ABB CP635 1SAP535100R0001

Control Panel



CP600 operator interface. ABB CP635 1SAP535100R0001 is a CP600 operator interface for machine visualization and control through a PB610 HMI application. The 7-inch widescreen display and resistive touchscreen allow operators to navigate configured process screens, enter values and issue commands. Alarm handling, trends and recipes can be included in the project to support routine operation and production-setting changes. Its Ethernet and configurable serial interfaces connect the HMI to the engineered automation system. This complete ordering code identifies the standard CP635 PB610 model, which is distinct from the separately ordered WEB and black-front variants.

Technical Specifications

Product Identity	
Manufacturer / ordering code	ABB / CP635 1SAP535100R0001
Product family / application	CP600 control panel / PB610 applications
Front / cut-out dimensions	187 × 147 mm front; 176 × 136 mm cut-out
Depth / weight	47 mm housing depth plus 4 mm faceplate; 1.1 kg
Functional Configuration	
Display	7-inch TFT LCD; 800 × 480 pixels; 65,536 colors
Touch technology	Single-touch, 4-wire resistive touchscreen
Brightness / backlight	300 cd/m²; LED backlight, typical life 40,000 h at 25 °C
Processor	ARM Cortex-A8, 600 MHz
Ethernet	2 × 10/100 Mbit/s, with integrated switch function
Serial interface	COM1: software-configurable RS-232 / RS-485 / RS-422; D-sub connector
USB / storage	2 USB host ports: one V2.0 and one V2.0/V1.1; SD-card slot
Performance & Power	
Memory	256 MB RAM; 128 MB flash; HMI project size up to 30 MB
Supply voltage / current	24 V DC nominal; permitted range 18–32 V DC; 0.7 A at 24 V DC
Environment	
Operating / storage temperature	0 to +50 °C operating; –20 to +70 °C storage
Relative humidity	5–85%, non-condensing
Protection rating	IP66 at the correctly installed front; IP20 at the rear
Mounting orientation	Panel mounting; landscape or portrait

Selected original manufacturer material follows on pages 3–4.

Compatibility & Selection Guide

Engineering and replacement checks. The 1SAP535100R0001 ordering code identifies the PB610 application model. CP635-WEB uses a different ordering code and an AC500 V2.3 microbrowser. Check the actual panel revision, installed BSP and project requirements before replacement or project transfer.

Wiring & Installation Reference

Power and interfaces

Supply · 24 V DC nominal; 18–32 V DC · Size the supply for 0.7 A panel current

Earth · Chassis earth and terminal 3 · Follow the ABB grounding arrangement

Ethernet · Two 10/100 Mbit/s ports · Match the machine network configuration

COM1 · RS-232 / RS-485 / RS-422 · Select the software mode and correct cable

Mounting and commissioning

1. Match the panel Verify the complete order code, 176 × 136 mm cut-out, project and interface requirements.

2. Install the gasket and brackets Use a flat mounting surface and 1.5–6 mm panel thickness. Fit the gasket and secure the brackets as shown in ABB’s installation procedure.

3. Validate the application Check touch operation, network communications and application behavior after loading the compatible PB610 project.

Installation precautions

The IP66 rating applies to the correctly installed front only; the rear is IP20.

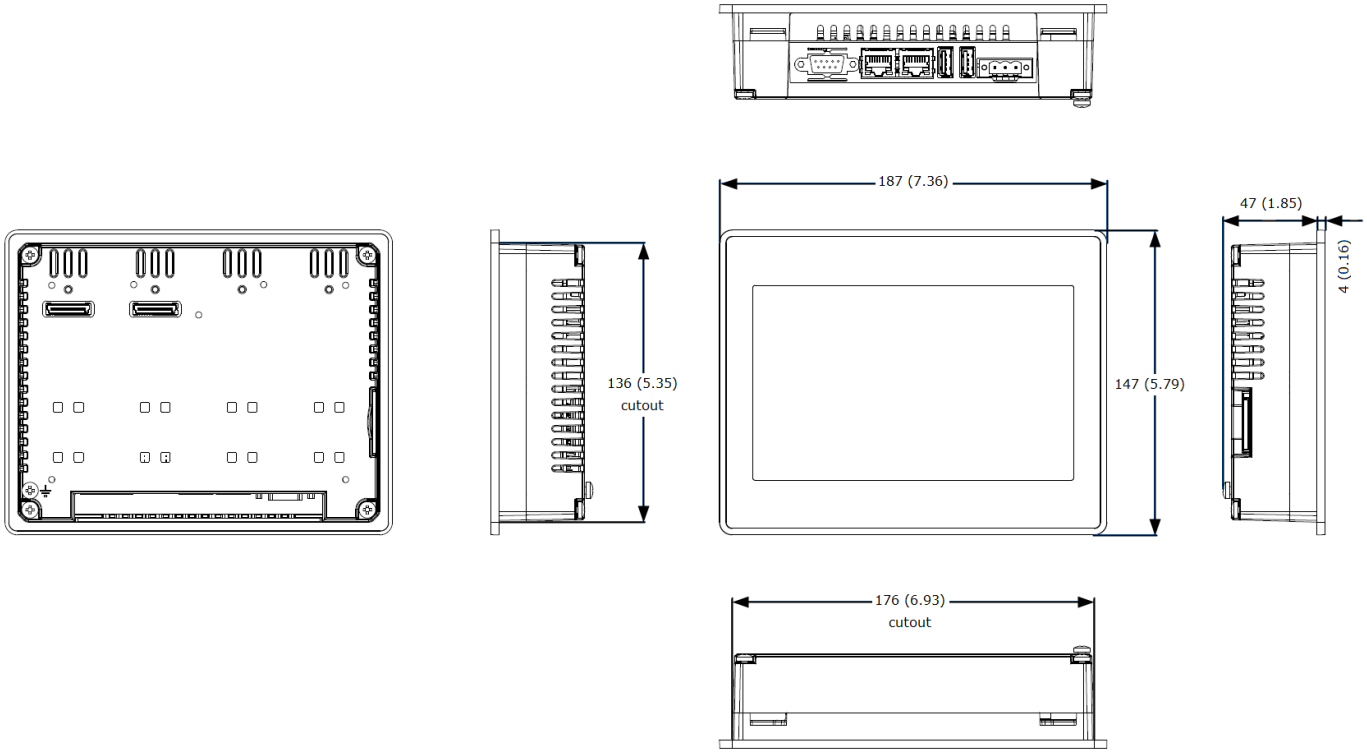
Keep the installation within 0 to +50 °C and 5–85% relative humidity without condensation.

Avoid continuous direct sunlight and unsuitable chemicals. Operate the touchscreen without sharp tools.

Clean using a soft cloth and neutral soap; avoid solvents.

Manufacturer reference 1

2 Dimensions



The dimensions are given in mm and in brackets in inch.

3 Technical Data

3.1 Product Data

Parameter		Value
Display		
	Size diameter	7”
	Resolution	800 x 480 pixels
	Type	TFT-LCD
	Number of colors	65536
	Brightness	300 cd/m²
Backlight		
	Type	LED
	Lifetime, typical	40 000 h at 25 °C
Touch screen		
	Type	Single-touch, resistive touch screen, 4 wires
	Material	glass, covered by plastic film
	Design	
	CP635, CP635-WEB	ABB design passepartout

	CP635-B	Black passepartout
System resources		
	Processor type	ARM Cortex-A8, 600 MHz
	Operating system	Microsoft Windows 6.0 Core
	Application memory	For HMI projects of up to 30 MB
	RAM	256 MB
	Flash	128 MB
	Card slot	SD card
Data backup		Battery
	Battery type	3 V, 50 mAH, Lithium, rechargeable, not user-replaceable
	Data buffering time at 25 °C	Ca. three months
Real-time clock:		
	Accuracy	< 100 ppm at 25 °C
	With battery back-up	Yes

3.2 Interfaces

Parameter		**Value**
Network interfaces		
	Ethernet port 0	10/100 Mbit (with integrated switch function)
	Ethernet port 1	10/100 Mbit
Serial interfaces		
	COM1	RS-232/-485/-422 software configurable
	COM1 connection	D-sub
USB interfaces		
	USB port 1	Host interface V2.0
	USB port 2	Host interface V2.0 and V1.1

3.3 Power Supply

Parameter		**Value**
Supply voltage 24 V DC		
	Voltage	24 V DC (18…32 V DC)
	Protection against reverse polarity	yes
	Connection at the control panel	Removable 3-pin terminal block with screw connection
	Current consumption from 24 V DC	0.7 A