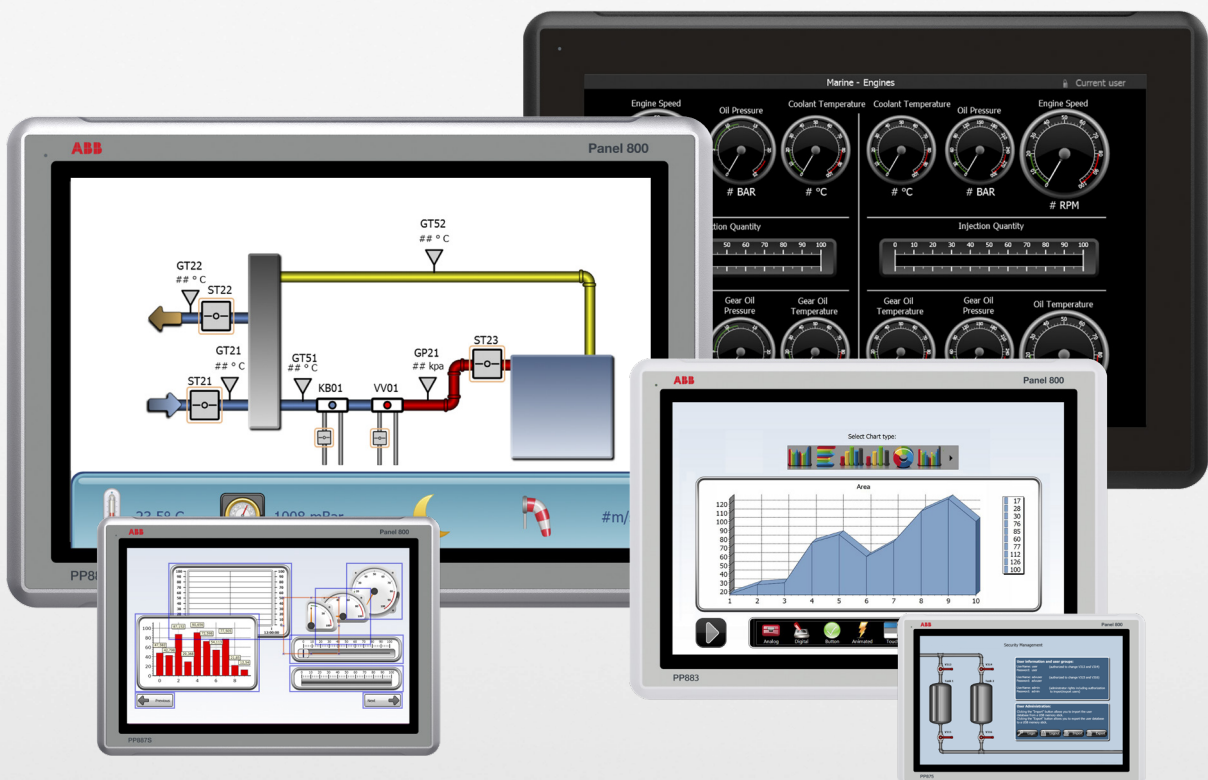

Panel 800 version 6.2

The right information, at the right time, in the right place



Panel 800

Version 6.2

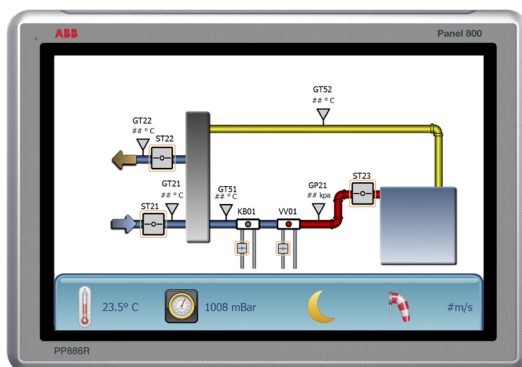
A wide range of user-friendly, intuitive and ergonomic operator panels for process automation systems gives you the right information at the right time, in the right place.

Panel 800 family comprises of user-friendly, intuitive and ergonomic operator panels that combine slim, space-saving dimensions with a comprehensive range of advanced functions.

Adding to the already well established feature rich Panel 800 version 6.2 our new Rugged and Black panels are designed to perform in challenging harsh environments. Whether it is heavy outdoor use, usage in areas with explosion risk, or ship bridge use in marine applications, they are ready to provide you with the information needed.

Designed to make process automation easy, all panels are equipped with advanced functionality for process and equipment control, maneuvered by touching the LCD display. Combined with market-leading performance and stunning graphical ability, Panel 800 erodes the line between ordinary Operator Panels and PC-based HMIs.

Panels are configured using ABB's Panel Builder tool that contains a wide range of advanced functions. The functions are tested and developed with customer needs and preferences in focus.



Key benefits

• Easy to use

A fully deployable HMI with comprehensive and integrated templates and libraries for every conceivable process. The Panel Builder tool, with familiar Microsoft® Windows® environment along with multiple language support results in remarkably quick, easy and efficient engineering.

• State-of-the-arts graphics

Vector-based, high-resolution graphics in TFL/LED display, with icon-based interface, navigation and control.

• Robust and reliable

Panel 800 is constructed in a strong yet lightweight diecast, powder-coated aluminum housing. IP65/IP66 front casing withstands wet, dusty and demanding environments. Operating temperatures ranging between -30 °C to 70 °C with maximum 95% humidity.

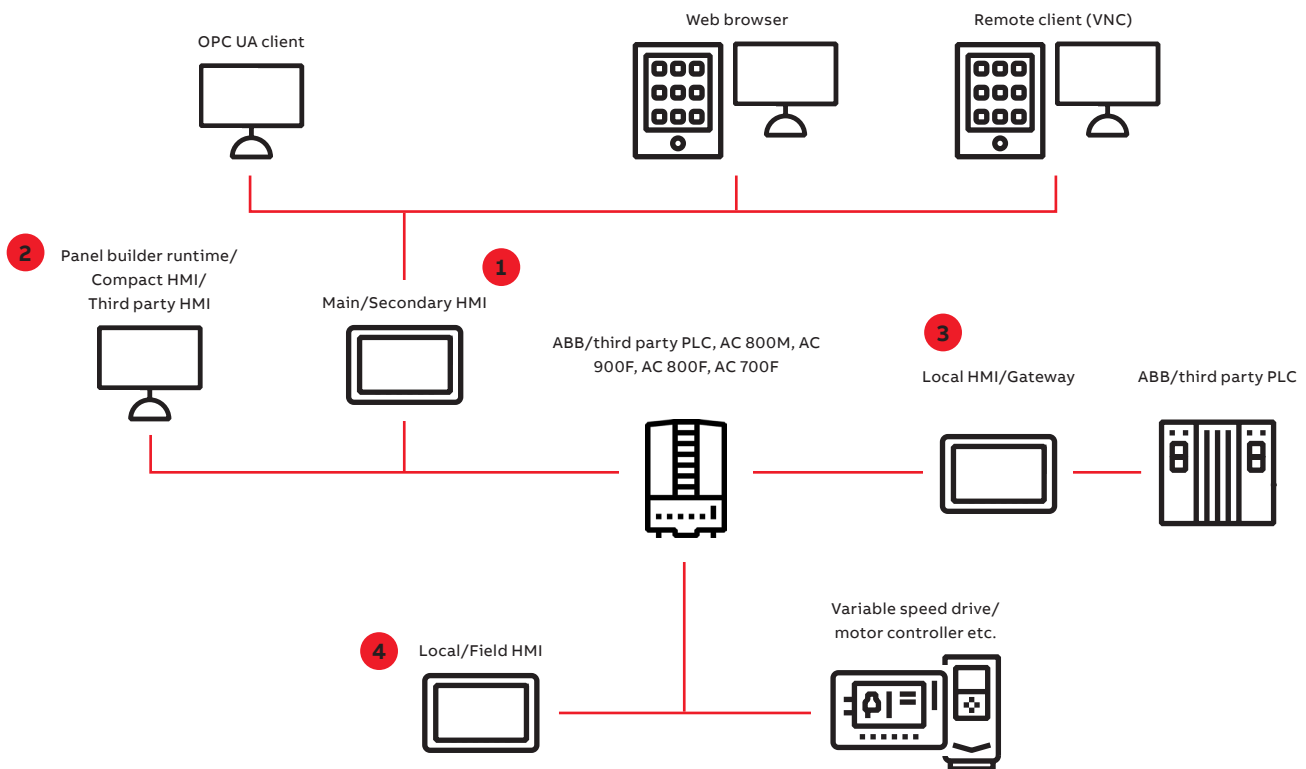
• Truly open platform

Built on open architecture and technologies that accompany the .NET framework, these panels are capable of multi-brand controller connectivity. A multitude of connection options are available for local communication, expansion, remote access and more.

• Try your application before you use it

Nice possibility to simulate and run the application directly from the Panel Builder 800 before you use it.

Various panel 800 use cases



Example of Panel 800 use cases in various setups

Panel 800 as main / secondary HMI (1)

The Panel 800 range is the perfect fit to act as the main HMI for smaller automation systems, or as a secondary complimentary HMI for mid-sized or larger systems. A standard panel is suitable to handle process information from up to 1000 signals. High performance panels can handle up to 2000 signals.

Panel 800 runtime (2)

Using Panel 800 Runtime and dedicated license dongles, Panel 800 applications can be run on normal Windows PC. This enables engineering efficient reuse of the panels applications in situations when a PC based HMI is required in addition to process panels. Since Panel 800 Runtime can be used to visualize data from up to 4000 signals, it is also suitable for mid-sized SCADA applications even when process panels are not needed.

Panel 800 as Gateway (3)

Many process sites has multiple brands of PLCs, and often these PLCs need to be able to share data and communicate with each other. Thanks due to the wide range of supported communication protocols, Panel 800 can act as gateways between PLCs from different vendors.

Panel 800 as local / field HMI (4)

Panel 800 are industrial grade process panels and are well suited to be located in the field. Using the extra rugged panels the HMI can be brought even closer to the process.

Panel Builder 800

A Panel Builder 800 is a user-friendly engineering tool to configure Panel 800 operator panels. Based on the familiar Microsoft® Windows® environment with intuitive ribbon menus and Windows® media objects it provides you an interface that is easy to understand and navigate.

Animated labels increase efficiency

Animated, scrolling text and labels solve the problem of showing a large amount of important information in a very small area. The user can select the speed, direction and color of the information on process statuses, production data, instructions and alarms.

Multiple languages

Panel 800 features unlimited support for different languages. Furthermore, the selected language can be changed in runtime based on, for example, a tag value. In addition, the Panel Builder engineering tool supports eight languages.

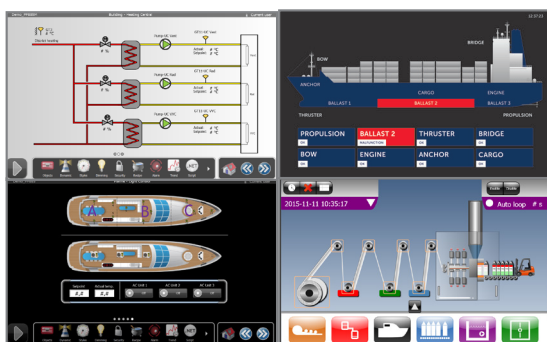
Pre-defined objects

More than 400 vector based symbols adding to a total of 700 symbols can be used to create complete process images, providing an overview of a complex application. You can also customize these objects or create objects of your own.

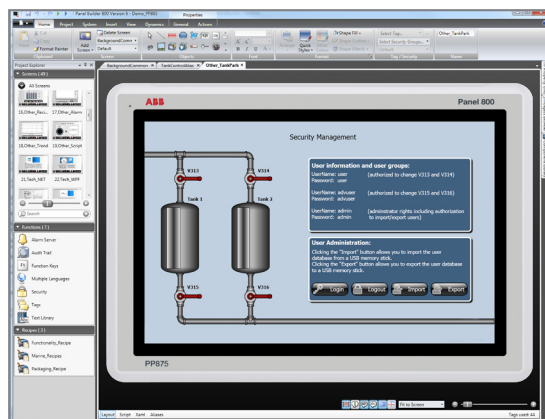
SD Card backup

Reduce downtime with project and data backup on the panel's built-in SD card. With scheduled or cyclic back-up, data is always up to date and easily restored in case of a breakdown. Additionally, the SD card can be used to transfer data from one panel to another (also possible with USB stick).

Screen built in Panel builder 800



Panel 800 interface



Panel 800 overview

Standard panels

Touchscreen panels with brilliant TFT/LED display colors and multi-protocol connectivity. The standard range of Panel 800 comprises of PP875, PP881, PP883, PP886 and P8895 that are easy-to-use HMI with comprehensive and integrated templates and libraries for every conceivable process you need.

All standard panels are equipped with high resolution graphics in TFT/LED display. This range includes 7", 10.1", 12.1", 15.4" and 21.5" touch screen panels. All models offer wide screen, high resolution display for increased efficiency and excellent operator interaction.

Black panels

The black panels are marine certified in 7" (PP875M, PP875H) and 15.4" (PP886M) sizes, with high resolution touch screen displays. Their classic black enclosure offers low light reflection and seamless integration for all onboard applications.

Dimmable backlight to suit varied ambient light conditions, and high brightness for outdoor use in bright sunlight.

Rugged panels

Designed to perform in challenging and harsh environments. The powder coated gray aluminum panels includes four 15.4" (PP886R, PP887H/PP887H - Conformal coated, and PP887S) panels fully certified for hazardous environments by major classification societies.

With dimmable backlight to suit varied ambient light conditions, high brightness for outdoor use in bright sunlight, works in a wide temperature range from the equator to the North Pole.

High vibration tolerance to withstand mechanical vibration (4 G) of machine on which it is mounted. Also certified for use in hazardous areas with flammable, poisonous and corrosive fumes and gases.

Sealed panel

Included in the range of rugged panels is a fully sealed version with M12 connectors with IP66 ingress protection rating and ATEX/IECEX Zone 2 and Zone 22 (IP65) certification (PP887S).

The sealed touch panel has the same tolerance for harsh environments, but can be mounted outdoors on a pole, outside of a cabinet.

Standard panels



*PP895 21" panel offers UL, CE, FCC and KCC certificates (no marine certification)

Black panels



Rugged panels



*PP887H-CFC has conformal coated circuit board

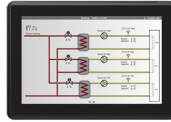


Outline of all Panel 800 models



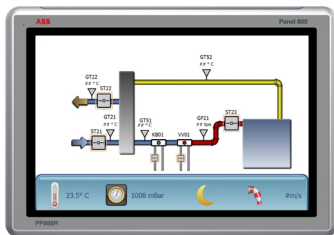
Standard panels

| Panel | PP875 | PP881 | PP883 | PP886 | PP895 |
|---------------------------|--|-------------------|--------------------|--------------------|--------------------|
| Display size | 7" | 10.4" | 12.1" | 15.4" | 21.5" |
| Display resolution, ratio | 800 × 480 (16:9) | 1024 × 600 (16:9) | 1280 × 800 (16:10) | 1280 × 800 (16:10) | 1920 × 1080 (16:9) |
| Processor | ARM9 (1 GHz) | | | | |
| Main memory | 512 MB | 1.0 GB | 1.0 GB | 1.0 GB | 2.0 GB |
| External storage media | 1 × SD card slot (or SDHC with latest image loaded). | | | | |
| Dimension WxHxD (mm) | 204 x 243 x 50 | 292 × 194 × 52 | 340 × 242 × 37 | 410 × 286 × 61 | 556 × 347 × 65 |
| Net weight (kg) | 0.8 | 1.65 | 2.6 | 3.85 | 7.38 |
| Power supply | +24 VDC (18-32 VDC) | | | | |
| Operating temperature | -10 to +60 °C | | | | 0 °C to +50 °C |
| Certification | | | | | |
| CE | CE, FCC, KCC | | | | |
| UL | UL610-2-201 | | | | |
| Marine | DNV, KR, GL, LR, ABS, CCS | | | | - |
| RoHS compliance | DIRECTIVE/2011/65/EU | | | | |
| WEEE compliance | DIRECTIVE/2012/19/EU | | | | |



Black panels

| Panel | PP875M | PP875H | PP886M |
|---------------------------|---|------------------|--------------------|
| Display size | 7" | 7" | 15.4" |
| Display resolution, ratio | 800 x 480 (16:9) | 800 x 480 (16:9) | 1280 x 800 (16:10) |
| Processor | ARM9 (1 GHz) | | |
| Main memory | 512 MB | 2 GB | 1 GB |
| External storage media | 1 x SD card slot (or SDHC with latest image loaded) | | |
| Dimension WxHxD (mm) | 204 x 143 x 50 | | 410 x 286 x 61 |
| Net weight (kg) | 0.8 | 0.8 | 3.85 |
| Power supply | 24 VDC (18-32 VDC) | | |
| Operating temperature | -10 to +60 °C | | |
| Certification | | | |
| CE | CE, FCC, KCC | | |
| UL | UL61010-2-201 | | |
| Marine | DNV, KR, GL, LR, ABS, CCS | | |
| RoHS compliance | DIRECTIVE/2011/65/EU | | |
| WEEE compliance | DIRECTIVE/2012/19/EU | | |



Rugged panels

| Panel | PP886R | PP887H/PP887H-CFC * | PP887S |
|---------------------------|--|---------------------|--------------|
| Display size | 15.4" | | |
| Display resolution, ratio | 1280 x 800 (16:10) | | |
| Processor | ARM9 (800 MHz) | ARM9 (1 GHz) | ARM9 (1 GHz) |
| Main memory | 1 GB | | |
| External storage media | 1 x SD card slot (or SDHC with latest image loaded) | | |
| Dimension WxHxD (mm) | 410 x 286 x 73 | | |
| Net weight (kg) | 4.1 | 4.1 | 4.8 |
| Power supply | 24 VDC (18-32 VDC) | | |
| Operating temperature | -30 to +70 °C | | |
| Certification | | | |
| CE | CE, FCC, KCC | | |
| UL | UL-61010-2-201 | | |
| Marine | DNV, KR, GL, LR, ABS, CCS | | |
| Hazardous | UL/cUL C1D2, ATEX (Zone 2, Zone 22), IECEx (Zone 2, Zone 22) | | |
| RoHS compliance | DIRECTIVE/2011/65/EU | | |
| WEEE compliance | DIRECTIVE/2012/19/EU | | |

[*] PP887H-CFC has conformal coating on the printed circuit board.

Protocol functionality and connectivity



Using the extra rugged panels the HMI can be brought even closer to the process.

Panel 800 large protocol functionality

Panel 800 can run several protocols simultaneously, and serve various brands of controllers at the same time. With its extensive driver library, with over 60 supported communication drivers, making it compatible with all ABB legacy control systems, all previous versions of Process Panel, and most makes of PLCs.

The multi-protocol capability enables different brands of PLCs to be connected simultaneously to the Panel 800. Critical information such as alarms, text reports, trend data and recipes can be accessed by remote, and alarms transmitted to the operator via e-mail or SMS.

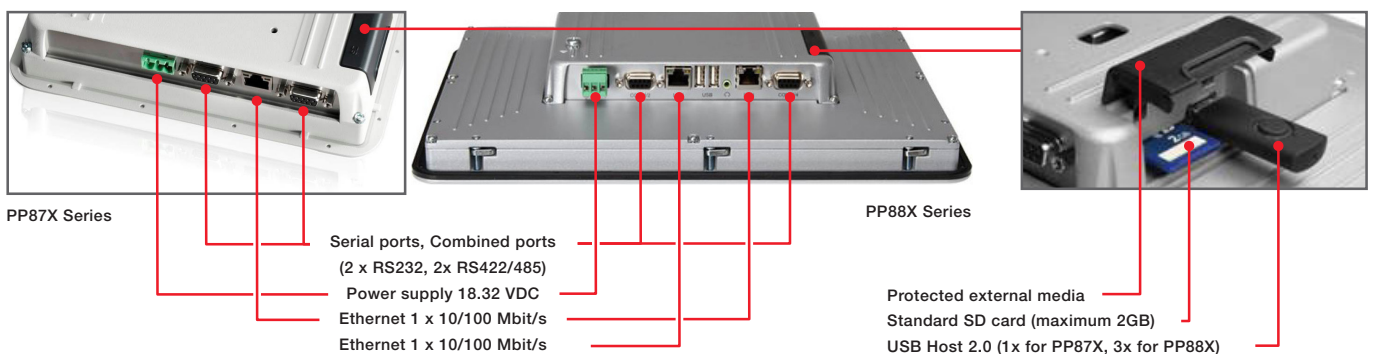
Various types of automation equipment

A wide range of automation equipment, including PLCs and servo drives, can be connected to the Panel 800. Drivers such as ABB Control Network MMS for AC 800M, ABB Freelance and Modbus AC500 give users the advantage of a common network for controllers, HMI and engineering thereby increasing accuracy, efficiency, safety, and productivity of any automation application or production plant.

Lots of connectivity possibilities

The Panel 800 series have a wide range of connections and ports on the backside for easy use in your applications and environment. Such as standard SD card port (SDHC functionality with latest image loaded), USB host ports, serial ports, ethernet ports and power supply.

Example of the great connectivity possibilities for Panel 800 series



Supported communication drivers

| Panel 800 Version 6 Communication Drivers | Type ^[1] |
|--|---------------------|
| ABB COMLI Master Protocol | Master |
| ABB COMLI Slave Protocol | Slave |
| ABB Control Network MMS for AC800M | Master |
| ABB Freelance | Master |
| ABB Modbus AC31 | Master |
| ABB Modbus AC500 | Master |
| ABB TotalFlow | Master |
| Allen-Bradley Ethernet/IP | Master |
| Allen-Bradley DF1 | Point to Point |
| Allen-Bradley DH485 | Token slave |
| Allen-Bradley MicroLogix Ethernet | Master |
| Allen-Bradley SLC/PLC5 Ethernet | Modicon |
| Altus Alnet I | Modicon |
| Animatics SmartMotor ^[2] | Master |
| Beckhoff ADS | Master |
| Bernecker+Rainer Driver | Point to Point |
| Bosch Rexroth IndraDrive ^[2] | Master |
| CACTUS ASCII | Master |
| CAN Can Open (Built-in) | Master/Slave |
| Can Free CAN (Built-in) | Master |
| CoDeSys ARTI | Master |
| Control Techniques Unidrive ^[3] | Master/Slave |
| CTC Serial Binary | Point to Point |
| Delta PLC Modbus ASCII | Master |
| Delta Tau PMAC/UMAC | Master |
| EMERSON Modbus Master RTU/ASCII | Master |
| Fatek Facon | Master |
| Galil DMC | Master |
| GE TCP/IP via SRTP | Master |
| GE Fanuc SNPX | Master |
| G&L Motion Control | Master |
| Hitachi H-series HCOMM | Point to Point |
| IAI X-Sel | Master |

| Panel 800 Version 6 Communication Drivers | Type ^[1] |
|--|---------------------|
| Idec Computer Link | Point to Point |
| J Control | Master |
| KEB COMBIVERT | Master |
| KEYENCE KV-Series | Master |
| Koyo DirectNET | Master |
| Koyo ECOM | Master |
| Koyo K-Sequence | Point to Point |
| Lenze LECOM A/B | Master |
| LS Glofa | Master |
| LS Master-K | Master |
| Matsushita Mewtocol-COM | Master |
| Medsec MC protocol | Master |
| MODBUS Master ASCII/RTU/TCP | Master |
| MODBUS Slave RTU/TCP | Slave |
| Omron FINS | Master |
| Omron Host Link | Master |
| OPC DA and OPC UA Local H ^[4] | Remote Server |
| Profibus, Generic Profibus DP ^[3] | Slave |
| Saia Serial/Ethernet | Master |
| Schneider Electric TSX Uni-Telway | Master |
| SIMATIC S5 PG /AS 511 | Point to Point |
| SIMATIC S7 200 PPI | Master |
| SIMATIC S7 MPI Direct | Token |
| SIMATIC S7 ISO over TCP/IP | Master |
| SIMATIC S7 MPI EM ^[3] | Token |
| SIMATIC S7 MPI (requires HMI Adapter) | Point to Point |
| SIMATIC TI500 | Point to Point |
| Vigor M/VB Series | Master |
| Vigor VS Series | Point to Point |
| WAGO Modbus TCP | Master |
| Yamaha VIP ^[3] | Point to Point |
| Yaskawa Memobus Master | Master |
| Yokogawa FA.M3 | Master |

[1] Type of communication:

- Master: The panel is a master/client and asks one or many slave/servers. (Also Ethernet drivers)
- Slave: The panel is a slave/server and answers.
- Point to Point: The panel asks only one slave; there is no support for multi-drop.
- Token slave: A token network with the possibility for many panels to one PLC, the PLC is considered a slave.
- Token: Supports many panels and many PLCs at the same time on the network.

[2] Not available for PP883, PP886, PP886M, PP886R and PP887H.

[3] Not possible to use for PP886M, PP886R and PP887H.

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