# About Beijer Electronics

Beijer Electronics HMI Products has over 20 years of experience connecting people with the processes they control. Our HMI solutions are built on extensive automation knowledge, yet they handle industrial applications with everyday ease. Used with simple intuition, they set machines, information and ideas in motion.

HMI Products is part of the Beijer Electronics group, which is listed on the Stockholm Stock Exchange and based in Malmö, Sweden. The group has subsidiaries in Norway, Finland, Germany, Taiwan and the United States, as well as close relationships with OEMs, brand-label partners and distribution partners worldwide. For the representative nearest you, visit www.beijerelectronics.com

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# PWS 6000 SERIES OPERATOR TEMINALS


HITECH Electronics Corp.
- a Beijer Electronics Group company

# Your choice

**Operator terminals matching your specific needs**

The PWS series offers valuable HMI functionality at an affordable level. The series include keypad and touch screen interfaces and is available in five different sizes from 3 to 10.4 inches. Offering three levels of functionality – Standard, Plus and Network the PWS series enables you to select and pay for what level of HMI technology you need.


HITECH Electronics Corp.
- a Beijer Electronics Group company

# PWS Series overview

| | PWS6500S-S | PWS6800C-P | PWS6800C-N | PWS6A00T-P | PWS6A00T-N |
|---|---|---|---|---|---|
| LCD Type | Mono STN LCD | Color STN LCD | | Color TFT LCD | |
| Screen size | 4.7" (diagonal) | 7.5" (diagonal) | | 10.4" (diagonal) | |
| Display resolution | 240 x 128 | 640 x 480 | | | |
| Brightness (cd/m2) | 110 | 350 | | | |
| CPU | 32 bits RISC | 32 bits RISC | | | |
| Contrast adjustment | Via touch panel | Via touch panel | | – | |
| Display colors | 16 shades of blue | 256 colors | | | |
| Back light type | CCFL | CCFL | | | |
| Back light life | 50,000 hours | 45,000 hours | | 50,000 hours | |
| Operation Status LED | PWR & COM1, COM2 LEDs | PWR, COM1–3, Ethernet LEDs | | PWR, COM1–3, Ethernet LEDs | |
| Touch screen | Analog | Analog | | | |
| Touch screen (number of times) | > 1,000,000 | > 1,000,000 | | | |
| Keypad | – | 1 Menu key and user-defined function keys (F1–F6) | | 1 Menu key and user-defined function keys (F1–F7) | |
| Application Flash ROM | 4MB | 4MB | | | |
| RTC (w/replaceable lithium battery) | Yes | Yes | | | |
| Data/Recipe | – | 512 KB | | | |
| Data storage (CF card) | – | Yes | | Yes | |
| COM1 | 9-pin female (RS232/RS485) | 9-pin female (RS232/RS485) | | | |
| COM2 | 9-pin female (RS422/RS485) | 25-pin female (RS232/RS422/RS485) | | | |
| COM3 | – | 9-pin female (RS422/RS485) | | 9-pin female (RS422/RS485) | |
| USB Host | – | 2 | | 2 | |
| USB Device | – | 1 | | 1 | |
| Multi-functional port | – | – | | | |
| Ethernet | – | – | Yes | – | Yes |
| Network interface unit | – | – | | – | |
| Certification | CE | CE | | | |
| External dimensions (mm) | 170.3 (W) x 102.6 (H) x 44.6 (D) | 231.0 (W) x 176.0 (H) x 46.8 (D) | | 297.0 (W) x 222.0 (H) x 52.3 (D) | |
| Cut-out dimensions (mm) | 160.7 x 93.0 | 220.8 x 165.8 | | 286.0 x 211.0 | |
| Supply voltage | 24V DC ±15 %, 12 W | 24V DC | | | |
| Front protection | IP65 | IP65 | | | |
| Weight (kg) | 0.47 | 1.20 | | 1.90 | |

**The PWS series consists of various models and versions**

PWS-6s00d-v

S: Size ( Inch )
d: Display ( c: color t: TFT s: mono )
V: Version ( S: standard P: plus N: network )

**Standard version**

Includes most software and hardware requirements for an operator terminal, such as alarm handling, Windows™ fonts, multi-language support, animated graphics and macro/ladder features.

**Plus version**

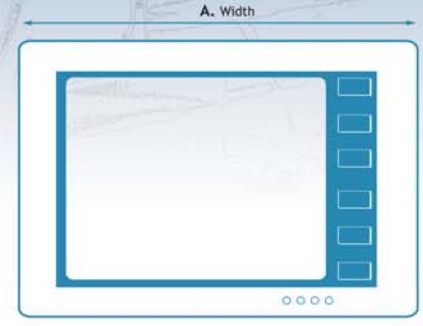
Has the same functionality as the Standard version as well as data/recipe handling and a communication port for a printer or external keyboard.

**Network version**

The network version is a Plus version with an integral Ethernet networking port.

# PWS Series overview

| | PWS6300S-S | PWS6600S-S | PWS6600S-P | PWS6600S-N | PWS6600C-S | PWS6600C-P | PWS6600C-N |
|---|---|---|---|---|---|---|---|
| LCD Type | Mono STN LCD | Mono STN LCD | | | Color STN LCD | | |
| Screen size | 3" (diagonal) | 5.7" (diagonal) | | | | | |
| Display resolution | 160 x 80 | 320 x 240 | | | | | |
| Brightness (cd/m2) | 36 | 110 | | | 300 | | |
| CPU | 32 bits RISC | 32 bits RISC | | | | | |
| Contrast adjustment | Via VR | Via touch panel and VR on the back | | | | | |
| Display colors | 16 shades of gray | 16 shades of blue | | | 256 colors | | |
| Back light type | LED | CCFL | | | | | |
| Back light life | 75,000 hours | 50,000 hours | | | 75,000 hours | | |
| Operation Status LED | PWR & COM2 LEDs | PWR, COM1, COM2, Ethernet LEDs | | | | | |
| Touch screen | – | Analog | | | | | |
| Touch screen (number of times) | > 500,000 | > 1,000,000 | | | | | |
| Keypad | 16 mechanical switches | 1 Menu key and user-defined function keys (F1--F5) | | | | | |
| Application Flash ROM | 4MB | 4MB | | | | | |
| RTC (w/replaceable lithium battery) | Yes | Yes | | | | | |
| Data/Recipe | – | – | 512 KB | – | | 512 KB | |
| Data storage (CF card) | – | – | | | | | |
| COM1 | – | 9-pin female (RS232/RS485) | | | | | |
| COM2 | 9-pin female (RS232/RS422/RS485) | 25-pin female (RS232/RS422/RS485) | | | | | |
| COM3 | – | – | | | | | |
| USB Host | – | – | | | | | |
| USB Device | – | – | | | | | |
| Multi-functional port | – | – | 26-pin connector for printer | | – | 26-pin connector for printer | |
| Ethernet | – | – | Yes | | – | Yes | |
| Network interface unit | – | LonWorks | | | | | |
| Certification | CE | CE | | | | | |
| External dimensions (mm) | 173.0 (W) x 105.5 (H) x 56.0 (D) | 195.0 (W) x 145.0 (H) x 60.0 (D) | | | | | |
| Cut-out dimensions (mm) | 160.8 x 93.3 | 185.8 x 135.8 | | | | | |
| Supply voltage | 24V DC ±15 %, 8 W | 24V DC ±15 %, 20 W | | | | | |
| Front protection | IP65 | IP65 | | | | | |
| Weight (kg) | 0.65 | 0.81 | | | | | |




**External dimensions, A x B x C**

| | |
|---|---|
| PWS6300 | 173.0 x 105.5 x 56.0 mm |
| PWS6500 | 170.3 x 102.6 x 44.6 mm |
| PWS6600 | 195.0 x 145.0 x 60.0 mm |
| PWS6800 | 231.0 x 176.0 x 46.8 mm |
| PWS6A00 | 297.0 x 222.0 x 52.3 mm |

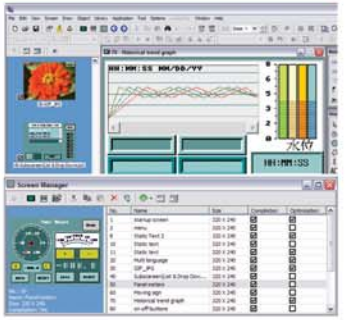

## Configuration software for PWS-terminal

ADP6 is a versatile and intuitive HMI configuration software. It has been created with users in mind and is ideal for machine builders and system integrators. With flexible tools that allow projects to be created in minutes, ADP6 is the perfect software to create simple or complex projects. The configuration software is available free of charge on www.hitechelectronics.com.au

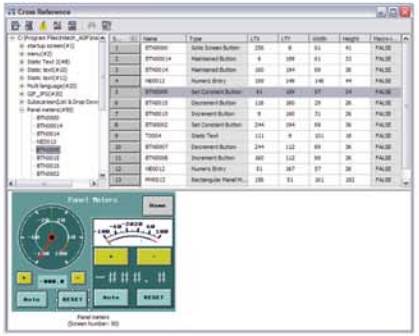
## Screen management

The "Screen Manager" function makes project management easy and enables the configurator to always oversee the entire project. It is possible to select between thumbnail and detailed zoomed views, allowing for dynamic screens to be created and viewed.

- Ideal for project cutting and pasting, browsing, editing and co-ordinating the operator terminal screens
- Ensures fast and easy project creation
- Familiar Windows™ environment and fonts



## Cross references



"Cross Reference" is a feature that enables the configurator to easily handle project tags, objects and signals. These can quickly be located and listed to get an overview of where and how they are used. If data has to be changed, it can be made in the tag list and the data will then automatically be changed everywhere else in the project.

- The list has up to 3 windows, giving a complete project overview
- Sort the Cross Reference list by screen number, screen name, tag name or controller address
- Locate objects and change parameters directly from the list

## All Windows™ fonts supported

Since ADP6 is based around the Windows™ operating system, a font library with up to 16 different fonts can be defined, exported and imported.

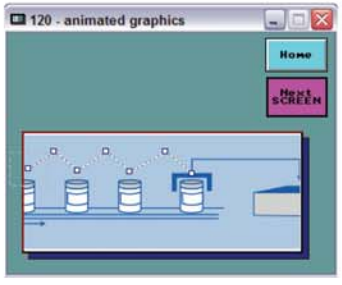
## Off-line and on-line simulation

In order to save valuable time and money at on-site commissioning, ADP6 provides powerful "Off-line and On-line Simulation". This allows for the HMI project to be thoroughly tested either just on a PC, or by combining the HMI with a PC to comprehensively test HMI and controller reactions, communications etc.

- Off-line simulation allows the developer to quickly test the entire project and verify the overall functionality of screens and alarms

- On-line simulation proves the communication and the functionality of the host controller, such as a PLC or inverter

## Animated graphics



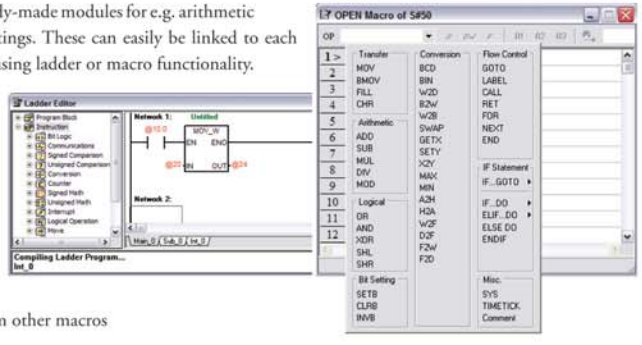

The graphic handling in the PWS series is developed with both the configurator and the user in mind. The animated graphics allow a variety of graphic possibilities with only the configurator's imagination being the limit.

- Import graphic formats such as Bitmaps, JPEG, GIF and AutoCAD™ files (*.bmp, *.jpg, *.gif, *.dwg, *.dxf )
- Supports animated gif images for complex and flexible screen creations
- Graphics can be moved in predefined paths or freely controlled by the host controller to maximize screen space
- Scrolling text can be used allowing long text strings to be displayed

## Ladder or macro functionality

ADP6 saves valuable time by providing ready-made modules for e.g. arithmetic calculations, logical operators and bit settings. These can easily be linked to each other or to other data within the project using ladder or macro functionality.

- Screen open macro
- Screen close macro
- Cyclic macro
- Initial application macro
- Clock macro
- Macros triggered by digital signals
- Sub-macros that can be triggered from other macros




## Communication drivers

To accompany this inspiring range of HMIs is a range of free of charge communication drivers. This increasing list of drivers totals over a 100 and can be used for connecting the HMIs to various automation equipment such as PLCs, inverters, and servo controllers. Main worldwide brands such as Siemens, Omron and Allen Bradley are already included and new drivers are continuously being developed and updated.

## Multi-language support

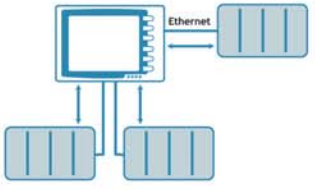
Making it easy for manufacturers who export all over the world, multi-language support allows the configurator to develop projects that can be used basically anywhere. With this setup within the HMI, to change languages is just a switch away. The language can also be changed during normal operation so that each operator can decide what language to use.

- Develop the application in up to 5 different languages
- Switch languages freely during normal operation

## Multi-channel communication

Multi-channel communication is a unique feature that allows a different controller to be connected on each serial or Ethernet port. This flexible communications solution not only saves on buying multiple HMIs, but also removes the need for expensive protocol converters.

- Connect a controller to each available port either via serial or Ethernet connection
- Move values between the drivers via macros
- Use values from several controllers in calculations




## File protection

Protecting the application from unauthorized upload and download is essential in today's manufacturing world. The "File Protection" feature ensures that only authorized users can access sensitive information.

- Impossible to upload the protected application from the terminal without the correct password

PWS6300

PWS6500

PWS6600

PWS6800

PWS6A00

Controller/PLC:

Null
AB DH-485
AB IQ Master
AB MicroLogix 1000/1500
AB PLC-5
AB SLC 5/03, 5/04
ABB COMLI(Slave mode; Binary)
ASCII Device
A-TECH SD 200/400 Controller
Computer (as master)
Computer (as master) V2
Computer (as slave)
DELTA DVP-ES/SS/EP/EH PLC
Delta VFD-B Inverter
Dupline DKG2
ERO TFS/THS/LFS
Facon FB Series(RS232/RS485)
Facon FB Series(RS232-RTS)
FAMA OMC/SC-500 Series
Fama softPLC
Festo FPC/FEC Series
FUJI 5000 G11S/P11S
Fuji Micrex-F
Fuji NB Series
GE Series 90 CCM
GE Series 90 SNP
Hitachi EC Series
Hitachi EH2 Series
Hitachi H/EH1 Series
HUST-CNC Controller
Idec Micro-3
Jetter DELTA
Jetter NANO-B
Jetter-process-PLC
Keyence KV Series
Klockner Moeller PS316
Klockner Moeller PS4-201
Koyo Direct DL Series
Koyo K-sequence
LG GLOFA GM6
LG K10/60H/200H
LG K200S
LG K300S
LG Master-K10S/30S/60S/100S
Matsushita FP Series
Mirle Axis Controller- SD+ CC
Mirle DX Controller
Mitsubishi AGJ2 CPU Port
Mitsubishi A1N CPU Port
Mitsubishi A1S/A2S CPU Port
Mitsubishi A2A/A2AS CPU Port
Mitsubishi A3N/A1SH CPU Port
Mitsubishi AnA/U Link
Mitsubishi AnN/S Link
Mitsubishi Fregrol-A500 Series
Mitsubishi FX Series
Mitsubishi FX-10GM/20GM
Mitsubishi FX2N
Mitsubishi FX2N with 485ADP
Mitsubishi MELSEC-Q(CPU)
Mitsubishi MELSEC-QnA(LINK)
ModBus Master
ModBus Slave
ModBus(ASCII) Master
ModBus(ASCII) Master - V2
ModBus(ASCII) Slave
Modicon 984 (RTU; Master)
Modicon 984 (RTU; Slave)
Modicon Premium Uni-Telway
Modicon TSX Micro(Telemecanique)
Modicon TSX Quantum
Null
Omron C Series
Omron CJ1M
Omron CS1 Series
Omron CV Series
Parker 6K Series
Servo Dynamics
Sharp JW Series
Shinko CxT Series
Shinko PC-900 Series
SIDE MIDA 20/20D
Siemens USS protocol
Simatic S5
Simatic S5 3964R
Simatic S7 3964R
Simatic S7-200 (via PPI; 1-to-1)
Simatic S7-200 (via PPI; network)
Simatic S7-300 (via HMI adapter)
Simatic S7-300 (via MPI Port)
Simatic S7-300 (via PC adapter)
Taian N2 Series Inverter
Taian TP01 Series
Taian TP02 Series
Texmate 320
TI 325/330 Series
TI 435 Series
TI 500/505 Series
T505 for BroadWeb
Toshiba M20/M40
Toshiba T1/T2
Unidriver UD 70
Vigor M/VB Series
VIPA Sys200V MPI
YASKAWA NS600
Yokogawa FA-M3 Series

The list of drivers is continously updated.