

Compact Installation Instructions



Scope of Delivery

- SINAMICS G120C converter.
- Mains supply terminal x1 (L1, L2, L3, Earth).
- Motor terminal x1 (U2, V2, W3, Earth).
- Brake resistor terminal x1 (R1, R2).
- I/O terminals.
- Screening plate.
- Cabinet information sticker (English/French).
- Multi-language warning labels.
- Accessory bag.

WARNING

Danger to life if the safety instructions and installation instructions are not observed
 The compact installation instructions only contain the most important information for installing the inverter. If the safety instructions and installation instructions in the associated documentation are not observed, accidents involving severe injuries or death can occur

- Observe the safety instructions and installation instructions given in the associated documentation.
- See also <https://support.industry.siemens.com/cs/ww/en/view/109744769>

SINAMICS G120C Operating Instructions

<https://support.industry.siemens.com/cs/ww/en/view/109744769>

SINAMICS G120C Betriebsanleitung

<https://support.industry.siemens.com/cs/ww/de/view/109744769>

SINAMICS G120C Instructions de service

<https://support.industry.siemens.com/cs/ww/fr/view/109744769>

SINAMICS G120C Istruzioni operative

<https://support.industry.siemens.com/cs/ww/it/view/109744769>

SINAMICS G120C Instrucciones de servicio

<https://support.industry.siemens.com/cs/ww/es/view/109744769>

SINAMICS G120C 操作说明

<https://support.industry.siemens.com/cs/ww/zh/view/109744769>

Reading the OSS license terms

The inverter contains open-source software (OSS). OSS comprises open source text and satisfies special license terms. If you wish to read the license terms, you must transfer them from the inverter to a PC.

Procedure

To transfer the OSS license terms from the inverter to a PC, proceed as follows:

1. Switch off the inverter power supply.
2. Insert an empty memory card into the card slot of the inverter.
3. Switch on the inverter power supply.
4. When you have switched on the power supply, wait 30 seconds.
5. During this time, the inverter writes the "Read_OSS.ZIP" file onto the memory card.
6. Withdraw the memory card from the inverter.
7. Use a card reader and load the file to a PC.

You have then transferred the OSS license terms from the inverter to a PC, and you can now read the license terms.

Installation in the United States and Canada (UL or CSA)

To install the inverter in compliance with UL/cUL, perform the following steps:

- The inverter must be mounted in the appropriate enclosure.
- Use the specified protection devices.
- A multi-motor drive is not permissible, i.e. simultaneously operating several motors connected to one inverter.
- The integrated semiconductor short-circuit protection in the inverter does not provide branch protection. Install branch protection in compliance with the National Electric Code and possibly relevant local regulations.
- Use copper cables, Class 1, $\geq 60^\circ\text{C}$ for frame size FSAA with rated power $\leq 1.5\text{ kW}$.
- Use copper cables, Class 1, 75°C for frame sizes FSAA (2.2 kW) and FSA ... FSC.
- Leave parameter p0610 in its factory setting.
- The factory setting p0610 = 12 means: The inverter responds to motor overtemperature immediately with an alarm and after a certain time with a fault.
- When commissioning the drive system, set the motor overload protection to 115%, 230% or 400% of the rated motor current using parameter p0640.
- No user serviceable parts are contained within the inverter. For replacement fans, see Service and Support link.

Additional requirements for CSA compliance:

- Use the specified protection devices.
- Use a surge protection device with article no. 5SD7424-1.
- Alternative: Install the inverter with an external surge protection device with the following attributes:
 - Surge protection device with 'listed' test symbol: category checking numbers VZCA and VZCA7
 - Rated 480 V (Phase to Phase)
 - VPR maximum 2.5 kV (FSA-C), 4.0 kV (FSAA)
 - Suitable for SPD applications, type 1 or type 2.

Rating plate and technical data

Frame size	Rated output power	Rated output current	Article No.	Based on low overload		Without filter		With filter	
FSAA	0.55 kW	1.7 A	6SL3210-1KE11-8U□2	6SL3210-1KE11-8A□2					
	0.75 kW	2.2 A	6SL3210-1KE12-3U□2	6SL3210-1KE12-3A□2					
	1.1 kW	3.1 A	6SL3210-1KE13-2U□2	6SL3210-1KE13-2A□2					
	1.5 kW	4.1 A	6SL3210-1KE14-3U□2	6SL3210-1KE14-3A□2					
	2.2 kW	5.6 A	6SL3210-1KE15-8U□2	6SL3210-1KE15-8A□2					
FSA	0.55 kW	1.7 A	6SL3210-1KE11-8U□1	6SL3210-1KE11-8A□1					
	0.75 kW	2.2 A	6SL3210-1KE12-3U□1	6SL3210-1KE12-3A□1					
	1.1 kW	3.1 A	6SL3210-1KE13-2U□1	6SL3210-1KE13-2A□1					
	1.5 kW	4.1 A	6SL3210-1KE14-3U□1	6SL3210-1KE14-3A□1					
	2.2 kW	5.6 A	6SL3210-1KE15-8U□1	6SL3210-1KE15-8A□1					
FSB	5.5 kW	12.5 A	6SL3210-1KE21-3U□1	6SL3210-1KE21-3A□1					
	7.5 kW	16.5 A	6SL3210-1KE21-7U□1	6SL3210-1KE21-7A□1					
	11.0 kW	25.0 A	6SL3210-1KE22-6U□1	6SL3210-1KE22-6A□1					
	15.0 kW	31.0 A	6SL3210-1KE23-2U□1	6SL3210-1KE23-2A□1					
	18.5 kW	37.0 A	6SL3210-1KE23-8U□1	6SL3210-1KE23-8A□1					
FSC	11 kW	15 kW	6SL3210-1KE22-6...	6SL3210-1KE22-6...					
	15 kW	18.5 kW	6SL3210-1KE23-2...	6SL3210-1KE23-2...					
SINAMICS G120C USS/MB (USS, Modbus RTU)				B		B			
SINAMICS G120C DP (PROFIBUS)				P		P			
SINAMICS G120C PN (PROFINET, EtherNet/IP)				F		F			

Branch circuit protection according to the IEC standard

Frame size	Rated power	Inverter article number	Article number	Fuse	Circuit-breaker	Imax ¹⁾	Control cabinet ²⁾
FSAA, FSA	0.55 kW 0.75 kW 1.1 kW 1.5 kW 2.2 kW	6SL3210-1KE11-8... 6SL3210-1KE12-3... 6SL3210-1KE13-2... 6SL3210-1KE14-3... 6SL3210-1KE15-8...	3NA3803	3RV2011-1JA... or 3RV2021-1JA..	10 A	$\geq 0.03\text{ m}^3$	
FSA	3.0 kW 4.0 kW	6SL3210-1KE17-5... 6SL3210-1KE18-8...	3NA3805	3RV2011-4AA... or 3RV2021-4AA..	16 A		
FSB	5.5 kW 7.5 kW	6SL3210-1KE21-3... 6SL3210-1KE21-7...	3NA3812	3RV2021-4EA...	32 A	$\geq 0.06\text{ m}^3$	
FSC	11 kW 15 kW 18.5 kW	6SL3210-1KE22-6... 6SL3210-1KE23-2... 6SL3210-1KE23-8...	3NA3822	3RV1041-4JA..	63 A	$\geq 0.2\text{ m}^3$	

- 1) Maximum rated current of the protection device. You may also use protective devices 3NA38... and 3RV with a lower rated current.
- 2) Minimum volume of the control cabinet in which the inverter is installed. The restriction applies only for a protection with a circuit-breaker.

OSS-Lizenzbedingungen lesen

Der Umrichter enthält Open Source Software (OSS). OSS besteht aus offengelegtem Quelltext und erfüllt besondere Lizenzbedingungen. Wenn Sie die Lizenzbedingungen lesen wollen, müssen Sie diese vom Umrichter auf einen PC übertragen.

Vorgehen

Um die OSS-Lizenzbedingungen vom Umrichter auf einen PC zu übertragen, gehen Sie folgendermaßen vor:

1. Schalten Sie die Stromversorgung des Umrichters aus.
 2. Stecken Sie eine leere Speicherkarte in den Karten-Slot des Umrichters.
 3. Schalten Sie die Stromversorgung des Umrichters ein.
 4. Warten Sie 30 Sekunden nach dem Einschalten der Spannung.
 5. Der Umrichter schreibt in dieser Zeit die Datei "Read_OSS.ZIP" auf die Speicherkarte.
 6. Retirez la carte mémoire du variateur.
 7. Insérez la carte dans un lecteur de cartes du PC.
- Les conditions de licence OSS ont été transférées du variateur sur un PC et peuvent à présent être lues.

Installation in den Vereinigten Staaten und Kanada (UL bzw. CSA)

Um den Umrichter UL/cUL-konform zu installieren, ergreifen Sie folgende Maßnahmen:

- Der Umrichter muss in geeigneten Gehäuse montiert werden.
- Verwenden Sie die angegebenen Sicherungseinrichtungen.
- Ein Mehrmotorenantrieb, das heißt der gleichzeitige Betrieb mehrerer Motoren an einem Umrichter, ist unzulässig.
- Der integrierte Halbleiter-Kurzschlusschutz im Umrichter bietet keinen Abwgeschutz. Installieren Sie den Abwgeschutz in Übereinstimmung mit dem National Electric Code und etwaigen zusätzlichen lokalen Vorschriften.
- Verwenden Sie Kupferleitungen der Klasse 1, $\geq 60^\circ\text{C}$ für die Baugröße FSAA mit Bemessungsleistung $\leq 1.5\text{ kW}$.
- Verwenden Sie Kupferleitungen der Klasse 1, 75°C für die Baugrößen FSAA (2,2 kW) und FSA ... FSC.
- Belassen Sie den Parameter p0610 in Werkseinstellung.
- Die Werkseinstellung p0610 = 12 bedeutet: Der Umrichter reagiert auf eine Motorübertemperatur unmittelbar mit einer Warnung und nach einer bestimmten Zeit mit einer Störung.
- Stellen Sie bei der Inbetriebnahme des Antriebssystems den Motorüberlastschutz mit dem Parameter p0640 auf 115%, 230% oder 400% des Motorbemessungsstromes ein.
- Im Umrichter befinden sich keine durch den Benutzer zu wartenden Teile. Für Austauschlüfter, siehe Link zu Service und Support.

Zusätzliche Anforderungen für CSA-Konformität:

- Verwenden Sie die angegebenen Sicherungseinrichtungen.
- Setzen Sie ein Überspannungsschutzgerät mit der Artikelnummer 5SD7424-1 ein.
- Alternative: installieren Sie den Umrichter mit einem externen Überspannungsschutzgerät mit folgenden Merkmalen:
 - Überspannungsschutzgerät mit Listed-Prüfzeichen: Kategoriekontrollnummer VZCA und VZCA7
 - Bemessungsspannung 480 V (Phase-Phase)
 - VPR maximal 2,5 kV (FSA-C), 4,0 kV (FSAA)
 - Geeignet für SPD-Anwendung Typ 1 oder Typ 2

Permissible Type E combination motor controller (NKJH)

Frame size	Rated power	Inverter article number	Type E combination motor controller			SCCR ³⁾	Control cabinet ⁴⁾
			Article number	Imax ¹⁾	PN ²⁾		
FSAA, FSA	0.55 kW 0.75 kW 1.1 kW 1.5 kW 2.2 kW	6SL3210-1KE11-8... 6SL3210-1KE12-3... 6SL3210-1KE13-2... 6SL3210-1KE14-3... 6SL3210-1KE15-8...	3RV2011-1JA... or 3RV2021-1JA..	10 A	5 HP	65 kA, 480V / 277 VAC	$\geq 1830\text{ in}^3$
FSA	3.0 kW 4.0 kW	6SL3210-1KE17-5... 6SL3210-1KE18-8...	3RV2011-4AA... or 3RV2011-4AA..	16 A	10 HP	65 kA, 480V / 277 VAC	$\geq 1830\text{ in}^3$
FSB	5.5 kW 7.5 kW	6SL3210-1KE21-3... 6SL3210-1KE21-7...	3RV1031-4AA... 3RV2021-4DA... 3RV2021-4EA... 3RV1031-4EA... 3RV2031-4EA..	16 A 25 A 32 A 32 A	10 HP 15 HP 20 HP	65 kA, 480V / 277 VAC 65 kA, 480V / 277 VAC 65 kA, 480V / 277 VAC	$\geq 1830\text{ in}^3$ $\geq 3660\text{ in}^3$ $\geq 3660\text{ in}^3$
	FSC	11 kW 15 kW 18.5 kW	6SL3210-1KE22-6... 6SL3210-1KE23-2... 6SL3210-1KE23-8...	3RV1031-4HA... 3RV1041-4JA..	50 A 63 A	40 HP 50 HP	65 kA, 480V / 277 VAC 65 kA, 480V / 277 VAC

- 1) Maximum rated current of the Type E combination motor controller. You may use NKJH-listed Type E combination motor controller of the same type - with a rated voltage $\geq 480\text{ V AC}$ and with a lower rated current - which match the inverter.
- 2) Rated power of the Type E combination motor controller at 460 V AC
- 3) Short-circuit current rating of the branch circuit
- 4) Minimum volume of a control cabinet approved according to UL in which the inverter is installed. UL does not specify any minimum value of the control cabinet for inverters FSA ... FSC with fuses, Class AJT from Mersen (Ferraz Shawmut).

Branch circuit protection according to the UL standard

Protection device	UL category
Fuses of any manufacturer with faster tripping characteristic than class RK5, e.g. class J, T, CC, G, or CF	JDDZ
SIEMENS circuit breaker	DIVQ
Type E combination motor controller (designation according to the UL standard), is available as SIEMENS circuit breaker	NKJH

Lecture des conditions de licence OSS

Le variateur comporte un logiciel open source (OSS). OSS est constitué d'un code source accessible au public et rempli des conditions de licence particulières. Si vous voulez lire les conditions de licence, vous devez transférer celles-ci du variateur à un PC.

Marche à suivre

Pour transférer les conditions de licence OSS sur un PC, procédez comme suit :

1. Coupez l'alimentation du variateur.
 2. Insérez une carte mémoire vide dans l'emplacement pour carte du variateur.
 3. Appliquez l'alimentation du variateur.
 4. Attendez 30 secondes après mise sous tension.
 5. Le variateur copie pendant ce temps le fichier "Read_OSS.ZIP" sur la carte mémoire.
 6. Retirez la carte mémoire du variateur.
 7. Insérez la carte dans un lecteur de cartes du PC.
- Les conditions de licence OSS ont été transférées du variateur sur un PC et peuvent à présent être lues.

Installation aux Etats-Unis et au Canada (UL ou CSA)

Pour installer le variateur conformément à UL/cUL, prenez les mesures suivantes :

- Le variateur doit être installé dans une enceinte adéquate.
- Utilisez les équipements de sécurité indiqués.
- L'entraînement à commande sectionnelle, c'est-à-dire l'exploitation de plusieurs moteurs sur un variateur, n'est pas admissible.
- La protection intégrée contre les courts-circuits à semi-conducteur dans le variateur n'offre aucune protection des dérivations. Toute protection de dérivation doit être installée en conformité avec le National Electric Code ainsi qu'avec d'éventuelles prescriptions locales complémentaires.
- Utilisez des câbles cuivre de classe 1, $\geq 60^\circ\text{C}$ pour la taille FSAA avec une puissance assignée $\leq 1.5\text{ kW}$.
- Utilisez des câbles cuivre de classe 1, 75°C pour les tailles FSAA (2,2 kW) et FSA ... FSC.
- Ne pas modifier le réglage d'usine du paramètre p0610.
- Le réglage d'usine p0610 = 12 signifie : le variateur réagit à une surchauffe du moteur immédiatement en déclenchant une alarme et après un certain temps en déclenchant un défaut.
- Lors de la mise en service du moteur, régler à l'aide du paramètre p0640 la protection du moteur contre les surcharges sur 115%, 230% ou 400% du courant nominal du moteur.
- Le variateur ne contient aucune pièce pouvant faire l'objet d'une maintenance par l'utilisateur. Pour remplacer les ventilateurs, se référer au lien relatif à la Maintenance et à l'Assistance.

Exigences supplémentaires concernant la conformité CSA :

- Utilisez les équipements de protection indiqués.
- Utilisez un appareil de protection contre les surtensions avec le numéro d'article 5SD7424-1.
- Alternative : installer le variateur avec un appareil externe de protection contre les surtensions présentant les caractéristiques suivantes :
 - Appareil de protection contre les surtensions avec la marque d'homologation UL : numéros de contrôle de catégorie VZCA et VZCA7
 - Tension assignée 480 V (triphase)
 - Protection de tension nominale maximum VPR 2,5 kV (FSA-C), 4,0 kV (FSAA)
 - Convient pour une application SPD, type 1 ou type 2

Permissible circuit-breakers (DIVQ)

Frame size	Rated power	Inverter article number	Circuit breaker		SCCR ²⁾	Control cabinet ³⁾	
			Article number	Imax ¹⁾			
FSAA, FSA	0.55 kW 0.75 kW 1.1 kW 1.5 kW 2.2 kW	6SL3210-1KE11-8... 6SL3210-1KE12-3... 6SL3210-1KE13-2... 6SL3210-1KE14-3... 6SL3210-1KE15-8...	3RV1742, LGG or CED6 3RV2711	15 A	5 kA, 480 VAC	$\geq 1830\text{ in}^3$ $\geq 1830\text{ in}^3$	
	FSA	3.0 kW 4.0 kW	6SL3210-1KE17-5... 6SL3210-1KE18-8...	3RV1742, LGG or CED6 3RV2711	15 A	65 kA, 480 VAC	$\geq 1830\text{ in}^3$
	FSB	5.5 kW 7.5 kW	6SL3210-1KE21-3... 6SL3210-1KE21-7...	3RV1742, LGG, CED6 or HCGA 3RV2721	35 A 35 A	65 kA, 480 VAC 50 kA, 480V / 277 VAC	$\geq 1830\text{ in}^3$ $\geq 3660\text{ in}^3$ $\geq 3660\text{ in}^3$
		FSC	11 kW 15 kW 18.5 kW	6SL3210-1KE22-6... 6SL3210-1KE23-2... 6SL3210-1KE23-8...	LGG, CED6 or HCGA 3RV1742	60 A 60 A	65 kA, 480 VAC 65 kA, 480V / 277 VAC ⁴⁾

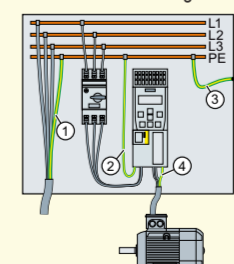
- 1) Maximum rated current of the circuit-breaker
- 2) Short-circuit current rating of the branch circuit
- 3) Minimum volume of a control cabinet approved according to UL in which the inverter is installed. UL does not specify any minimum value of the control cabinet for inverters FSA ... FSC with fuses, Class AJT from Mersen (Ferraz Shawmut).
- 4) 65 kA, 480 VAC with rated current < 35 A

Drill Patterns

	Frame size AA 0.55 kW ... 2.2 kW	Frame size A 0.55 kW ... 4.0 kW	Frame size B 5.5 kW ... 7.5 kW	Frame size C 11 kW ... 18.5 kW
Drilling pattern				
Mounting parts	2 x M4 bolts 2 x M4 nuts 2 x M4 washers	3 x M4 studs, 3 x M4 nuts, 3 x M4 washers	4 x M4 studs, 4 x M4 nuts, 4 x M4 washers	4 x M5 studs, 4 x M5 nuts, 4 x M5 washers
Tightening torques	2.5 Nm	2.5 Nm	2.5 Nm	2.5 Nm

Dimensioning the protective conductor

Observe the local regulations for protective conductors subject to an increased leakage current at the site of operation.



- Line or motor feeder cable > 35 mm²
- Minimum cross-section of the protective conductor = 1/2 cross-section of the line or motor feeder cable
- Additional requirements placed on the protective conductor ①:
- For permanent connection, the protective conductor must fulfill at least one of the following conditions:
 - The protective conductor is routed so that it is protected against damage along its complete length. Cables routed inside electrical cabinets or enclosed machine housings are considered to be adequately protected against mechanical damage.
 - As a conductor of a multi-conductor cable, the protective conductor has a cross-section $\geq 2.5\text{ mm}^2\text{ Cu}$.
 - For an individual conductor, the protective conductor has a cross-section $\geq 10\text{ mm}^2\text{ Cu}$.
 - The protective conductor consists of two conductors with the same cross-section.
- When connecting a multi-core cable using an industrial plug connector according to EN 60309, the protective conductor must have a cross-section of $\geq 2.5\text{ mm}^2\text{ Cu}$.

Letture delle condizioni di licenza OSS

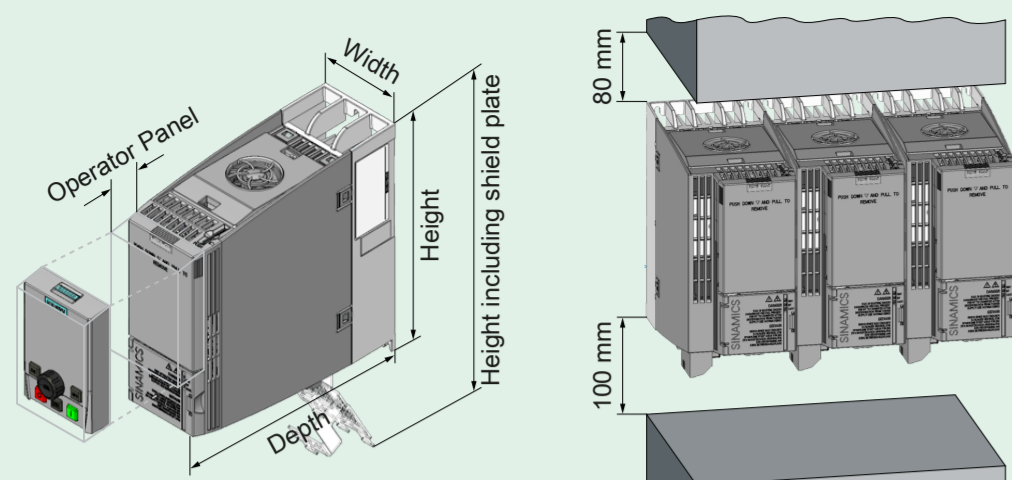
Il convertitore contiene software Open Source (OSS). L'OSS (Open Source Software) consiste di testo sorgente aperto e soddisfa particolari condizioni di licenza. Se si desidera leggere le condizioni di licenza, si devono trasferire le stesse dal convertitore a un PC.

Procedura

Per trasferire le condizioni di licenza OSS del convertitore a un PC, proceda del seguente modo:

1. Disconnette l'alimentazione del convertitore.
2. Inserire una tarjeta de memoria vacia en la ranura al efecto del convertidor.
3. Conecte la alimentación del convertidor.
- 4.

Mounting Specifications

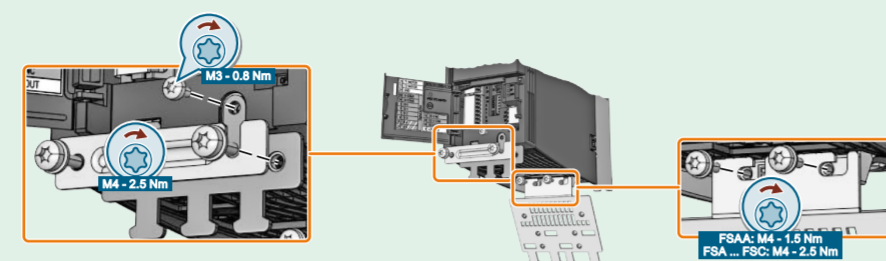


	Frame size AA 0.55 kW ... 2.2 kW	Frame Size A 0.55 kW ... 4.0 kW	Frame size B 5.5 kW ... 7.5 kW	Frame size C 11 kW ... 18.5 kW
Height including connectors	181 mm	196 mm	196 mm	295 mm
Height including shield plate	268 mm	276 mm	276 mm	375 mm
Width	73 mm	73 mm	100 mm	140 mm
Depth of the inverter with PROFINET interface	178 mm	226 mm	226 mm	226 mm
Depth of the inverter with USS/MB, CANopen, or PROFIBUS interface	155 mm	203 mm	203 mm	203 mm
Additional depth when the Operator Panel is attached	+ 21 mm with IOP (Intelligent Operator Panel) attached + 11 mm with BOP-2 (Basic Operator Panel) attached			
Weight (kg)	1.1	2.1	2.7	5.2
Max. surrounding air temperature	40 °C			

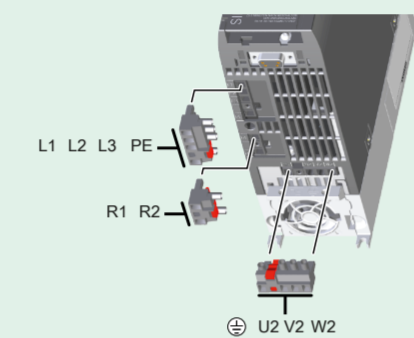
Cross-sections and tightening torques

Frame size	Rated power	Converter connection cross-section (tightening torque)	
FSAA, FSA	0.55 kW ... 4.0 kW	1.0 ... 2.5 mm ² (0.5 Nm)	18 ... 14 AWG (4.5 lbf in)
FSB	5.5 kW ... 7.5 kW	4.0 ... 6.0 mm ² (0.6 Nm)	12 ... 10 AWG (5.5 lbf in)
FSC	11 kW	6.0 ... 16.0 mm ² (1.5 Nm)	10 ... 5 AWG (13.5 lbf in)
	15 kW ... 18.5 kW	10.0 ... 16.0 mm ² (0.5 Nm)	7 ... 5 AWG (13.5 lbf in)

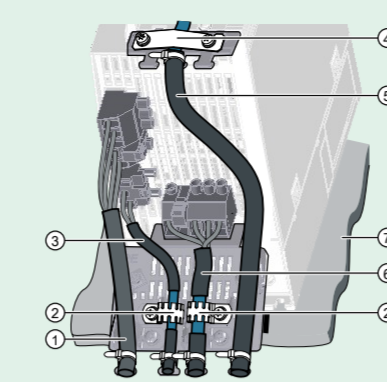
Fitting shield plates



Converter Connections

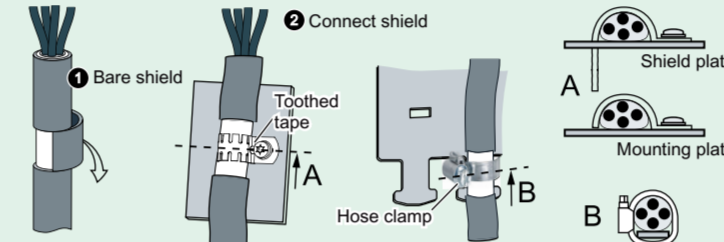


EMC Connections

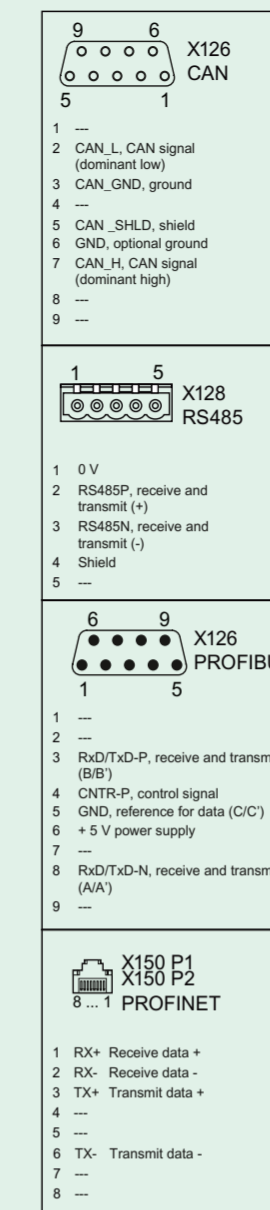


- Unshielded line cable
- Toothed tapes on the shield plate of the inverter
- Shielded cable to the braking resistor
- Shield clamp for the cable to the terminal strip on the shield plate of the inverter
- Shielded cables to the terminal strip, to the fieldbus and to the motor temperature sensor
- Shielded motor cable
- Unlacquered, good electrically conducting mounting plate

EMC shield connection



Fieldbus interface assignment



Description files for fieldbuses

Generic Station Description (GSD) for PROFIBUS
<http://support.automation.siemens.com/WW/view/en/23450835>

GSD Markup Language (GSML) for PROFINET
<http://support.automation.siemens.com/WW/view/en/26641490>

Electronic Data Sheet (EDS) for CANopen
<http://support.automation.siemens.com/WW/view/en/48351511>

Operator Panels and Commissioning Tools

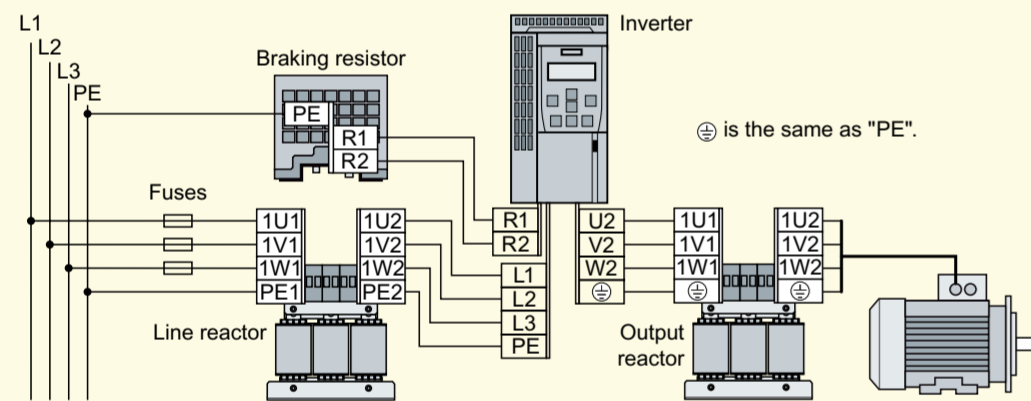
Compatible Operator Panels and Control Units
<http://support.automation.siemens.com/WW/view/en/67273266>

Operating Instructions for Operator Panels
<http://support.automation.siemens.com/WW/view/en/30565314/133300>

Startdrive commissioning software download
<http://support.automation.siemens.com/WW/view/en/68034568>

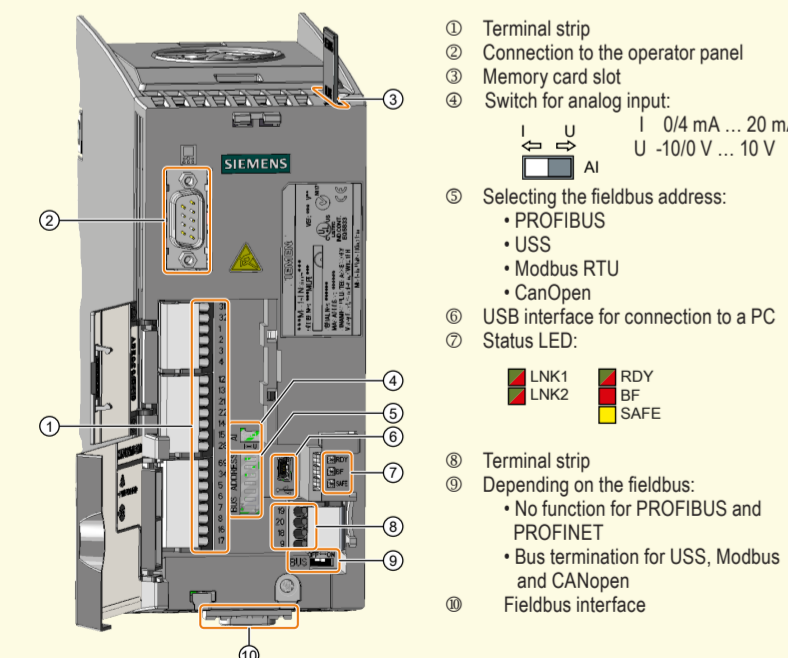
STARTER commissioning software download
<http://support.automation.siemens.com/WW/view/en/26233208>

Connection with options



Inverter interfaces

To access the interfaces at the front of the inverter, you must unplug the operator panel (if one is being used) and open the front doors.



Factory settings of the interfaces

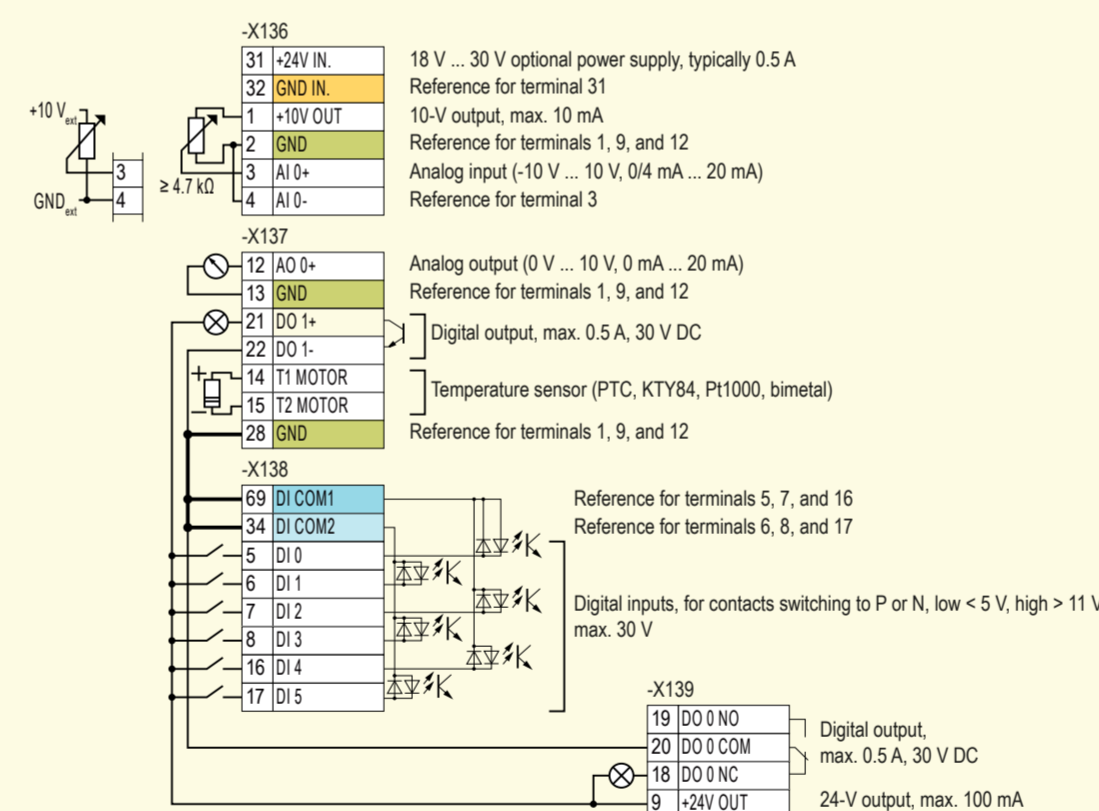
Factory default setting for G120C USS and G120C CAN

Terminal	Function
-X136 31	+24V IN
32	GND IN
1	+10V out
2	GND
3	AI 0+
4	AI 0-
Speed setpoint (-10 V ... 10 V)	
-X137 12	AO 0+
13	GND
21	DO 1 POS
22	DO 1 NEG
14	T1 MOTOR
15	T2 MOTOR
28	GND
Analog output (0 V ... 10 V, 0 mA ... 20 mA)	
-X138 69	DI COM1
34	DI COM2
5	DI 0
6	DI 1
7	DI 2
8	DI 3
16	DI 4
17	DI 5
Digital inputs, for contacts switching to P or N, low < 5 V, high > 11 V, max. 30 V	
-X139 18	DO 0 NC
19	DO 0 NO
20	DO 0 COM
9	+24V out
24-V output, max. 100 mA	

Factory default settings G120C DP and G120C PN

Terminal	Function
Higher-level open-loop control	
PROFIBUS / PROFINET	DI 3 = 0 Open-loop control via PROFIdrive telegram 1 DI 3 = 1 Fieldbus is not active
-X136 31	+24V IN
32	GND IN
1	+10V out
2	GND
3	AI 0+
4	AI 0-
Speed setpoint (0 mA ... 20 mA)	
-X137 12	AO 0+
13	GND
21	DO 1 POS
22	DO 1 NEG
14	T1 MOTOR
15	T2 MOTOR
28	GND
Analog output (0 mA ... 20 mA)	
-X138 69	DI COM1
34	DI COM2
5	DI 0
6	DI 1
7	DI 2
8	DI 3
16	DI 4
17	DI 5
Digital inputs, for contacts switching to P or N, low < 5 V, high > 11 V, max. 30 V	
-X139 18	DO 0 NC
19	DO 0 NO
20	DO 0 COM
9	+24V out
24-V output, max. 100 mA	

Layout of terminal strip



Underwriters Laboratories
 UL and CUL LISTED POWER CONVERSION EQUIPMENT for use in a pollution degree 2 environment
ISO 9001
 Siemens plc operates a quality management system, which complies with the requirements of ISO 9001.



European Low Voltage Directive
 Europäische Niederspannungsrichtlinie
 Directive européenne basse tension
 Direttiva europea "Baja tension"
 Direttiva europea sulla bassa tensione

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 Änderungen vorbehalten

Download manuals from Siemens Support site

SINAMICS G120C compact operating instructions
<https://support.industry.siemens.com/cs/ww/en/view/109477369>

EMC installation guideline
<http://support.automation.siemens.com/WW/view/en/60812658>

SINAMICS G120C List Manual
<https://support.industry.siemens.com/cs/ww/en/view/109477254>

"Fieldbus" function manual
<https://support.industry.siemens.com/cs/ww/en/view/109477369>

"Safety Integrated" function manual
<https://support.industry.siemens.com/cs/ww/en/view/109477367>

