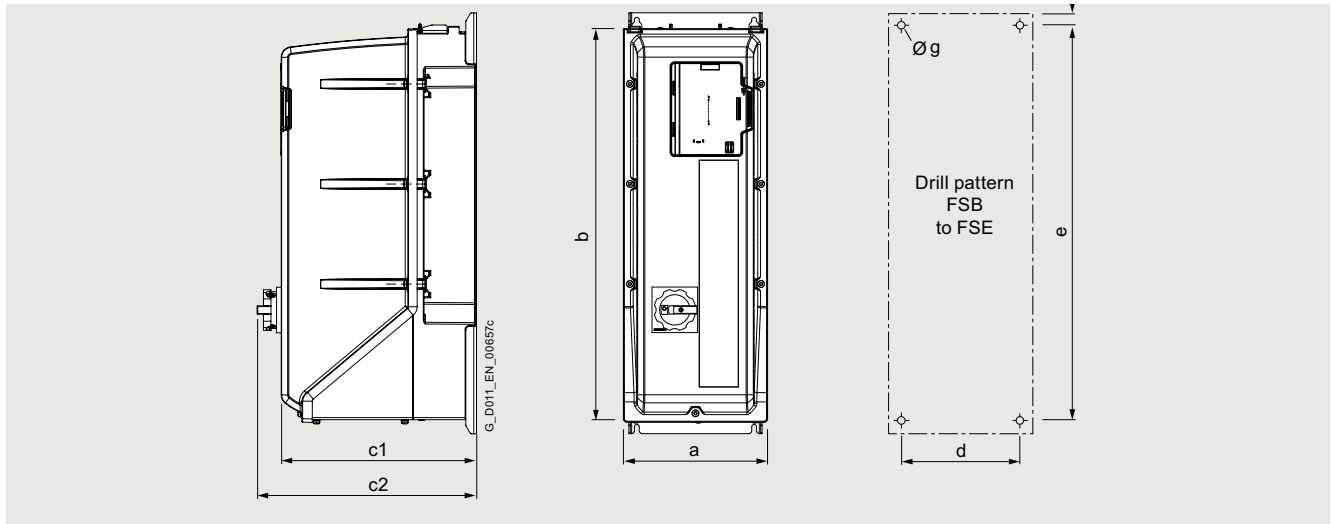
Frame size	Dimensions in mm (inches)			Drilling dimensions in mm (inches)				Mounting	Cooling clearance in mm (inches)		Minimal mounting clearance (inches)
	a (width)	b (height) ¹⁾	c (depth)	d	e	f	g		top	bottom	
FSA	73 (2.88)	250 (9.84)	208 (8.19)	50 (1.97)	275 (10.83)	10 (0.39)	11 (0.43)	4 × M4	85 (3.35)	85 (3.35)	10 (0.39)
FSB	85 (3.35)	355 (13.98)	208 (8.19)	50 (1.97)	375 (14.76)	8.7 (0.34)	11 (0.43)	4 × M5	85 (3.35)	108 (4.26)	10 (0.39)
FSC	125 (4.92)	355 (13.98)	209 (8.23)	100 (3.94)	375 (14.76)	10 (0.39)	11.5 (0.45)	4 × M5	85 (3.35)	149 (5.87)	10 (0.39)
FSD1	150 (5.91)	400 (15.75)	245 (9.65)	125 (4.92)	425 (16.73)	10 (0.39)	16 (0.63)	4 × M6	90 (3.55)	160 (6.30)	10 (0.39)
FSD2	200 (7.87)	442 (17.41)	245 (9.65)	175 (6.89)	475 (18.70)	10 (0.39)	16 (0.63)	4 × M6	90 (3.55)	160 (6.30)	10 (0.39)
FSE	250 (9.84)	520 (20.47)	245 (9.65)	225 (8.86)	550 (21.66)	10 (0.39)	16 (0.63)	4 × M6	90 (3.55)	193 (7.60)	10 (0.39)

¹⁾ Height is extended by the shield plate – refer to the equipment user manual for specific values.

SINAMICS G220 built-in and wall-mounted units

Dimensional drawings

SINAMICS G220 degree of protection IP55 / UL Type 12



Principle dimension drawing and drill pattern for SINAMICS G220 degree of protection IP55 / UL Type 12

Frame size	Dimensions in mm (inches)				Drilling dimensions in mm (inches)				Mounting With screws (plus washers and nuts)	Cooling clearance in mm (inches)	
	a (width)	b (height)	c1 (depth)	c2 (depth)	d	e	f	g		top	bottom
FSB	225 (8.87)	415 (16.35)	225 (8.86)	265 (10.43)	170 (6.70)	435 (17.14)	8 (0.32)	13 (0.51)	4 × M4	103 (4.06)	103 (4.06)
FSC	245 (9.65)	460 (18.12)	250 (9.84)	283 (11.14)	200 (7.88)	480 (18.91)	10 (0.39)	16 (0.63)	4 × M5	115 (4.53)	115 (4.53)
FSD1	209 (8.23)	571 (22.50)	284 (11.18)	319 (12.56)	170 (6.70)	590 (23.25)	10 (0.39)	15 (0.59)	4 × M5	143 (5.63)	143 (5.63)
FSD2	270 (10.64)	650 (25.61)	284 (11.18)	318 (12.52)	225 (8.87)	675 (26.60)	14 (0.55)	14 (0.55)	4 × M6	163 (6.42)	163 (6.42)
FSE	327 (12.88)	778 (30.65)	315 (12.40)	379 (14.92)	285 (11.23)	800 (31.54)	14 (0.55)	14 (0.55)	4 × M6	195 (7.68)	195 (7.68)

SINAMICS G220 built-in and wall-mounted units

Clicking to SiePortal

6SL3255-0AA00-5AA0

IP20/UL Open Type · 200 ... 240 V 3 AC · 0.55 kW to 30 kW (0.75 hp to 40 hp)

Selection and ordering data

SINAMICS G220 built-in and wall-mounted units → Configuration with power components (see right page)

Rated power				Rated output current				Rated input current		Frame size	SINAMICS G220 <u>without</u> integrated line filter
Low overload (LO)		High overload (HO)		Low overload (LO)		High overload (HO)		Low overload (LO)			
Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC		
230 V	240 V	230 V	240 V	230 V	240 V	230 V	240 V	230 V	240 V		
kW	hp	kW	hp	A	A	A	A	A	A	Article No.	

200 ... 240 V 3 AC · Rated pulse frequency 4 kHz · Input frequency 50/60 Hz (47 ... 63 Hz)

0.55	0.75	0.37	0.5	3.9	3.2	2.9	2.2	3.2	3.0	FSA	6SL4112-0 ■ A 05 - 0 ■ F 0
0.75	1	0.55	0.75	4.7	4.2	3.9	3.2	3.9	3.7	FSA	6SL4112-0 ■ A 06 - 0 ■ F 0
1.1	1.5	0.75	1	6.5	6.0	4.7	4.2	5.4	5.1	FSA	6SL4112-0 ■ A 08 - 0 ■ F 0
1.5	2	1.1	1.5	8.5	6.8	6.5	6.0	7.1	6.4	FSA	6SL4112-0 ■ A 10 - 0 ■ F 0
2.2	3	1.5	2	11	9.6	8.5	6.8	10.1	9.3	FSA	6SL4112-0 ■ A 11 - 0 ■ F 0
3	4	2.2	3	14.5	12.4	11	9.6	13.1	11.9	FSB	6SL4112-0 ■ A 12 - 0 ■ F 0
4	5	3	4	19	15.2	14.5	12.4	17.7	14.7	FSB	6SL4112-0 ■ A 13 - 0 ■ F 0
5.5	7.5	4	5	27	22	19	15.2	21.7	20.1	FSC	6SL4112-0 ■ A 15 - 0 ■ F 0
7.5	10	5.5	7.5	34	28	27	22	29.5	26.6	FSC	6SL4112-0 ■ A 16 - 0 ■ F 0
11	15	7.5	10	46	42	40	28	41.8	39.5	FSD2	6SL4112-0 ■ A 17 - 0 ■ F 0
15	20	11	15	63	54	46	42	53.9	49.7	FSD2	6SL4112-0 ■ A 18 - 0 ■ F 0
18.5	25	15	20	75	68	63	54	66.5	62.5	FSD2	6SL4112-0 ■ A 20 - 0 ■ F 0
22	30	18.5	25	90	80	75	68	76.0	72.1	FSE	6SL4112-0 ■ A 21 - 0 ■ F 0
30	40	22	30	112	104	90	80	103.2	96.1	FSE	6SL4112-0 ■ A 23 - 0 ■ F 0

Article No. supplements

Degree of protection	Cooling	Coating acc. to IEC 60721-3-3: 2002	Housing				
IP20/UL Open Type	Internal	Class 3C2 Class 3C3	Standard	C	D		
Hardware configuration				A			
Standard							
Line filter							
Without integrated line filter						0	
Additional hardware option							
Without hardware option or with more than one hardware option (see Special versions)							
OM-DQ Option Module DRIVE-CLiQ						A	
OM-IIoT Option Module IIoT						B	
OM-SMT Option Module Safe Motor Temperature						E	
Communication						F	
PROFINET, Modbus TCP and EtherNet/IP							
Special versions							
Only for selection of more than one hardware option (Additional hardware option = "A")							
OM-DQ Option Module DRIVE-CLiQ							T01
OM-IIoT Option Module IIoT							T04
OM-SMT Option Module Safe Motor Temperature							T05

Order codes

6SL4112-0 ■ ... - A . 0 -Z...+...+...

More information

Further technical specifications and documentation are available on the internet at:

www.siemens.com/sinamics-g220/documentation

and concerning ordering and configuration via the

Siemens Product Configurator in SiePortal:

www.siemens.com/sinamics-g220/configuration

Clicking to SiePortal

6SL3255-0AA00-5AA0



SINAMICS G220 built-in and wall-mounted units

IP20/UL Open Type · 200 ... 240 V 3 AC · 0.55 kW to 30 kW (0.75 hp to 40 hp)

Line-side components					DC link components	Load-side power components	
Line reactors	Recommended line-side overcurrent protection devices				Braking resistors	Output reactors	dv/dt filters plus VPL
	More information at: www.siemens.com/sinamics-g220/ocpd						
	Fuses IEC-compliant		Fuses UL/cUL-compliant Rated voltage 600 V AC				
	Current		Fuse type	Current			
Article No.	A	Article No.	Class/Article No.	A	Article No.	Article No.	Article No.
A DC line reactor is integrated – therefore no line reactor is required.	6	3NA3801	J	6	JJY:023151720007	–	–
	10	3NA3803	J	8		–	–
	10	3NA3803	J	10		–	–
	16	3NA3805	J	12		–	–
	16	3NA3805	J	15		–	–
	20	3NA3807	J	20	JJY:023163720018	–	–
	32	3NA3812	J	30		–	–
	40	3NA3817	J	40	JJY:023433720001	–	–
	50	3NA3820	J	50		–	–
	80	3NA3824	J	70	JJY:023422620002	–	–
	100	3NA3830	J	90		–	–
	100	3NA3830	J	110		–	–
	125	3NA3832	J	125	JJY:023423320001	–	–
	160	3NA3836	J	150		–	–

Ordering examples

Basic selection

SINAMICS G220 converters ·
degree of protection IP20/UL Open Type · 200 ... 240 V 3 AC,
15 kW · without integrated line filter

Example 1

6SL4112-0

18-

0

-Z

Example 2

6SL4112-0

18-

0

-Z

Article No. supplements

Degree of protection	Cooling	Coating acc. to IEC 60721-3-3: 2002	Housing
IP20/UL Open Type	Internal	Class 3C2 Class 3C3	Standard
Hardware configuration			
Standard			
Line filter			
Without integrated line filter			
Additional hardware option			
Without hardware option or with more than one hardware option (see Special versions)			
OM-DQ Option Module DRIVE-CLiQ			
OM-ILoT Option Module ILoT			
OM-SMT Option Module Safe Motor Temperature			
Communication			
PROFINET, Modbus TCP and EtherNet/IP			
Special versions			
OM-DQ Option Module DRIVE-CLiQ			
OM-ILoT Option Module ILoT			
OM-SMT Option Module Safe Motor Temperature			
Complete Article No.			
with "-Z" and order codes			

6SL4112-0

C

A

18-

0

A

F

0

-Z

T01

T04

T05

6SL4112-0

D

A

18-

0

B

F

0

Order codes

T01

T04

T05

T01 + T04 + T05

6SL4112-0

D

A

18-

0

B

F

0

6SL4112-0

SINAMICS G220 built-in and wall-mounted units

Clicking to SiePortal

6SL3255-0AA00-5AA0

IP20/UL Open Type · 380 ... 500 V 3 AC · 1.1 kW to 55 kW (1.5 hp to 75 hp)

Selection and ordering data

SINAMICS G220 built-in and wall-mounted units → Configuration with power components (see right page)

Rated power				Rated output current				Rated input current		Frame size	SINAMICS G220 without integrated line filter	SINAMICS G220 with integrated line filter
Low overload (LO)		High overload (HO)		Low overload (LO)		High overload (HO)		Low overload (LO)				
Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC			
400 V	480 V	400 V	480 V	400 V	480 V	400 V	480 V	400 V	480 V			
kW	hp	kW	hp	A	A	A	A	A	A		Article No.	Article No.
380 ... 500 V 3 AC · Rated pulse frequency 4 kHz · Input frequency 50/60 Hz (47 ... 63 Hz)												
1.1	1.5	0.75	1	3.9	3.0	2.9	2.1	3.3	3.0	FSA	6SL4113-0 ■ A 08 - 0 ■ F 0	6SL4113-0 ■ A 08 - 2 ■ F 0
1.5	2	1.1	1.5	4.7	3.4	3.9	3.0	4.1	3.7	FSA	6SL4113-0 ■ A 10 - 0 ■ F 0	6SL4113-0 ■ A 10 - 2 ■ F 0
2.2	3	1.5	2	6.5	4.8	4.7	3.4	5.6	4.9	FSA	6SL4113-0 ■ A 11 - 0 ■ F 0	6SL4113-0 ■ A 11 - 2 ■ F 0
3	4	2.2	3	8.5	6.2	6.5	4.8	7.3	6.1	FSA	6SL4113-0 ■ A 12 - 0 ■ F 0	6SL4113-0 ■ A 12 - 2 ■ F 0
4	5	3	4	11	7.6	8.5	6.2	9.6	7.3	FSA	6SL4113-0 ■ A 13 - 0 ■ F 0	6SL4113-0 ■ A 13 - 2 ■ F 0
5.5	7.5	4	5	14.5	11	11	7.6	12.9	11.0	FSB	6SL4113-0 ■ A 15 - 0 ■ F 0	6SL4113-0 ■ A 15 - 2 ■ F 0
7.5	10	5.5	7.5	19	14	14.5	11	17.3	14.0	FSB	6SL4113-0 ■ A 16 - 0 ■ F 0	6SL4113-0 ■ A 16 - 2 ■ F 0
11	15	7.5	10	27	21	19	14	23.3	19.6	FSC	6SL4113-0 ■ A 17 - 0 ■ F 0	6SL4113-0 ■ A 17 - 2 ■ F 0
15	20	11	15	34	27	27	21	31.3	25.4	FSC	6SL4113-0 ■ A 18 - 0 ■ F 0	6SL4113-0 ■ A 18 - 2 ■ F 0
18.5	25	15	20	40	34	34	27	37.8	31.6	FSD1	6SL4113-0 ■ A 20 - 0 ■ F 0	6SL4113-0 ■ A 20 - 2 ■ F 0
22	30	18.5	25	46	40	40	34	44.9	37.5	FSD1	6SL4113-0 ■ A 21 - 0 ■ F 0	6SL4113-0 ■ A 21 - 2 ■ F 0
30	40	22	30	63	52	46	40	59.9	49.8	FSD2	6SL4113-0 ■ A 23 - 0 ■ F 0	6SL4113-0 ■ A 23 - 2 ■ F 0
37	50	30	40	75	65	63	52	72.6	59.9	FSD2	6SL4113-0 ■ A 24 - 0 ■ F 0	6SL4113-0 ■ A 24 - 2 ■ F 0
45	60	37	50	90	77	75	65	86.7	71.3	FSE	6SL4113-0 ■ A 26 - 0 ■ F 0	6SL4113-0 ■ A 26 - 2 ■ F 0
55	75	45	60	112	96	90	77	105.9	88.3	FSE	6SL4113-0 ■ A 27 - 0 ■ F 0	6SL4113-0 ■ A 27 - 2 ■ F 0

Article No. supplements

Degree of protection	Cooling	Coating acc. to IEC 60721-3-3: 2002	Housing								
IP20/UL Open Type	Internal	Class 3C2 Class 3C3	Standard	C	D			C	D		
Hardware configuration											
Standard				A				A			
Line filter											
Without integrated line filter						0					
With integrated line filter Category C2										2	
Additional hardware option											
Without hardware option or with more than one hardware option (see Special versions)											
OM-DQ Option Module DRIVE-CLiQ						A				A	
OM-IIoT Option Module IIoT						B				B	
OM-SMT Option Module Safe Motor Temperature						E				E	
						F				F	
Communication											
PROFINET, Modbus TCP and EtherNet/IP								F			F
Special versions											
Only for selection of more than one hardware option (Additional hardware option = "A")				6SL4113-0 ■ ... - . A . 0				Order codes			
								-Z...+...+...			
OM-DQ Option Module DRIVE-CLiQ								T01			T01
OM-IIoT Option Module IIoT								T04			T04
OM-SMT Option Module Safe Motor Temperature								T05			T05

More information

Further technical specifications and documentation are available on the internet at:
www.siemens.com/sinamics-g220/documentation

and concerning ordering and configuration via the Siemens Product Configurator in SiePortal:
www.siemens.com/sinamics-g220/configuration

Clicking to SiePortal

6SL3255-0AA00-5AA0



SINAMICS G220 built-in and wall-mounted units

IP20/UL Open Type · 380 ... 500 V 3 AC · 1.1 kW to 55 kW (1.5 hp to 75 hp)

Line-side components					DC link components	Load-side power components	
Line reactors		Recommended line-side overcurrent protection devices			Braking resistors	Output reactors	dv/dt filters plus VPL
		More information at: www.siemens.com/sinamics-g220/ocpd					
		Fuses IEC-compliant Fuses UL/cUL-compliant Rated voltage 600 V AC					
Article No.		Current A	Fuse type Class/Article No.	Current A	Article No.	Article No.	Article No.
A DC line reactor is integrated – therefore no line reactor is required.	6	3NA3801	J	6	6SL3201-0BE14-3AA0	–	available soon
	10	3NA3803	J	8		–	available soon
	10	3NA3803	J	10	6SL3201-0BE21-0AA0	–	available soon
	16	3NA3805	J	12		–	available soon
	16	3NA3805	J	15		–	available soon
	20	3NA3807	J	20	6SL3201-0BE21-8AA0	–	available soon
	32	3NA3812	J	30		–	available soon
	40	3NA3817	J	40	6SL3201-0BE23-8AA0	–	available soon
	50	3NA3820	J	50		–	available soon
	63	3NA3822	J	60	JJY:023422620001	–	available soon
	80	3NA3824	J	70		–	available soon
	100	3NA3830	J	90	JJY:023424020001	–	available soon
	100	3NA3830	J	110		–	available soon
	120	3NA3832	J	125	JJY:023434020001	–	available soon
	160	3NA3836	J	150		–	available soon

SINAMICS G220 built-in and wall-mounted units

Clicking to SiePortal

6SL3255-0AA00-5AA0

IP55/UL Type 12 · 200 ... 240 V 3 AC · 1.1 kW to 30 kW (1.5 hp to 40 hp)

Selection and ordering data

SINAMICS G220 built-in and wall-mounted units → Configuration with power components (see right page)

Rated power				Rated output current				Rated input current		Frame size	SINAMICS G220 without integrated line filter
Low overload (LO)		High overload (HO)		Low overload (LO)		High overload (HO)		Low overload (LO)			
Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC		
230 V	240 V	230 V	240 V	230 V	240 V	230 V	240 V	230 V	240 V		
kW	hp	kW	hp	A	A	A	A	A	A		Article No.

200 ... 240 V 3 AC · Rated pulse frequency 4 kHz · Input frequency 50/60 Hz (47 ... 63 Hz)

1.1	1.5	0.75	1	6.5	6	4.7	4.2	5.4	5.1	FSB	6SL4112-0 ■ 08 - 0 ■ F 0
1.5	2	1.1	1.5	8.5	6.8	6.5	6	7.1	6.4	FSB	6SL4112-0 ■ 10 - 0 ■ F 0
2.2	3	1.5	2	11	9.6	8.5	6.8	10.1	9.3	FSB	6SL4112-0 ■ 11 - 0 ■ F 0
3	4	2.2	3	14.5	12.4	11	9.6	13.1	11.9	FSB	6SL4112-0 ■ 12 - 0 ■ F 0
4	5	3	4	19	15.2	14.5	12.4	17.7	14.7	FSB	6SL4112-0 ■ 13 - 0 ■ F 0
5.5	7.5	4	5	27	22	19	15.2	21.7	20.1	FSC	6SL4112-0 ■ 15 - 0 ■ F 0
7.5	10	5.5	7.5	34	28	27	22	29.5	26.6	FSC	6SL4112-0 ■ 16 - 0 ■ F 0
11	15	7.5	10	46	42	40	28	41.8	39.5	FSD2	6SL4112-0 ■ 17 - 0 ■ F 0
15	20	11	15	63	54	46	42	53.9	49.7	FSD2	6SL4112-0 ■ 18 - 0 ■ F 0
18.5	25	15	20	75	68	63	54	66.5	62.5	FSD2	6SL4112-0 ■ 20 - 0 ■ F 0
22	30	18.5	25	90	80	75	68	76.0	72.1	FSE	6SL4112-0 ■ 21 - 0 ■ F 0
30	40	22	30	112	104	90	80	103.2	96.1	FSE	6SL4112-0 ■ 23 - 0 ■ F 0

Article No. supplements

Degree of protection	Cooling	Coating acc. to IEC 60721-3-3: 2002	Housing							
IP55/UL Type 12	Internal	Class 3C2	Standard	J						
			Maintenance switch ¹⁾	L						
		Class 3C3	Standard	K						
			Maintenance switch ¹⁾	M						
Hardware configurations										
Standard						A				
Gland plate for connecting in IP55 degree of protection according to IEC						P				
Gland plate for connecting in UL Type 12 degree of protection						Q				
Line filter										
Without integrated line filter								0		
Additional hardware option										
Without hardware option or with more than one hardware option (see Special versions)								A		
OM-DQ Option Module DRIVE-CLiQ								B		
OM-IIoT Option Module IIoT								E		
OM-SMT Option Module Safe Motor Temperature								F		
Communication										
PROFINET, Modbus TCP and EtherNet/IP								F		
Special versions										
Only for selection of more than one hardware option (Additional hardware option = "A")										
					6SL4112-0	■	...	-	A . 0 -Z...+...+...	
OM-DQ Option Module DRIVE-CLiQ									T01	
OM-IIoT Option Module IIoT									T04	
OM-SMT Option Module Safe Motor Temperature									T05	

More information

Further technical specifications and documentation are available on the internet at:

www.siemens.com/sinamics-g220/documentation

and concerning ordering and configuration via the

Siemens Product Configurator in SiePortal:

www.siemens.com/sinamics-g220/configuration

¹⁾ Available soon.

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6SL3255-0AA00-5AA0



SINAMICS G220 built-in and wall-mounted units

IP55/UL Type 12 · 200 ... 240 V 3 AC · 1.1 kW to 30 kW (1.5 hp to 40 hp)

Line-side components					DC link components	Load-side power components	
Line reactors		Recommended line-side overcurrent protection devices			Braking resistors	Output reactors	dv/dt filters plus VPL
		More information at: www.siemens.com/sinamics-g220/ocpd			Degree of protection IP54		
		Fuses IEC-compliant	Fuses UL/cUL-compliant Rated voltage 600 V AC				
		Current		Fuse type			
Article No.		A	Article No.	Class/Article No.	Article No.	Article No.	Article No.
A DC line reactor is integrated – therefore no line reactor is required.	10	3NA3803	J	10	–	–	–
	16	3NA3805	J	12	–	–	–
	16	3NA3805	J	15	–	–	–
	20	3NA3807	J	20	–	–	–
	32	3NA3812	J	30	–	–	–
	40	3NA3817	J	40	–	–	–
	50	3NA3820	J	50	–	–	–
	80	3NA3824	J	70	–	–	–
	100	3NA3830	J	90	–	–	–
	100	3NA3830	J	110	–	–	–
	125	3NA3832	J	125	–	–	–
	160	3NA3836	J	150	–	–	–

SINAMICS G220 built-in and wall-mounted units

Clicking to SiePortal

6SL3255-0AA00-5AA0

IP55/UL Type 12 · 380 ... 500 V 3 AC · 1.1 kW to 55 kW (1.5 hp to 75 hp)

Selection and ordering data

SINAMICS G220 built-in and wall-mounted units → Configuration with power components (see right page)

Rated power				Rated output current				Rated input current		Frame size	SINAMICS G220 without integrated line filter	SINAMICS G220 with integrated line filter
Low overload (LO)		High overload (HO)		Low overload (LO)		High overload (HO)		Low overload (LO)				
Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC		Article No.	Article No.
400 V	480 V	400 V	480 V	400 V	480 V	400 V	480 V	400 V	480 V			
kW	hp	kW	hp	A	A	A	A	A	A			
380 ... 500 V 3 AC · Rated pulse frequency 4 kHz · Input frequency 50/60 Hz (47 ... 63 Hz)												
1.1	1.5	0.75	1	3.9	3	2.9	2.1	3.3	3.0	FSB	6SL4113-0 ■ ■ 08 - 0 ■ F 0	6SL4113-0 ■ ■ 08 - 2 ■ F 0
1.5	2	1.1	1.5	4.7	3.4	3.9	3	4.1	3.7	FSB	6SL4113-0 ■ ■ 10 - 0 ■ F 0	6SL4113-0 ■ ■ 10 - 2 ■ F 0
2.2	3	1.5	2	6.5	4.8	4.7	3.4	5.6	4.9	FSB	6SL4113-0 ■ ■ 11 - 0 ■ F 0	6SL4113-0 ■ ■ 11 - 2 ■ F 0
3	4	2.2	3	8.5	6.2	6.5	4.8	7.3	6.1	FSB	6SL4113-0 ■ ■ 12 - 0 ■ F 0	6SL4113-0 ■ ■ 12 - 2 ■ F 0
4	5	3	4	11	7.6	8.5	6.2	9.6	7.3	FSB	6SL4113-0 ■ ■ 13 - 0 ■ F 0	6SL4113-0 ■ ■ 13 - 2 ■ F 0
5.5	7.5	4	5	14.5	11	11	7.6	12.9	11.0	FSB	6SL4113-0 ■ ■ 15 - 0 ■ F 0	6SL4113-0 ■ ■ 15 - 2 ■ F 0
7.5	10	5.5	7.5	19	14	14.5	11	17.3	14.0	FSB	6SL4113-0 ■ ■ 16 - 0 ■ F 0	6SL4113-0 ■ ■ 16 - 2 ■ F 0
11	15	7.5	10	27	21	19	14	23.3	19.6	FSC	6SL4113-0 ■ ■ 17 - 0 ■ F 0	6SL4113-0 ■ ■ 17 - 2 ■ F 0
15	20	11.0	15	34	27	27	21	31.3	25.4	FSC	6SL4113-0 ■ ■ 18 - 0 ■ F 0	6SL4113-0 ■ ■ 18 - 2 ■ F 0
18.5	25	15.0	20	40	34	34	27	37.8	31.6	FSD1	6SL4113-0 ■ ■ 20 - 0 ■ F 0	6SL4113-0 ■ ■ 20 - 2 ■ F 0
22	30	18.5	25	46	40	40	34	44.9	37.5	FSD1	6SL4113-0 ■ ■ 21 - 0 ■ F 0	6SL4113-0 ■ ■ 21 - 2 ■ F 0
30	40	22.0	30	63	52	46	40	59.9	49.8	FSD2	6SL4113-0 ■ ■ 23 - 0 ■ F 0	6SL4113-0 ■ ■ 23 - 2 ■ F 0
37	50	30	40	75	65	63	52	72.6	59.9	FSD2	6SL4113-0 ■ ■ 24 - 0 ■ F 0	6SL4113-0 ■ ■ 24 - 2 ■ F 0
45	60	37	50	90	77	75	65	86.7	71.3	FSE	6SL4113-0 ■ ■ 26 - 0 ■ F 0	6SL4113-0 ■ ■ 26 - 2 ■ F 0
55	75	45	60	112	96	90	77	105.9	88.3	FSE	6SL4113-0 ■ ■ 27 - 0 ■ F 0	6SL4113-0 ■ ■ 27 - 2 ■ F 0

Article No. supplements

Degree of protection	Cooling	Coating acc. to IEC 60721-3-3: 2002	Housing																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										</
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More information

Further technical specifications and documentation are available on the internet at:

www.siemens.com/sinamics-g220/documentation

and concerning ordering and configuration via the Siemens Product Configurator in SiePortal:

www.siemens.com/sinamics-g220/configuration

¹⁾ Available soon.

Clicking to SiePortal

6SL3255-0AA00-5AA0



SINAMICS G220 built-in and wall-mounted units

IP55/UL Type 12 · 380 ... 500 V 3 AC · 1.1 kW to 55 kW (1.5 hp to 75 hp)

Line-side components					DC link components	Load-side power components	
Line reactors		Recommended line-side overcurrent protection devices			Braking resistors	Output reactors	dv/dt filters plus VPL
		More information at: www.siemens.com/sinamics-g220/ocpd			Degree of protection IP54		
		Fuses IEC-compliant	Fuses UL/cUL-compliant Rated voltage 600 V AC				
Article No.	Current A	Article No.	Fuse type Class/Article No.	Current A	Article No.	Article No.	Article No.
A DC line reactor is integrated – therefore no line reactor is required.		6	3NA3801	J	6	–	–
		10	3NA3803	J	8	–	–
		10	3NA3803	J	10	–	–
		16	3NA3805	J	12	–	–
		16	3NA3805	J	15	–	–
		20	3NA3807	J	20	–	–
		32	3NA3812	J	30	–	–
		40	3NA3817	J	40	–	–
		50	3NA3820	J	50	–	–
		63	3NA3822	J	60	–	–
		80	3NA3824	J	70	–	–
		100	3NA3830	J	90	–	–
		100	3NA3830	J	110	–	–
		120	3NA3832	J	125	–	–
		160	3NA3836	J	150	–	–

SINAMICS G220 built-in and wall-mounted units

Clicking to SiePortal

6SL3255-0AA00-5AA0

Clean Power/IP20/UL Open Type · 380 ... 500 V 3 AC · 7.5 kW to 55 kW (10 hp to 75 hp)

Selection and ordering data

SINAMICS G220 built-in and wall-mounted units → Configuration with power components (see right page)

Rated power				Rated output current				Rated input current		Frame size	SINAMICS G220 Clean Power with integrated line filter
Low overload (LO)		High overload (HO)		Low overload (LO)		High overload (HO)		Low overload (LO)			
Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC		
400 V	480 V	400 V	480 V	400 V	480 V	400 V	480 V	400 V	480 V		
kW	hp	kW	hp	A	A	A	A	A	A		Article No.
380 ... 500 V 3 AC · Rated pulse frequency 4 kHz · Input frequency 50/60 Hz (47 ... 63 Hz)											
7.5	10	5.5	7.5	19	14	14.5	11	15.2	12.3	FSD1	6SL4113-2 ■ A 16 - 2 ■ F 0
11	15	7.5	10	27	21	19	14	20.6	17.5	FSD1	6SL4113-2 ■ A 17 - 2 ■ F 0
15	20	11	15	34	27	27	21	28.0	23.2	FSD1	6SL4113-2 ■ A 18 - 2 ■ F 0
18.5	25	15	20	40	34	34	27	33.5	28.5	FSD1	6SL4113-2 ■ A 20 - 2 ■ F 0
22	30	18.5	25	46	40	40	34	39.9	34.2	FSD1	6SL4113-2 ■ A 21 - 2 ■ F 0
30	40	22	30	63	52	46	40	52.9	44.4	FSD2	6SL4113-2 ■ A 23 - 2 ■ F 0
37	50	30	40	75	65	63	52	65.3	55.7	FSD2	6SL4113-2 ■ A 24 - 2 ■ F 0
45	60	37	50	90	77	75	65	77.5	65.5	FSE	6SL4113-2 ■ A 26 - 2 ■ F 0
55	75	45	60	112	96	90	77	95.1	81.9	FSE	6SL4113-2 ■ A 27 - 2 ■ F 0

Article No. supplements

Degree of protection	Cooling	Coating acc. to IEC 60721-3-3: 2002	Housing						
IP20/UL Open Type	Internal	Class 3C2	Standard	C					
		Class 3C3		D					
Hardware configuration									
Standard				A					
Line filter									
With integrated line filter Category C2					2				
Additional hardware option									
Without hardware option or with more than one hardware option (see Special versions)									
OM-DQ Option Module DRIVE-CLiQ									
OM-IIoT Option Module IIoT									
OM-SMT Option Module Safe Motor Temperature									
Communication									
PROFINET, Modbus TCP and EtherNet/IP									
Special versions									
Only for selection of more than one hardware option (Additional hardware option = "A")									
6SL4113-2 ■ ... - . A . 0									
OM-DQ Option Module DRIVE-CLiQ									T01
OM-IIoT Option Module IIoT									T04
OM-SMT Option Module Safe Motor Temperature									T05

More information

Further technical specifications and documentation are available on the internet at:

www.siemens.com/sinamics-g220/documentation

and concerning ordering and configuration via the Siemens Product Configurator in SiePortal:

www.siemens.com/sinamics-g220/configuration

Clicking to SiePortal

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SINAMICS G220 built-in and wall-mounted units

Clean Power/IP20/UL Open Type · 380 ... 500 V 3 AC · 7.5 kW to 55 kW (10 hp to 75 hp)

Line-side components					DC link components	Load-side power components	
Line reactors		Recommended line-side overcurrent protection devices			Braking resistors ¹⁾	Output reactors	dv/dt filters plus VPL
		More information at: www.siemens.com/sinamics-g220/ocpd					
		Fuses IEC-compliant		Fuses UL/cUL-compliant Rated voltage 600 V AC			
Current		Fuse type		Current			
Article No.	A	Article No.	Class/Article No.	A	Article No.	Article No.	Article No.
	A DC line reactor	32	3NA3812	J	30	–	–
	is integrated –	40	3NA3817	J	40	–	–
	therefore no	50	3NA3820	J	50	–	–
	line reactor	63	3NA3822	J	60	–	–
	is required.	80	3NA3824	J	70	–	–
		100	3NA3830	J	90	–	–
		100	3NA3830	J	110	–	–
		125	3NA3832	J	125	–	–
		160	3NA3836	J	150	–	–

¹⁾ Available soon.

SINAMICS G220 built-in and wall-mounted units

Clicking to SiePortal

6SL3255-0AA00-5AA0

Clean Power/IP55/UL Type 12 · 380 ... 500 V 3 AC · 7.5 kW to 55 kW (10 hp to 75 hp)

Selection and ordering data

SINAMICS G220 built-in and wall-mounted units → Configuration with power components (see right page)

Rated power				Rated output current				Rated input current		Frame size	SINAMICS G220 Clean Power NEW with integrated line filter
Low overload (LO)		High overload (HO)		Low overload (LO)		High overload (HO)		Low overload (LO)			
Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC	Acc. to IEC	Acc. to NEC		Article No.
400 V	480 V	400 V	480 V	400 V	480 V	400 V	480 V	400 V	480 V		
kW	hp	kW	hp	A	A	A	A	A	A		

380 ... 500 V 3 AC · Rated pulse frequency 4 kHz · Input frequency 50/60 Hz (47 ... 63 Hz)

7.5	10	5.5	7.5	19	14	14.5	11	15.2	12.3	FSD1	6SL4113-2 ■ ■ 16 - 2 ■ F 0
11	15	7.5	10	27	21	19	14	20.6	17.5	FSD1	6SL4113-2 ■ ■ 17 - 2 ■ F 0
15	20	11	15	34	27	27	21	28.0	23.2	FSD1	6SL4113-2 ■ ■ 18 - 2 ■ F 0
18.5	25	15	20	40	34	34	27	33.5	28.5	FSD1	6SL4113-2 ■ ■ 20 - 2 ■ F 0
22	30	18.5	25	46	40	40	34	39.9	34.2	FSD1	6SL4113-2 ■ ■ 21 - 2 ■ F 0
30	40	22	30	63	52	46	40	52.9	44.4	FSD2	6SL4113-2 ■ ■ 23 - 2 ■ F 0
37	50	30	40	75	65	63	52	65.3	55.7	FSD2	6SL4113-2 ■ ■ 24 - 2 ■ F 0
45	60	37	50	90	77	75	65	77.5	65.5	FSE	6SL4113-2 ■ ■ 26 - 2 ■ F 0
55	75	45	60	112	96	90	77	95.1	81.9	FSE	6SL4113-2 ■ ■ 27 - 2 ■ F 0

Article No. supplements

Degree of protection	Cooling	Coating acc. to IEC 60721-3-3: 2002	Housing						
IP55/UL Type 12	Internal	Class 3C2	Standard	J					
			Maintenance switch ¹⁾	L					
		Class 3C3	Standard	K					
			Maintenance switch ¹⁾	M					
Hardware configurations									
Standard				A					
Gland plate for connecting in IP55 degree of protection according to IEC				P					
Gland plate for connecting in UL Type 12 degree of protection				Q					
Line filter									
With integrated line filter Category C2						2			
Additional hardware option									
Without hardware option or with more than one hardware option (see Special versions)							A		
OM-DQ Option Module DRIVE-CLiQ							B		
OM-ILoT Option Module ILoT							E		
OM-SMT Option Module Safe Motor Temperature							F		
Communication									
PROFINET, Modbus TCP and EtherNet/IP							F		
Special versions									
Only for selection of more than one hardware option (Additional hardware option = "A")									Order codes
						6SL4113-2 ■ ... - . A . 0			-Z ... + ... + ...
OM-DQ Option Module DRIVE-CLiQ									T01
OM-ILoT Option Module ILoT									T04
OM-SMT Option Module Safe Motor Temperature									T05

More information

Further technical specifications and documentation are available on the internet at:

www.siemens.com/sinamics-g220/documentation

and concerning ordering and configuration via the Siemens Product Configurator in SiePortal:

www.siemens.com/sinamics-g220/configuration

¹⁾ Available soon.

Clicking to SiePortal

6SL3255-0AA00-5AA0



SINAMICS G220 built-in and wall-mounted units

Clean Power/IP55/UL Type 12 · 380 ... 500 V 3 AC · 7.5 kW to 55 kW (10 hp to 75 hp)

Line-side components					DC link components	Load-side power components	
Line reactors	Recommended line-side overcurrent protection devices				Braking resistors	Output reactors	dv/dt filters plus VPL
	More information at: www.siemens.com/sinamics-g220/ocpd Fuses IEC-compliant Fuses UL/cUL-compliant Rated voltage 600 V AC				Degree of protection IP54		
Article No.	Current A	Article No.	Fuse type Class/Article No.	Current A	Article No.	Article No.	Article No.
A DC line reactor is integrated – therefore no line reactor is required.	25	3NA3810	J	30	–	–	–
	40	3NA3817	J	40	–	–	–
	50	3NA3820	J	50	–	–	–
	63	3NA3822	J	60	–	–	–
	80	3NA3824	J	70	–	–	–
	80	3NA3824	J	90	–	–	–
	100	3NA3830	J	110	–	–	–
	125	3NA3832	J	125	–	–	–
	160	3NA3836	J	150	–	–	–

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SINAMICS G220 built-in and wall-mounted units

Supplementary system components

Selection and ordering data

Supplementary system components for SINAMICS G220 built-in and wall-mounted units

Description	Article No.
Option Modules ¹⁾ for SINAMICS G220	
• OM-DQ Option Module DRIVE-CLiQ	6SL4950-0AL00-0BA0
• OM-IloT Option Module IloT	6SL4950-0AL00-0EA0
• OM-SMT Option Module Safe Motor Temperature	6SL4950-0AL00-0FA0
Additional components for SINAMICS G220	
• SINAMICS Smart Adapter Wi-Fi solution for the next generation of SINAMICS converters	6SL4950-0AJ00-0AA0
• SMC10 Sensor Module Cabinet-Mounted Without DRIVE-CLiQ cable	6SL3055-0AA00-5AA3
• SMC20 Sensor Module Cabinet-Mounted Without DRIVE-CLiQ cable	6SL3055-0AA00-5BA3
• SMC30 Sensor Module Cabinet-Mounted Without DRIVE-CLiQ cable	6SL3055-0AA00-5CA2
Accessories for re-ordering of SMC10, SMC20 and SMC30	
• Dust protection blanking plugs (50 units) For DRIVE-CLiQ port	6SL3066-4CA00-0AA0
Smart Drive Interfaces for SINAMICS G220	
• SINAMICS SDI Standard	Included in the scope of delivery of the converters
• SINAMICS SDI Pro 5.5" ³⁾	6SL4950-0AH35-2AA0
• SINAMICS SDI Pro 5.5" handheld kit for use with the SINAMICS SDI Pro 5.5"	6SL4950-0AH65-0AA0
• SINAMICS SDI Pro 5.5" door mounting kit for mounting a SINAMICS SDI Pro 5.5" in control cabinet doors	6SL4950-0AH55-0AA0
• SINAMICS IP55 panel mounting frame	6SL4950-0AH75-0AA0

SINAMICS Drive Software Options for SINAMICS G220 built-in and wall-mounted units

Description	Article No.
Delivery with SINAMICS SD memory card, 8 GB The parameter assignment, firmware and licenses for a converter can be stored on the memory card.	
• Memory card without firmware (empty)	6SL5970-0AA00-0AA0
• With SINAMICS Motor Control Extended (license)	6SL5970-0AA00-0AA0-Z H01
• With SINAMICS Safety Integrated Extended (license)	6SL5970-0AA00-0AA0-Z F01
• With SINAMICS OPC UA Single Extended (license)	6SL5970-0AA00-0AA0-Z H80
• With SINAMICS Positioning Extended (license)	6SL5970-0AA00-0AA0-Z E01
• With SINAMICS Drive Control Chart Extended (license)	6SL5970-0AA00-0AA0-Z J03
• With SINAMICS Drive Control Chart Advanced (license)	6SL5970-0AA00-0AA0-Z J04
• Memory card with firmware V6.4	6SL4170-1GE00-0AA0
• With Firmware V6.4 and SINAMICS Motor Control Extended (license)	6SL4170-1GE00-0AA0-Z H01
• With Firmware V6.4 and SINAMICS Safety Integrated Extended (license)	6SL4170-1GE00-0AA0-Z F01
• With Firmware V6.4 and SINAMICS OPC UA Single Extended (license)	6SL4170-1GE00-0AA0-Z H80
• With Firmware V6.4 and SINAMICS Positioning Extended (license)	6SL4170-1GE00-0AA0-Z E01
• With Firmware V6.4 and SINAMICS Drive Control Chart Extended (license)	6SL4170-1GE00-0AA0-Z J03
• With Firmware V6.4 und SINAMICS Drive Control Chart Advanced (license)	6SL4170-1GE00-0AA0-Z J04

Description	Article No.
Delivery in electronic form, eCoL (without memory card) ²⁾	
• SINAMICS Motor Control Extended (license)	6SL5977-0AA00-1DA0
• SINAMICS Safety Integrated Extended (license)	6SL5977-0AA00-2HA0
• SINAMICS OPC UA Single Extended (license)	6SL5977-0AA00-1GA0
• SINAMICS Positioning Extended (license)	6SL5977-0AA00-2EA0
• SINAMICS Drive Control Chart Extended (license)	6SL5977-0AA00-2FA0
• SINAMICS Drive Control Chart Advanced (license)	6SL5977-0AA00-3FA0

For an overview and more information on all available firmware versions, see

<https://support.industry.siemens.com/cs/document/109807094>

Environmental Product Declaration (EPD)

Environmental Product Declarations (EPD) are available as PDFs for this product.

The EPD PDF provides brief and concise information about the ecological properties of a product.

You can find more information on the internet at:

<https://support.industry.siemens.com/cs/ww/en/ps/28308/cert?ci=5690>

More information

Further technical specifications and documentation, such as the operating instructions, are available on the internet at:

www.siemens.com/sinamics-g220/documentation

Detailed information on the SINAMICS G220 built-in and wall-mounted units, including the latest technical documentation (brochures, tutorials, dimensional drawings, certificates, manuals and operating instructions), is available on the internet at:

www.siemens.com/sinamics-g220

and also via the Siemens Product Configurator in SiePortal:

www.siemens.com/sinamics-g220/configuration

¹⁾ Option Modules can also be ordered directly as a part of the converter as an additional hardware option or a special version.
²⁾ The memory card is not included in the scope of delivery. The licenses can also be ordered together with a memory card (see above). With the Certificate of License (CoL) in electronic form, the license is supplied as a PDF file. Notification of this with a download link is received by email.
³⁾ Available soon.

SINAMICS G220 built-in and wall-mounted units

Technical specifications

General technical specifications

Article number	6SL411-0....-0.F0, 6SL4113-0.A..-2.F0
mounting position	Vertical
design of the protective insulation	SELV according to IEC 61800-5-1, protective separation from the line supply using double/reinforced insulation
operating resource protection class according to EN 61800-5-1	Class I (with protective conductor system) and Class III (SELV)
Relative humidity during operation maximum	95 %
certificate of suitability	CE, UL, KC, cUL according to UL 61800-5-1, EAC, UKCA
• for fail-safety	SIL 3 according to IEC 61508 and IEC 61800-5-2, PL e according to ISO 13849-1, Category 4 according to ISO 13849-1
• for CE marking	EMC directive 2014/30/EU; Low Voltage Directive 2014/35/EU; RoHS Directive 2011/65/EU; energy efficiency and eco design 2009/125/EU
standard for EMC according to EN 61800-3	IEC 61800-3
installation environment regarding EMC	
• environment A	✓
• environment B	—
Pulse frequency	4 kHz
Line power factor at rated power	
• Total minimum	0.9
• Fundamental power factor cos phi 1	0.98
Installation altitude at height above sea level without power reduction, max.	1 000 m

Article number	6SL411-0....-0.F0, 6SL4113-0.A..-2.F0
brake version	DC braking, compound braking, resistance braking with integrated brake chopper
type of cooling	Air cooling using an integrated fan
Bus system Protocol	Ethernet (for service and engineering)
design of the interface for bus system integrated note	with CM-PN
for signal line	
• connectable conductor cross-section	0.2 ... 2.5 mm ²
• Connectable conductor cross-section (AWG)	24 ... 12
design of the sensor to detect the ambient temperature connectable	1 input for motor temperature, connectable PTC, KTY 84, PT1000, and bimetal temperature switch
product function for U/f control	
• ECO mode linear or quadratic	✓
• flux current control	✓
• linear or quadratic parameterization	✓
• multi-point	✓
Product function Vector control	
• without encoder	✓
• with encoder	✓
Product function Torque control	
• without encoder	✓
• with encoder	✓

Cable length

Article number	6SL4112-0.A..-0.F0 6SL4113-0.A..-0.F0	6SL4113-2.A..-2.F0
Cable length		
• for braking resistor / maximum	10 m	10 m
• for motor / shielded	200 m	200 m
- maximum	200 m	200 m
- with EMC category C2 / maximum		150 m
• for motor / unshielded / maximum	300 m	300 m

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Technical specifications

Inputs and outputs

Article number	6SL411-0....-0.F0, 6SL4113-2.A..-2.F0
Digital inputs	
design of the electrical isolation of the digital input	Optocoupler
number of digital inputs	6, additionally 2 AI configurable as 2 DI
designation	DI0..DI5
type of digital input according to IEC 61131-2	Type 3
response time	
• for signal <0> to <1> maximum	0.05 ms
• for signal <1> to <0> maximum	0.05 ms
• of the digital input when used as digital input	0.25 ms
• parameterizable	Yes
- minimum	0.25 ms
input current at digital standard inputs maximum	4 mA
input voltage maximum permissible	30 V
input voltage when used as digital input	
• for signal <0> to <1>	11 V
• for signal <1> to <0>	5 V
Fail-safe digital input	
number of digital inputs with fail-safe	1, additionally 4 DI configurable as 2 FDI
designation	FDI0 (FDI1, FDI2)
type of digital input according to IEC 61131-2	type 3
response time parameterizable minimum	1 ms
certificate of suitability for fail-safety	SIL 3 according to IEC 61508 and IEC 61800-5-2, PL e according to ISO 13849-1, Category 4 according to ISO 13849-1
Rapid input	
number of digital inputs as rapid input	1
designation of the high-speed input	DI5
type of digital input according to IEC 61131-2	type 3
pulse frequency	32 kHz
response time of the high-speed input when used as probe input	
• for signal <0> to <1> maximum	0.01 ms
• for signal <1> to <0> maximum	0.01 ms

Article number	6SL411-0....-0.F0, 6SL4113-2.A..-2.F0
Digital outputs	
number of digital outputs	
• as transistor	1
• as pulse train output	0
designation	DO0
output current of digital outputs as transistor with resistive load at DC	0.5 A
• maximum	0.5 A
output voltage of digital outputs as transistor with resistive load at DC maximum	30 V
response time of the digital output	
• as transistor for signal <0> to <1> maximum	0.05 ms
• as transistor for signal <1> to <0> maximum	0.1 ms
• parameterizable minimum	0.25 ms
product function	
• overload protection at digital output as transistor	No
• short-circuit protection at digital output as transistor	No
• reverse voltage protection of digital outputs as transistor	Yes
diagnostics function at digital output as transistor open-circuit detection	No
product feature of the digital output as transistor	
• sourcing output	Yes
• sinking output	Yes
Fail-safe digital output	
number of digital outputs with fail-safe	1, with external 24 V supply
designation	FDO0
load resistance	48 ... 130 000 Ω
product function	
• overload protection at digital output with fail-safe	Yes
• response time with fail-safe parameterizable	Yes
• short-circuit protection at digital output with fail-safe	Yes
• reverse voltage protection of digital outputs with fail-safe	Yes
product feature of the digital output with fail-safe	
• sourcing output	Yes
• sinking output	Yes
diagnostics function at digital output with fail-safe open-circuit detection	No

Technical specifications

Article number	6SL411-0....-0.F0, 6SL4113-2.A..-2.F0
Relay output	
number of digital outputs as relay change-over contact	2
designation of the digital output as relay change-over contact	DO1, DO2
response time of the digital output as relay output	3 ms
type of relay output	Changeover contact (CO)
operating cycles of digital outputs as relay output at DC maximum	300 000
output voltage of digital outputs as relay output	
• at DC maximum	30 V
• at DC minimum	0 V
• with resistive load at DC	30 V
output current of digital outputs as relay change-over contact with resistive load at DC	0.5 A
• maximum	0.5 A
Analog inputs	
number of analog inputs, number of analog inputs note	2, The analog inputs can be used as additional digital inputs.
designation	AI0, AI1
type of analog input	Differential input
• note	Can be toggled between current and voltage mode using a parameter
overvoltage protection	Yes
input voltage at the analog input	
• during operating mode selection: current input maximum permissible	8 V
• during operating mode selection: voltage input maximum permissible	35 V
• during operating mode selection: voltage input unipolar	0 ... 10 V
• during operating mode selection: voltage input bipolar	-10 ... +10 V
input voltage at analog inputs as voltage inputs	
• for signal <0> to <1>	11 V
• for signal <1> to <0>	5 V
input current at the analog input during operating mode selection: current input	
• maximum permissible	65 mA
• unipolar	0 ... 20 mA
• unipolar/ monitored	4 ... 20 mA
input current at digital standard inputs for signal <0> to <1> minimum	2.5 mA
consumed current during operating mode selection: voltage input typical	0.2 mA
input resistance at the analog input	
• during operating mode selection: voltage input	100 kΩ
• during operating mode selection: current input	120 Ω
A/D resolution at the analog input	16 bit

Article number	6SL411-0....-0.F0, 6SL4113-2.A..-2.F0
Analog outputs	
number of analog outputs	1
type of analog output	Non-isolated output
• note	Can be toggled between current and voltage mode using a parameter
designation	AO0
output current at analog output	0 ... 20 mA
during operating mode selection: current mode	20 mA
output voltage at analog output during operating mode selection: voltage mode	10 V
output load at analog output	
• during operating mode selection: voltage mode minimum	500 Ω
• during operating mode selection: current mode maximum	10 000 Ω
offset of the output voltage with output value 0 at analog output during operating mode selection: voltage mode maximum	50 mV
response time of the analog output parameterizable minimum	0.25 ms
protection function of analog outputs short-circuit protection	Yes
protection function of analog input overvoltage protection note	Analog inputs are protected against inputs in a voltage range of ±35 V and have a common mode voltage in the range of ±15 V
diagnostics function at analog output open-circuit detection	No
A/D resolution at analog output	16 bit
Analog input for acquisition of the motor temperature	
design of the sensor for detection of the motor temperature connectable	
• bimetallic temperature switch with NC contact	Yes
• KTY 84	Yes
• KTY 84 note	Short-circuit monitoring < 50 Ohm; wire breakage >2120 Ohm; measurement current 2 mA
• Pt100	No
• Pt1000	Yes
• Pt1000 note	Short-circuit monitoring < 603 Ohm; wire breakage >2120 Ohm; measurement current 2 mA
• PTC	Yes
• PTC note	Type A, according to IEC 60947-8, short-circuit monitoring < 20 Ohm, overtemperature >1650 Ohm, measuring current 2 mA

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Technical specifications

Environmental data

Article number		6SL4112-0CA...-0.F0, 6SL4113-2CA...-0.F0	6SL4111-0JA...-0.F0, 6SL4111-0LA...-0.F0, 6SL4111-0KA...-0.F0, 6SL4111-0MA...-0.F0
protection class IP		IP20	IP55
degree of protection NEMA rating		UL open type	UL type 12
Ambient temperature			
ambient temperature			
• during storage	°C (°F)	-25 ... +55 (-13 ... +131)	-25 ... +55 (-13 ... +131)
• during transport	°C (°F)	-40 ... +70 (-40 ... +158)	-40 ... +70 (-40 ... +158)
• during operation	°C (°F)	-20 ... +60 (-4 ... +140)	-20 ... +50 (-4 ... +122)
• with low overload without power reduction during operation maximum	°C (°F)	45 (113)	40 (104)
• with high overload without power reduction during operation maximum	°C (°F)	50 (122)	45 (113)
Resistance to chemically active substances			
during storage		Class 1C2 according to IEC 60721-3-1: 2002	Class 1C2 according to IEC 60721-3-1: 2002
• note		in the transport packaging	in the transport packaging
during transport		Class 2C2 according to IEC 60721-3-2:1997	Class 2C2 according to IEC 60721-3-2:1997
• note		in marine- and weather-resistant transport packaging	in marine- and weather-resistant transport packaging
during operation		Class 3C2, according to IEC 60721-3-3: 2002	Class 3C2, according to IEC 60721-3-3: 2002
Resistance to biologically active substances			
during storage		Class 1B1 according to IEC 60721-3-1:1997	Class 1B1 according to IEC 60721-3-1:1997
• note		in the transport packaging	in the transport packaging
during transport		Class 2B1 according to IEC 60721-3-2:1997	Class 2B1 according to IEC 60721-3-2:1997
• note		in the transport packaging	in the transport packaging
during operation		Class 3B1 according to IEC 60721-3-3: 2002	Class 3B1 according to IEC 60721-3-3: 2002
Resistance to climatic environmental conditions			
during transport		Class 2K4 according to IEC 60721-3-2:1997	Class 2K4 according to IEC 60721-3-2:1997
• note		in the transport packaging; temperature -40 ... +70 °C; relative atmospheric humidity 5..95% (without condensation)	in the transport packaging; temperature -40 ... +70 °C; relative atmospheric humidity 5..95% (without condensation)
during storage		Class 1K4 according to IEC 60721-3-1:1997	Class 1K4 according to IEC 60721-3-1:1997
• note		in the transport packaging; temperature -25 ... +55 °C; relative atmospheric humidity 5..95% (without condensation), storage altitude ≤4000m; condensation, spray water, ice formation, salt mist not permissible	in the transport packaging; temperature -25 ... +55 °C; relative atmospheric humidity 5..95% (without condensation), storage altitude ≤4000m; condensation, spray water, ice formation, salt mist not permissible
during operation		Class 3K3 according to IEC 60721-3-3 Ed. 2.2: 2002	Class 3K3 according to IEC 60721-3-3 Ed. 2.2: 2002
• note		with increased ruggedness with respect to relative humidity, with HO: without derating (temperature -20 ... +50°C); with reduction of the permissible output current by 2.5 % per K (>50 ... 60 °C) with LO: without derating (temperature -20 ... +45°C); with reduction of the permissible output current by 1.5 % per K (>45 ... 50 °C), by 2.5 % per K (>50 ... 60°C), relative humidity 5 ... 95 % (without condensation; better than Class 3K3); ice formation, condensation, dripping water, spray water, splash water, jet water are not permissible	with increased ruggedness with respect to relative humidity, with HO: without temperature derating (temperature -20..45 °C), with reduction of the permissible output current, by 1.5 % per K (>45 ... 50 °C) with LO: without temperature derating (temperature -20..40 °C), by 1.5 % per K (>40 ... 50 °C), relative humidity 5 ... 95 % (without condensation, better than Class 3K3), ice formation, condensation, dripping water, spray water, splash water, jet water not permissible
Resistance to mechanical environmental conditions			
during storage		Class 1M2 according to IEC 60721-3-1:1997	Class 1M2 according to IEC 60721-3-1:1997
• note		in the transport packaging	in the transport packaging
during transport		Class 2M3 according to IEC 60721-3-2:1997	Class 2M3 according to IEC 60721-3-2:1997
• note		in the transport packaging	in the transport packaging
during operation		Class 3M1 according to IEC 60721-3-3 Ed. 2.2: 2002	Class 3M1 according to IEC 60721-3-3 Ed. 2.2: 2002
• note		Vibration test (test Fc according to IEC 60068-2-6; sinusoidal; 9 ... 29 Hz (amplitude 0.3 mm); 29 ... 200 Hz (acceleration 1g); 10 frequency cycles (per axis)); shock test (test Ea according to IEC 60068-2-27; semi-sinusoidal; peak acceleration 5g; duration 30 ms (3 shocks per direction))	Vibration test (test Fc according to IEC 60068-2-6; sinusoidal; 9 ... 29 Hz (amplitude 0.3 mm); 29 ... 200 Hz (acceleration 1g); 10 frequency cycles (per axis)); shock test (test Ea according to IEC 60068-2-27; semi-sinusoidal; peak acceleration 5g; duration 30 ms (3 shocks per direction))

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Technical specifications

Electrical specifications

Article number		6SL4112-0.A05-0.F0	6SL4112-0.A06-0.F0	6SL4112-0.A08-0.F0	6SL4112-0.A10-0.F0
Input voltage		3 AC	3 AC	3 AC	3 AC
Input frequency	Hz	47 ... 63	47 ... 63	47 ... 63	47 ... 63
manufacturer data rating plate electrical input frequency		50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Line voltage	V	200 ... 240	200 ... 240	200 ... 240	200 ... 240
output current rated value					
• without overload	A	4.1	4.9	6.7	8.8
• with low overload	A	3.9	4.7	6.5	8.5
• with high overload	A	2.9	3.9	4.7	6.5
supply voltage according to NEC	V	200 ... 240	200 ... 240	200 ... 240	200 ... 240
output current rated value according to NEC					
• without overload	A	3.3	4.4	6.2	7
• with low overload	A	3.2	4.2	6	6.8
• with high overload	A	2.2	3.2	4.2	6
rated power					
• at 230 V					
- with high overload	kW	0.37	0.55	0.75	1.1
- with low overload	kW	0.55	0.75	1.1	1.5
rated power [hp]					
• at 240 V					
- with high overload according to NEC	hp	0.5	0.75	1	1.5
- with low overload according to NEC	hp	0.75	1	1.5	2
Article number		6SL4112-0.A11-0.F0	6SL4112-0.A12-0.F0	6SL4112-0.A13-0.F0	6SL4112-0.A15-0.F0
Input voltage		3 AC	3 AC	3 AC	3 AC
Input frequency	Hz	47 ... 63	47 ... 63	47 ... 63	47 ... 63
manufacturer data rating plate electrical input frequency		50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Line voltage	V	200 ... 240	200 ... 240	200 ... 240	200 ... 240
output current rated value					
• without overload	A	11.3	14.9	19.5	27.7
• with low overload	A	11	14.5	19	27
• with high overload	A	8.5	11	14.5	19
supply voltage according to NEC	V	200 ... 240	200 ... 240	200 ... 240	200 ... 240
output current rated value according to NEC					
• without overload	A	9.9	12.8	15.6	22.6
• with low overload	A	9.6	12.4	15.2	22
• with high overload	A	6.8	9.6	12.4	15.2
rated power					
• at 230 V					
- with high overload	kW	1.5	2.2	3	4
- with low overload	kW	2.2	3	4	5.5
rated power [hp]					
• at 240 V					
- with high overload according to NEC	hp	2	3	4	5
- with low overload according to NEC	hp	3	4	5	7.5

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Article number		6SL4112-0.A16-0.F0	6SL4112-0.A17-0.F0	6SL4112-0.A18-0.F0	6SL4112-0.A20-0.F0
Input voltage		3 AC	3 AC	3 AC	3 AC
Input frequency	Hz	47 ... 63	47 ... 63	47 ... 63	47 ... 63
manufacturer data rating plate electrical input frequency		50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Line voltage	V	200 ... 240	200 ... 240	200 ... 240	200 ... 240
output current rated value					
• without overload	A	34.9	47.2	64.7	77
• with low overload	A	34	46	63	75
• with high overload	A	27	40	46	63
supply voltage according to NEC	V	200 ... 240	200 ... 240	200 ... 240	200 ... 240
output current rated value according to NEC					
• without overload	A	28.8	43.1	55.4	69.8
• with low overload	A	28	42	54	68
• with high overload	A	22	28	42	54
rated power at 230 V					
• with high overload	kW	5.5	7.5	11	15
• with low overload	kW	7.5	11	15	18.5
rated power [hp] at 240 V					
• with high overload according to NEC	hp	7.5	10	15	20
• with low overload according to NEC	hp	10	15	20	25
Article number		6SL4112-0.A21-0.F0		6SL4112-0.A23-0.F0	
Input voltage		3 AC		3 AC	
Input frequency	Hz	47 ... 63		47 ... 63	
manufacturer data rating plate electrical input frequency		50/60 Hz		50/60 Hz	
Line voltage	V	200 ... 240		200 ... 240	
output current rated value					
• without overload	A	92.4		114.9	
• with low overload	A	90		112	
• with high overload	A	75		90	
supply voltage according to NEC	V	200 ... 240		200 ... 240	
output current rated value according to NEC					
• without overload	A	82.1		106.7	
• with low overload	A	80		104	
• with high overload	A	68		80	
rated power at 230 V					
• with high overload	kW	18.5		22	
• with low overload	kW	22		30	
rated power [hp] at 240 V					
• with high overload according to NEC	hp	25		30	
• with low overload according to NEC	hp	30		40	

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Technical specifications

Article number		6SL4113-0.A08-..F0	6SL4113-0.A10-..F0	6SL4113-0.A11-..F0	6SL4113-0.A12-..F0
Input voltage		3 AC	3 AC	3 AC	3 AC
Input frequency	Hz	47 ... 63	47 ... 63	47 ... 63	47 ... 63
manufacturer data rating plate electrical input frequency		50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Line voltage	V	380 ... 415	380 ... 415	380 ... 415	380 ... 415
output current rated value					
• without overload	A	4.1	4.9	6.7	8.8
• with low overload	A	3.9	4.7	6.5	8.5
• with high overload	A	2.9	3.9	4.7	6.5
• for SRM	A	3.9	4.7	6.5	8.5
supply voltage according to NEC	V	440 ... 500	440 ... 500	440 ... 500	440 ... 500
output current rated value according to NEC					
• without overload	A	3.1	3.5	5	6.4
• with low overload	A	3	3.4	4.8	6.2
• with high overload	A	2.1	3	3.4	4.8
rated power					
• at 400 V for SRM					
- with high overload	kW	0.75	1.1	1.5	2.2
- with low overload	kW	1.1	1.5	2.2	3
• at 400 V					
- with high overload	kW	0.75	1.1	1.5	2.2
- with low overload	kW	1.1	1.5	2.2	3
• at 500 V					
- with high overload	kW	0.8	1.1	1.5	2.2
- with low overload	kW	1.1	1.5	2.2	3
rated power [hp] at 480 V					
• with high overload according to NEC	hp	1	1.5	2	3
• with low overload according to NEC	hp	1.5	2	3	4

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Technical specifications

Article number		6SL4113-0.A13-..F0	6SL4113-0.A15-..F0	6SL4113-..A16-..F0	6SL4113-..A17-..F0
Input voltage		3 AC	3 AC	3 AC	3 AC
Input frequency	Hz	47 ... 63	47 ... 63	47 ... 63	47 ... 63
manufacturer data rating plate electrical input frequency		50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Line voltage	V	380 ... 415	380 ... 415	380 ... 415	380 ... 415
output current rated value					
• without overload	A	11.3	14.9	19.5	27.7
• with low overload	A	11	14.5	19	27
• with high overload	A	8.5	11	14.5	19
• for SRM	A	11	14.5	19	27
supply voltage according to NEC	V	440 ... 500	440 ... 500	440 ... 500	440 ... 500
output current rated value according to NEC					
• without overload	A	7.8	11.3	14.4	21.6
• with low overload	A	7.6	11	14	21
• with high overload	A	6.2	7.6	11	14
rated power					
• at 400 V for SRM					
- with high overload	kW	3	4	5.5	7.5
- with low overload	kW	4	5.5	7.5	11
• at 400 V					
- with high overload	kW	3	4	5.5	7.5
- with low overload	kW	4	5.5	7.5	11
• at 500 V					
- with high overload	kW	3	4	5.5	7.5
- with low overload	kW	4	5.5	7.5	11
rated power [hp] at 480 V					
• with high overload according to NEC	hp	4	5	7.5	10
• with low overload according to NEC	hp	5	7.5	10	15

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Article number		6SL4113-..A18-..F0	6SL4113-..A20-..F0	6SL4113-..A21-..F0	6SL4113-..A23-..F0
Input voltage		3 AC	3 AC	3 AC	3 AC
Input frequency	Hz	47 ... 63	47 ... 63	47 ... 63	47 ... 63
manufacturer data rating plate electrical input frequency		50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Line voltage	V	380 ... 415	380 ... 415	380 ... 415	380 ... 415
output current rated value					
• without overload	A	34.9	41.1	47.2	64.7
• with low overload	A	34	40	46	63
• with high overload	A	27	34	40	46
• for SRM	A	35	43	50	69
supply voltage according to NEC	V	440 ... 500	440 ... 500	440 ... 500	440 ... 500
output current rated value according to NEC					
• without overload	A	27.7	34.9	41.1	53.4
• with low overload	A	27	34	40	52
• with high overload	A	21	27	34	40
rated power					
• at 400 V for SRM					
- with high overload	kW	11	15	18.5	22
- with low overload	kW	15	18.5	22	30
• at 400 V					
- with high overload	kW	11	15	18.5	22
- with low overload	kW	15	18.5	22	30
• at 500 V					
- with high overload	kW	11	15	18.5	22
- with low overload	kW	15	18.5	22	30
rated power [hp] at 480 V					
• with high overload according to NEC	hp	15	20	25	30
• with low overload according to NEC	hp	20	25	30	40

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Article number		6SL4113-..A24-..F0	6SL4113-..A26-..F0	6SL4113-..A27-..F0
Input voltage		3 AC	3 AC	3 AC
Input frequency	Hz	47 ... 63	47 ... 63	47 ... 63
manufacturer data rating plate electrical input frequency		50/60 Hz	50/60 Hz	50/60 Hz
Line voltage	V	380 ... 415	380 ... 415	380 ... 415
output current rated value				
• without overload	A	77	92.4	114.9
• with low overload	A	75	90	112
• with high overload	A	63	75	90
• for SRM	A	85	103	123
supply voltage according to NEC	V	440 ... 500	440 ... 500	440 ... 500
output current rated value according to NEC				
• without overload	A	66.7	79	98.5
• with low overload	A	65	77	96
• with high overload	A	52	65	77
rated power				
• at 400 V for SRM				
- with high overload	kW	30	37	45
- with low overload	kW	37	45	55
• at 400 V				
- with high overload	kW	30	37	45
- with low overload	kW	37	45	55
• at 500 V				
- with high overload	kW	30	37	45
- with low overload	kW	37	45	55
rated power [hp] at 480 V				
• with high overload according to NEC	hp	40	50	60
• with low overload according to NEC	hp	50	60	75

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Technical specifications

Power loss

Article number		6SL4112-0CA05-0AF0	6SL4112-0CA06-0AF0	6SL4112-0CA08-0AF0	6SL4112-0CA10-0AF0
rated power at 230 V with low overload	kW	0.55	0.75	1.1	1.5
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	66.9	78.6	107	144
• in standby mode of operation	W	15.6	15.6	15.6	15.6
• at the operating point (90/100) according to NEC	W	58.1	71.5	98.6	112
• in standby mode of operation according to NEC	W	15.6	15.6	15.6	15.6
Article number		6SL4112-0CA11-0AF0	6SL4112-0CA12-0AF0	6SL4112-0CA13-0AF0	6SL4112-0CA15-0AF0
rated power at 230 V with low overload	kW	2.2	3	4	5.5
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	191	202	277	373
• in standby mode of operation	W	15.6	19.2	19.2	21.6
• at the operating point (90/100) according to NEC	W	166	174	213	296
• in standby mode of operation according to NEC	W	15.6	19.2	19.2	21.6
Article number		6SL4112-0CA16-0AF0	6SL4112-0CA17-0AF0	6SL4112-0CA18-0AF0	
rated power at 230 V with low overload	kW	7.5	11	15	
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	498	566	842	
• in standby mode of operation	W	21.6	28.8	30	
• at the operating point (90/100) according to NEC	W	392	511	694	
• in standby mode of operation according to NEC	W	21.6	28.8	30	
Article number		6SL4112-0CA20-0AF0	6SL4112-0CA21-0AF0	6SL4112-0CA23-0AF0	
rated power at 230 V with low overload	kW	18.5	22	30	
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	1 060	1 150	1 530	
• in standby mode of operation	W	30	34.8	34.8	
• at the operating point (90/100) according to NEC	W	935	1 000	1 390	
• in standby mode of operation according to NEC	W	30	34.8	34.8	
Article number		6SL4113-0CA08-0AF0	6SL4113-0CA10-0AF0	6SL4113-0CA11-0AF0	6SL4113-0CA12-0AF0
rated power at 400 V with low overload	kW	1.1	1.5	2.2	3
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	77.2	90.6	123	165
• in standby mode of operation	W	14.3	14.3	14.3	14.3
• at the operating point (90/100) according to NEC	W	72.2	77.3	103	131
• in standby mode of operation according to NEC	W	14.3	14.3	14.3	14.3

SINAMICS G220 built-in and wall-mounted units

Technical specifications

Article number		6SL4113-0CA13-0AF0	6SL4113-0CA15-0AF0	6SL4113-0CA16-0AF0	6SL4113-0CA17-0AF0
rated power at 400 V with low overload	kW	4	5.5	7.5	11
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	216	238	314	406
• in standby mode of operation	W	14.3	17.6	17.6	19.8
• at the operating point (90/100) according to NEC	W	161	206	255	340
• in standby mode of operation according to NEC	W	14.3	17.6	17.6	19.8
Article number		6SL4113-0CA18-0AF0	6SL4113-0CA20-0AF0	6SL4113-0CA21-0AF0	6SL4113-0CA23-0AF0
rated power at 400 V with low overload	kW	15	18.5	22	30
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	534	562	662	888
• in standby mode of operation	W	19.8	25.3	25.3	27.5
• at the operating point (90/100) according to NEC	W	441	508	608	765
• in standby mode of operation according to NEC	W	19.8	25.3	25.3	27.5
Article number		6SL4113-0CA24-0AF0	6SL4113-0CA26-0AF0	6SL4113-0CA27-0AF0	
rated power at 400 V with low overload	kW	37	45	55	
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	1 110	1 230	1 600	
• in standby mode of operation	W	27.5	31.9	31.9	
• at the operating point (90/100) according to NEC	W	992	1 100	1 430	
• in standby mode of operation according to NEC	W	27.5	31.9	31.9	
Article number		6SL4113-0CA08-2AF0	6SL4113-0CA10-2AF0	6SL4113-0CA11-2AF0	6SL4113-0CA12-2AF0
rated power at 400 V with low overload	kW	1.1	1.5	2.2	3
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	78.3	92.2	126	170
• in standby mode of operation	W	14.3	14.3	14.3	14.3
• at the operating point (90/100) according to NEC	W	72.8	78.1	104	133
• in standby mode of operation according to NEC	W	14.3	14.3	14.3	14.3
Article number		6SL4113-0CA13-2AF0	6SL4113-0CA15-2AF0	6SL4113-0CA16-2AF0	6SL4113-0CA17-2AF0
rated power at 400 V with low overload	kW	4	5.5	7.5	11
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	224	244	324	420
• in standby mode of operation	W	14.3	17.6	17.6	19.8
• at the operating point (90/100) according to NEC	W	165	210	261	348
• in standby mode of operation according to NEC	W	14.3	17.6	17.6	19.8

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Technical specifications

Article number		6SL4113-0CA18-2AF0	6SL4113-0CA20-2AF0	6SL4113-0CA21-2AF0	6SL4113-0CA23-2AF0
rated power at 400 V with low overload	kW	15	18.5	22	30
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	555	564	665	899
• in standby mode of operation	W	19.8	25.3	25.3	27.5
• at the operating point (90/100) according to NEC	W	455	510	610	772
• in standby mode of operation according to NEC	W	19.8	25.3	25.3	27.5
Article number		6SL4113-0CA24-2AF0	6SL4113-0CA26-2AF0	6SL4113-0CA27-2AF0	
rated power at 400 V with low overload	kW	37	45	55	
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	1 119	1 246	1 634	
• in standby mode of operation	W	27.5	31.9	31.9	
• at the operating point (90/100) according to NEC	W	1 003	1 118	1 450	
• in standby mode of operation according to NEC	W	27.5	31.9	31.9	
Article number		6SL4112-0JA08-0AF0	6SL4112-0JA10-0AF0	6SL4112-0JA11-0AF0	6SL4112-0JA12-0AF0
rated power at 230 V with low overload	kW	1.1	1.5	2.2	3
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	108	135	166	214
• in standby mode of operation	W	25.2	25.2	25.2	25.2
• at the operating point (90/100) according to NEC	W	101	112	150	186
• in standby mode of operation according to NEC	W	25.2	25.2	25.2	25.2
Article number		6SL4112-0JA13-0AF0	6SL4112-0JA15-0AF0	6SL4112-0JA16-0AF0	6SL4112-0JA17-0AF0
rated power at 230 V with low overload	kW	4	5.5	7.5	11
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	290	409	540	566
• in standby mode of operation	W	25.2	31.2	31.2	38.4
• at the operating point (90/100) according to NEC	W	225	328	429	522
• in standby mode of operation according to NEC	W	25.2	31.2	31.2	38.4
Article number		6SL4112-0JA18-0AF0	6SL4112-0JA20-0AF0	6SL4112-0JA21-0AF0	6SL4112-0JA23-0AF0
rated power at 230 V with low overload	kW	15	18.5	22	30
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	840	1 060	1 160	1 540
• in standby mode of operation	W	38.4	38.4	44.4	44.4
• at the operating point (90/100) according to NEC	W	692	933	1 010	1 400
• in standby mode of operation according to NEC	W	38.4	38.4	44.4	44.4

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Article number		6SL4113-0JA08-0AF0	6SL4113-0JA10-0AF0	6SL4113-0JA11-0AF0	6SL4113-0JA12-0AF0
rated power at 400 V with low overload	kW	1.1	1.5	2.2	3
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	85.5	96.8	123	156
• in standby mode of operation	W	23.1	23.1	23.1	23.1
• at the operating point (90/100) according to NEC	W	82.2	86.5	108	131
• in standby mode of operation according to NEC	W	23.1	23.1	23.1	23.1
Article number		6SL4113-0JA13-0AF0	6SL4113-0JA15-0AF0	6SL4113-0JA16-0AF0	6SL4113-0JA17-0AF0
rated power at 400 V with low overload	kW	4	5.5	7.5	11
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	193	249	325	440
• in standby mode of operation	W	23.1	23.1	23.1	28.6
• at the operating point (90/100) according to NEC	W	156	217	266	371
• in standby mode of operation according to NEC	W	23.1	23.1	23.1	28.6
Article number		6SL4113-0JA18-0AF0	6SL4113-0JA20-0AF0	6SL4113-0JA21-0AF0	6SL4113-0JA23-0AF0
rated power at 400 V with low overload	kW	15	18.5	22	30
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	573	557	655	887
• in standby mode of operation	W	28.6	29.7	29.7	35.2
• at the operating point (90/100) according to NEC	W	476	505	603	764
• in standby mode of operation according to NEC	W	28.6	29.7	29.7	35.2
Article number		6SL4113-0JA24-0AF0	6SL4113-0JA26-0AF0	6SL4113-0JA27-0AF0	
rated power at 400 V with low overload	kW	37	45	55	
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	1 100	1 240	1 620	
• in standby mode of operation	W	35.2	40.7	40.7	
• at the operating point (90/100) according to NEC	W	990	1 110	1 440	
• in standby mode of operation according to NEC	W	35.2	40.7	40.7	
Article number		6SL4113-0JA08-2AF0	6SL4113-0JA10-2AF0	6SL4113-0JA11-2AF0	6SL4113-0JA12-2AF0
rated power at 400 V with low overload	kW	1.1	1.5	2.2	3
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	85.8	97.3	124	158
• in standby mode of operation	W	23.1	23.1	23.1	23.1
• at the operating point (90/100) according to NEC	W	82.4	86.8	109	132
• in standby mode of operation according to NEC	W	23.1	23.1	23.1	23.1

SINAMICS G220 built-in and wall-mounted units

Technical specifications

Article number		6SL4113-0JA13-2AF0	6SL4113-0JA15-2AF0	6SL4113-0JA16-2AF0	6SL4113-0JA17-2AF0
rated power at 400 V with low overload	kW	4	5.5	7.5	11
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	196	254	334	448
• in standby mode of operation	W	23.1	23.1	23.1	28.6
• at the operating point (90/100) according to NEC	W	157	220	271	375
• in standby mode of operation according to NEC	W	23.1	23.1	23.1	28.6

Article number		6SL4113-0JA18-2AF0	6SL4113-0JA20-2AF0	6SL4113-0JA21-2AF0	6SL4113-0JA23-2AF0
rated power at 400 V with low overload	kW	15	18.5	22	30
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	585	560	660	895
• in standby mode of operation	W	28.6	29.7	29.7	35.2
• at the operating point (90/100) according to NEC	W	483	507	607	770
• in standby mode of operation according to NEC	W	28.6	29.7	29.7	35.2

Article number		6SL4113-0JA24-2AF0		6SL4113-0JA26-2AF0		6SL4113-0JA27-2AF0	
rated power at 400 V with low overload	kW	37		45		55	
power loss [W] of the CDM or SDOM							
• at the operating point (90/100)	W	1 120		1 240		1 630	
• in standby mode of operation	W	35.2		40.7		40.7	
• at the operating point (90/100) according to NEC	W	1 000		1 120		1 450	
• in standby mode of operation according to NEC	W	35.2		40.7		40.7	

Article number		6SL4113-2CA16-2AF0	6SL4113-2CA17-2AF0	6SL4113-2CA18-2AF0	6SL4113-2CA20-2AF0	6SL4113-2CA21-2AF0
rated power at 400 V with low overload	kW	7.5	11	15	18.5	22
power loss [W] of the CDM or SDOM						
• at the operating point (90/100)	W	456.3	590.5	781.3	794.3	936.1
• in standby mode of operation	W	32.2	32.2	32.2	32.2	32.2
• at the operating point (90/100) according to NEC	W	366.7	498.6	640.1	717.4	859.2
• in standby mode of operation according to NEC	W	32.2	32.2	32.2	32.2	32.2

Article number		6SL4113-2CA23-2AF0	6SL4113-2CA24-2AF0	6SL4113-2CA26-2AF0	6SL4113-2CA27-2AF0
rated power at 400 V with low overload	kW	30	37	45	55
power loss [W] of the CDM or SDOM					
• at the operating point (90/100)	W	1 156.8	1 441	1 624.2	2 129.8
• in standby mode of operation	W	37.6	37.6	39.2	39.2
• at the operating point (90/100) according to NEC	W	994.2	1 291.4	1 457.4	1 890.6
• in standby mode of operation according to NEC	W	37.6	37.6	39.2	39.2

SINAMICS G220 built-in and wall-mounted units

Technical specifications

Braking resistors

Article number		JJY:023-15172-0007	JJY:023-16372-0018	JJY:023-43372-0001	JJY:023-42262-0002
electrical resistance of the braking resistor	Ω	68	37	20	7.5
consumed active power rated value	kW	0.11	0.2	0.375	0.93
consumed active power rated value maximum	kW	2.2	4	7.5	18.5
type of electrical connection for power cable		Integrated cable, 2x AWG 16	Integrated cable, 2x AWG 16	Integrated cable, 2x AWG 16	Terminal block
design of the temperature switch		integrated, with cable 2x AWG 22	integrated, with cable 2x AWG 22	integrated, with cable 2x AWG 22	integrated
Degree of protection		IP20 / UL open type	IP20 / UL open type	IP20 / UL open type	IP21
Dimensions					
width	mm (in)	217 (8.54)	337 (13.27)	337 (13.27)	220 (8.66)
height	mm (in)	60 (2.36)	60 (2.36)	120 (4.72)	180 (7.09)
depth	mm (in)	30 (1.18)	30 (1.18)	30 (1.18)	470 (18.5)
net weight	kg (lb)	0.7 (1.54)	1.1 (2.43)	2 (4.41)	7 (15.43)
Article number		JJY:023-42332-0001	6SL3201-0BE14-3AA0	6SL3201-0BE21-0AA0	6SL3201-0BE21-8AA0
electrical resistance of the braking resistor	Ω	4.5	370	140	75
consumed active power rated value	kW	1.5	0.075	0.2	0.375
consumed active power rated value maximum	kW	30	1.5	4	7.5
type of electrical connection for power cable		Terminal block	Terminal block	Terminal block	Terminal block
design of the temperature switch		integrated	Normally closed contact	Normally closed contact	Normally closed contact
Degree of protection		IP21	IP20 / UL open type	IP20 / UL open type	IP20 / UL open type
Dimensions					
width	mm (in)	220 (8.66)	105 (4.13)	105 (4.13)	175 (6.89)
height	mm (in)	180 (7.09)	295 (11.61)	345 (13.58)	345 (13.58)
depth	mm (in)	560 (22.05)	100 (3.94)	100 (3.94)	100 (3.94)
net weight	kg (lb)	8.5 (18.74)	1.48 (3.26)	1.8 (3.97)	2.73 (6.02)
Article number		6SL3201-0BE23-8AA0	JJY:023-42262-0001	JJY:023-42402-0001	JJY:023-43402-0001
electrical resistance of the braking resistor	Ω	30	25	15	10
consumed active power rated value	kW	0.925	1.1	1.85	2.75
consumed active power rated value maximum	kW	18.5	22	37	55
type of electrical connection for power cable		Terminal block	Terminal block	Terminal block	Terminal block
design of the temperature switch		Normally closed contact	integrated	integrated	integrated
Degree of protection		IP20 / UL open type	IP21	IP21	IP21
Dimensions					
width	mm (in)	250 (9.84)	220 (8.66)	220 (8.66)	350 (13.78)
height	mm (in)	490 (19.29)	470 (18.5)	180 (7.09)	630 (24.8)
depth	mm (in)	140 (5.51)	180 (7.09)	610 (24.02)	180 (7.09)
net weight	kg (lb)	6.2 (13.67)	7 (15.43)	9.5 (20.94)	13.5 (29.76)

SINAMICS G220 built-in and wall-mounted units

Safety Integrated for SINAMICS G220

Overview



The SINAMICS G220 converter features Safety Integrated Functions as standard.

Safety Integrated overview

The Safety Integrated Functions are implemented electronically and therefore offer short response times and easy handling in comparison to solutions with externally implemented monitoring functions.

The integrated safety functions comply with the requirements of SIL 3 according to IEC 61508 and IEC 61062 and PL e/category 4 according to ISO 13849-1.

No additional license is required for the Basic Functions STO, SS1-t, SS1E-t and SMT. One Safety Extended Runtime license per device is required for the Extended Functions SS1-r, SS1-a, SS1E-r, SS1E-a, SS2, SS2E, SOS, SLS, SSM, SDI and SLA.

Use of the Basic Functions does not require a motor encoder, but use of the Extended Functions does require a Safety-capable encoder connected via DRIVE-CLiQ or SMC20 Sensor Module Cabinet-Mounted.

Controlling the Safety Integrated Functions

The Safety Integrated Functions are completely integrated into the drive system. They can be activated via fail-safe digital inputs or via PROFINET with PROFIsafe.

The SINAMICS G220 converter has up to three fail-safe digital inputs.

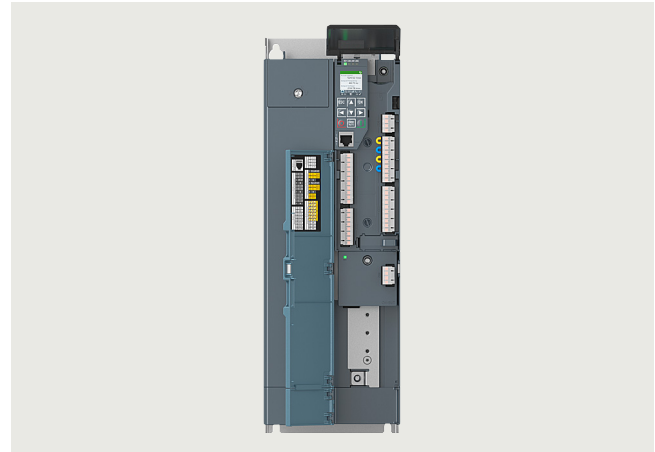
The STO function in the converter is released ex works, and is assigned to the fail-safe digital input F-DI 0. When wiring an emergency stop operating device, the STO function can therefore be used right away with no additional configuration. The F-DI 0 is delivered with a bridge, meaning that the drive can be operated even without wiring an emergency stop operating device.

To comply with the requirements of ISO 13849-1 and IEC 61508 for timely error detection, the fail-safe inputs and switch-off signal paths of the SINAMICS G220 are tested cyclically and automatically during operation. A test stop and consequent shutdown of the drive is therefore not necessary for error detection.

OM-SMT Option Module Safe Motor Temperature



OM-SMT Option Module Safe Motor Temperature



Integrated safety solution: SINAMICS G220 with inserted OM-SMT Option Module Safe Motor Temperature

The OM-SMT Option Module (Safe Motor Temperature)

- is suitable for monitoring the temperature of a motor in an explosive atmosphere (ATEX applications).
- is required for the SMT (Safe Motor Temperature) safety function.
- monitors the temperature of motors with two connected PTC temperature sensors for a warning threshold and a shutdown threshold.
- also detects short-circuits and wire breaks in the sensor circuit.
- detects when the limit temperature is exceeded. Once the shutdown threshold is reached, the converter automatically triggers the STO stop function, which prevents the motor from receiving any more energy from the converter; and the temperature can no longer rise.
- is classified for EX II (2) GD. Shutdown is certified for ATEX to SIL 2 in accordance with IEC 61508 and IEC 61062 and PL d, category 3 in accordance with ISO 13849-1.
- is intended for operation in the option slot of the converter. Operation is possible in converters with degree of protection IP20 / UL Open Type and IP55 / UL Type 12.

SINAMICS G220 built-in and wall-mounted units

Safety Integrated for SINAMICS G220

Function

Function	Control	Underlying function	Reaction to limit overshoot	Encoder required	License required
Basic functions (no additional license is required)					
STO	- F-DI - PROFIsafe	–	–	No	No
SS1 time-controlled	- F-DI - PROFIsafe	Following expiry of the parameterized delay time	–	No	No
SS1E time-controlled	- F-DI - PROFIsafe	Following expiry of the parameterized delay time	–	No	No
SMT	–	When STO limit temperature exceeded	STO	No	No
Extended functions (an additional license is required)					
SS1 with SBR/SAM	- F-DI - PROFIsafe	Safe Acceleration Monitor (SAM) or Safe Brake Ramp (SBR) during braking. Following expiry of the parameterized delay time or if the speed falls below the minimum speed limit STO	STO	Yes	Yes
SS1E with SBR/SAM	- F-DI - PROFIsafe	Safe Acceleration Monitor (SAM) or Safe Brake Ramp (SBR) during braking. Following expiry of the parameterized delay time or if the speed falls below the minimum speed limit STO	STO	Yes	Yes
SS2 time-controlled	- F-DI - PROFIsafe	Following expiry of the parameterized SOS delay time	–	Yes	Yes
SS2 with SBR/SAM	- F-DI - PROFIsafe	Safe Acceleration Monitor (SAM) or Safe Brake Ramp (SBR) during braking. Following expiry of the parameterized delay time or if the speed falls below the minimum speed limit SOS	STO	Yes	Yes
SS2E time-controlled	- F-DI - PROFIsafe	Following expiry of the parameterized SOS delay time	–	Yes	Yes
SS2E with SBR/SAM	- F-DI - PROFIsafe	Safe Acceleration Monitor (SAM) or Safe Brake Ramp (SBR) during braking. Following expiry of the parameterized delay time or if the speed falls below the minimum speed limit SOS	STO	Yes	Yes
SOS	- F-DI - PROFIsafe	–	STO	Yes	Yes
SLS	- F-DI - PROFIsafe	–	STO, SS1, SS1E, SS2, SS2E (can be parameterized)	Yes	Yes
SDI	- F-DI - PROFIsafe	–	STO, SS1, SS1E, SS2, SS2E (can be parameterized)	Yes	Yes
SSM	- F-DI - PROFIsafe	–	Signals that the speed has fallen below a specified value	Yes	Yes
SLA	- F-DI - PROFIsafe	–	STO, SS1, SS1E, SS2, SS2E (can be parameterized)	Yes	Yes

SINAMICS G220 built-in and wall-mounted units
Supplementary system components

Option Modules > OM-DQ Option Module DRIVE-CLiQ

Overview



SINAMICS G220 OM-DQ Option Module DRIVE-CLiQ

The OM-DQ Option Module DRIVE-CLiQ connects the converter to DRIVE-CLiQ modules.

The OM-DQ Option Module DRIVE-CLiQ is intended for operation in the option slot of the converter. Operation is possible in converters with degree of protection IP20 / UL Open Type and IP55 / UL Type 12. The OM-DQ Option Module DRIVE-CLiQ connects the converter to other Option Modules or DRIVE-CLiQ modules that are mounted outside the converter.

Selection and ordering data

Description	Article No.
OM-DQ Option Module DRIVE-CLiQ • For ordering as a supplementary system component or a spare part • For ordering as a part of the converter with an order code	6SL4950-0AL00-0BA0 6SL4...-.....-Z T01

Technical specifications

	OM-DQ Option Module DRIVE-CLiQ 6SL4950-0AL00-0BA0
Max. current consumption (at 24 V DC)	0.08 A
Weight	0.075 kg
Operating temperature	-20 ... 60 °C
Transfer rate	100 Mbit/s

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SINAMICS G220 built-in and wall-mounted units

Supplementary system components

Option Modules > OM-IIoT Option Module IIoT

Overview



SINAMICS G220 OM-IIoT Option Module IIoT

The OM-IIoT Option Module IIoT connects the converter to the Industrial Internet of Things (IIoT).

The OM-IIoT Option Module IIoT is intended for operation in the option slot of the converter. Operation is possible in converters with degree of protection IP20 / UL Open Type and IP55 / UL Type 12. The OM-IIoT Option Module IIoT can be operated outside the option slot via the OM-DQ Option Module DRIVE-CLiQ.

Selection and ordering data

Description	Article No.
OM-IIoT Option Module IIoT	
• For ordering as a supplementary system component or a spare part	6SL4950-0AL00-0EA0
• For ordering as a part of the converter with an order code	6SL4...-.....-Z T04

Technical specifications

	OM-IIoT Option Module IIoT 6SL4950-0AL00-0EA0
Max. current consumption (at 24 V DC)	0.08 A
Weight	0.075 kg
Operating temperature	-20 ... 60 °C

SINAMICS G220 built-in and wall-mounted units
Supplementary system components

Option Modules > OM-SMT Option Module Safe Motor Temperature

Overview



SINAMICS G220 OM-SMT Option Module Safe Motor Temperature

The OM-SMT Option Module Safe Motor Temperature is suitable for monitoring the temperature of a motor in a hazardous atmosphere.

The OM-SMT Option Module Safe Motor Temperature monitors the temperature of motors with two connected PTC temperature sensors. It also detects short-circuits and wire breaks in the sensor circuit.

The OM-SMT Option Module Safe Motor Temperature is intended for operation in the option slot of the converter. Operation is possible in converters with degree of protection IP20 / UL Open Type and IP55 / UL Type 12. The OM-SMT Option Module Safe Motor Temperature can be operated outside the option slot via the OM-DQ Option Module DRIVE-CLiQ.

Selection and ordering data

Description	Article No.
OM-SMT Option Module Safe Motor Temperature - For ordering as a supplementary system component or a spare part - For ordering as a part of the converter with an order code	6SL4950-0AL00-0FA0 6SL4...-...-...-Z T05

Technical specifications

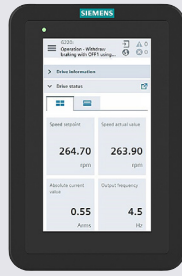
	OM-SMT Option Module Safe Motor Temperature 6SL4950-0AL00-0FA0
Max. current consumption (at 24 V DC)	0.08 A
Weight	0.075 kg

SINAMICS G220 built-in and wall-mounted units

Supplementary system components

Smart Drive Interfaces

Overview

Operator panel	SINAMICS SDI Standard	SINAMICS SDI Pro 5.5"
Description	 With its high-contrast color display (1.4"), menu navigation and the extensive functionality provided by the integrated web server of the connected converter, it is easy to implement commissioning, diagnostics, operator control and monitoring, and service scenarios of the standard drives, for example.	 Thanks to the high-contrast color touch display (5.5"), menu navigation and the extensive functionality provided by the integrated web server of the connected converter, it is easy to implement commissioning, diagnostics, operator control and monitoring, and service scenarios of the standard drives, for example.
Possible applications	Integrated into the SINAMICS G220 converter	- Mountable on the SINAMICS G220¹⁾ IP55 converter with adapter - Can be mounted in a control cabinet door using a door mounting kit (achievable degree of protection is IP55/UL type 12 enclosure) - The SINAMICS SDI Pro 5.5" can also be used as a handheld device when using the handheld kit. - Wired connection to the converter via the service interface (X127) or PROFIBUS interface (X150) - Direct power supply via the service interface of the converter (X127)
Quick commissioning without expert knowledge		- Easy commissioning of standard applications via quick/advanced commissioning, no knowledge of the parameter structure necessary - Series commissioning with clone function (backup/restore). Backup files are stored directly on the SINAMICS SDI Pro 5.5" - User-defined parameter list with focused, custom parameter selection - Simple on-site commissioning thanks to its use as a handheld
High degree of operator friendliness and intuitive handling	- Intuitive navigation with integrated keyboard - Graphical color display (1.4") to show status values such as pressure or flow rate in the form of scalar values - Status display with freely selectable units to specify physical values - User interface has context-sensitive help, making diagnostics of alarms, for example, possible with minimal documentation - Direct manual operation of the drive with easy switchover between the automatic and manual modes - The following languages are supported: English, French, German, Italian, Spanish, Chinese Simplified	- Intuitive navigation thanks to touch operation - Graphic color touch display (5.5") to show status values such as pressure or flow rate in the form of scalar values - Status display with predefined units - User interface has context-sensitive help, making commissioning or diagnostics of alarms, for example, possible with minimal documentation - Direct manual operation of the drive with the control panel - The SINAMICS SDI Pro 5.5" lets the user easily access a large number of converters (installed in a cabinet, for example) either with an automatically or manually created converter list. - The following languages are supported: English, French, German, Italian, Spanish, Chinese Simplified
Minimization of maintenance times	- Diagnostics using plain text display, can be used locally on-site without documentation - The support function allows for easy access to information about the converter, for which it provides QR code links. - Using the support function, the display can show a QR code representing the IP address of the service/fieldbus interface currently configured on the converter. By scanning the code (for example, with a smartphone), the user can easily access the integrated web server of the converter. - Simple cloning of the SINAMICS SDI default settings with the converter's backup/restore function. - Updating of the SINAMICS SDI standard function with a drive firmware upgrade.	- Diagnostics using plain text display; can be used locally on-site without documentation - The support function allows for easy access to information about the SINAMICS SDI Pro and the converter, for which it provides QR code links. - Simple cloning of the SDI Pro settings with the backup/restore function of the Panel. - Thanks to the USB C interface on the SINAMICS SDI Pro, the Panel can be upgraded to the latest features. The upgrade only affects the internal functionality of the SINAMICS SDI Pro. The user interface of the converter is not affected. It is provided by the respective converter.

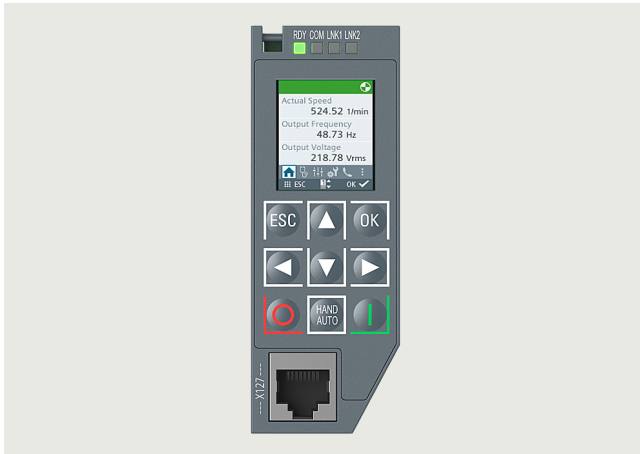
¹⁾ Release for SINAMICS S200 and SINAMICS S210 (6SL5...) available soon.

SINAMICS G220 built-in and wall-mounted units

Supplementary system components

Smart Drive Interfaces > SINAMICS SDI Standard

Overview



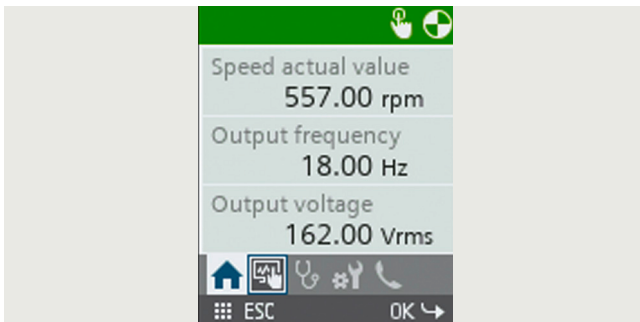
SINAMICS G220 SDI Standard

The SINAMICS SDI Standard is a highly user-friendly Operator Panel for the SINAMICS G220. The SDI Standard supports newcomers and drive experts alike with essential tasks locally on the device. Thanks to its high-contrast 1.4" color display and membrane keyboard, the device can assist with diagnosing faults in plain text, operation and monitoring, and with maintenance and servicing of the converter on site.

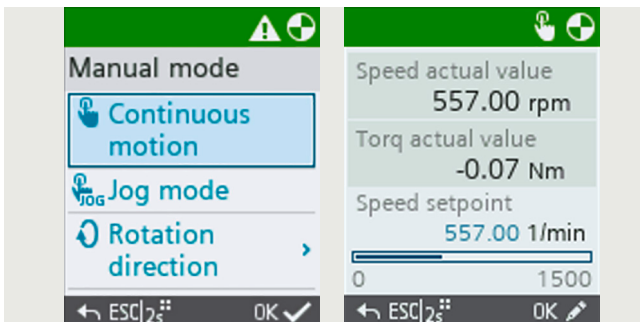
The user interface to the converter is provided by the converter's built-in web server. The technology in the SDI Standard gives it access to select functions of the web server.

This includes:

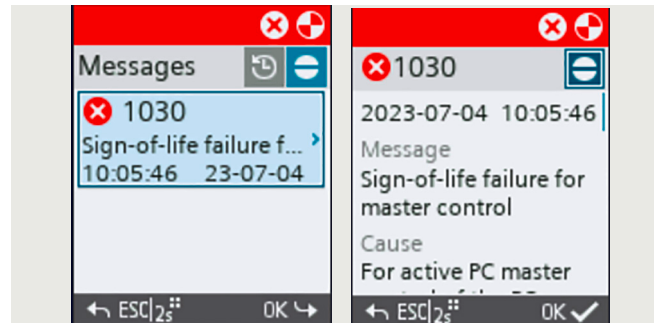
- Home page with selected display values (values are configurable)



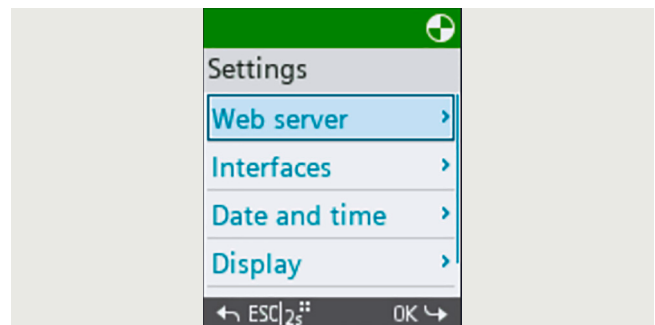
- Operate motor in manual operation



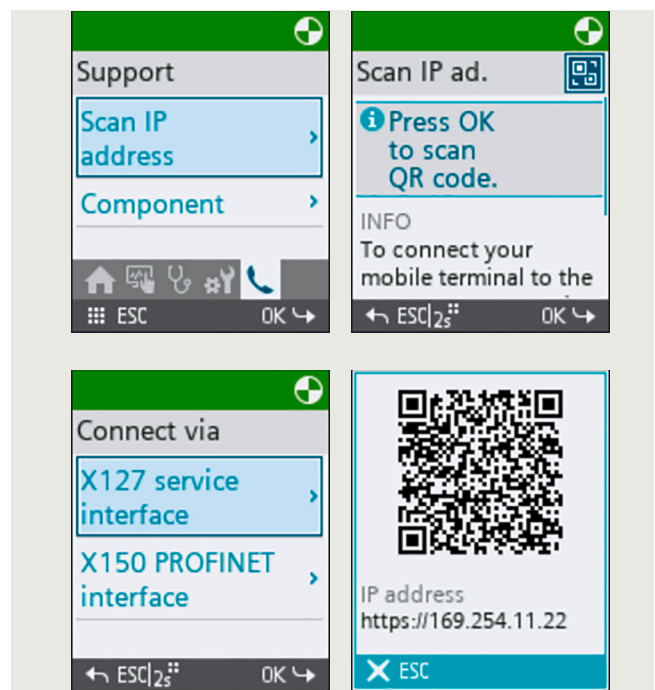
- Diagnose alarms in plain text and view fault cause/remedy messages



- System settings to configure the web server, converter interfaces, date and time and display settings (brightness, backlight timer) as well as the user interface language



- Support page with scannable information (QR code) for the configured IP address of the service interface and PROFINET interface (X127 / X150) and for the individual components of the SINAMICS G220 drive.



SINAMICS G220 built-in and wall-mounted units

Supplementary system components

Smart Drive Interfaces > SINAMICS SDI Standard

Technical specifications

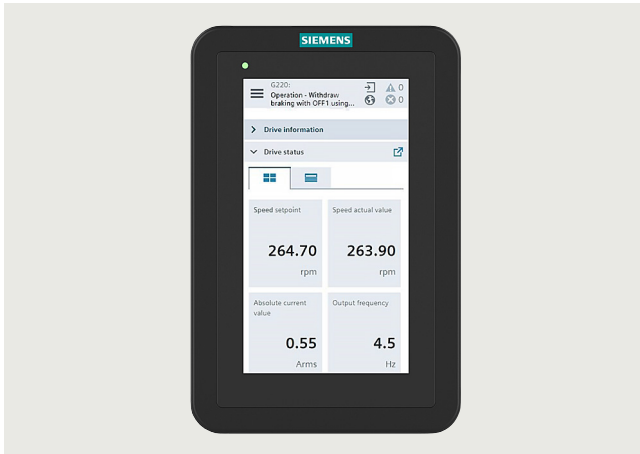
	SINAMICS SDI Standard
Display	1.4" color display
• Resolution	128 × 160 pixels
User languages	German, English, French, Italian, Spanish, Chinese Simplified
Converter service interface	X127 service interface (1 RJ45)
Ambient temperature	
• During storage	-25 ... +55 °C (-13 ... +131 °F)
• During transport	-40 ... +70 °C (-40 ... +158 °F)
• During operation	-20 ... +60 °C (-4 ... +140 °F)
- without power reduction, max.	+40 °C (+104 °F)
Environmental class/harmful chemical substances	
• Operation	
Air humidity	Relative air humidity < 95 %, non-condensing
Degree of protection	IP20/IP55
Certificate of suitability	UL, cUL, CE, EAC, REACH, RoHS II, Green Passport

SINAMICS G220 built-in and wall-mounted units

Supplementary system components

Smart Drive Interfaces > SINAMICS SDI Pro 5.5"

Overview



SINAMICS SDI Pro 5.5"

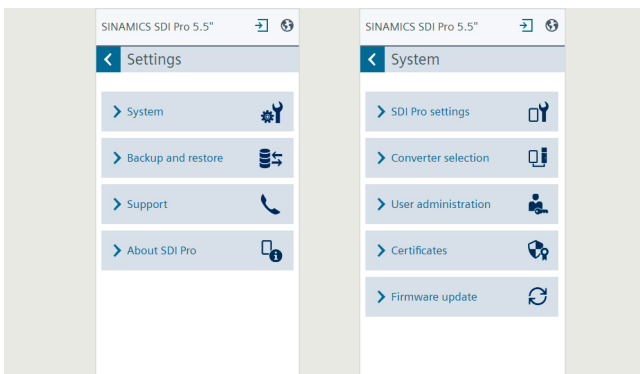
The SINAMICS SDI Pro 5.5" represents a powerful and user-friendly Operator Panel for SINAMICS G220, SINAMICS S200¹⁾ and SINAMICS S210 (6SL5...) ¹⁾. The SDI Pro supports both newcomers and drive experts. Thanks to its touch interface and high-contrast 5.5" color display, it goes hand-in-glove for commissioning, diagnostics, operator control and monitoring as well as on-site maintenance and servicing of converters.

The user interface to the converter is provided by the converter's built-in web server. The technology of the SDI Pro grants full access to the functionality of the web server. The supported web server functions pertaining to each converter can be found here:

- SINAMICS G220 ⇒ [For more information on web server functions, see SINAMICS web server for SINAMICS G220.](#)
- SINAMICS S200¹⁾ ⇒ [For more information on web server functions, see SINAMICS web server for SINAMICS S200.](#)
- SINAMICS S210 (6SL5...) ¹⁾ ⇒ [For more information on web server functions, see SINAMICS web server for SINAMICS S210 \(6SL5...\).](#)

In addition, the SDI Pro offers its own configuration interface with the following settings options:

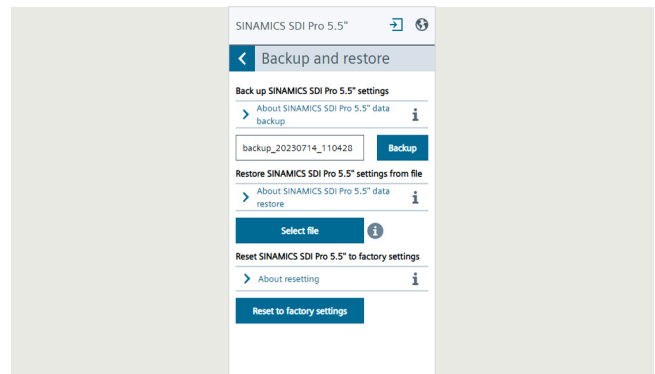
- SDI Pro main menu



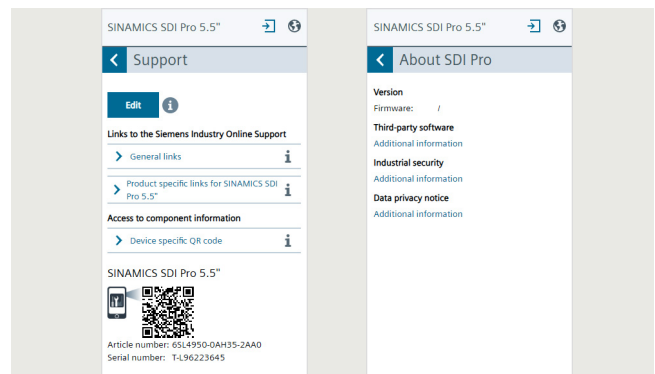
- Set the SDI Pro system settings such as user interface language, real-time clock, interface settings, display settings, change background image of the home screen



- Back up and restore the SDI Pro device settings



- Access product-specific information (e.g. manuals, downloads, FAQs) and information on SDI Pro (e.g. currently installed firmware version, security notifications)



The additional available options in the form of the SINAMICS SDI Pro 5.5" handheld kit and SINAMICS SDI Pro 5.5" door mounting kit extend the operating range of the device. With the SDI Pro 5.5" handheld kit, the device can be equipped with a rubber oversheath for mobile use. The SINAMICS SDI Pro 5.5" door mounting kit enables the SINAMICS SDI Pro to be installed in control cabinet doors.

¹⁾ Release for SINAMICS S200 and SINAMICS S210 (6SL5...) available soon.

SINAMICS G220 built-in and wall-mounted units

Supplementary system components

Smart Drive Interfaces > SINAMICS SDI Pro 5.5"

Selection and ordering data

Description	Article No.
SINAMICS SDI Pro 5.5" ^{2) 4) 5)} for use with SINAMICS G220 SINAMICS S200 ¹⁾ SINAMICS S210 (6SL5...) ¹⁾ Operating languages: German, English, French, Italian, Spanish, Chinese Simplified	6SL4950-0AH35-2AA0
Accessories	
SINAMICS SDI Pro 5.5" handheld kit ^{2) 5)} for use with the SINAMICS SDI Pro 5.5" Included in the scope of delivery: • Handheld housing • Ethernet connecting cable Length 3 m (9.84 ft), can be used to connect a SINAMICS SDI Pro 5.5" with a converter	6SL4950-0AH65-0AA0
SINAMICS SDI Pro 5.5" door mounting kit ^{2) 5)} for mounting a SINAMICS SDI Pro 5.5" in control cabinet doors with metal thicknesses of 1 ... 3 mm (0.04 ... 0.12 in) Degree of protection IP55 Included in the scope of delivery: • Metal plate for installing the SINAMICS SDI Pro 5.5" • Fixing accessories	6SL4950-0AH55-0AA0
SINAMICS IP55 panel mounting frame ⁵⁾ for SINAMICS G220 Included in the scope of delivery: • SINAMICS IP55 panel mounting frame • Ethernet connecting cable, length approx. 15 cm (5.91 in)	6SL4950-0AH75-0AA0
Bundle SINAMICS SDI Pro 5.5" with SINAMICS IP55 panel mounting frame ⁵⁾ for SINAMICS G220 Included in the scope of delivery: • SINAMICS SDI Pro 5.5" • SINAMICS IP55 panel mounting frame • Ethernet connecting cable, length approx. 15 cm (5.91 in)	6SL4950-0AH45-0AA0
IE TP Cord RJ45/RJ45 ³⁾ Patch cable, available fully assembled • With 4 x 2 cores for 10/100/1000 Mbps Ethernet • Small cable diameter • Cat6 _A (4 x 2) of the ISO/IEC 11801 and EN 50173 international cabling standards 0.3 m 0.5 m 1 m 2 m 3 m 4 m 6 m 10 m 15 m 20 m 25 m 30 m	6XV1870-3QE30 6XV1870-3QE50 6XV1870-3QH10 6XV1870-3QH20 6XV1870-3QH30 6XV1870-3QH40 6XV1870-3QH60 6XV1870-3QN10 6XV1870-3QN15 6XV1870-3QN20 6XV1870-3QN25 6XV1870-3QN30

¹⁾ For information on updates to the SINAMICS SDI Pro 5.5", see
www.siemens.com/sinamics-sdi-pro-dl

²⁾ The Ethernet connection cable to connect the SDI Pro to the service
 interface of the converter (X127) or the PROFINET interface (X150)
 must be ordered separately.
 To use the operator panel without an additional power supply at the service
 interface of the converter (X127; point-to-point connection), an 8-wire RJ45
 Ethernet cable is required. Pre-assembled cables can be ordered as an
 accessory.

³⁾ For applications where the space behind the SINAMICS SDI Pro 5.5" is
 very limited, a cable with angled connectors can be used. Such cables
 can be purchased from HARTING under the order number
 09 48 858 5745 050. For information on HARTING cables visit
www.harting.com.

⁴⁾ Release for SINAMICS S200 and SINAMICS S210 (6SL5...) available soon.

⁵⁾ Available soon.

Benefits

- User interface
 - Intuitive user interface for the drive provided by the converter itself
 - High-contrast 5.5" color touch display
 - SINAMICS SDI Pro device design open for future function expansions (e.g. device functions, languages)
 - Easily upgradable to latest features via USB C interface
- Commissioning
 - Easy commissioning of the connected converter via the Quick/Advanced Commissioning Wizard. Neither variant requires expert knowledge of converter parameters.
 - Quick commissioning gives the user simple and fast access to all the basic parameters required to commission simple applications.
 - Advanced commissioning provides the parameters required to commission more complex applications, dispensing with the need to switch between different areas within the user interface.
 - Fast series commissioning of frequency converters thanks to cloning function (backup/restore)
 - For quicker access right on the SDI Pro, the names of the backup files you wish to create can be entered or modified with the on-screen keyboard.
 - Context-sensitive help functions provide support for the user during commissioning.
 - Simple local commissioning on-site using the handheld kit
- Operator control and monitoring
 - Simple, individual local drive control (start/stop, setpoint value specification, change in direction of rotation)
 - Actual values from the converter are displayed clearly. You can change the parameters you wish to monitor depending on the requirement.
- Diagnostics
 - Rapid diagnostics thanks to on-site plain text display
 - Integrated plain text help function for local display and resolution of fault messages
- Service and Support function
 - Input/output of a service contact person
 - Easy access to component information via QR code shown on the display
 - Quick access to product information, documentation, FAQs using mobile devices (e.g. smartphones, tablets) by scanning a QR code generated on the SDI Pro
 - Optional scanning and evaluation of the QR code with the Industry Online Support app (<https://support.industry.siemens.com/cs/ww/en/sc/2067>)
 - Simple cloning of specific settings of the SINAMICS SDI Pro such as the language setting, backlight timer, date/time settings, interface settings (IP address), list of available converters, user administration of the SDI Pro. Settings made once can thus be transferred easily to many other SINAMICS SDI Pro 5.5" devices.
 - Firmware upgrade for the SINAMICS SDI Pro 5.5"
 The SDI Pro can be updated and expanded with the integrated USB C port.
 Data can be transferred from a PC to the device for future expansions. Furthermore, the USB interface allows user languages and firmware updates¹⁾ that will become available in future to be downloaded.
- Management of users allowed to have access to the SDI Pro settings (UMAC)
- Management of certificates for encrypted communication to the converter (https)

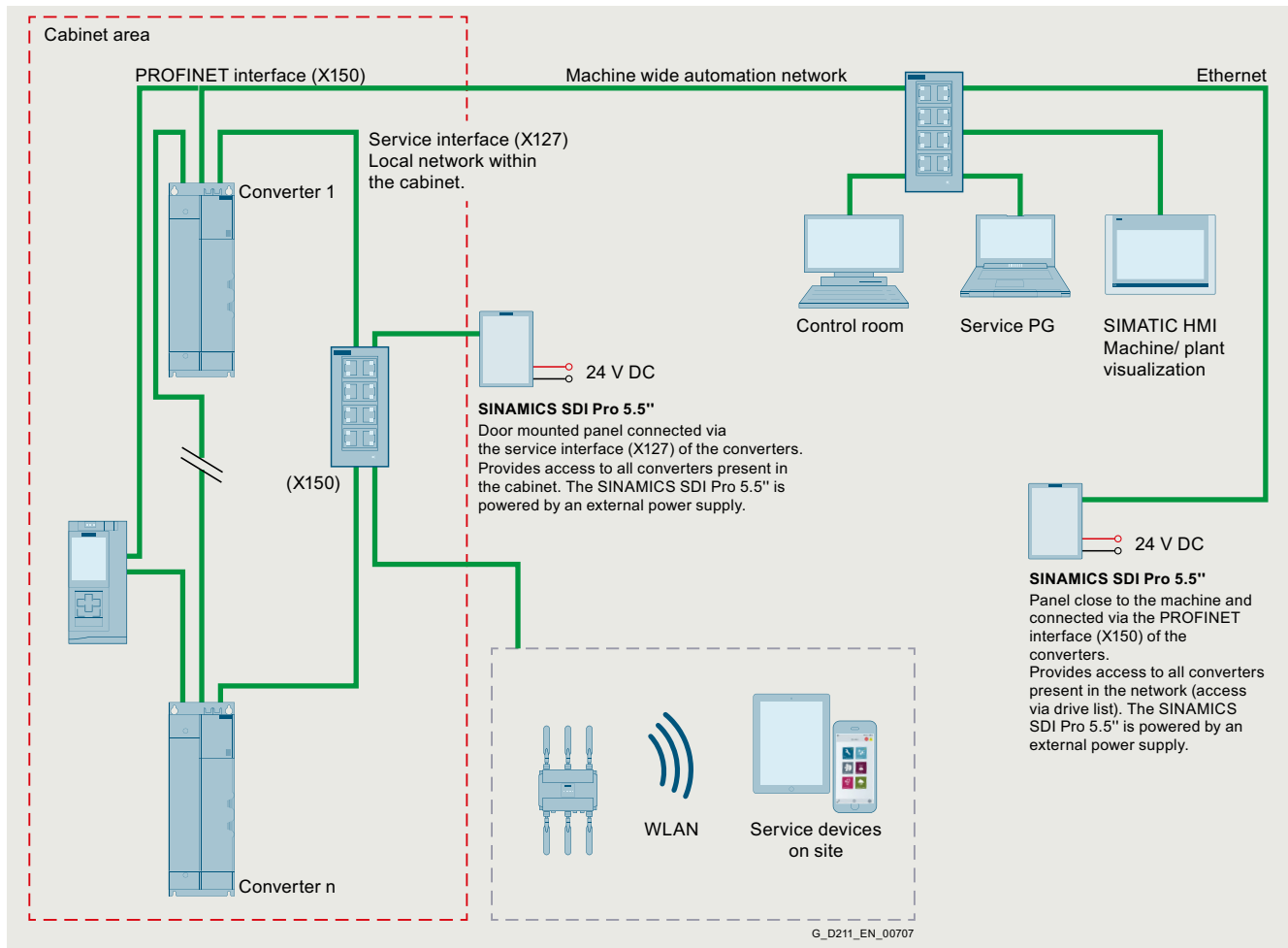
SINAMICS G220 built-in and wall-mounted units

Supplementary system components

Smart Drive Interfaces > SINAMICS SDI Pro 5.5"

Integration

- Flexible deployment in point-to-point and network configurations
 - The SDI Pro can either be connected to the service interface (X127) or the PROFINET interface (X150) of the converter.
 - SDI Pro can be directly supplied with power via the converter service interface. An external power supply is not required.¹⁾
- If the SDI Pro is operated in a network with n converters ($1 < n \leq 20$), the converters can be accessed in a flexible way via a drive list. As such, a wide range of converters can be operated or diagnosed via an SDI Pro, for instance. The drive list can be conveniently created on the SDI Pro either automatically or manually.



Application example in which multiple converters in a control cabinet can be reached with one SINAMICS SDI Pro

¹⁾ To use the operator panel without an additional power supply at the service interface of the converter (X127; point-to-point connection), an 8-wire RJ45 Ethernet cable is required. Pre-assembled cables can be ordered as an accessory.

SINAMICS G220 built-in and wall-mounted units

Supplementary system components

Smart Drive Interfaces > SINAMICS SDI Pro 5.5"

Technical specifications

	SINAMICS SDI Pro 5.5" 6SL4950-0AH35-2AA0
Display	High-contrast color display
• Resolution	320 × 580 pixels
Operator panel	Touch display
User languages	German, English, French, Italian, Spanish, Chinese Simplified
Power supply	20 ... 29 V DC 24 V DC via the RJ45 (8-core) X127 cable connection from the converter ¹⁾ or external power supply via the external power supply terminals on the Operator Panel
Current, max.	300 mA
Ambient temperature	-40 ... +70 °C (-40 ... +158 °F)
• During transport and storage	When using the SINAMICS SDI Pro 5.5" handheld kit: -20 ... +55 °C (-4 ... +131 °F)
• During operation	If installed with the SINAMICS SDI Pro 5.5" door mounting kit: -20 ... +55 °C (-4 ... +131 °F)
Air humidity	Relative air humidity < 95 %, non-condensing
Environmental class/harmful chemical substances	
• Operation	Class 3C3 per IEC 60721-3-3: 2002
Degree of protection	IP20 on the rear side or when in use with the SINAMICS SDI Pro 5.5" handheld kit IP55 on the front side, mounted with the SINAMICS SDI Pro 5.5" door mounting kit
Dimensions (H × W × D)	167 mm × 111 mm × 16.1 mm (6.57 in × 4.37 in × 0.63 in)
Weight, approx.	0.275 kg (0.61 lb)
Certificate of suitability	CE, UKCA, RCM, cULus, EAC, KC-REM-S49-SINAMICS

	SINAMICS SDI Pro 5.5" handheld kit 6SL4950-0AH65-2AA0
Ambient temperature	-40 ... +70 °C (-40 ... +158 °F)
• During transport and storage	
Air humidity	Relative air humidity < 95 %, non-condensing
Degree of protection	IP20
Weight, approx.	0.265 kg (0.58 lb)

	SINAMICS SDI Pro 5.5" door mounting kit 6SL4950-0AH55-0AA0
Ambient temperature	-40 ... +70 °C (-40 ... +158 °F)
• During transport and storage	
Air humidity	Relative air humidity < 95 %, non-condensing
Degree of protection	IP20 on the rear side or inside of the cabinet IP55 on the front side, mounted with the SINAMICS SDI Pro 5.5" door mounting kit
Dimensions	
• Door mounting kit dimensions	Cabinet cutout: 93 mm × 153 mm (3.66 in × 6.02 in), Screws: M4 × 20, 6 pcs., Tightening torque: 0.1 Nm (0.89 lbf-in) / M3 × 6, 2 pcs., Tightening torque: 1.2 Nm (10.6 lbf-in)
Weight, approx.	0.214 kg (0.47 lb)

	SINAMICS IP55 Panel mounting frame 6SL4950-0AH75-0AA0
Ambient temperature	-40 ... +70 °C (-40 ... +158 °F)
• During transport and storage	
Air humidity	Relative air humidity < 95 %, non-condensing
Degree of protection	IP55, including the SINAMICS SDI Operator Panel
Dimensions	
• Mounting frame dimensions	180 mm × 150 mm × 35 mm (7.09 in × 5.91 in × 1.38 in), Screws: M4 × 20, 4 pcs., Tightening torque: 1.2 Nm (10.6 lbf-in)
Weight, approx.	0.405 kg (0.89 lb) + 0.275 kg (0.61 lb) if the SINAMICS SDI Pro Operator Panel is inserted in the mounting frame

¹⁾ The Ethernet connection cable to connect the SDI Pro to the service interface of the converter (X127) or the PROFINET interface (X150) must be ordered separately.
To use the operator panel without an additional power supply at the service interface of the converter (X127; point-to-point connection), an 8-wire RJ45 Ethernet cable is required. Pre-assembled cables can be ordered as an accessory.

SINAMICS G220 built-in and wall-mounted units

Supplementary system components

Smart Drive Interfaces > SINAMICS SDI Pro 5.5"

Accessories

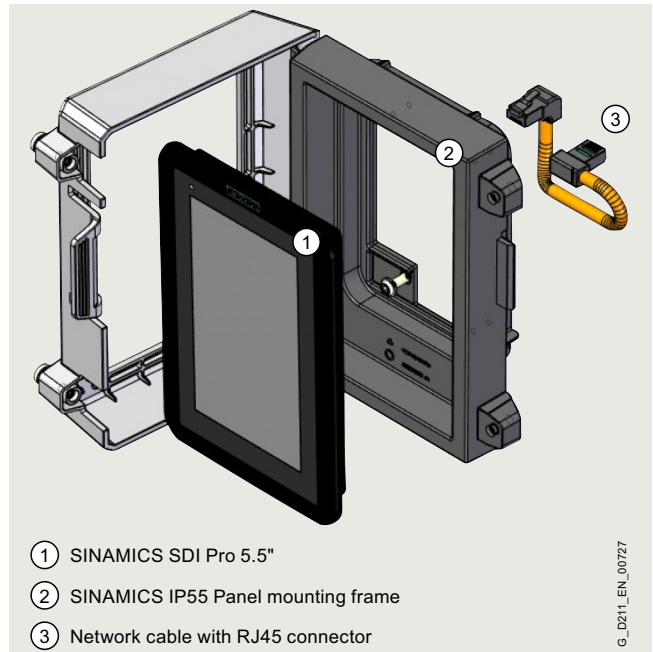
SINAMICS SDI Pro 5.5" handheld kit



SINAMICS SDI Pro 5.5" with handheld kit

A handheld kit can be ordered to assist with using the SINAMICS SDI Pro 5.5" while on the go. It contains a rubber housing and a 3 m long Ethernet connecting cable.

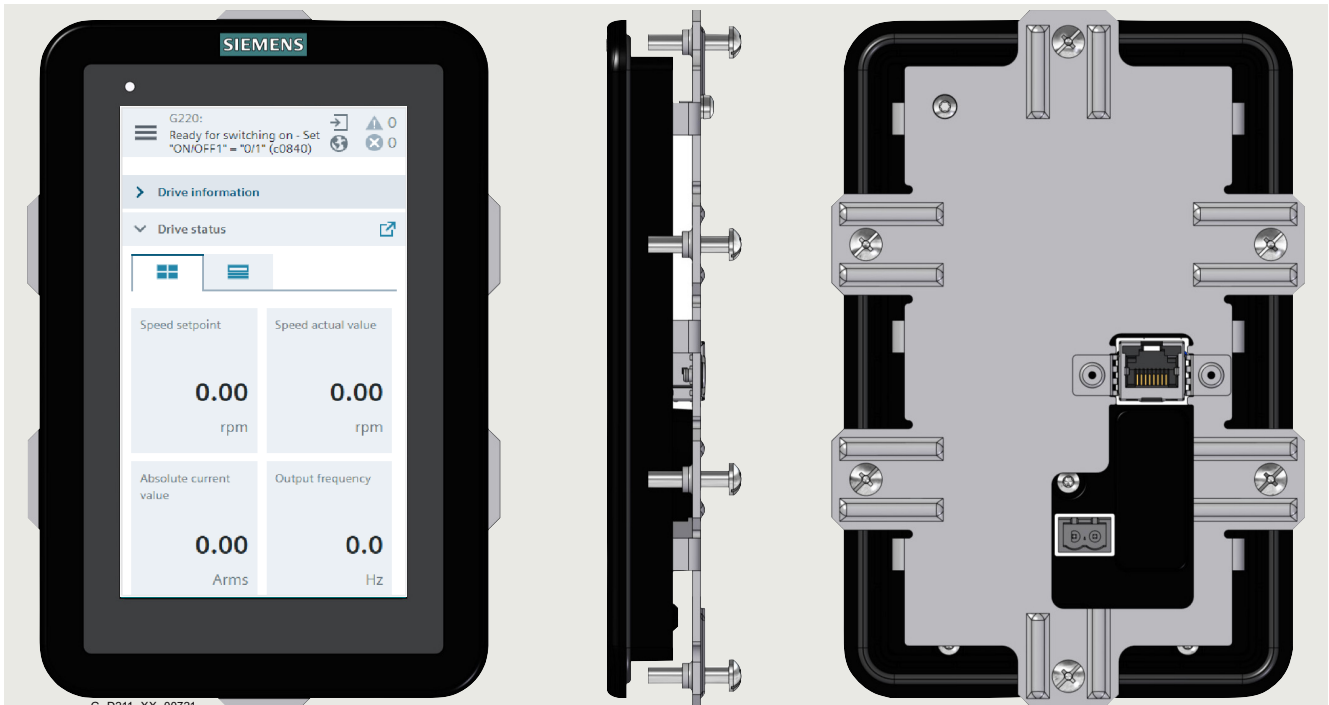
SINAMICS IP55 Panel mounting frame



SINAMICS IP55 Panel mounting frame

The SINAMICS IP55 Panel mounting frame is designed so that the SINAMICS SDI Pro Operator Panel can be connected to the IP55 converter while retaining the IP55 degree of protection of the converter.

SINAMICS SDI Pro 5.5" door mounting kit



With the optional SINAMICS SDI Pro 5.5" door mounting kit, a SINAMICS SDI Pro 5.5" can be easily installed in a control cabinet door in just a few steps. The door mounting kit includes a metal plate for installing the SINAMICS SDI Pro 5.5" e.g. in a cabinet cutout.¹⁾ In case of door mounting with the SDI Pro 5.5" Operator Panel, the degree of protection IP55/UL type 12 enclosure is achieved for the front side.

¹⁾ The Ethernet connection cable to connect the SDI Pro to the service interface of the converter (X127) or the PROFINET interface (X150) must be ordered separately.

To use the operator panel without an additional power supply at the service interface of the converter (X127; point-to-point connection), an 8-wire RJ45 Ethernet cable is required. Pre-assembled cables can be ordered as an accessory.

SINAMICS G220 built-in and wall-mounted units

Supplementary system components

SINAMICS Smart Adapter

Overview



SINAMICS Smart Adapter

SINAMICS Smart Adapter is a Wi-Fi solution for engineering, service and maintenance tasks for the next generation of SINAMICS converters SINAMICS S200, SINAMICS S210 (6SL5...) and SINAMICS G220. The adapter is designed to be plugged into and powered from the service interface (X127) on the converter.

Benefits

- Wireless access to the converter-integrated web server via mobile users device
- Wireless access with SINAMICS Startdrive to the SINAMICS converters
- Portable and compact Wi-Fi solution for engineering, service and maintenance tasks for the next generation of SINAMICS converters SINAMICS S200, SINAMICS S210 (6SL5...) and SINAMICS G220
- Advanced security technology
- Plug and Play interface for easy connectivity
- User friendly

Application

SINAMICS Smart Adapter is used in general industrial applications as an engineering solution for quick commissioning and service.

The adapter is especially valuable in areas, which are difficult to access due to their mechanical mounting locations. The use of SINAMICS Smart Adapter avoids cable clutter and tripping points during commissioning and service tasks and therefore prevents from occasional accidents.

Function

- Easy and quick service and commissioning via a wireless solution using the converter-integrated web server
- Interface that is suitable for the next generation of SINAMICS converters SINAMICS S200, SINAMICS S210 (6SL5...) and SINAMICS G220 allows power supply of SINAMICS Smart Adapter directly from the converter.
- Advanced security with WPA3 protocol

Selection and ordering data

Description	Article No.
SINAMICS Smart Adapter Wi-Fi solution for the next generation of SINAMICS converters SINAMICS S200, SINAMICS S210 (6SL5...) and SINAMICS G220	6SL4950-0AJ00-0AA0

Technical specifications

SINAMICS Smart Adapter 6SL4950-0AJ00-0AA0	
Supported operating systems	Apple iOS (from 12.2), Android, Microsoft Windows, Mac OS (from 10.15)
Recommended browsers	Google Chrome (from 69.0), Microsoft Edge (from 80.0), Safari, Opera (from 56.0)
Ambient temperature	
• During storage and transport	-40 °C ... +70 °C (-40 ... +158 °F)
• During operation	-10 °C ... +40 °C (-40 ... +104 °F)
Humidity	< 95 %, without condensation
Rated voltage	24 V DC
Wireless technology and frequency range ¹⁾	
• At 2.4G:	Wi-Fi 2400 MHz ... 2483.5 MHz
• At 5G:	Wi-Fi 5150 MHz ... 5250 MHz
Wireless modulation type	
• At 2.4G:	802.11 b/g/n
• At 5G:	802.11 a/n
Maximum output power (EIRP)	
• At 2.4G:	17.66 dBm
• At 5G:	14.50 dBm
Type of modulation	DSSS (DBPSK, DQPSK, CCK), OFDM (BPSK, QPSK, 16QAM, 64QAM)
Maximum wireless communication distance	50 m (164 ft)
Maximum antenna gain	
• At 2.4G:	1.2 dBi
• At 5G:	1.6 dBi
Maximum radio frequency output power	
• At 2.4G:	18 dBm
• At 5G:	15 dBm
Degree of protection	IP20/UL Open Type
Dimensions	
• Width	30 mm (1.18 in)
• Height	200 mm (7.87 in)
• Depth	18 mm (0.71 in)
Weight, approx.	0.032 kg (0.071 lb)
Compliance with standards	CE, UKCA, UL, CRC, IMDA, NBTC, KCC, NCC, ICASA, SDPPI, UkrCEPRO, JRF, RED, FCC, IC, WPC, ANATEL, TRA, MIC, SRRC, RCM, ENACOM, SUBTEL, MTC, SDOC, MOC

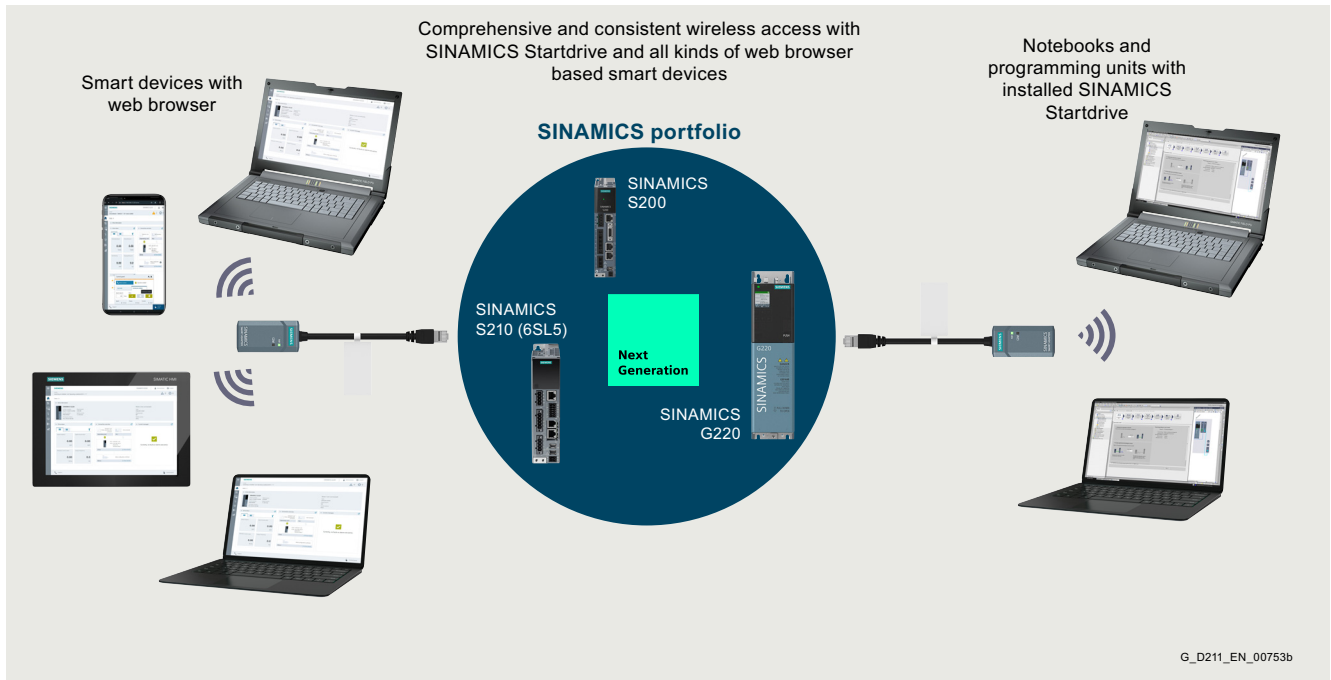
¹⁾ The actual frequency range may vary depending on market.

SINAMICS G220 built-in and wall-mounted units

Supplementary system components

SINAMICS Smart Adapter

Integration



Wireless access with SINAMICS Startdrive via SINAMICS Smart Adapter

SINAMICS G220 built-in and wall-mounted units

Supplementary system components

Encoder system connection > SMC10 Sensor Module Cabinet-Mounted

Overview



SMC10 Sensor Module Cabinet-Mounted

The SMC10 Sensor Module Cabinet-Mounted is required to evaluate the encoder signals of motors without a DRIVE-CLiQ interface. External encoders can also be connected via the SMC10.

The following encoder signals can be evaluated:

- 2-pole resolver
- Multi-pole resolver

Design

The SMC10 Sensor Module Cabinet-Mounted features the following connections and interfaces as standard:

- 1 encoder connection including motor temperature sensing (KTY84-130, Pt1000¹⁾ or PTC) via SUB-D connector
- 1 DRIVE-CLiQ interface
- 1 connection for the electronics power supply via the 24 V DC supply connector
- 1 PE/protective conductor connection

The status of the SMC10 Sensor Module Cabinet-Mounted is indicated via a multi-color LED.

The SMC10 Sensor Module Cabinet-Mounted can be snapped onto a TH 35 standard mounting rail according to EN 60715 (IEC 60715).

The signal cable shield is connected via the encoder system connector and can also be connected to the SMC10 Sensor Module Cabinet-Mounted via a shield connection terminal, e.g. Phoenix Contact type SK8 or Weidmüller type KLBÜ CO 1. The shield connection terminal must not be used as a strain relief mechanism.

Integration

SMC10 Sensor Modules Cabinet-Mounted communicate via DRIVE-CLiQ with selected devices e.g. SINAMICS S110/S120/S150 Control Units and SINAMICS G220 converters (from firmware V6.4) with OM-DQ Option Module DRIVE-CLiQ.

Selection and ordering data

Description	Article No.
SMC10 Sensor Module Cabinet-Mounted Without DRIVE-CLiQ cable	6SL3055-0AA00-5AA3
Accessories for re-ordering	
Dust protection blanking plugs (50 units) For DRIVE-CLiQ port	6SL3066-4CA00-0AA0

For the SINAMICS S150 and SINAMICS S120 Cabinet Modules, the SMC10 Sensor Module Cabinet-Mounted can be ordered as an option by specifying order code **K46**.

Technical specifications

SMC10 Sensor Module Cabinet-Mounted 6SL3055-0AA00-5AA3	
Current requirement, max. at 24 V DC, without taking encoder into account	0.2 A
• Conductor cross-section, max.	2.5 mm ²
• Fuse protection, max.	20 A
Power loss, max.	10 W
Encoders which can be evaluated	• 2-pole resolver • Multi-pole resolver
• Excitation voltage, rms	4.1 V
• Excitation frequency	5 ... 16 kHz depending on the current controller clock cycle of the Motor Module or Power Module
• Transformation ratio	0.5
• Encoder frequency, max.	2 kHz (120000 r/min) depending on the number of resolver pole pairs and current controller clock cycle of the Motor Module or Power Module
• Signal subdivision (interpolation), max.	16384 times (14 bits)
• Cable length to encoder, max.	130 m (427 ft)
PE connection	M4 screw
Dimensions	
• Width	30 mm (1.18 in)
• Height	150 mm (5.91 in)
• Depth	111 mm (4.37 in)
Weight, approx.	0.45 kg (0.99 lb)
Certificate of suitability	cULus

¹⁾ The Pt1000 sensor is not supported when combined with a Control Unit CU305.

SINAMICS G220 built-in and wall-mounted units

Supplementary system components

Encoder system connection > SMC20 Sensor Module Cabinet-Mounted

Overview



SMC20 Sensor Module Cabinet-Mounted

The SMC20 Sensor Module Cabinet-Mounted is required to evaluate the encoder signals of motors without a DRIVE-CLiQ interface. External encoders can also be connected via the SMC20.

The following encoder signals can be evaluated:

- Incremental encoder sin/cos 1 V_{pp}
- Absolute encoder EnDat 2.1
- SSI encoder with incremental signals sin/cos 1 V_{pp} (firmware version 2.4 and later)

The motor temperature can also be sensed using a PTC thermistor KTY84-130, Pt1000¹⁾ or PTC.

Design

The SMC20 Sensor Module Cabinet-Mounted features the following connections and interfaces as standard:

- 1 encoder connection including motor temperature sensing (KTY84-130, Pt1000¹⁾ or PTC) via SUB-D connector
- 1 DRIVE-CLiQ interface
- 1 connection for the electronics power supply via the 24 V DC supply connector
- 1 PE/protective conductor connection

The status of the SMC20 Sensor Module Cabinet-Mounted is indicated via a multi-color LED.

The SMC20 Sensor Module Cabinet-Mounted can be snapped onto a TH 35 standard mounting rail according to EN 60715 (IEC 60715).

The signal cable shield is connected via the encoder system connector and can also be connected to the SMC20 Sensor Module Cabinet-Mounted via a shield connection terminal, e.g. Phoenix Contact type SK8 or Weidmüller type KLBÜ CO 1. The shield connection terminal must not be used as a strain relief mechanism.

Integration

SMC20 Sensor Modules Cabinet-Mounted communicate via DRIVE-CLiQ with selected devices e.g. SINAMICS S110/S120/S150 Control Units and SINAMICS G220 converters with OM-DQ Option Module DRIVE-CLiQ.

Selection and ordering data

Description	Article No.
SMC20 Sensor Module Cabinet-Mounted	6SL3055-0AA00-5BA3
Without DRIVE-CLiQ cable	
Accessories for re-ordering	
Dust protection blanking plugs (50 units)	6SL3066-4CA00-0AA0
For DRIVE-CLiQ port	

For the SINAMICS S150 and SINAMICS S120 Cabinet Modules, the SMC20 Sensor Module Cabinet-Mounted can be ordered as an option by specifying order code **K48**.

Technical specifications

	SMC20 Sensor Module Cabinet-Mounted 6SL3055-0AA00-5BA3
Power requirement, max. at 24 V DC, without taking encoder into account	0.2 A
• Conductor cross-section, max.	2.5 mm ²
• Fuse protection, max.	20 A
Power loss, max.	10 W
Encoders which can be evaluated	• Incremental encoder sin/cos 1 V_{pp} • Absolute encoder EnDat 2.1 • SSI encoder with incremental signals sin/cos 1 V_{pp} (firmware version 2.4 and later)
• Encoder supply	5 V DC/0.35 A
• Encoder frequency incremental signals, max.	500 kHz
• Signal subdivision (interpolation), max.	16384 times (14 bits)
• SSI baud rate	100 ... 1000 kBaud
• Cable length to encoder, max.	100 m (328 ft)
PE connection	M4 screw
Dimensions	
• Width	30 mm (1.18 in)
• Height	150 mm (5.91 in)
• Depth	111 mm (4.37 in)
Weight, approx.	0.45 kg (0.99 lb)
Certificate of suitability	cULus

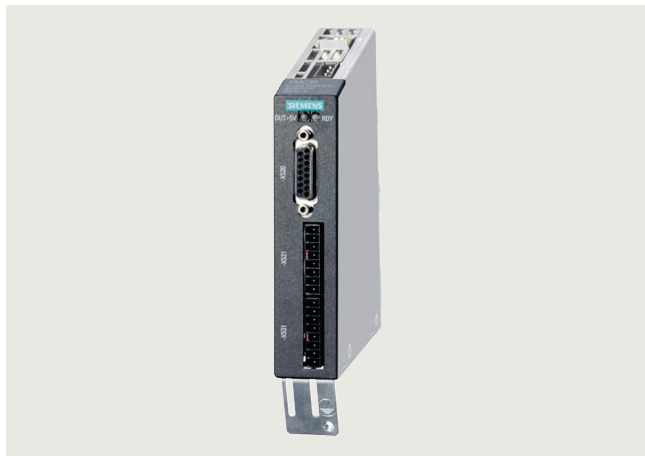
¹⁾ The Pt1000 sensor is not supported when combined with a Control Unit CU305.

SINAMICS G220 built-in and wall-mounted units

Supplementary system components

Encoder system connection > SMC30 Sensor Module Cabinet-Mounted

Overview



SMC30 Sensor Module Cabinet-Mounted

The SMC30 Sensor Module Cabinet-Mounted is required to evaluate the encoder signals of motors without a DRIVE-CLiQ interface. External encoders can also be connected via the SMC30.

The following encoder signals can be evaluated:

- Incremental encoders TTL/HTL with/without open-circuit detection (open-circuit detection is only available with bipolar signals)
- SSI encoder with TTL/HTL incremental signals
- SSI encoder without incremental signals

The motor temperature can also be sensed using a PTC thermistor KTY84-130, Pt1000¹⁾ or PTC.

Design

The SMC30 Sensor Module Cabinet-Mounted features the following connections and interfaces as standard:

- 1 encoder connection including motor temperature sensing (KTY84-130, Pt1000¹⁾ or PTC) either via SUB-D connector or via terminals
- 1 DRIVE-CLiQ interface
- 1 connection for the electronics power supply via the 24 V DC supply connector
- 1 PE/protective conductor connection

The status of the SMC30 Sensor Module Cabinet-Mounted is indicated via a multi-color LED.

The SMC30 Sensor Module Cabinet-Mounted can be snapped onto a TH 35 standard mounting rail in according to EN 60715 (IEC 60715).

The maximum encoder cable length between SMC30 modules and encoders is 100 m. For HTL encoders, this length can be increased to 300 m if the A+/A- and B+/B- signals are evaluated and the power supply cable has a minimum cross-section of 0.5 mm².

The signal cable shield can be connected to the SMC30 Sensor Module Cabinet-Mounted via a shield connection terminal, e.g., Phoenix Contact type SK8 or Weidmüller type KLBÜ CO 1. The shield connection terminal must not be used as a strain relief mechanism.

Integration

SMC30 Sensor Modules Cabinet-Mounted communicate via DRIVE-CLiQ with selected devices e.g. SINAMICS S110/S120/S150 Control Units and SINAMICS G220 converters with OM-DQ Option Module DRIVE-CLiQ.

Selection and ordering data

Description	Article No.
SMC30 Sensor Module Cabinet-Mounted	6SL3055-0AA00-5CA2
Without DRIVE-CLiQ cable	
Accessories for re-ordering	
Dust protection blanking plugs (50 units)	6SL3066-4CA00-0AA0
For DRIVE-CLiQ port	

For the SINAMICS S150 and SINAMICS S120 Cabinet Modules, the SMC30 Sensor Module Cabinet-Mounted can be ordered as an option by specifying order code **K50**.

A second SMC30 can be ordered as an option with the order code **K52** for reliable actual value acquisition when using the Safety Integrated Extended Functions.

Technical specifications

	SMC30 Sensor Module Cabinet-Mounted 6SL3055-0AA00-5CA2
Current requirement, max. at 24 V DC, without taking encoder into account	0.2 A
• Conductor cross-section, max.	2.5 mm ²
• Fuse protection, max.	20 A
Power loss, max.	10 W
Encoders which can be evaluated	• Incremental encoder TTL/HTL • SSI encoder with TTL/HTL incremental signals • SSI encoder without incremental signals
• Input current range TTL/HTL	4 ... 20 mA (typ. 10 mA)
• Encoder supply	24 V DC/0.35 A or 5 V DC/0.35 A
• Encoder frequency, max.	500 kHz
• SSI baud rate	100 ... 1000 kBaud
• Resolution absolute position SSI	30 bits
• Cable length, max.	
- TTL encoder	100 m (328 ft) (only bipolar signals permitted) ²⁾
- HTL encoder	100 m (328 ft) for unipolar signals 300 m (984 ft) for bipolar signals ²⁾
- SSI encoder	100 m (328 ft)
PE connection	M4 screw
Dimensions	
• Width	30 mm (1.18 in)
• Height	150 mm (5.91 in)
• Depth	111 mm (4.37 in)
Weight, approx.	0.45 kg (0.99 lb)
Certificate of suitability	cULus

¹⁾ The Pt1000 sensor is not supported when combined with a Control Unit CU305.

²⁾ Signal cables twisted in pairs and shielded.