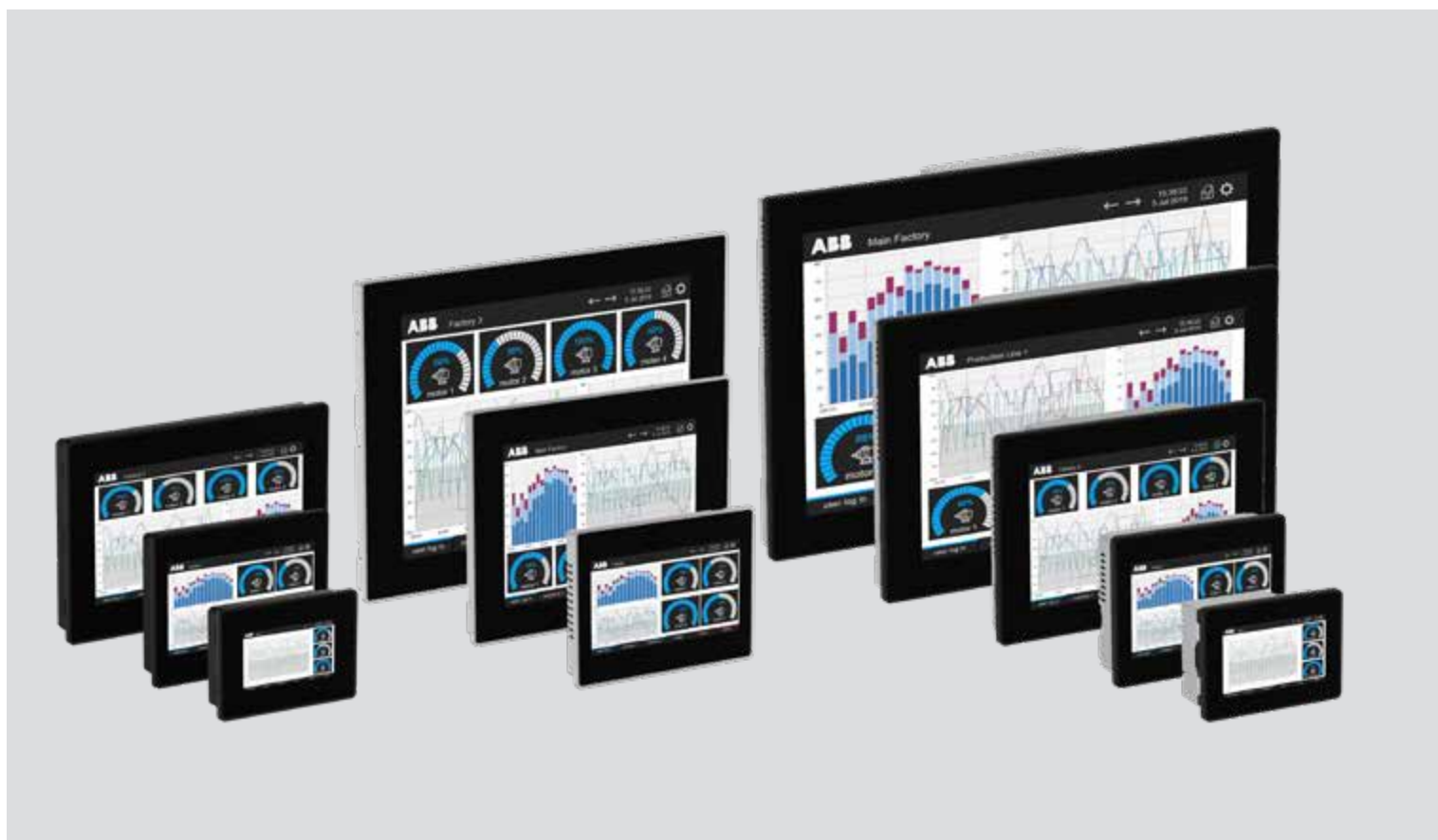


PLC AUTOMATION

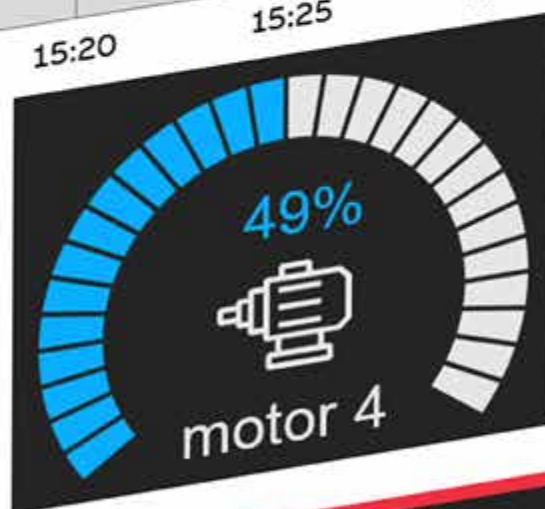
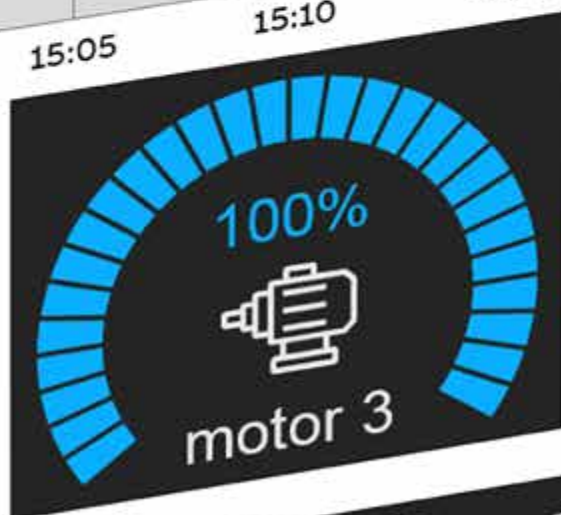
CP600-eCo, CP600 and CP600-Pro

Control panels





15:38:22
10 Jul 2022



HVAC

Chiller

Alarm

e 2

CP600 control panels

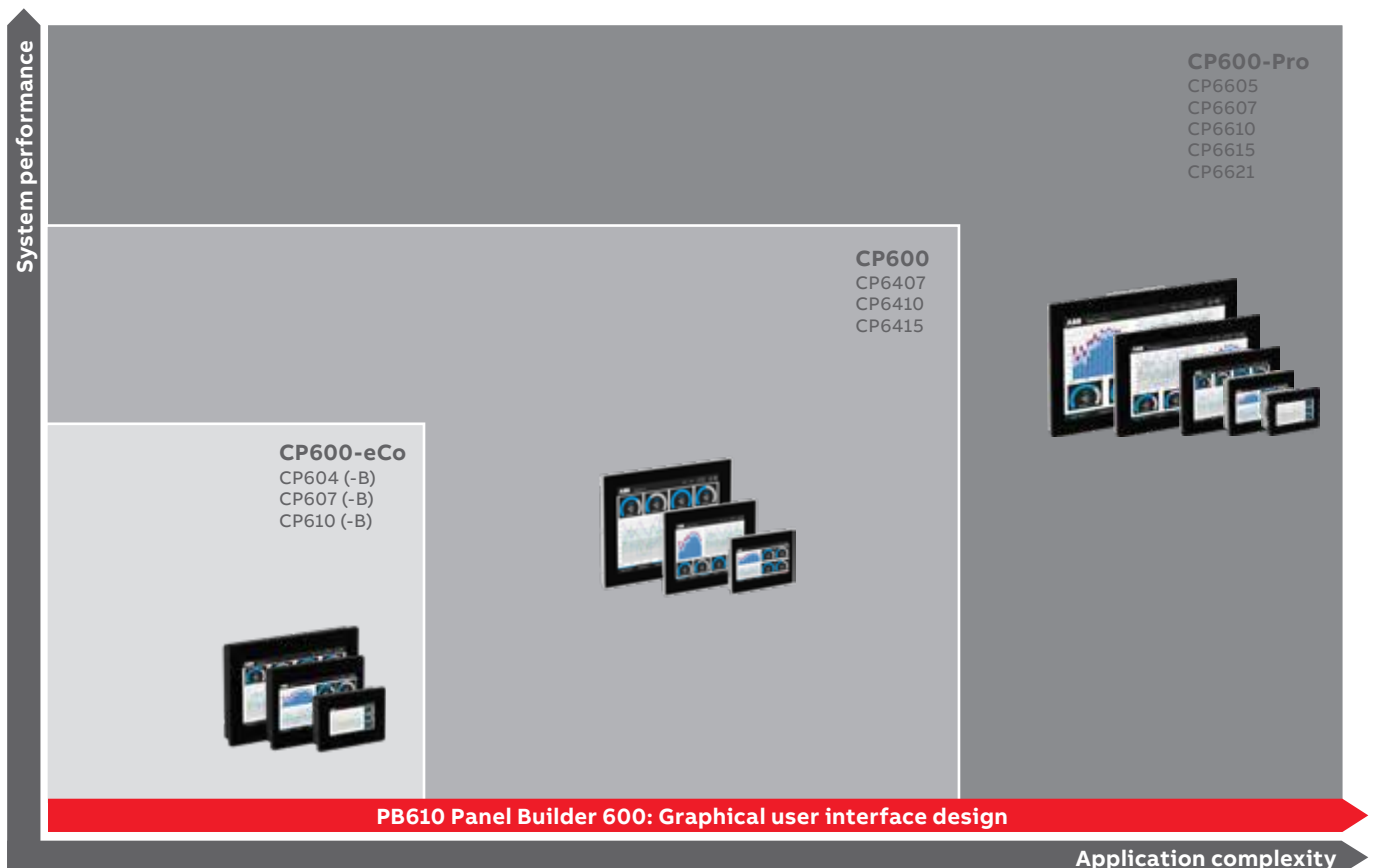
004	CP600 control panel platform
005	CP600 highlights
006	Visualization options
007–008	PB610 Panel Builder 600
009	CP600 connectivity
010–011	CP600-eCo, CP600 and CP600-Pro – Key features
012–013	CP600-eCo
014–015	CP600
016–017	CP600-Pro
018–019	CP600 drives faceplate
020	Perfect match: CP600 and AC500
021	What does your application need?
022–023	Ordering data
024–027	Technical data

CP600 control panel platform

Various options for your individual visualization project

With comprehensive but easy-to-use functionalities, ABB control panels stand out from competitor products. At a single touch, they intuitively provide operators with tailor-made operational

information for production plants and machines. CP600-eCo, CP600 and CP600-Pro control panels make machine operation efficient, predictable and user-friendly.



CP600 highlights



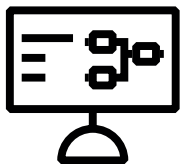
—
Harmonized with AC500 PLCs and
ABB Ability™ Automation Builder



—
Various application possibilities through
a large number of protocols



—
Scalable solutions from basic CP600-eCo
functionalities to premium CP600-Pro



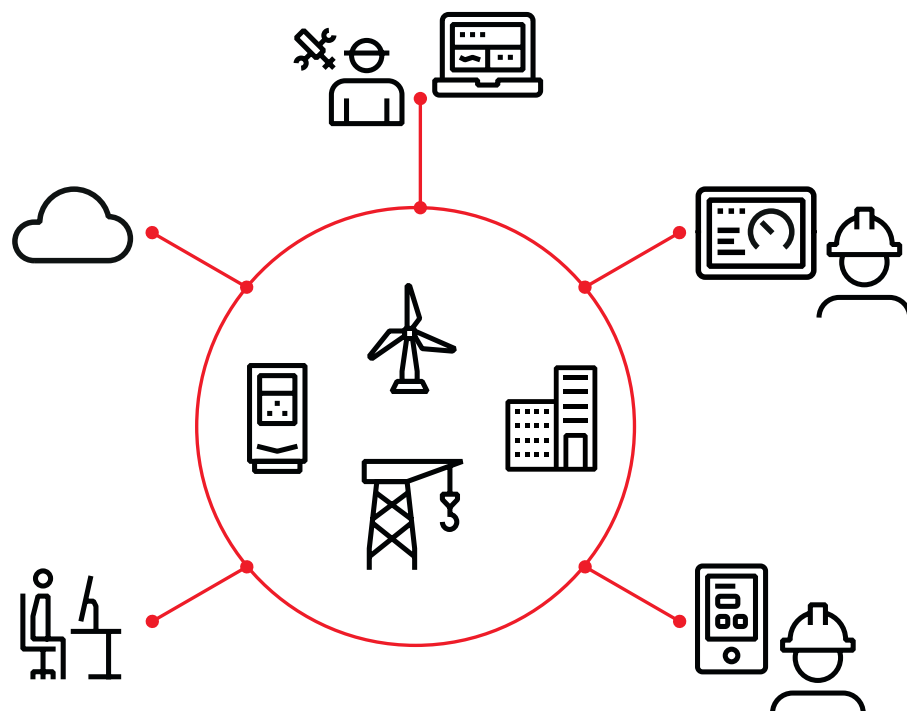
—
Easy programming with predefined customizable
widgets



—
Gateway functionality to cloud systems or
third party devices

Visualization options

CP600 as your flexible interface to the application



Create your individual faceplate with Panel Builder 600

CP600 control panels with their common engineering tool offer functionalities for many different segments and connected devices.

Thanks to HTML5-based pages, HMI client and VNC client, it is possible to access your visualization from nearly everywhere, no matter whether you use an HMI, a PC, a tablet or a smartphone.

Connecting to the web from the panel with the preinstalled Chromium browser is very easy and allows access to AC500 V3 web visualization or other web-based information.

Functionalities like an integrated user access management and regular cyber security checks ensure that everything runs in a secure and controlled way.

PB610 Panel Builder 600

Efficient engineering for the entire CP600 platform



Stay in one environment

Integration of PB610 into ABB Ability™ Automation Builder for perfect interaction between CP600 and AC500 devices

Reduce risk

Reusable and scalable configuration to manage complexity and realize connectivity easily

Increase efficiency

Use state-of-the-art widgets for programming native HMI and web visualizations

Customize solutions

Create your own or customize existing widgets easily to develop a tailor-made solution for your needs

Combine the tools

The PB610 runtime license allows you to use your Windows PC as an HMI

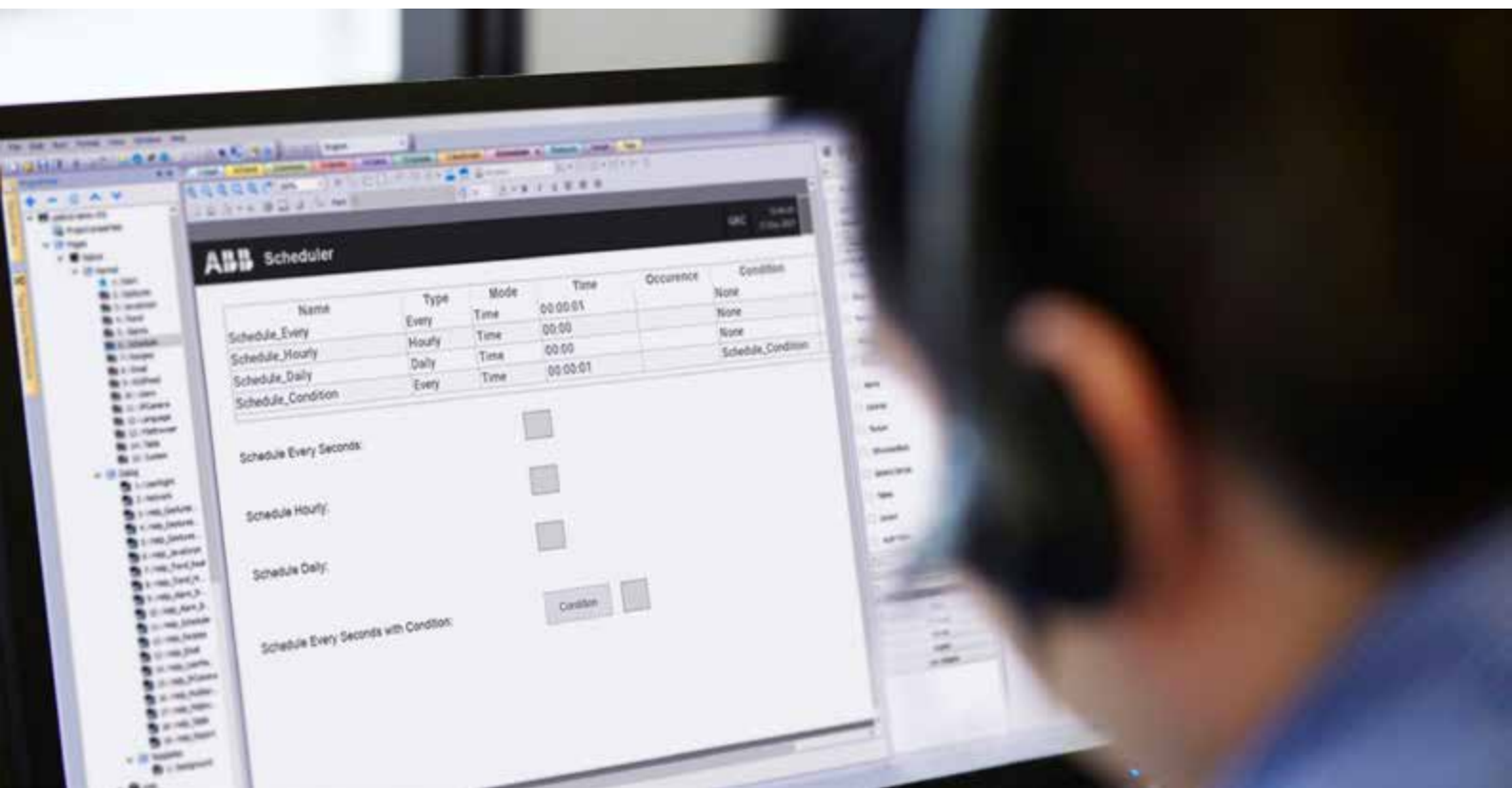
PB610 Panel Builder 600

Broad feature set for many use cases

PB610 Panel Builder 600 software is integrated in the ABB Ability™ Automation Builder engineering suite and can be downloaded via Automation Builder installer. The engineering software is intended for the efficient design of flexible HMI applications in a multiplicity of automation solutions.

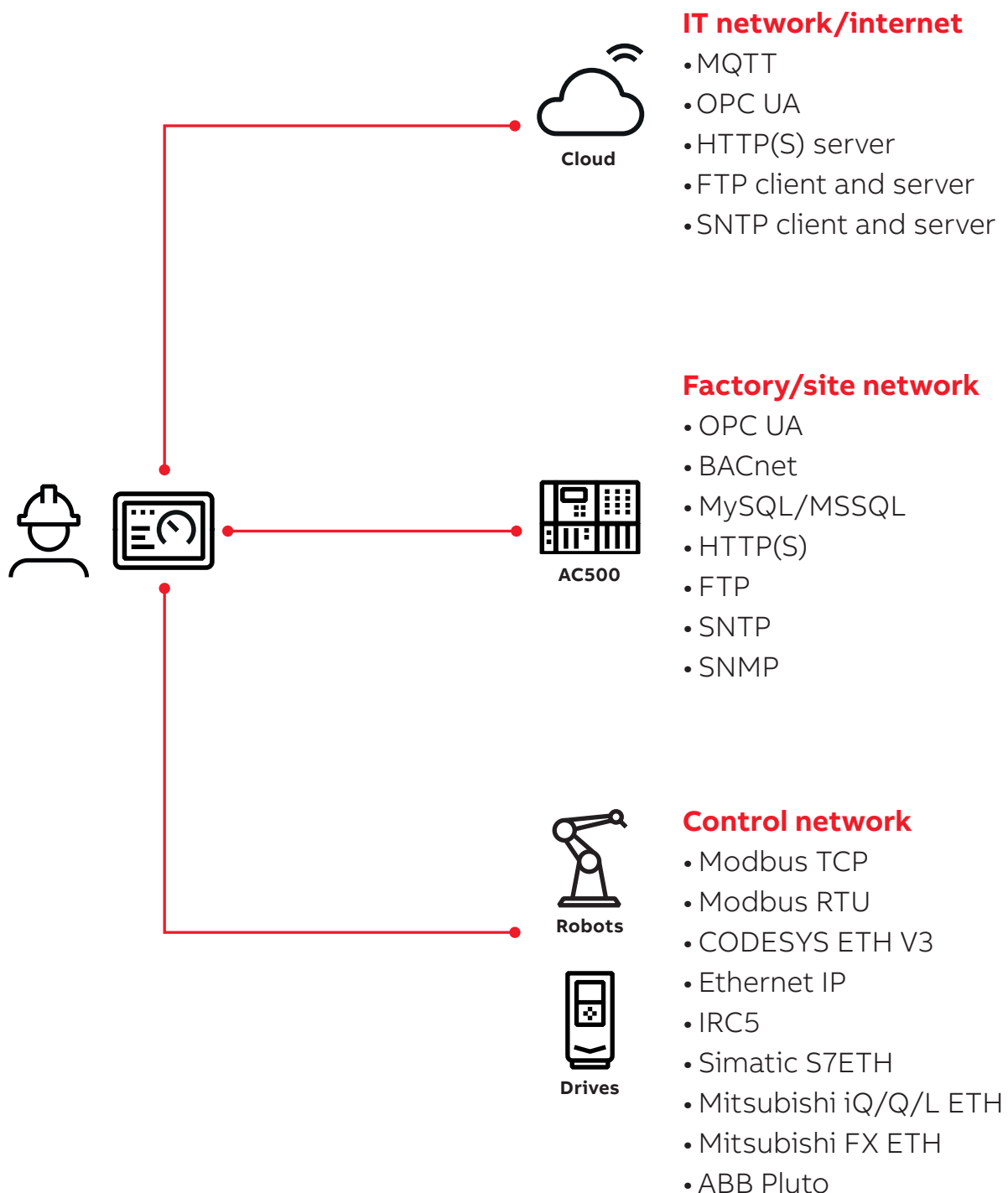
It includes for instance the following features:

- Vector graphics (*.SVG) for precise, easily scalable and dynamic HMI design.
- Alpha blending for realistic transparency effects.
- Libraries including rich sets of widgets – ready-to-use graphical objects.
- Easy creation of customized widgets through the combination/modification of standard widgets.
- Customized widgets clearly arranged in user galleries.
- Page templates for professional design.
- Numerous configuration options for all HMI elements.
- Realization of customized functions and individual dynamic manipulation via the Java Script with debugger.
- Easy data acquisition and trend presentation.
- Reliable user management and secure access control.
- Rich set of configurable features: dynamic objects, data acquisition, alarm handling, multi-language applications, recipes, ...
- HMI simulation for efficient commissioning.
- Numerous drivers for easy connection to e.g. PLCs, drives, robots.
- OPC UA and MQTT for future-oriented cloud connectivity and IoT.
- Gateway function for easy data exchange between different protocols and systems.



CP600 connectivity

Many supported protocols for easy connection in different applications





CP600-eCo, CP600 and CP600-Pro

Key features

Various options for tailor-made HMI solutions:

- PB610 Panel Builder 600 HMI applications
- Visualization of AC500 web servers (V3)
- Mobile remote access to HMI applications
- PB610-R PC runtime for Windows platforms
- Drivers for integration into automation systems
- OPC UA as well as MQTT



CP600

- Brilliant display
- Aluminum enclosure
- Operating temperature: -20...+60 °C
- Three different screen sizes
- Usable as web panel

CP600-Pro

- Multi-touch
- Brilliant real glass screen
- Aluminum enclosure
- Fast ETH 10/100/1000
- Operating temperature: -20...+60 °C
- Five different screen sizes from 5" to 21.5"
- Usable as web panel

CP600-eCo

- Slim design for easy installation even in compact spaces
- Robust plastic enclosure
- Three different screen sizes
- CP610 usable as web panel

CP600-eCo

Basic feature set for basic applications

Suitable for many different applications

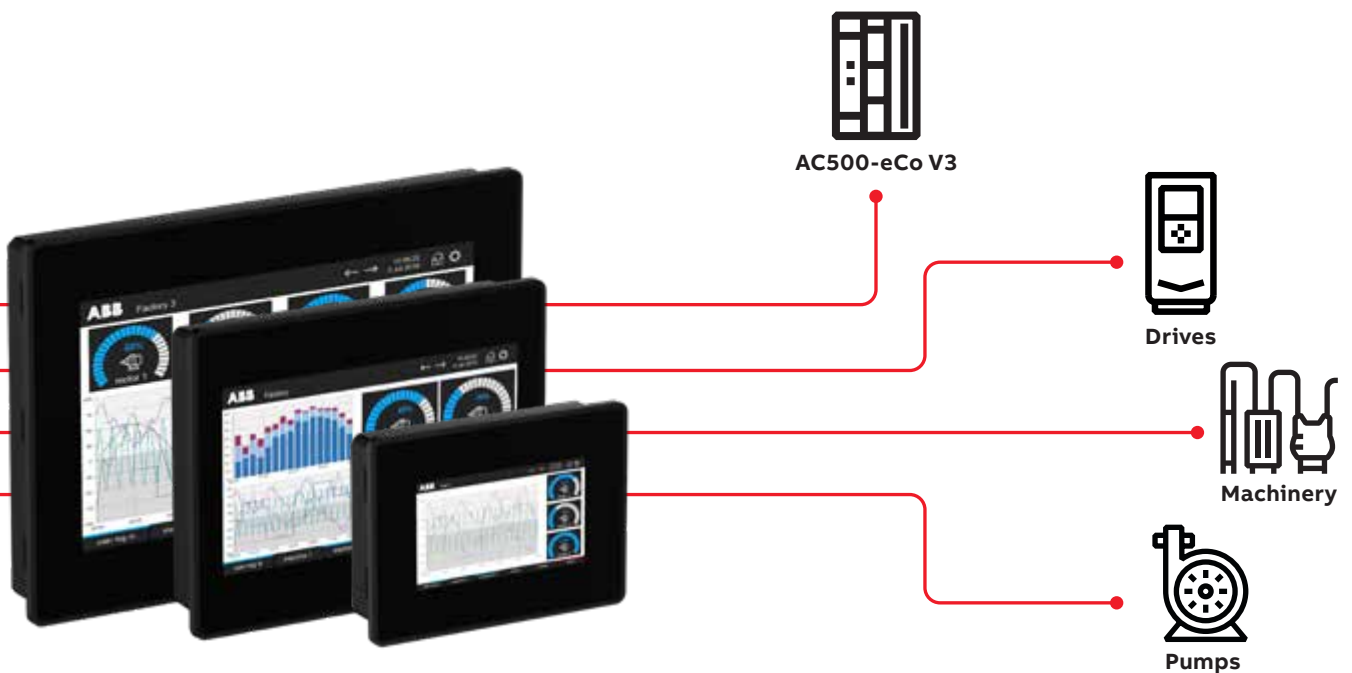
To match the design of your machine, CP600-eCo control panels are available in the screen sizes 4.3", 7" and 10.1" with a black or an ABB design front foil. All panels can be mounted in portrait and landscape mode. Their plastic housing has a depth of just 29 mm to save cabinet space.

Engineering with Panel Builder 600, which is part of the ABB Ability™ Automation Builder, ensures easy scalability and combination with other CP600 ranges and AC500 PLCs.

Flexible connectivity

Protocols for ABB PLCs, machinery and motion drives for Ethernet and serial connection make these control panels the first choice for entry-level ABB automation solutions and allow you to configure your network the way you want.

Furthermore, through OPC UA as well as MQTT client and server functions, the panels are well prepared for future communication solutions. Therefore, they offer one Ethernet interface, one serial interface as well as a USB host for flexible data storage and easy updating.





CP600

Future-oriented visualization

State-of-the-art HMI range for diverse applications

The CP600 control panels are ready to meet your individual needs. To support a wide range of applications they are available in screen sizes of 7", 10.4" and 15". Panel Builder 600 as part of the ABB Ability™ Automation Builder ensures efficient engineering, scalability and cyber security through regular updates.

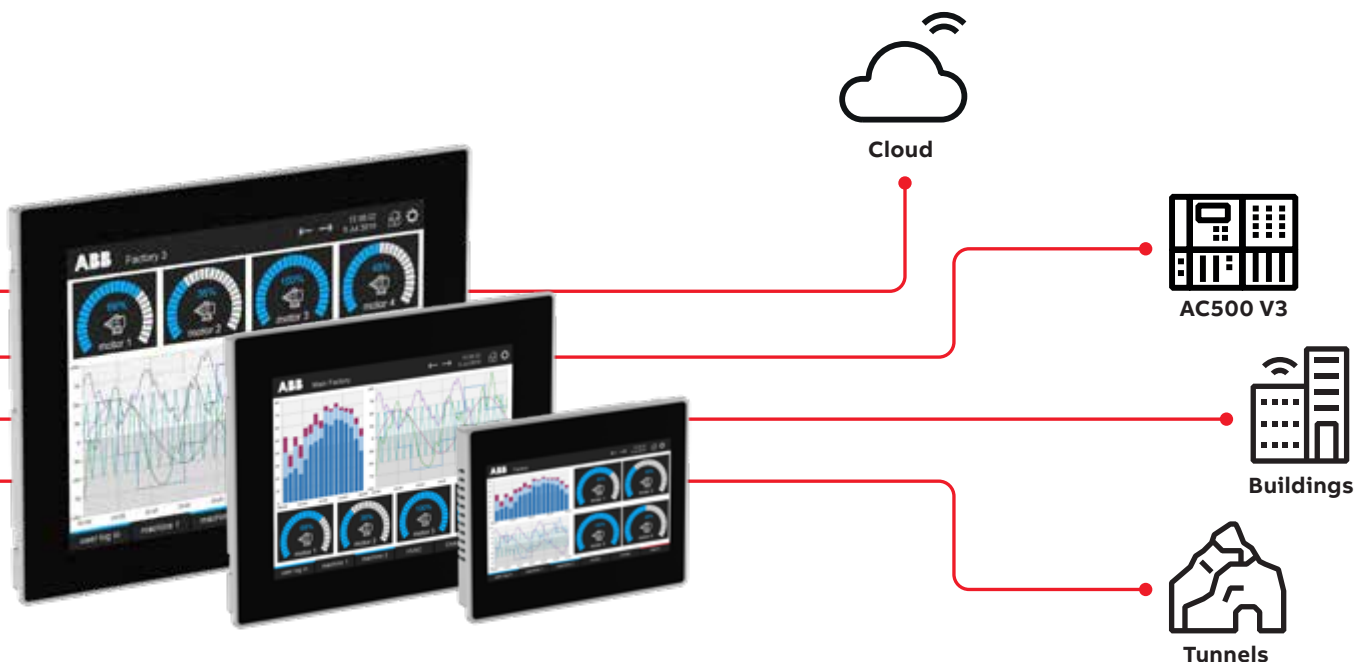
Thanks to OPC UA and MQTT in combination with a powerful CPU, these panels are prepared for future communication trends and support cloud connectivity. The AC500 V3 web visualization can be accessed easily with the integrated Chromium browser.

Two Ethernet ports and a serial port enable connections to the web, PLCs, drives or IRC5 robots via multiple protocols to provide the right solution for your application.

Up-to-date hardware design

The robust aluminum enclosure has a modern, industrial look and carries all interfaces on one side, so that installation in various locations is made possible. The wide operating temperature range from -20 up to +60 °C makes these panels suitable even for challenging environments. Landscape and portrait mounting options provide installation flexibility.

2 Ethernet interfaces 10/100 Mbit with configurable bridge mode for easy connectivity with different components are available in combination with a serial interface. For updating, data storage and accessory connections, the control panels offer 2 USB hosts and a memory card slot.





CP600-Pro

High-end feature set for demanding applications

Outstanding HMI range designed for challenging applications

The CP600-Pro series is a powerful HMI series for challenging applications and offers five different variants with multi-touch screens from 5" to 21.5". Real glass fronts, aluminum housing and an increased operating temperature range of -20...+60 °C make them the first choice even for harsh environments. They are also certified for different marine applications.

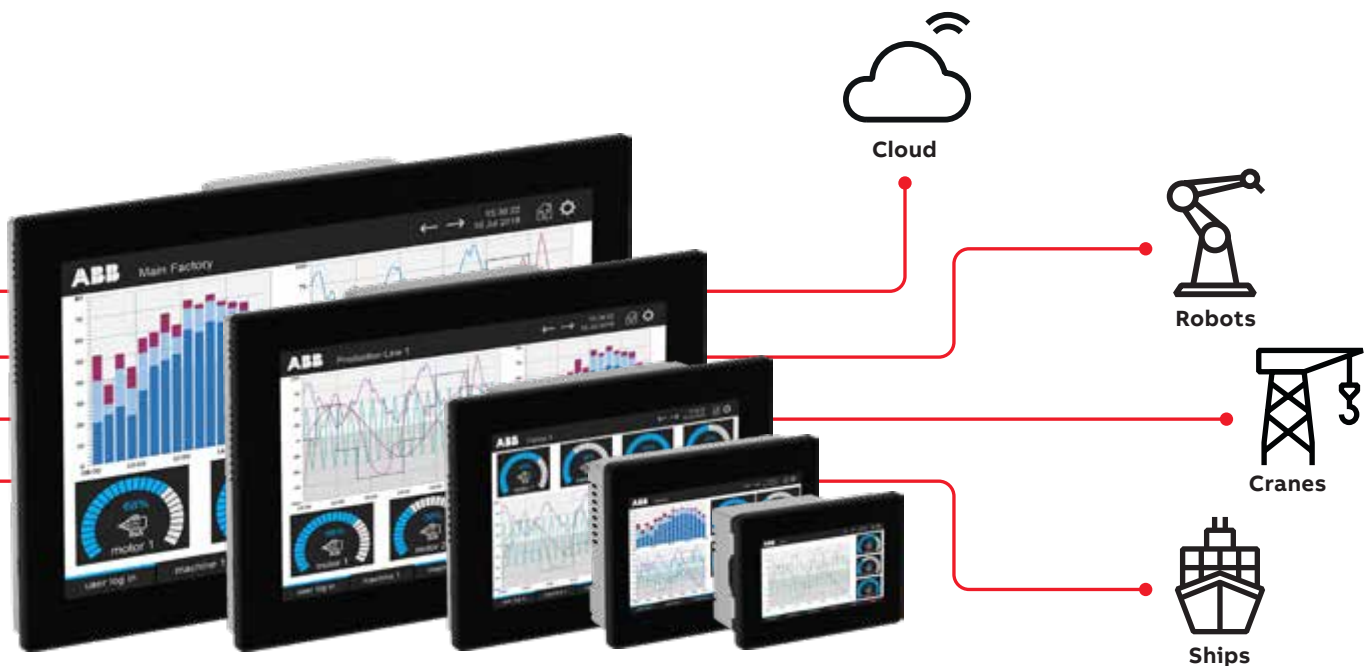
Efficient engineering of individual visualizations is ensured by PB610 Panel Builder 600, part of ABB Ability™ Automation Builder. In addition to all the functionalities in combination with AC500 PLCs provided by PB610, the CP600-Pro (7" to 15") is also able to trigger safety actions in combination with AC500-S safety PLC.

Advanced connectivity

A wide range of protocols enables the panels to be used as gateways, and to connect to the IoT, clouds, PLCs, drives, robots or other automation components.

To increase connectivity, the HMIs come with up to 3 Ethernet interfaces with different physical layers as well as a serial port to comply with current and future communication requirements. USB hosts and a memory card slot are available for updating, data storage and accessory connection.

The AC500 V3 web visualization can be accessed easily with the integrated Chromium browser.





CP600 drives faceplate

Use CP600 together with ABB's ACSx80 drives

CP600 drives faceplate is an application example consisting of standard faceplates which are customizable by using Panel Builder 600.

It is an easy-to-use plug-and-play solution for connecting one 7" CP600 with up to eight ACSx80 drives via a serial connection.

Without any engineering effort, you can monitor, control, diagnose and troubleshoot from the HMI and even have a predefined user management.



**Monitor**

Actual status or graphical trends of your motor parameters and I/Os

Control

Start and stop the drives, change the speed and settings

Diagnose

Easy access and notification of active and most recent faults and warnings

Troubleshoot

Direct response to faults and error messages without opening the enclosure

Perfect match: CP600 and AC500

AC500 Programmable Logic Controllers with scalable, state-of-the-art technology for better performance.

Standard industrial communication fieldbus, network and protocols supported by the 'One Platform' solution make the AC500 the perfect automation solution in even the most demanding

environments. Flexible and scalable superior CPUs deliver performance whenever and wherever you need it.



Secure cloud connectivity options



One programming tool for the entire AC500 PLC platform



Scalable and flexible range of products, with various communication protocol and connectivity options



Reliable, secure and safe with different performance levels



The ideal choice for high availability, extreme environments, condition monitoring, motion control or safety solutions

What does your application need?

	CP600-eCo	CP600	CP600-Pro
Screen sizes	4.3", 7", 10.1"	7", 10.4", 15"	5", 7", 10.1", 15.6", 21.5"
Operation	single-touch	single-touch	multi-touch
Communication	1 SER, 1 ETH, 1 USB	1 SER, 2 ETH, 2 USB, 1 SD	1 SER, 3 ETH (1), 2 USB (2), 1 SD
Operating temperature	0...50 °C	-20...+60 °C	-20...+60 °C
Enclosure	plastic / glass + front foil	aluminum / glass + front foil	aluminum / real glass
Front design	ABB or black	black	black
Operating system	Linux	Linux	Linux
PB610 application	60 MB	150 MB	240 MB (3)
Chromium browser	CP610: preinstalled	preinstalled	preinstalled

(1) CP6605: 2 ETH

(2) CP6605: 1 USB

(3) CP6605: 60 MB



Ordering data

CP600-eCo control panels

Display size	Resolution pixels	Description	Type	Order code	Price	Weight (1 pce) kg
4.3"	480 x 272	for PB610 applications	CP604	1SAP504100R0001		0.400
7.0"	800 x 480	for PB610 applications	CP607	1SAP507100R0001		0.600
10.1"	1024 x 600	for PB610 applications or visualization of AC500 V3 web server	CP610	1SAP510100R0001		1.000
4.3"	480 x 272	black, for PB610 applications	CP604-B	1SAP504100R2001		0.400
7.0"	800 x 480	black, for PB610 applications	CP607-B	1SAP507100R2001		0.600
10.1"	1024 x 600	black, for PB610 applications or visualization of AC500 V3 web server	CP610-B	1SAP510100R2001		1.000

Visualization of AC500 V3 web server is supported by products with revision index C1 or higher.



CP604



CP607



CP610



CP607-B

CP600 control panels

Display size	Resolution pixels	Description	Type	Order code	Price	Weight (1 pce) kg
7"	800 x 480	for PB610 applications or visualization of AC500 V3 web server	CP6407	1SAP540710R0001		1.000
10.4"	800 x 600	for PB610 applications or visualization of AC500 V3 web server	CP6410	1SAP541010R0001		2.000
15"	1024 x 768	for PB610 applications or visualization of AC500 V3 web server	CP6415	1SAP541510R0001		3.300



CP6407



CP6410



CP6415

CP600-Pro control panels

Display size	Resolution pixels	Description	Type	Order code	Price	Weight (1 pce) kg
5.0"	800 x 480	for PB610 applications or visualization of AC500 V3 web server	CP6605	1SAP560510R0001		1.000
7.0"	800 x 480	for PB610 applications or visualization of AC500 V3 web server (1)	CP6607	1SAP560710R0001		1.300
10.1"	1280 x 800	for PB610 applications or visualization of AC500 V3 web server (1)	CP6610	1SAP561010R0001		1.700
15.6"	1366 x 768	for PB610 applications or visualization of AC500 V3 web server (1)	CP6615	1SAP561510R0001		4.100
21.5"	1920 x 1080	for PB610 applications or visualization of AC500 V3 web server	CP6621	1SAP562110R0001		6.100

(1) Can be used to trigger safety actions in combination with AC500-S.



CP6605



CP6610



CP6621

Accessories

Description	Type	Order code	Price	Weight (1 pce) kg
Communication cable RS232: CP600-eCo, CP600 <-> AC500	TK681	1SAP500981R0001		0.130
Communication cable RS485: CP600-eCo, CP600 <-> AC500-eCo	TK682	1SAP500982R0001		0.130
Installation accessory bag for CP600-Pro	TK6028	1SAP506028R0001		0.150
Installation accessory bag for CP600-eCo, CP600	TK6031	1SAP506031R0001		0.150

Programming software licenses

Description	Type	Order code	Price	Weight (1 pce) kg
PB610 Panel Builder 600, engineering tool license for CP600-eCo, CP600, CP600-Pro control panels and PB610-R PC-runtime, for stand-alone installation via Automation Builder installer. PB610 is included in Automation Builder Standard.	PB610	1SAP500900R0101		0.005
PB610-R Panel Builder 600 runtime license for running a PB610 application on one Windows 32-/64-Bit platform. Installation via Automation Builder installer.	PB610-R	1SAP500901R0101		0.005

CP600-eCo

Technical data

Type	CP604 CP604-B	CP607 CP607-B	CP610 CP610-B
Application	control panels for PB610 Panel Builder 600 applications		
	-	-	visualization of AC500 V3 web server (*)
Display			
Exact display size diameter	4.3" widescreen	7" widescreen	10.1" widescreen
Resolution	480 x 272 pixels	800 x 480 pixels	1024 x 600 pixels
Display type, colors	TFT-LCD, 65536 colors		
Touch screen material	glass covered by plastic film		
Touch screen type	single-touch, analog resistive, 4 wires		
Backlight type, life	LED, 20 000 h typ at 25 °C		
Brightness	150 cd/m²	200 cd/m²	
System resources			
Processor type	ARM Cortex-A8; 300 MHz	ARM Cortex-A8; 300 MHz	ARM Cortex-A8; 1 GHz
Operating system, version	Linux RT		
Application memory	for HMI projects of 30 MB in total plus 30 MB for fonts		
Interfaces			
Ethernet ports, number, type	1 - 10/100 Mbit		
USB Host ports number, type	1 - ver. 2.0		
Serial ports number, type	1 - RS-232/-485/-422 software configurable		
Card slot number, type	none		
Power supply			
Power supply voltage nominal, tolerance	24 V DC, 18...32 V DC		
Current consumption at nominal voltage	0.25 A	0.3 A	0.4 A
Backup power type	Supercapacitor, 72 h at 25 °C		
Enclosure			
Degree of protection front, rear	IP66, IP20		
Front frame material	Plastic		
Reverse side material	Plastic		
Weight	0.4 kg	0.6 kg	1.0 kg
Faceplate dimensions (L x H)	147 mm x 107 mm	187 mm x 147 mm	282 mm x 197 mm
Faceplate depth	5 mm		6 mm
Enclosure depth	29 mm		
Cutout dimensions (L x H)	136 mm x 96 mm	176 mm x 136 mm	271 mm x 186 mm
Environmental conditions			
Operating temperature range	0...50 °C		
Operating humidity range	5...85 % relative humidity, non-condensing		
Storage temperature range	-20...+70 °C		
Storage humidity range	5...85 % relative humidity, non-condensing		

(*) Supported by products with revision index C1 or higher

CP600

Technical data

Type	CP6407	CP6410	CP6415
Application	control panels for PB610 Panel Builder 600 applications or visualization of AC500 V3 web server		
Display			
Exact display size diameter	7" widescreen	10.4"	15"
Resolution	800 x 480 pixels	800 x 600 pixels	1024 x 768 pixels
Display type, colors	TFT-LCD, 65536 colors		
Touch screen material	glass covered by plastic film		
Touch screen type	single-touch, analog resistive, 4 wires		
Backlight type, life	LED, 40 000 h typ at 25 °C		
Brightness	400 cd/m²		
System resources			
Processor type	ARM Cortex-A8; 1 GHz		
Operating system, version	Linux RT		
Application memory	150 MB		
Interfaces			
Ethernet ports, number, type	2 - 10/100 Mbit (with integrated bridge function)		
USB Host ports number, type	2 - ver. 2.0		
Serial ports number, type	1 - RS-232/-485/-422 software configurable		
Card slot number, type	1 - Memory card slot		
Power supply			
Power supply voltage nominal, tolerance	24 V DC, 18...32 V DC		
Current consumption at nominal voltage	0.35 A	0.4 A	0.7 A
Backup power type, capacity	Rechargeable Lithium battery, not user-replaceable		
Enclosure			
Degree of protection front, rear	IP66, IP20		
Front frame material	aluminum		
Reverse side material	aluminum		
Weight	1 kg	2 kg	3.3 kg
Faceplate dimensions (L x H)	187 mm x 147 mm	287 mm x 232 mm	392 mm x 307 mm
Faceplate depth	4 mm		
Enclosure depth	40 mm	40 mm	45 mm
Cutout dimensions (L x H)	176 mm x 136 mm	276 mm x 221 mm	381 mm x 296 mm
Environmental conditions			
Operating temperature range	-20...+60 °C		
Operating humidity range	5...85 % relative humidity, non-condensing		
Storage temperature range	-20...+70 °C		
Storage humidity range	5... 85 % relative humidity, non-condensing		

CP600-Pro

Technical data

Type	CP6605	CP6607	CP6610	CP6615	CP6621
Application	control panels for PB610 Panel Builder 600 applications or visualization of AC500 V3 web server				
Display					
Exact display size diameter	5" widescreen	7" widescreen	10.1" widescreen	15.6" widescreen	21.5" widescreen
Resolution	800 x 480 pixels	800 x 480 pixels	1280 x 800 pixels	1366 x 768 pixels	1920 x 1080 pixels
Display type, colors	TFT-LCD, 65536 colors	TFT-LCD, 16 Mio colors			
Touch screen material	true glass, black passepartout				
Touch screen type	multi-touch, 2-points gestures, PCAP, projected capacitive touchscreen				
Backlight type, life time	LED, 40 000 h typ at 25 °C				
Brightness	300 cd/m²	500 cd/m²	500 cd/m²	300 cd/m²	300 cd/m²
System resources					
Processor type	ARM Cortex-A8; 1 GHz	ARM Cortex-A9 dual core; 800 MHz	ARM Cortex-A9 dual core; 800 MHz	ARM Cortex-A9 quad core; 800 MHz	ARM Cortex-A9 quad core; 800 MHz
Operating system, version	Linux RT				
Application memory	for HMI projects of up to 240 MB in total				
Interfaces					
Ethernet ports, number, type	2 - 10/100 Mbit (with integrated bridge function)	2 - 10/100 Mbit (with integrated bridge function) 1 - 10/100/1000 Mbit			
USB Host ports, number, type	1 - ver. 2.0	2 - ver. 2.0			
Serial ports number, type	1 - RS-232/-485/-422 software configurable				
Card slot number, type	1 - Memory card slot				
Power supply					
Power supply voltage nominal, tolerance	24 V DC, 18...32 V DC				
Current consumption at nominal voltage	1.0 A	0.7 A	1.0 A	1.2 A	1.7 A
Backup power type, capacity	Rechargeable Lithium battery, not user-replaceable				
Enclosure					
Degree of protection front, rear	IP66, IP20				
Front frame material	aluminum, black				
Reverse side material	aluminum				
Weight	1.3 kg	1.3 kg	1.7 kg	4.1 kg	6.1 kg
Faceplate dimensions (L x H)	147 mm x 107 mm	187 mm x 147 mm	282 mm x 197 mm	422 mm x 267 mm	552 mm x 347 mm
Faceplate depth	8.5 mm	8.5 mm	8.5 mm	8.5 mm	8.5 mm
Enclosure depth	52 mm	47 mm	52 mm	56 mm	56 mm
Cutout dimensions (L x H)	136 mm x 96 mm	176 mm x 136 mm	271 mm x 186 mm	411 mm x 256 mm	541 mm x 336 mm
Environmental conditions					
Operating temperature range	-20...+60 °C				
Operating humidity range	5...85 % relative humidity, non-condensing				
Storage temperature range	-20...+70 °C				
Storage humidity range	5...85 % relative humidity, non-condensing				



The CP600 platform is many customers' first choice for their individual visualization projects.



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