

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6SL3255-0AA00-4JA1

SINAMICS INTELLIGENT OPERATOR PANEL

Used with the applicable SINAMICS IOP configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Technical reference package for 6SL3255-0AA00-4JA1

Overview

2.1 Introduction

Compatibility

The Intelligent Operator Panel (IOP) has been designed to enhance the interface and communications capabilities of SINAMICS Inverters.

The IOP connects to the Inverter through an RS232 interface. It has been designed to automatically recognize the following devices from the SINAMICS range:

- SINAMICS G120 CU230P-2
- SINAMICS G120 CU240B-2
- SINAMICS G120 CU240E-2
- SINAMICS G120 CU250S-2
- SINAMICS G120C
- SINAMICS G120D-2 CU240D-2*
- SINAMICS G120D-2 CU250D-2*
- SINAMICS ET 200pro FC-2*
- SINAMICS G110D*
- SINAMICS G110M*
- SINAMICS S110 CU305*

*Denotes Control Units that require the IOP Hand-Held Kit to connect the IOP to the Control Unit.

Hand-Held Kit order number: 6SL3255-0AA00-4HA0.

Optical cable order number: 3RK1922-2BP00 (not required for the SINAMICS S110 CU305)

For information on firmware and language upgrades, please see Firmware and language upgrade (Page 23).

Note

IOP functional support

- Drives with SINAMICS firmware prior to version 4.2 may not be fully supported by the IOP.
 - The actual menu structure and functionality of the IOP will be influenced by the following factors:
 - The software version and type of Control Unit to which the IOP is fitted.
 - The firmware and software version of the IOP.
 - The selected functional group filtering of the parameters.
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2.2 Layout and functions

Overview

The physical layout of the IOP is shown below:

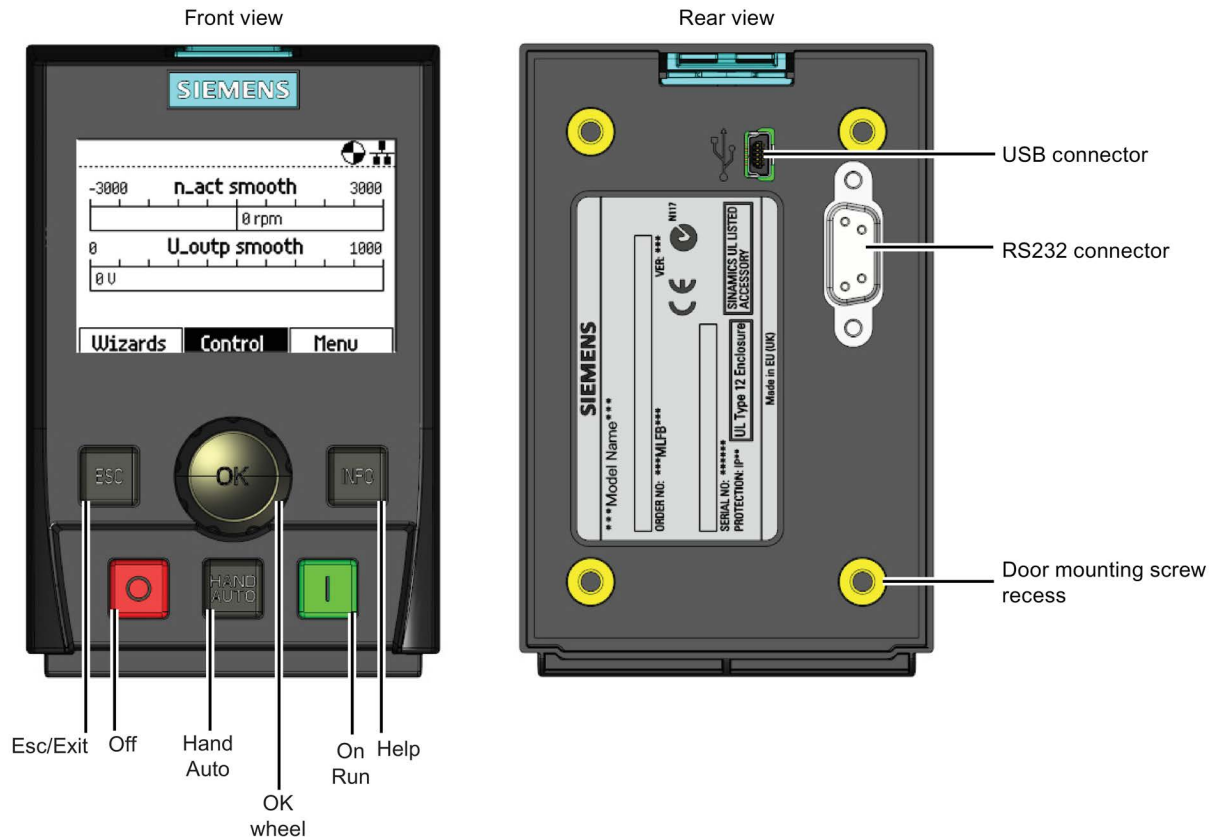


Figure 2-1 Layout of IOP

The IOP is operated by using a push-wheel and five additional buttons. The specific functions of the push-wheel and buttons are shown in the table below.

Table 2- 1 Function of the IOP controls

Key	Function
	<p>The push-wheel has the following functions:</p> <ul style="list-style-type: none"> In a menu, turning the push-wheel changes the selection. When a selection is highlighted, pressing the push-wheel confirms the selection. When editing a parameter, turning the push-wheel changes the displayed value; clockwise increases the value and anti-clockwise decreases the displayed value. When editing parameter or search values there is a choice to edit individual digits or an entire value. With a long press of the push-wheel (>3 sec) it will toggle between the two different value editing modes.
	<p>The ON key has the following functions:</p> <ul style="list-style-type: none"> In AUTO mode, the screens displays an information screen, stating that the command sources is AUTO and can be changed by pressing the HAND/AUTO KEY. In HAND mode the Inverter is started - the Inverter status icon starts turning. <p>Notes:</p> <p>For Control Units with firmware versions less than 4.0: When running in AUTO mode, HAND mode cannot be selected unless the Inverter is stopped.</p> <p>For Control Units with firmware versions 4.0 or greater: When running in AUTO mode, HAND mode can be selected and the motor will continue to run at the last selected setpoint speed.</p> <p>When the Inverter is running in HAND mode, the motor stops when switched to AUTO.</p>
	<p>The OFF key has the following functions:</p> <ul style="list-style-type: none"> If pressed for longer than 3 seconds the Inverter will perform an OFF2; the motor will then coast down to a standstill. Note: 2 presses of the OFF key within 3 seconds will also perform an OFF2. If pressed for less than 3 seconds the following actions will be performed: <ul style="list-style-type: none"> If in AUTO mode the screen will display an information screen stating that the command sources is AUTO and can be changed using the HAND/AUTO key. The Inverter will not be stopped. If in HAND mode the Inverter will perform an OFF1; the motor will come to a standstill in the ramp-down time set in parameter P1121.
	<p>The ESC key has the following functions:</p> <ul style="list-style-type: none"> If pressed for less than 3 seconds the IOP returns to the previous screen or if a value has been edited, the new value is not saved. If pressed longer than 3 seconds the IOP returns to the status screen. <p>When using the ESC key in the parameter editing mode, no data is saved unless the OK key is pressed first.</p>
	<p>The INFO key has the following functions:</p> <ul style="list-style-type: none"> Displays additional information for the currently selected item. Pressing the INFO key again will display the previous screen. Pressing the INFO key during power-up of the IOP will place the IOP in DEMO mode. To exit DEMO mode, power-cycle the IOP.
	<p>The HAND/AUTO key switches the command source between HAND and AUTO mode.</p> <ul style="list-style-type: none"> HAND sets the command source to the IOP. AUTO sets the command source to an external source, for example, fieldbus.

Changes in functionality of the IOP keys

The functionality of the individual controls of the IOP is changed when the following functions are activated, the user should be aware of these changes of functions to ensure that the IOP operates in the intended manner.

- Custom Hand mode Custom Hand mode (Page 49)
- Startup in Hand mode Startup in Hand mode (Page 53)
- Hand/Auto disable Hand/Auto disable (Page 54)

DEMO mode

To enter the DEMO mode it is necessary to do a long press of the ESC key or INFO key during the power-up cycle. The IOP must be power cycled again to exit the DEMO mode.

DEMO mode allows the IOP to be used for demonstration purposes without affecting the Inverter to which it is connected. Menus can be navigated and functions selected, but all communications with the Inverter are blocked to ensure that the Inverter does not react to any commands issued from the IOP.

Locking and unlocking the keypad

The keypad can only be locked once the power-up cycle has been completed. If the keys are activated before the power-up cycle is completed, the IOP will enter the DEMO mode.

To lock the IOP keypad press **ESC** and **INFO** simultaneously for 3 seconds or more. To unlock the keypad press **ESC** and **INFO** simultaneously for 3 seconds or more.

Technical data

IOP technical data

Table 8- 1 IOP and Door mounting kit specifications

Feature	IOP only	Door mounting kit
Protection	Depending upon the Control Unit IP rating to a max. of IP54	
Dimensions (HxWxD)	106.86 mm x 70 mm x 30.06 mm (Depth includes width of wheel)	
Net weight	0.134 Kg (0.295 lbs)	
Gross weight	0.206 Kg (0.454 lbs) - Includes packaging	
Screw torque	- Max. 2 Nm	
Operating ambient temperature	0 - 50 °C (32 - 122 °F) when directly connected to the converter. 0 - 55 °C (32 - 131 °F) when using the Door Mounting Kit.	
Transport and storage ambient temperature	-40 - +70 °C (-40 - 158 °F)	
Humidity	Maximum absolute humidity 25 g/m ³	

Table 8- 2 Hand-held specifications

Feature	IOP Hand-held kit
Protection	IP20
Dimensions (HxWxD)	195.04 mm x 70 mm x 47.99 mm
Net weight	0.724 Kg (0.1.59 lbs)
Gross weight	0.970 Kg (2.14 lbs) - Includes packaging
Operating ambient temperature	0 - 40 °C (32 - 104 °F) [charging 10 - 40 °C]
Transport and storage ambient temperature	-20 - +55 °C (-4 - 131 °F)
Humidity	Relative humidity 90%