

# PWS-SERIES – THE RATIONAL CHOICE.



# The rational 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.



## Configuration software for the PWS-terminal

The ADP software 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, ADP is the perfect software to create simple or complex projects. The configuration software is available free of charge on [www.beijerelectronics.com](http://www.beijerelectronics.com).

## 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

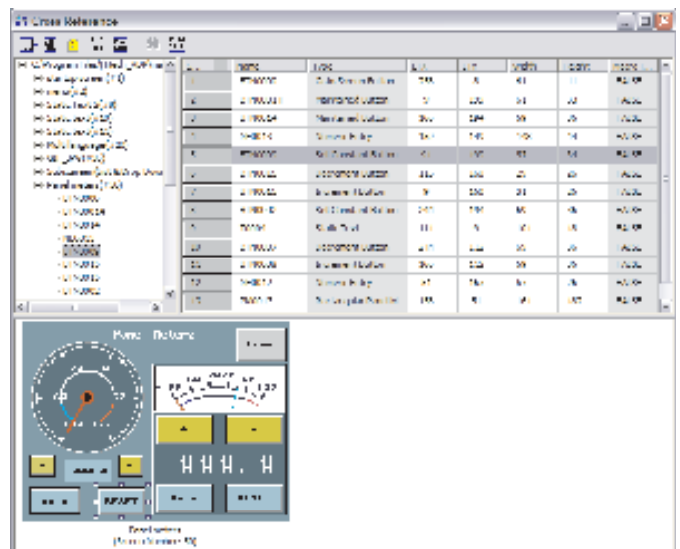
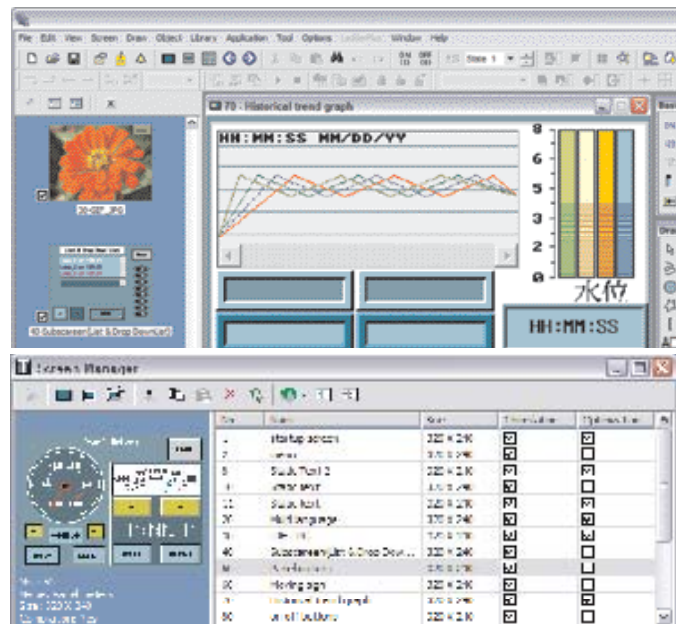
## Cross references

"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 the ADP software 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

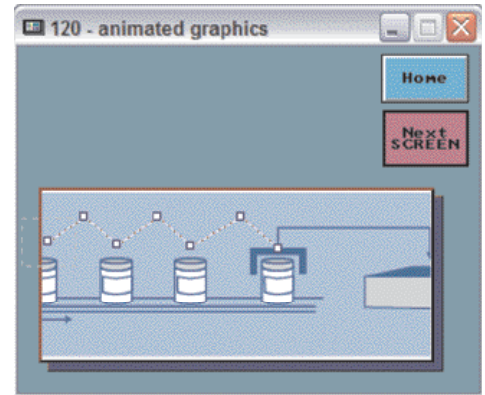
In order to save valuable time and money at on-site commissioning, The ADP software provides powerful "Off-line and On-line Simulation". This allows for the HMI project to be thoroughly tested either just on a PC, or by combining the HMI with a PC to comprehensively test HMI and controller reactions,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

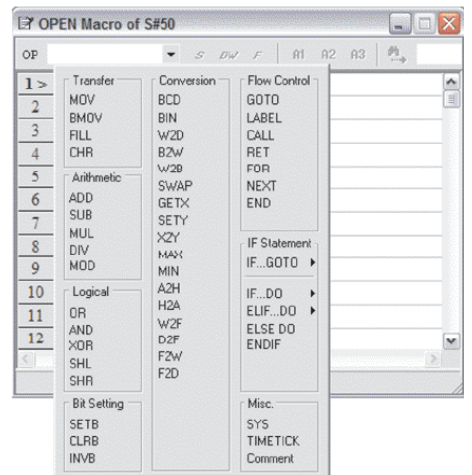
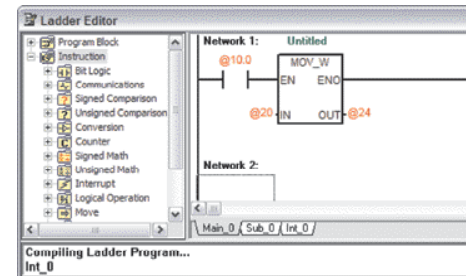
- Import graphic formats such as Bitmaps, JPEG, GIF and AutoCAD™ files (\*.bmp, \*.jpg, \*.gif, \*.dwg, \*.dxf)
- Supports animated gif images for complex and flexible screen creations
- Graphics can be moved in predefined paths or freely controlled by the host controller to maximize screen space
- Scrolling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



## Ladder or macro functionality

The ADP software 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



PWS6300



PWS6500



PWS6600



PWS6620



## 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

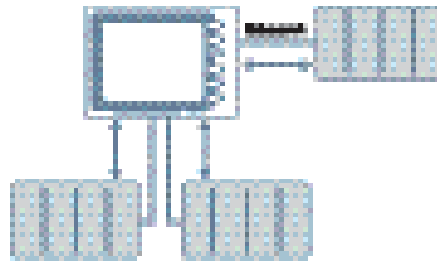
Making it easy for manufacturers who export all over the world, multi-language support allows the configurator to develop projects that can be used basically anywhere. With this setup within the HMI, to change languages is just a switch away. The language can also be changed during normal operation so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



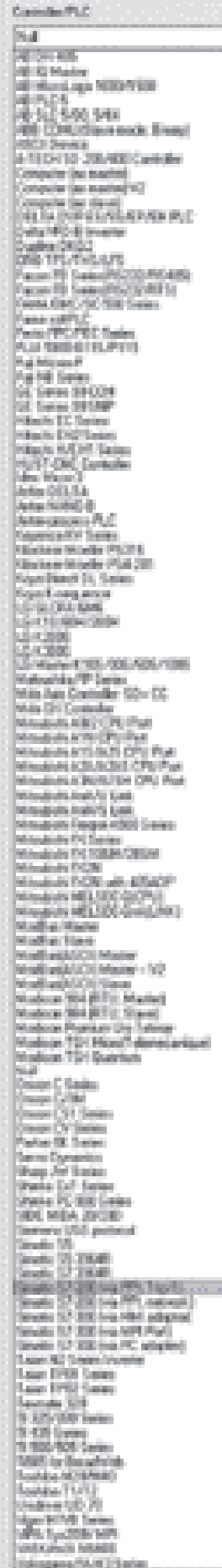
PWS6700



PWS6800



PWS6A00



The list of drivers is continuously updated.

# PWS-series overview



|                                      | PWS6300-S                        | PWS6400F-S                       | PWS6500S-S                       | PWS6560S-S                             | PWS6600S-S                       | PWS6600S-N                       | PWS6600C-S                       | PWS6600C-P                       | PWS6600T-S                       | PWS6600T-N  |
|--------------------------------------|----------------------------------|----------------------------------|----------------------------------|--|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|---|
| LCD Type                             | Mono STN LCD                     | Mono FSTN                        | Mono STN LCD                     | Mono STN LCD                           | Mono STN LCD                     | Mono STN LCD                     | Color STN LCD                    | Color STN LCD                    | Color TFT LCD                    | Color TFT LCD                                       |
| Screen size                          | 3" (diagonal)                    | 3.5"                             | 4.7" (diagonal)                  | 4.7" (diagonal)                        | 5.7" (diagonal)                  | 5.7" (diagonal)                  | 5.7" (diagonal)                  | 5.7" (diagonal)                  | 5.7" (diagonal)                  | 5.7" (diagonal)                                     |
| Display resolution                   | 160 x 80                         | 240 x 240                        | 240 x 128                        | 240 x 128                              | 320 x 240                        | 320 x 240                        | 320 x 240                        | 320 x 240                        | 320 x 240                        | 320 x 240   |
| Brightness (cd/m2)                   | 36                               | 90                               | 110                              | 110                                    | 110                              | 110                              | 110                              | 110                              | 110                              | 300   |
| CPU                                  | 32 bits RISC                     | 32 bits RISC                     | 32 bits RISC                     | 32 bits RISC                           | 32 bits RISC                     | 32 bits RISC                     | 32 bits RISC                     | 32 bits RISC                     | 32 bits RISC                     | 32 bits RISC  |
| Contrast adjustment                  | Via VR                           | Via Touch                        | Via touch panel                  | Via external keyboard (sold sperately) | Via touch panel                  | Via touch panel                  | Via touch panel                  | Via touch panel                  | Via touch panel                  | —   |
| Display colors                       | 16 shades of gray                | 16 shades of gray                | 16 shades of blue                | 16 shades of blue                      | 16 shades of blue                | 16 shades of blue                | 16 shades of blue                | 16 shades of blue                | 256 colors                       | 256 colors  |
| Back light type                      | LED                              | LED                              | CCFT                             | CCFT                                   | CCFT                             | CCFT                             | CCFT                             | CCFT                             | CCFT                             | CCFT  |
| Back light life                      | 50,000 hours                     | 40,000 hours                     | 50,000 hours                     | 50,000 hours                           | 50,000 hours                     | 50,000 hours                     | 50,000 hours                     | 75,000 hours                     | 60,000 hours                     | 60,000 hours  |
| Operation Status LED                 | PWR & COM2 LEDs                  | PWR & COM1 LEDs                  | PWR & COM1, COM2 LEDs            | PWR & COM1, COM2 LEDs                  | PWR & COM1, COM2 LEDs            | PWR & COM1, COM2 LEDs            | PWR & COM1, COM2 LEDs            | PWR & COM1, COM2 LEDs            | PWR & COM1, COM2 LEDs            | PWR & COM1, COM2 LEDs                               |
| Touch screen                         | —                                | Analog                           | Analog                           | Via external keyboard (sold sperately) | Analog                           | Analog                           | Analog                           | Analog                           | Analog                           | Analog  |
| Touch screen (number of times)       | —                                | > 1,000,000                      | > 1,000,000                      | —                                      | > 1,000,000                      | > 1,000,000                      | > 1,000,000                      | > 1,000,000                      | > 1,000,000                      | > 1,000,000   |
| Keypad                               | 16 mechanical switches           | —                                | —                                | 128                                    | —                                | —                                | —                                | —                                | —                                | 1 Menu key and 5 user-defined function keys (F1–F5) |
| Application Flash ROM                | 4MB                              | 4 MB                             | 4MB                              | 4MB                                    | 4MB                              | 4MB                              | 4MB                              | 4MB                              | 4MB                              | 4MB   |
| RTC (w/rechargeable lithium battery) | Yes                              | Yes                              | Yes                              | Yes                                    | Yes                              | Yes                              | Yes                              | Yes                              | Yes                              | Yes   |
| Data/Recipe                          | —                                | —                                | —                                | —                                      | —                                | —                                | —                                | —                                | —                                | —   |
| Data storage (CF card)               | —                                | —                                | —                                | —                                      | —                                | —                                | —                                | —                                | —                                | —   |
| COM1                                 | —                                | 9-pin female (RS232/RS422/RS485) | 9-pin female (RS232/RS485)       | 9-pin female (RS232/RS485)             | 9-pin female (RS232/RS485)       | 9-pin female (RS232/RS485)       | 9-pin female (RS232/RS485)       | 9-pin female (RS232/RS485)       | 9-pin female (RS232/RS485)       | 9-pin female (RS232/RS485)                          |
| COM2                                 | 9-pin female (RS232/RS422/RS485) | —                                | 9-pin female (RS422/RS485)       | 9-pin female (RS422/RS485)             | 9-pin female (RS422/RS485)       | 9-pin female (RS422/RS485)       | 9-pin female (RS422/RS485)       | 9-pin female (RS422/RS485)       | 9-pin female (RS422/RS485)       | 9-pin female (RS422/RS485)                          |
| COM3                                 | —                                | —                                | —                                | —                                      | —                                | —                                | —                                | —                                | —                                | —   |
| USB Host                             | —                                | —                                | —                                | —                                      | —                                | —                                | —                                | —                                | —                                | —   |
| USB Device                           | —                                | —                                | —                                | —                                      | —                                | —                                | —                                | —                                | —                                | —   |
| Multi-functional port                | —                                | —                                | —                                | —                                      | —                                | —                                | —                                | —                                | —                                | —   |
| Ethernet                             | —                                | —                                | —                                | —                                      | —                                | —                                | —                                | —                                | —                                | —   |
| Network interface unit               | —                                | —                                | —                                | —                                      | —                                | —                                | —                                | —                                | —                                | —   |
| Certification                        | CE                               | CE                               | CE                               | CE                                     | CE                               | CE                               | CE                               | CE                               | CE                               | CE  |
| External dimensions (mm)             | 173.0 (W) x 105.5 (H) x 51.8 (D) | 96.0 (W) x 96.0 (H) x 40.6 (D)   | 170.3 (W) x 102.6 (H) x 44.6 (D) | 170.3 (W) x 102.6 (H) x 44.6 (D)       | 170.3 (W) x 102.6 (H) x 44.6 (D) | 170.3 (W) x 102.6 (H) x 44.6 (D) | 170.3 (W) x 102.6 (H) x 44.6 (D) | 170.3 (W) x 102.6 (H) x 44.6 (D) | 170.3 (W) x 102.6 (H) x 44.6 (D) | 195.0 (W) x 145.0 (H) x 69.1 (D)                    |
| Cut-out dimensions (mm)              | 160.8 x 93.3                     | 90.0 x 90.0                      | 160.7 x 93.0                     | 160.7 x 93.0                           | 160.7 x 93.0                     | 160.7 x 93.0                     | 160.7 x 93.0                     | 160.7 x 93.0                     | 160.7 x 93.0                     | 185.8 x 135.8                                       |
| Supply voltage                       | 24V DC ±15 %, < 8W               | 24V DC ±15 %, < 8W               | 24V DC ±15 %, < 12W              | 24V DC ±15 %, < 12W                    | 24V DC ±15 %, < 12W              | 24V DC ±15 %, < 12W              | 24V DC ±15 %, < 12W              | 24V DC ±15 %, < 12W              | 24V DC ±15 %, < 12W              | 24V DC ±15 %, < 20W                                 |
| Front protection                     | IP65 /NEMA 4                     | IP65                             | IP65 /NEMA 4                     | IP65 /NEMA 4                           | IP65 /NEMA 4                     | IP65 /NEMA 4                     | IP65 /NEMA 4                     | IP65 /NEMA 4                     | IP65 /NEMA 4                     | IP65 /NEMA 4  |
| Weight (kg)                          | 0.65                             | —                                | 0.47                             | 0.47                                   | 0.47                             | 0.47                             | 0.47                             | 0.47                             | 0.47                             | 0.81  |

The PWS-series consists of various models and versions

PWS-65e0d-v S: Size (inch) e: Enhancement model d: Display (C: color, T: TFT, S: STN, F: FSTN)

V: Version (S: standard, P: plus, N: network)



|                                      | PWS6620S-P   | PWS6620S-N  | PWS6620T-P    | PWS6620T-N  | PWS6700T-P  | PWS6700T-N  | PWS6800C-P  | PWS6800C-N  | PWS6A00F-P | PWS6A00T-P  | PWS6A00T-N  |
|--------------------------------------|--------------|---|---------------|---|---|---|---|---|------------|---|---|
| LCD Type                             | Mono STN LCD | Mono STN LCD  | Color TFT LCD | Color TFT LCD                                       | Color TFT LCD                                       | Color TFT LCD                                       | Color STN LCD                                       | Color STN LCD                                       | Mono LCD   | Color TFT LCD                                       | Color TFT LCD                                       |
| Screen size                          |              | 5.7" (diagonal)                                     |               |   | 7" (diagonal)                                       | 7" (diagonal)                                       | 7.5" (diagonal)                                     | 7.5" (diagonal)                                     |            | 10.4" (diagonal)                                    | 10.4" (diagonal)                                    |
| Display resolution                   |              | 320x240   |               |   | 800x480   | 800x480   | 640 x 480   | 640 x 480   |            | 640 x 480   | 640 x 480   |
| Brightness (cd/m2)                   |              | 110   |               | 300   | 250   | 250   | 350   | 350   |            | 350   | 350   |
| CPU                                  |              | 32 bits RISC  |               | 32 bits RISC  | 32 bits RISC  | 32 bits RISC  | 32 bits RISC  | 32 bits RISC  |            | 32 bits RISC  | 32 bits RISC  |
| Contrast adjustment                  |              | Via touch panel                                     |               | —   | —   | —   | Via touch panel                                     | Via touch panel                                     |            | —   | —   |
| Display colors                       |              | 16 shades of blue                                   |               | 64K colors  | 64K colors  | 64K colors  | 256 colors  | 256 colors  |            | 16 shades of gray                                   | 64K color   |
| Back light type                      |              | CCFT  |               | CCFT  | CCFT  | CCFT  | CCFT  | CCFT  |            | CCFT  | CCFT  |
| Back light life                      |              | 50,000 hours  |               | 60,000 hours  | 30,000 hours  | 30,000 hours  | 45,000 hours  | 45,000 hours  |            | 50,000 hours  | 50,000 hours  |
| Operation Status LED                 |              | PWR, COM1, COM 2, Ethernet LEDs                     |               | PWR, COM1, COM 2, Ethernet LEDs                     | PWR, COM1—3, Ethernet LEDs                          | PWR, COM1—3, Ethernet LEDs                          | PWR, COM1—3, Ethernet LEDs                          | PWR, COM1—3, Ethernet LEDs                          |            | PWR, COM1—3, Ethernet LEDs                          | PWR, COM1—3, Ethernet LEDs                          |
| Touch screen                         |              | Analog  |               | Analog  | Analog  | Analog  | Analog  | Analog  |            | Analog  | Analog  |
| Touch screen (number of times)       |              | > 1,000,000   |               | > 1,000,000   | > 1,000,000   | > 1,000,000   | > 1,000,000   | > 1,000,000   |            | > 1,000,000   | > 1,000,000   |
| Keypad                               |              | 1 Menu key and 5 user-defined function keys (F1—F5) |               | 1 Menu key and 5 user-defined function keys (F1—F5) | 1 Menu key and 6 user-defined function keys (F1—F6) | 1 Menu key and 6 user-defined function keys (F1—F6) | 1 Menu key and 6 user-defined function keys (F1—F6) | 1 Menu key and 6 user-defined function keys (F1—F6) |            | 1 Menu key and 7 user-defined function keys (F1—F7) | 1 Menu key and 7 user-defined function keys (F1—F7) |
| Application Flash ROM                |              | 4MB   |               | 8MB   | 8MB   | 8MB   | 8MB   | 8MB   |            | 84MB  | 84MB  |
| RTC (w/rechargeable lithium battery) |              | Yes   |               | Yes   | Yes   | Yes   | Yes   | Yes   |            | Yes   | Yes   |
| Data/Recipe                          |              | 512KB   |               | 512KB   | 512KB   | 512KB   | 512KB   | 512KB   |            | 512KB   | 512KB   |
| Data storage (CF card)               |              | Yes   |               | Yes   | Yes   | Yes   | Yes   | Yes   |            | Yes   | Yes   |
| COM1                                 |              | 9-pin female (RS232/RS485)                          |               | 9-pin female (RS232/RS485)                          | 9-pin female (RS232/RS485)                          | 9-pin female (RS232/RS485)                          | 9-pin female (RS232/RS485)                          | 9-pin female (RS232/RS485)                          |            | 9-pin female (RS232/RS485)                          | 9-pin female (RS232/RS485)                          |
| COM2                                 |              | 25-pin female (RS232/RS422/RS485)                   |               | 25-pin female (RS232/RS422/RS485)                   | 25-pin female (RS232/RS422/RS485)                   | 25-pin female (RS232/RS422/RS485)                   | 25-pin female (RS232/RS422/RS485)                   | 25-pin female (RS232/RS422/RS485)                   |            | 25-pin female (RS232/RS422/RS485)                   | 25-pin female (RS232/RS422/RS485)                   |
| COM3                                 |              | —   |               | 9-pin female (RS422/RS485)                          | 9-pin female (RS422/RS485)                          | 9-pin female (RS422/RS485)                          | 9-pin female (RS422/RS485)                          | 9-pin female (RS422/RS485)                          |            | 9-pin female (RS422/RS485)                          | 9-pin female (RS422/RS485)                          |
| USB Host                             |              | 1   |               | 2   | 2   | 2   | 2   | 2   |            | 2   | 2   |
| USB Device                           |              | 1   |               | 1   | 1   | 1   | 1   | 1   |            | 1   | 1   |
| Multi-functional port                |              | —   |               | —   | —   | —   | —   | —   |            | —   | —   |
| Ethernet                             |              | Yes   |               | Yes   | —   | Yes   | —   | Yes   |            | —   | Yes   |
| Network interface unit               |              | —   |               | —   | —   | —   | —   | —   |            | —   | —   |
| Certification                        |              | CE  |               | CE  | CE  | CE  | CE  | CE  |            | CE  | CE  |
| External dimensions (mm)             |              | 195.0 (W) x 145.0 (H) x 59.1 (D)                    |               | 231.0 (W) x 176.0 (H) x 46.8 (D)                    | 231.0 (W) x 176.0 (H) x 46.8 (D)                    | 231.0 (W) x 176.0 (H) x 46.8 (D)                    | 231.0 (W) x 176.0 (H) x 46.8 (D)                    | 231.0 (W) x 176.0 (H) x 46.8 (D)                    |            | 297.0 (W) x 222.0 (H) x 52.3 (D)                    | 297.0 (W) x 222.0 (H) x 52.3 (D)                    |
| Cut-out dimensions (mm)              |              | 185.8 x 165.8                                       |               | 220.8 x 168.8                                       | 220.8 x 168.8                                       | 220.8 x 168.8                                       | 220.8 x 168.8                                       | 220.8 x 168.8                                       |            | 286.0 x 211.0                                       | 286.0 x 211.0                                       |
| Supply voltage                       |              | 24V DC ±15 %, < 20W                                 |               | 24V DC ±15 %, < 24W                                 | 24V DC ±15 %, < 24W                                 | 24V DC ±15 %, < 24W                                 | 24V DC ±15 %, < 24W                                 | 24V DC ±15 %, < 24W                                 |            | 24V DC ±15 %, < 30W                                 | 24V DC ±15 %, < 30W                                 |
| Front protection                     |              | IP65 /NEMA 4  |               | IP65 /NEMA 4  | IP65 /NEMA 4  | IP65 /NEMA 4  | IP65 /NEMA 4  | IP65 /NEMA 4  |            | IP65 /NEMA 4  | IP65 /NEMA 4  |
| Weight (kg)                          |              | 0.81  |               | 1.20  | 1.20  | 1.20  | 1.20  | 1.20  |            | 1.90  | 1.90  |

#### 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.

## About Hitech Electronics

Hitech Electronics has 17 years' experience of developing HMI products. The company was a pioneer in developing LCD modules and quickly spread its business into operator terminals. Today, the company has a leading position in the Asian HMI market. Since 2005, the company is part of the Beijer Electronics Group, a world-leader in HMI development.

**About Beijer Electronics** Beijer Electronics HMI Products is a pioneer in connecting people with the processes they control. Our HMI solutions build on 25 years of 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 10 countries in Asia, Europe and North America, as well as close relationships with OEMs, brand-label partners and distribution partners worldwide.

For the representative nearest you, visit [www.beijerelectronics.com](http://www.beijerelectronics.com).

## FROM PERSON TO PROCESS.

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**Beijer**  
ELECTRONICS