ABB CP630 1SAP530100R0001

Control Panel



CP600 machine visualization. ABB CP630 1SAP530100R0001 is a compact CP600 operator panel for machine applications engineered with PB610 Panel Builder 600. Its 5.7-inch color display and resistive touchscreen provide a local interface for viewing process data and entering operator commands. The PB610 application can include alarm handling, trend presentation and recipe functions, with the actual screens and controls defined by the engineered project. Ethernet and configurable serial interfaces provide the panel's communication options. The full ordering code identifies the PB610 panel version for customers maintaining an existing CP630 HMI application.

Technical Specifications

Product Identity	
Manufacturer / ordering code	ABB / CP630 1SAP530100R0001
Product family / application	CP600 control panel / PB610 applications
Front / cut-out dimensions	187 × 147 mm front; 176 × 136 mm cut-out
Functional Configuration	
Display	5.7-inch TFT LCD; 320 × 240 pixels; 65,536 colors
Touch technology	Single-touch, 4-wire resistive touchscreen
Brightness / backlight	200 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
Depth / mounting	47 mm housing depth plus 4 mm faceplate; landscape or portrait
Performance & Power	
Memory	256 MB RAM; 128 MB flash; HMI project size up to 30 MB
Supply voltage	24 V DC nominal; permitted range 18–32 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

Selected original manufacturer material follows on pages 3–4.

Compatibility & Selection Guide

Application and version matching. This ordering code is the PB610 application version. CP630-WEB is a separate model intended for an AC500 V2.3 web server. An existing project, its engineering environment and the actual panel revision must be checked together when replacing a unit.

Wiring & Installation Reference

Supply and communication checks

Supply · 24 V DC nominal; 18–32 V DC · Confirm the nameplate and applicable current rating

Protective earth · Chassis connection and terminal 3 · Follow the ABB grounding arrangement

Ethernet · Two 10/100 Mbit/s ports · Check the machine network and project settings

Serial port · RS-232 / RS-485 / RS-422 · Match the configured mode and cable pin assignment

Panel installation and project check

1. Check the enclosure opening Confirm a 176 × 136 mm cut-out, a flat mounting surface and 1.5–6 mm panel thickness.

2. Fit the seal and brackets Position the gasket correctly and secure the panel using ABB’s bracket procedure. Front protection depends on correct installation.

3. Commission the application Load the compatible PB610 project, then verify touch operation, communications and the machine application before returning it to service.

Installation precautions

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

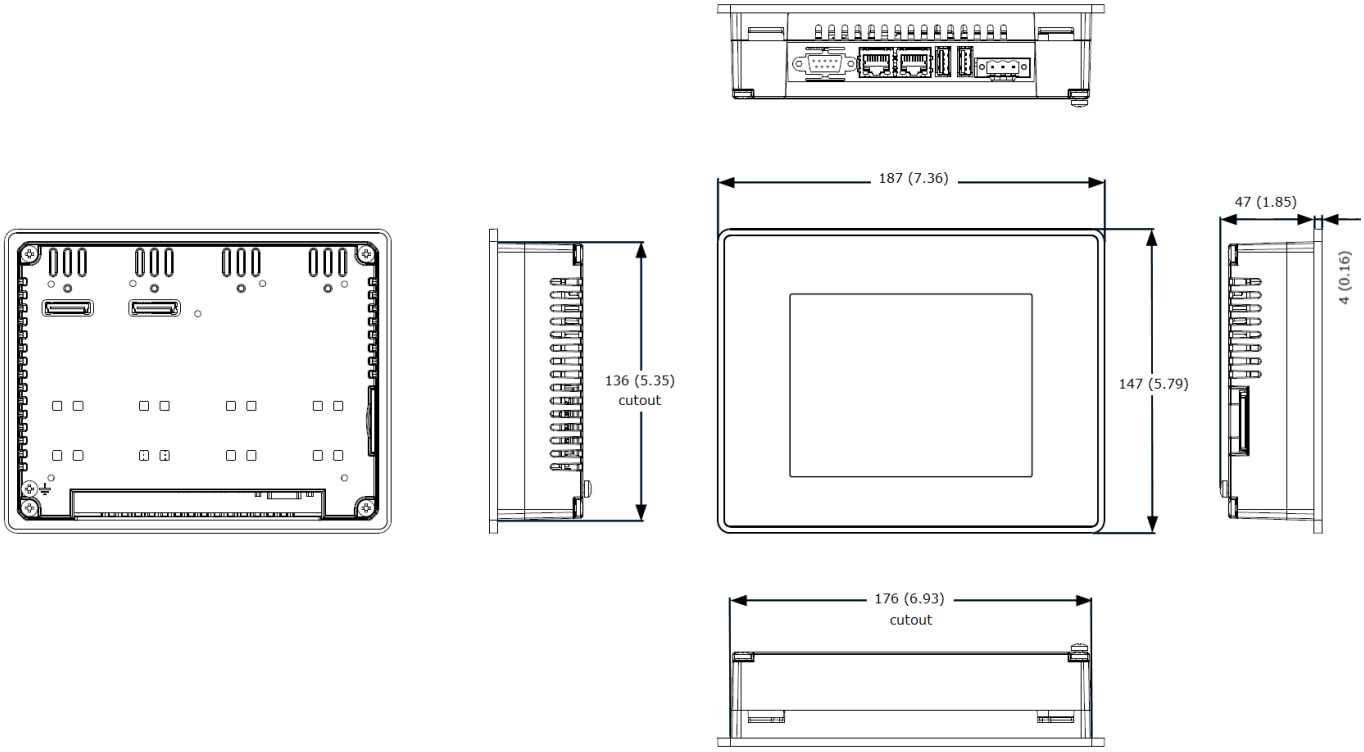
Keep operation within 0 to +50 °C and 5–85% relative humidity without condensation.

Avoid continuous direct sunlight, unsuitable chemicals and sharp tools on the touchscreen.

Clean with a soft cloth and neutral soap; do not use 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	5.7”
	Resolution	320 x 240 pixels
	Type	TFT-LCD
	Number of colors	65536
	Brightness	200 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	ABB design 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