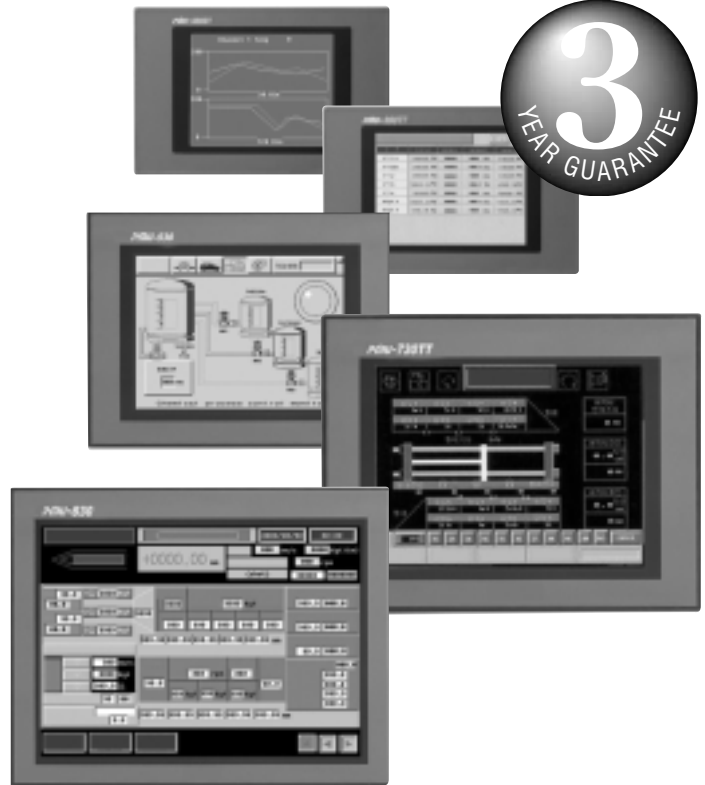


# Graphics based HMI (Human Machine Interfaces) PMU



High function graphics operator interfaces for use with Programmable Controllers and IMO Jaguar Drives

- High Quality STN/TFT Mono/colour touch screens
- Easy to use configuration software
- 2 Serial Ports 1 RS232 & 1 RS485
- Parallel Printer Port (option) ■ Ethernet interface (option)
- Recipe Function ■ Data Logging
- Bit Map support ■ Trend Graph plus Meter Graph
- Interface to a wide range of PLC's and Drives including IMO PLC's and Jaguar Drives
- IP65 ■ CE Marked
- Password Screens for security
- 32 bit RISC processor



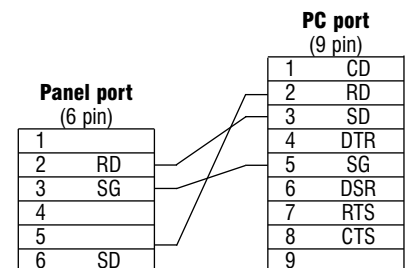
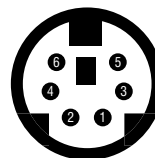
## HMI models

Part No	Description
<b>PMU-330BT</b>	320x240 5.7" mono (blue/white) STN display with matrix touch
<b>PMU-330TT</b>	320x240 5.5" TFT 256 colour display with matrix touch
<b>PMU-530ST</b>	640x480 7.5" STN 256 colour display with analogue touch
<b>PMU-730TT</b>	640x480 10.4" TFT 256 colour with matrix touch
<b>IPMU-830TT</b>	800x600 12.1" TFT 256 colour with analogue touch

## Specification

Technology	32 bit 66Mhz RISC processor (ARM)
Communications port	Two serial port 1 RS232 plus 1 RS485
Parallel Port	Standard (option on PMU330BT/TT and PMU530ST)
FNET	Option
Ethernet	Option
DeviceNet	Option
Profibus	Option
Diagram Type	Circle, Straight line, Oval, Square, Polygon
Graph Type	Bar, Trend, Meter, Pie, XY Chart
Memory Flash	4MB/2MB/1MB Plus 250K for Logging/Recipe
Fonts	Different Fonts can be download
Contrast Control	Contrast adjustment
Enclosure	IP65F
Mounting	Panel mounting
Temperature range	Operating 0-55C non-operating -20 to 70C
Relative Humidity	5 to 90%
Vibration	Operating 5 to 250Hz 1G
CE compliance	<i>Emissions:</i> EN50081-1 Class A radiated conducted emissions <i>Immunity:</i> EN50082-1 Light industry immunity <i>Safety:</i> EN60950 Low Voltage Directive

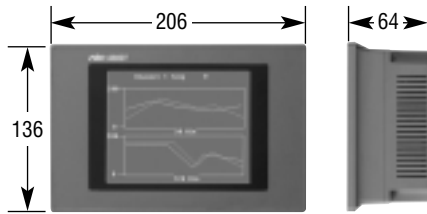
## Connections



## Tag types in PMU

Tag	Functions
Numeric	Number display on screen
Touch	Touch Controlling device by touching screen Bitmap Touch function using bitmap
Lamp	Lamp Display 1 bit ON/OFF information with colour Bitmap Lamp function using bitmap
Clock	RTC data display on screen
String	After converting ASCII code into letters, display on screen
Message	Message display on screen
Alarm	Display alarms on screen and manage their history
Key display	Input data display
Graph1	Bar graph and pie graph: Data display with bar/pie/polygon
Graph2	Trend graph: Time-varying data display
Window	Calling out window screen
Calculation	Arithmetic and logic calculation
Animation	Calling out symbol, images or subsidiary screen
ExNumeric	Numeric data display with recipe or logging data
ExMessage	Message display with recipe or logging data
ExString	String display with recipe or logging data
ExGraph 2	Trend graph with recipe or logging data

**Features**



Screen: 146x125mm

**PMU-330BT**

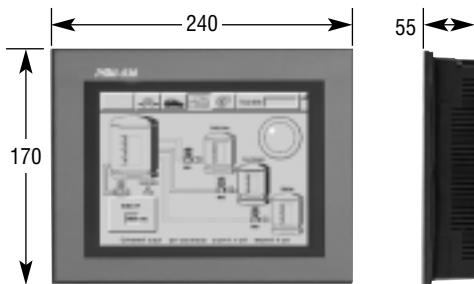
- High Quality 5.7" STN mono (Blue / White) touch screen 320x240 220cd/m
- 1 MB Flash plus 256K for Logging and recipe
- Logged data can be downloaded to PC using PMU Editor and converted to an Excel report
- 15 pin D type serial interface
- 18-28 VDC 12Watts
- Dimensions 206x136x64mm



Screen: 146x125mm

**PMU-330TT**

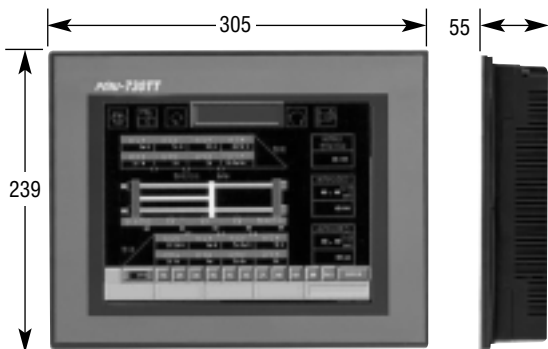
- High Quality 5.5" TFT 256 colour Matrix touch screen 320x240 250cdm
- 2 MB Flash plus 256K for Logging and recipe
- Logged data can be downloaded to PC using PMU
- 15 pin D type serial interface
- 18-28 VDC 12Watts
- Dimensions 206x136x64



Screen: 229x159mm

**PMU-530ST**

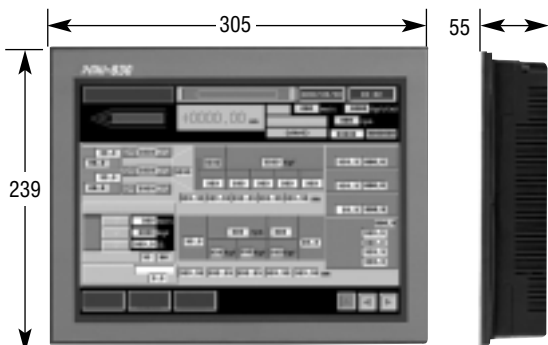
- High Quality 7.5" STN 256 colour touch screen 320x240 83cd/m
- 2 MB Flash plus 256K for Logging and recipe
- Logged data can be downloaded to PC using PMU Editor and converted to an Excel report
- 9 pin D type serial interface
- 18-28 VDC 12Watts
- Dimensions 240x136x64



Screen: 292x226mm

**PMU-730TT**

- High Quality 10.4" TFT 256 colour Matrix touch screen 640x480x240 200cd/m
- 4 MB Flash plus 256K for Logging and recipe
- Built in printer
- Logged data can be downloaded to PC using PMU
- 9 pin D type serial interface
- 85-264VAC VDC 20Watts
- Dimensions 305x239x55



Screen: 292x226mm

**PMU-830TT**

- High Quality 12.1" TFT 256 colour touch screen 800x600 135cd/m
- Built in printer
- 4 MB Flash plus 256K for Logging and recipe
- Logged data can be downloaded to PC using PMU Editor and converted to an Excel report
- 9 pin D type serial interface
- 85 – 265VAC 20 Watts
- Dimensions 305x239x55

## Screen functionality



### Numeric display

- Numeric data display: DEC, HEX and BCD type
- Displays data with 8 different colors depending on the numeric range variance
- Data, read from controller, can be displayed after calculation
- ASCII CODE, read from PLC or controller, can be displayed with characters

### Data input function

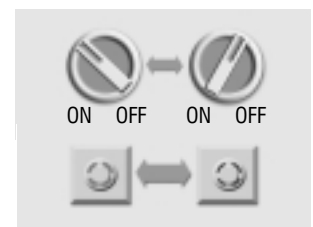
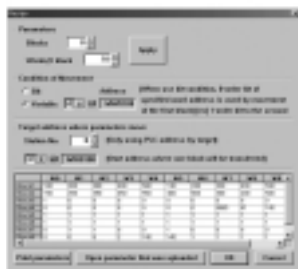
- Min/max value of data setting
- Input range limit
- Data input using TENKEY
- Password encrypted

### Touch/lamp function

- **Caption Displays**  
2 letters according to the status (ON/OFF) of devices when using touch/lamp tag
- **Touch color**  
Displays the status (ON/OFF) of device with colors after operation of touch button with lamp function
- **Data lamp**  
Displays lamp with 8 colors, according to data range, while monitoring data
- Maximum 10 functions can be set up with one touch tag

### Graph function

- **Trend graph**
  - Input value change is visually shown with the time axis
  - 10 data can be set up with one graph
  - Logging data and recipe data trend available
- **Meter graph**
  - Sets the lowest/highest value of data and displays current data in rate
  - Preset warning color is shown when data are out of range
  - Analog data (voltage, current) display



### Recipe function

- Running data of each work are stored in PMU
- When work changes, running data are batch-transferred to the controller
- Converts the setup data into MS EXCEL format
- High-performance under a varied and small volume production environment

### Data Logging

- The data generated during operation are stored in PMU
- Periodic or conditional data logging
- The data stored in PMU can be saved in PC using PMU Editor
- Converts logging data in PC into a MS EXCEL report

### Various bitmap functions

- **256-colour bitmap support**
  - A realistic screen with 256 colours
  - A 256-color bitmap file display available
  - Spectacular graphics using various colours
  - Various functions using bitmap
- **Bitmap lamp**  
Displays other bitmap according to the bit status (ON/OFF) while monitoring it
- **Background bitmap**  
Draws pictures on screen with a background bitmap of the same screen resolution
- **Transparent bitmap and lettering function**  
Does not display the unnecessary part of bitmap and background letters