SINAMICS G120C compact inverters
0.55 kW to 18.5 kW (0.75 hp to 25 hp)
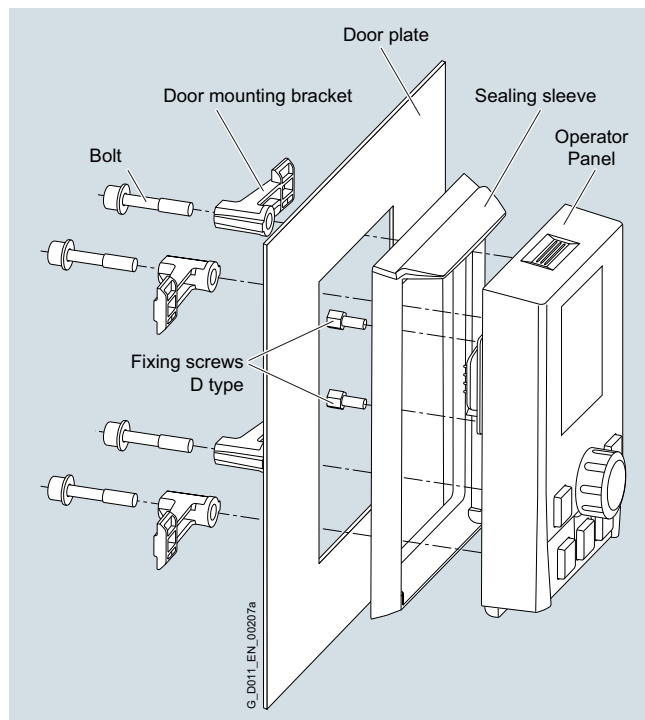
■ Benefits

- Simple commissioning of standard applications using wizards, it is not necessary to know the parameter structure
- Diagnostics using plain text display; can be used locally on-site without documentation
- Direct manual operation of the drive; you can toggle between the automatic and manual modes
- Status display with freely selectable units; display of real physical values
- Intuitive, navigation using a wheel – just like in everyday applications
- Graphic display e.g. for status values such as pressure or flowrate in bar charts
- Quickly and simply mounted in the door – mechanically and electrically
- Simple local commissioning on-site using the handheld version
- Commissioning without documentation using the integrated help function
- Standard commissioning using the clone function (parameter set data is saved for fast replacement)
- User-defined parameter list with a reduced number of self-selected parameters (to generate your own commissioning screens)
- The IOP supports the following languages [1]: German, English, French, Italian, Spanish, Portuguese, Dutch, Swedish, Russian, Czech, Polish, Turkish, Finnish
- Simple update of languages, wizards and firmware updates via USB [1]

■ Integration

Using the optionally available door mounting kit, an operator panel can be simply mounted in a control cabinet door with just a few manual operations. For door mounting with an IOP, degree of protection IP54/UL Type 12 is achieved, and with BOP-2, degree of protection IP55.

Door mounting kit with plugged-on IOP

■ Selection and ordering data

Description	Article No.
Intelligent Operator Panel IOP	**6SL3255-0AA00-4JA1**
IOP Handheld For use with SINAMICS G120, SINAMICS G120C, SINAMICS G120P, SINAMICS G110D, SINAMICS G120D, SINAMICS G110M and SINAMICS S110 Included in the scope of delivery: • IOP • Handheld housing • Rechargeable batteries (4 × AA) • Charging unit (international) • RS232 connecting cable (3 m/9.84 ft long, used in combination with SINAMICS G120, SINAMICS G120C, SINAMICS G120P and SINAMICS S110 [2]) • USB cable (1 m/3.28 ft long)	**6SL3255-0AA00-4HA0**

Accessories

Door mounting kit For mounting an operator panel in control cabinet doors with sheet steel thicknesses of 1 ... 3 mm (0.04 ... 0.12 in) IP54 degree of protection for IOP IP55 degree of protection for BOP-2 Included in the scope of delivery: • Seal • Mounting material • Connecting cable (5 m/16.4 ft long, also supplies voltage to the IOP directly via the SINAMICS G120C compact inverter)	**6SL3256-0AP00-0JA0**

[1] You can find more information at
http://support.automation.siemens.com/WW/view/en/67273266

[2] For use in combination with SINAMICS G110D, SINAMICS G120D and SINAMICS G110M, the RS232 connecting cable with optical interface is required (Article No.: 3RK1922-2BP00). The cable must be ordered separately.

■ Overview

Basic Operator Panel BOP-2

The Basic Operator Panel BOP-2 can be used to commission drives, monitor drives in operation and input individual parameter settings.

Commissioning of standard drives is easy with the menu-prompted dialog on a 2-line display. Simultaneous display of the parameter and parameter value, as well as parameter filtering, means that basic commissioning of a drive can be performed easily and, in most cases, without a printed parameter list.

The drives are easily controlled manually using directly assigned navigation buttons. The BOP-2 has a dedicated switchover button to switch from automatic to manual mode.

Diagnostics can easily be performed on the connected inverter by following the menus.

Up to two process values can be numerically visualized simultaneously.

BOP-2 supports standard commissioning of identical drives. For this purpose, a parameter list can be copied from an inverter into the BOP-2 and when required, downloaded into other drive units of the same type.

The operating temperature of the BOP-2 is 0 to 50 °C (32 to 122 °F).

■ Benefits

- Shorten commissioning times – Easy commissioning of standard drives using basic commissioning wizards (setup)
- Minimize standstill times – Fast detection and rectification of errors (Diagnostics)
- Greater transparency in the process – The status display of the BOP-2 makes process variable monitoring easy (Monitoring)
- Direct mounting on the inverter (also see IOP)
- User-friendly user interface:
  - Easy navigation using clear menu structure and clearly assigned control keys
  - Two-line display

■ Selection and ordering data

Description	Article No.
Basic Operator Panel BOP-2	**6SL3255-0AA00-4CA1**
Accessories	
Door mounting kit For mounting an operator panel in control cabinet doors with sheet steel thicknesses of 1 ... 3 mm (0.04 ... 0.12 in) IP54 degree of protection for IOP IP55 degree of protection for BOP-2 Included in the scope of delivery: • Seal • Mounting material • Connecting cable (5 m/16.4 ft long, also supplies voltage to the BOP-2 directly via the SINAMICS G120C compact inverter)	6SL3256-0AP00-0JA0

4

SINAMICS G120 standard inverters
0.37 kW to 250 kW (0.5 hp to 400 hp)

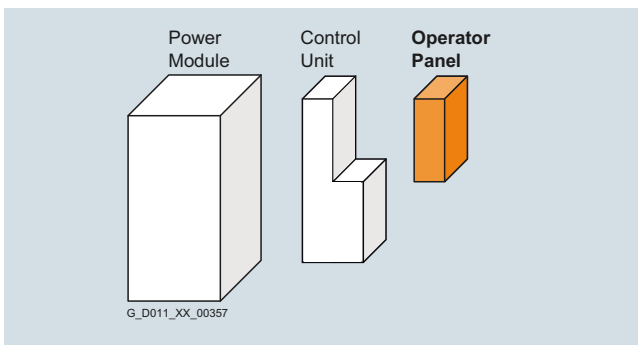## ■ Design

PC inverter connection kit 2

For controlling and commissioning an inverter directly from a PC if the appropriate software (STARTER commissioning tool or SINAMICS Startdrive) has been installed.

Shield connection kit for Power Modules

The shield connection kit makes it easier to connect the shields of supply and control cables, provides mechanical strain relief and thus ensures optimum EMC performance.

Shield connection kit for Control Units

The shield connection kit offers optimum shield connection and strain relief for all signal and communication cables. It includes a matching shield bonding plate and all of the necessary connecting and retaining elements for mounting.

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Description	Article No.
Operator Panel IOP	**6SL3255-0AA00-4JA1**
Operator Panel IOP Handheld	**6SL3255-0AA00-4HA0**
Operator Panel BOP-2	**6SL3255-0AA00-4CA1**
Door mounting kit for IOP/BOP-2	**6SL3256-0AP00-0JA0**
Push-through mounting frame	
• For PM230 and PM240-2 Power Modules, degree of protection IP20 – push-through variants	
- Frame size FSA	**6SL3260-6AA00-0DA0**
- Frame size FSB	**6SL3260-6AB00-0DA0**
- Frame size FSC	**6SL3260-6AC00-0DA0**
Memory card	
• SINAMICS SD card [1] 512 MB	**6SL3054-4AG00-2AA0**
Brake Relay	**6SL3252-0BB00-0AA0**
Safe Brake Relay _NEW_	**6SL3252-0BB01-0AA0**
PC inverter connection kit 2	**6SL3255-0AA00-2CA0**
Shield connection kits	
• For PM230 and PM240-2 Power Modules standard and push-through variants	
- Frame sizes FSA to FSC	Supplied with the Power Modules, available as a spare part
• For PM230 and PM240 Power Modules	
- Frame sizes FSD and FSE	**6SL3262-1AD00-0DA0**
- Frame size FSF	**6SL3262-1AF00-0DA0**
• For PM250 Power Modules	
- Frame size FSC	**6SL3262-1AC00-0DA0**
- Frame sizes FSD and FSE	**6SL3262-1AD00-0DA0**
- Frame size FSF	**6SL3262-1AF00-0DA0**
• For Control Units	
- For CU230P-2 HVAC/DP/CAN	**6SL3264-1EA00-0FA0**
- For CU240B-2 and CU240E-2	**6SL3264-1EA00-0HA0**
- For CU230P-2 PN, CU240E-2 PN and CU240E-2 PN-F	**6SL3264-1EA00-0HB0**
- For CU250S-2 _NEW_	**6SL3264-1EA00-0LA0**
STARTER commissioning tool [2] on DVD-ROM	**6SL3072-0AA00-0AG0**
SINAMICS Startdrive commissioning tool [3] on DVD-ROM	**6SL3072-4DA02-0XG0**

[1] Approved only for CU230P-2 HVAC, CU230P-2 CAN and CU230P-2 DP Control Units with firmware version V4.6 and higher.

[2] STARTER commissioning tool can be found on the Internet at http://support.automation.siemens.com/WW/view/en/10804985/133100

[3] SINAMICS Startdrive commissioning tool can be found on the Internet at http://support.automation.siemens.com/WW/view/en/68034568

5

SINAMICS G120 standard inverters
0.37 kW to 250 kW (0.5 hp to 400 hp)

5

■ Selection and ordering data

Description	Article No.
Intelligent Operator Panel IOP	**6SL3255-0AA00-4JA1**
IOP Handheld For use with SINAMICS G120, SINAMICS G120C, SINAMICS G120P, SINAMICS G110D, SINAMICS G120D, SINAMICS G110M and SINAMICS S110 Included in the scope of delivery: • IOP • Handheld housing • Rechargeable batteries (4 × AA) • Charging unit (international) • RS232 connecting cable (length 3 m, used in combination with SINAMICS G120, SINAMICS G120C, SINAMICS G120P and SINAMICS S110 [1]) • USB cable (1 m/3.28 ft long)	**6SL3255-0AA00-4HA0**
Accessories	
Door mounting kit For mounting an operator panel in control cabinet doors with sheet steel thicknesses of 1 ... 3 mm (0.04 in ... 0.12 in) IP54 degree of protection for IOP IP55 degree of protection for BOP-2 Included in the scope of delivery: • Seal • Mounting material • Connecting cable (5 m/16.41 ft long, also supplies voltage to the IOP directly via the Control Unit)	**6SL3256-0AP00-0JA0**
RS232 connecting cable With optical interface to connect the SINAMICS G110D, SINAMICS G120D or SINAMICS G110M inverters to the IOP Handheld (2.5 m long)	**3RK1922-2BP00**

■ Benefits

• Simple commissioning of standard applications using wizards, it is not necessary to know the parameter structure
• Diagnostics using plain text display; can be used locally on-site without documentation
• Direct manual operation of the drive – you can toggle between automatic and manual modes
• Status display with freely selectable units; display of real physical values
• Intuitive, navigation using a wheel – just like in everyday applications
• Graphic display with bar charts, e.g. for status values such as pressure or flowrate
• Quickly and simply mounted in the door – mechanically and electrically
• Simple local commissioning on-site using the handheld version
• Commissioning without documentation using the integrated help function
• Standard commissioning using the clone function (parameter set data is saved for fast replacement)
• User-defined parameter list with a reduced number of self-selected parameters (to generate your own commissioning screens)
• The IOP supports the following languages [2]: German, English, French, Italian, Spanish, Portuguese, Dutch, Swedish, Russian, Czech, Polish, Turkish, Finnish
• Simple update of languages, wizards and firmware updates via USB [2]

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[1] For use in combination with SINAMICS G110D, SINAMICS G120D and SINAMICS G110M, the RS232 connecting cable with optical interface is required (Article No.: 3RK1922-2BP00). The cable must be ordered separately.

[2] You can find more information at http://support.automation.siemens.com/WW/view/en/67273266

SINAMICS G120 standard inverters
0.37 kW to 250 kW (0.5 hp to 400 hp)

■ Overview

Basic Operator Panel BOP-2

The Basic Operator Panel BOP-2 can be used to commission drives, monitor drives in operation and input individual parameter settings.

Commissioning of standard drives is easy with the menu-prompted dialog on a 2-line display. Simultaneous display of the parameter and parameter value, as well as parameter filtering, means that basic commissioning of a drive can be performed easily and, in most cases, without a printed parameter list.

The drives are easily controlled manually using directly assigned navigation buttons. The BOP-2 has a dedicated switchover button to switch from automatic to manual mode.

Diagnostics can easily be performed on the connected inverter by following the menus.

Up to two process values can be numerically visualized simultaneously.

BOP-2 supports standard commissioning of identical drives. For this purpose, a parameter list can be copied from an inverter into the BOP-2 and when required, downloaded into other drive units of the same type.

The operating temperature of the BOP-2 is 0 ... 50 °C (32 ... 122 °F).

■ Selection and ordering data

Description	Article No.
Basic Operator Panel BOP-2	**6SL3255-0AA00-4CA1**
Accessories	
Door mounting kit For mounting an operator panel in control cabinet doors with sheet steel thicknesses of 1 ... 3 mm (0.04 ... 0.12 in) IP54 degree of protection for IOP IP55 degree of protection for BOP-2 Included in the scope of delivery: • Seal • Mounting material • Connecting cable (5 m/16.41 ft long, also supplies voltage to the BOP-2 directly via the Control Unit)	**6SL3256-0AP00-0JA0**

■ Benefits

• Shorten commissioning times – Easy commissioning of standard drives using basic commissioning wizards (setup)

• Minimize standstill times – Fast detection and rectification of faults (Diagnostics)

• Greater transparency in the process – The status display of the BOP-2 makes process variable monitoring easy (Monitoring)

• Direct mounting on the Control Unit (also see IOP)

• User-friendly user interface:
  - Easy navigation using clear menu structure and clearly assigned control keys
  - Two-line display

◼ Overview

The Intelligent Operator Panel IOP is a very user-friendly and powerful operator panel for SINAMICS S110.

The IOP supports both entry-level personnel and drive experts. Thanks to the large plain text display, the menu-based operation and the application wizards, it is easy to commission the drive. A drive can be essentially commissioned without having to use a printed parameter list – as the parameters are displayed in plain text, and explanatory help texts and a parameter filtering function are provided.

The drives are easily controlled manually using directly assigned buttons and the navigation wheel. The IOP has a dedicated switchover button to switch from automatic to manual mode.

The inverter can be diagnosed in a user-friendly fashion using the plain text display of faults and alarms. Help texts can be obtained by pressing the INFO button.

Up to 2 process values can be displayed graphically or numerically at the same time. Process values can also be displayed in technological units.

The IOP supports standard commissioning of identical drives. For this purpose, a parameter list can be copied from a inverter into the IOP and downloaded into other drive units of the same type as required.

The IOP supports the following languages [1]: German, English, French, Italian, Spanish, Portuguese, Dutch, Swedish, Russian, Czech, Polish, Turkish, Finnish.

Note:

The IOP cannot be directly snapped onto the CU305 Control Unit. An adapter cable is required for operation.

Note:

The IOP cannot be used for commissioning SINAMICS S120.

Updating the IOP

The IOP can be updated and expanded using the integrated USB interface.

Data to support future drive systems can be transferred from the PC to the IOP. Further, the USB interface allows user languages and wizards that will become available in the future to be subsequently downloaded and the firmware to be updated for the IOP [1].

The IOP is supplied with power via the USB interface during an update.

◼ Benefits

- Simple commissioning of standard applications using wizards, it is not necessary to know the parameter structure
- Diagnostics using plain text display; can be used locally on-site without documentation
- Direct manual operation of the drive; you can toggle between automatic and manual modes
- Status display with freely selectable units; display of real physical values
- Intuitive navigation using a wheel - just like in everyday applications
- Graphic display e.g. for status values such as pressure or flowrate in bar charts
- Commissioning without documentation using the integrated help function
- Standard commissioning using the clone function (parameter set data is saved for fast replacement)
- User-defined parameter list with a reduced number of self-selected parameters (to generate your own commissioning screens)
- The IOP supports the following languages [1]: German, English, French, Italian, Spanish, Portuguese, Dutch, Swedish, Russian, Czech, Polish, Turkish, Finnish.
- Simple update of languages, wizards and firmware via USB [1]

◼ Selection and ordering data

Description	Article No.
Intelligent Operator Panel IOP	**6SL3255-0AA00-4JA1**
IOP Handheld For use with SINAMICS G120, SINAMICS G120C, SINAMICS G120P, SINAMICS G110D, SINAMICS G120D, SINAMICS G110M and SINAMICS S110	6SL3255-0AA00-4HA0
Included in the scope of delivery: • IOP • Handheld housing • Rechargeable batteries (4 × AA) • Charging unit (international) • RS232 connecting cable (length 3 m, used in combination with SINAMICS G120, SINAMICS G120C, SINAMICS G120P and SINAMICS S110 [2]) • USB cable (1 m/3.28 ft long)	
Accessories	
Door mounting kit IP54 degree of protection for mounting an operator panel in control cabinet doors with sheet steel thicknesses of 1 ... 3 mm (0.04 ...0.12 in) IP54 degree of protection for IOP IP55 degree of protection for BOP-2	6SL3256-0AP00-0JA0
Included in the scope of delivery: • Seal • Mounting material • Connecting cable (5 m/16.4 ft long)	

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[1] You can find more information at
http://support.automation.siemens.com/WW/view/en/67273266

[2] For use in combination with SINAMICS G110D, SINAMICS G120D and SINAMICS G110M, the RS232 connecting cable with optical interface is required (Article No.: 3RK1922-2BP00). The cable must be ordered separately.