UTICOR

American Innovation
Made in USA
with US & Foreign content

ToughPanels
for demanding applications

Tough Panel ™

Tough Panel ™

Tough Panel ™

UTICOR

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EZ Automation

UTICOR

AVG Automation

AUTOTECH

balmoral technologies

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Robust, Tough, Top of Line Products at Competitive Prices and Local Support, all over the World

Uticor Touchpanel beginings in 1992

Built like a *smart* Tank

Uticor first introduced a Programmable Graphical Interface (PGI) in 1992.

We saw the value of a device that allowed the operator to intuitively view the machine operation and also control it. We also foresaw the of a product that would eliminate the costly, inefficient, and complicated array of pushbuttons, selector switches, pilot light meters, etc. The technology was eventually offered by PLC manufacturers as they became aware of its value.

Since the first products, we have remained committed to our core design criteria:

• Screen design must be intuitive and require no training. Infact we coined the phrase

"Screen Design so simple, even your CEO can use it in minutes."

• Simplicity should not come at the cost of features. In fact, many of Toughpanel's features exceed those of more expens PC based SCADA HMIs. Hence the phrase

"Features so rich, your CCO would want it now."

• The devices must be cost effective resulting in

"Prices so good, that your CFO would love it."

• The products must be compatible with the major PLC's and networks..So that our customers can have

"Universal Connectivity, that crosses all PLC boundaries."

Uticor, World leader in Industrial Marquees introducing a new breed of Marquees with the brains of a Touchpanel

In Tough SmartMarquees Uticor has combined its expertise in building the most rugged LED message displays with its extensive expertise in designing and producing the most advanced Touchpanels in the market. The results are obvious. Now you have:

Can communicate with any PLC or PLC Network easily
Can be added to any PLC Network without touching the
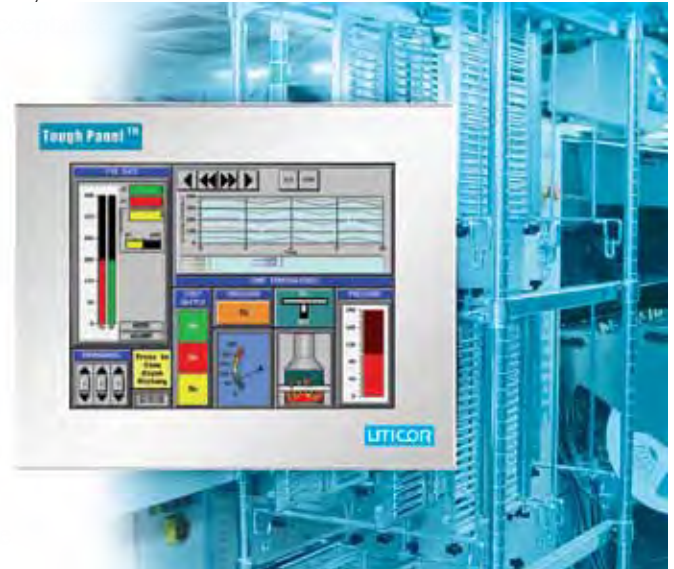 PLC program
Can be viewed and controlled over Internet/Intranet
Can perform complex Math and Logical operations
  generating its own messages and alarms
Can import, export and store massive databases for
  messages & alarms
And of course scroll, blink and display messages up
  to 400 ft. away using International character set

Built to withstand a Shuttle Launch...

HALT Based Design Process
(Highly Accelerated Life Test)

The Ultimate Test for Reliability

The HALT test was initially conceived for testing electronic products for shuttle launch. The purpose of this test is to subject the product to a combination of high shock, vibration, and a steep temperature gradient. MTBF of all electronic products depends upon the strength of connections of various components inside and therefore HALT is the ultimate test for reliability testing. Here is how it works:

1. Initial Design Specifications

Before a product is taken to drawing board, all the desired specifications are laid out around which a product is to be designed. These specifications are based on the actual working parameters that are applied to our products in the industry. Let's pick an example of our Toughpanel and see all the steps it goes through. The published specifications for Toughpanel are to the right:

2. HALT Test Of Finished Product

Once a product is designed and built as per initial specifications, it is subjected to HALT testing. Again the point of this phase is to eliminate any pre-mature failure that might be present in its initial design. Based on the above published specifications, Toughpanel is subjected to following tests:

I) Without Power (Non-Operating)

A - Temperature Cycling: 20°C beyond published spec @ 100°C/min.

For Non-Operating (storage) conditions, Toughpanel goes through a total of 50 cycles of thermal shock in the range of -40˚C to +80˚C at the rate of 100˚C/min. If Toughpanel passes Temperature Cycling test, it advances to next step. If for any reason Toughpanel does not complete temperature cycling test for at least 50 cycles it goes back to drawing board for re-design and the process continues until it passes.

B - Shock and Vibration Cycling: 2 Times published spec

After Toughpanel passes Temperature Cycling test, it is subjected to Vibration and Shock test as set by internal HALT specifications of 5-55 HZ 4 G's for 2 hours maximum and 20 G's for 12 ms respectively Non-Operating (storage) conditions. If Toughpanel passes the Shock and Vibration cycling test, it advances to next step. If for any reason Toughpanel does not complete the Shock and Vibration cycling test for at least 50 cycles, it goes back to drawing board for re-design and the process continues until it passes.

C - Combined Temperature and Shock/Vibration: 20°C beyond & 2 Times Gs @ 100°C/min.

After Toughpanel passes Shock and Vibration cycling test, it is subjected to a combined Temperature, Shock, and Vibration test as set by internal HALT specifications of -40˚C to +80˚C at the rate of 100˚C/min, 5-55 HZ 4 G's for 2 hours maximum, and 20 G's for 12 ms respectively for Non-Operating (storage) conditions.

Toughpanel's Published Specifications:

Storage (Non-Operating) Temperature: -20˚C to +60˚C
Operating Temperature: 0˚C to +55˚C
Vibration: 5 to 55 Hz 2 G's for 2 hours in X, Y, and Z axis

Shock: 10 G for 12ms in the X, Y, and Z axis

Internal HALT Threshold To Achieve The Above Published Specifications:

Our internal HALT thresholds are ALWAYS higher then the required published specifications. These thresholds for Toughpanel are as follows:

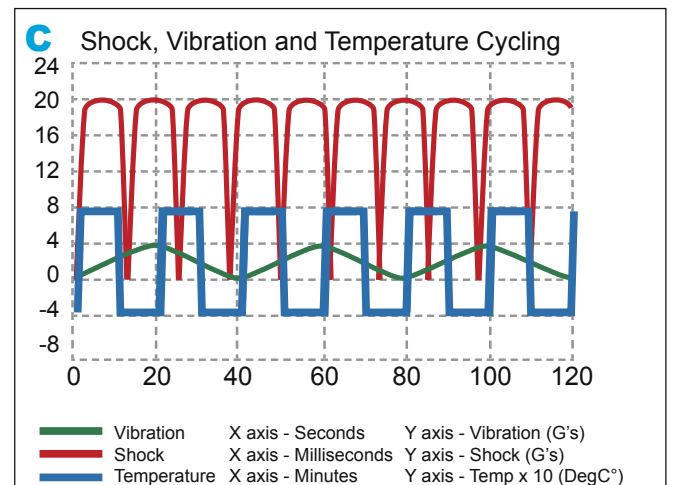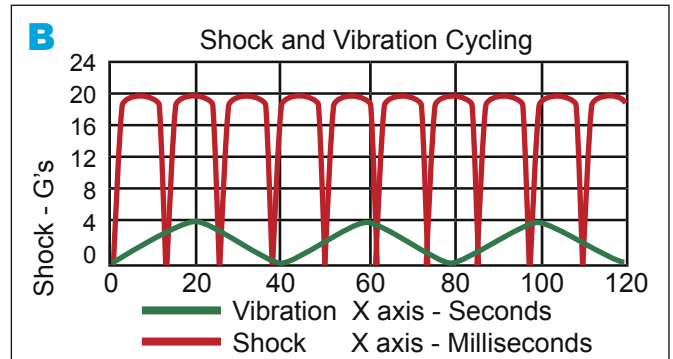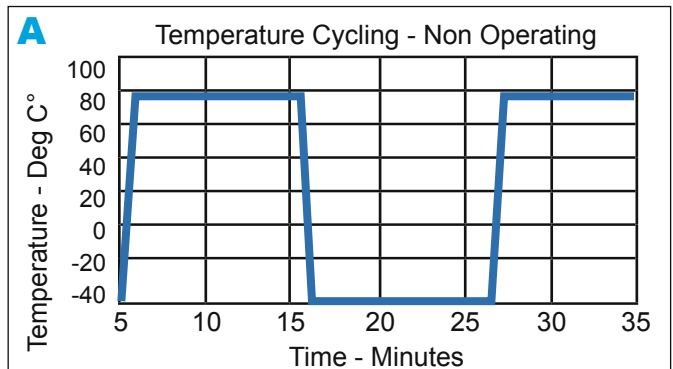Storage Temperature: -40˚C to +80˚C
Storage (Non-Operating) Vibration: 5 to 55 Hz 4 G's for 2 hours in X, Y, and Z axis
Storage (Non-Operating) Shock: 20G for 12ms in the X, Y, and Z axis
Operating Temperature: -10˚C to +55˚C
Operating Vibration: 5 to 55 Hz 2.4 G's for 2 hours in X, Y, and Z axis
Operating Shock 10G for less than 12ms in the X, Y, and Z axis

A Temperature Cycling - Non Operating

B Shock and Vibration Cycling

Vibration — X axis - Seconds
Shock — X axis - Milliseconds

C Shock, Vibration and Temperature Cycling

Vibration — X axis - Seconds — Y axis - Vibration (G's)
Shock — X axis - Milliseconds — Y axis - Shock (G's)
Temperature — X axis - Minutes — Y axis - Temp x 10 (DegC°)

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II) Unit Under Power, Fully Functional (Operating)

A - Temperature Cycling: 10°C beyond published spec @ 100°C/min.

For Operating conditions, Toughpanel goes through a total of 50 cycles of thermal shock in the range of -30˚C to +70˚C at the rate of 100˚C/min. If Toughpanel passes Temperature Cycling test, it advances to next step. If for any reason Toughpanel does not complete temperature cycling test for at least 50 cycles it goes back to drawing board for re-design and the process continues until it passes.

B - Shock and Vibration Cycling: 20% beyond published spec

After Toughpanel passes Temperature Cycling test, it is subjected to Vibration and Shock test as set by internal HALT specifications of 5-55 HZ 2.4 G's for 2 hours maximum and 12 G's for 12 ms respectively Operating conditions. If Toughpanel passes the Shock and Vibration cycling test, it advances to next step. If for any reason Toughpanel does not complete the Shock and Vibration cycling test for at least 50 cycles, it goes back to drawing board for re-design and the process continues until it passes.

C - Combined Temperature and Shock/Vibration: 10°C beyond & 20% beyond published Gs @ 100°C/min.

After Toughpanel passes Shock and Vibration cycling test, it is subjected to a combined Temperature, Shock, and Vibration test as set by internal HALT specifications of -30˚C to +70˚C at the rate of 100˚C/min, 5-55 HZ 2.4 G's for 2 hours maximum, and 12 G's for 12 ms respectively for Operating conditions.
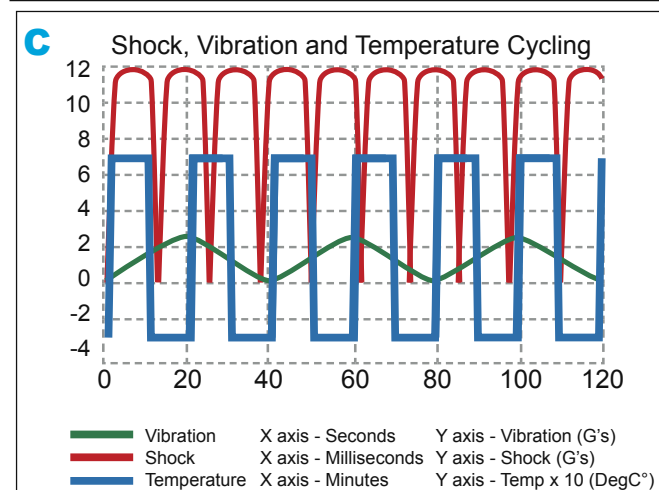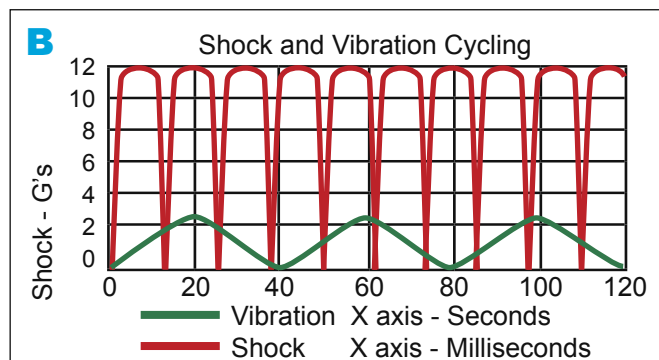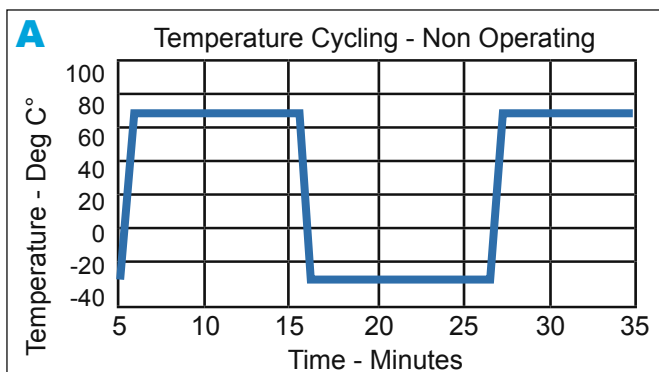
After the successful completion of both Operating and Non-Operating HALT tests within specifications, Toughpanel is released for production.

HASS Based Manufacturing Process

Highly Accelerated Stress Screening (HASS)

HASS is an integral part of the manufacturing process at AVG/Uticor. The main purpose of HASS testing is to ensure that our manufacturing processes are in control. 1% AQL (per Mil Spec) level samples from the end of the manufacturing line are subjected to HASS testing to qualify and re-qualify the manufacturing process. If we detect a failure in HASS testing beyond acceptable Mil Spec numbers, the entire manufacturing lot is segregated for further screening. To explain this further, lets continue with the example of Toughpanel.

The operating specification for Toughpanel is 0˚C to +55˚C with 2Gs of vibration and 10Gs of shock. 1% AQL sample of a production run will be subjected to HASS testing from -5˚C to +60˚C @ 2.2 Gs of vibration and 11 Gs of shock. Failure beyond Mil Spec number based on 1% AQL, will subject the entire lot to segregation and further analysis.

A — Temperature Cycling - Non Operating

B — Shock and Vibration Cycling

Vibration   X axis - Seconds
Shock   X axis - Milliseconds

C — Shock, Vibration and Temperature Cycling

Vibration	X axis - Seconds	Y axis - Vibration (G's)	
Shock	X axis - Milliseconds	Y axis - Shock (G's)	
Temperature	X axis - Minutes	Y axis - Temp x 10 (DegC°)	

HALT/HASS Chamber

-60˚C to 150˚C at 100˚C/min @ 50 Gs of shock and vibration. We invested over $500,000 in this HALT/HASS Chamber.

Tough Panel ™

Industrially Robust, Intuitive, Simple to Program

Industrially Robust, NEMA 4X, Class I, Div II, Conformal Coated, Aluminum or Stainless Steel Panels

FDA Compliant

Hard surface Touchscreen with built-in Anti-glare film (0.090" Thick)

7 Models to Choose

Identical programming and features; you select the size and display most appropriate for the application, without concern for programming changes

Competitively Priced

Outdoor Readable Panels

Toughpanels are available in a new Transflective Technology producing low heat.

Multiple Languages

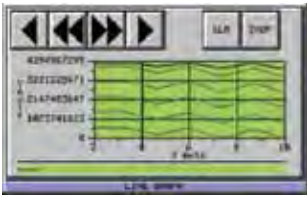**Program the text for Panel components in up to 9-different languages**

SELECT LANGUAGE
English
El Idioma Selecto
Espanol
Choisir la langue
Francais
Erlesene Sprache
Deutsch

Unicode Language

Toughpanels are now provided to display text in any language supported by "Unicode".

為　नमस्कार　வணக்கம்　こんいちわ
ನಮಸ್ಕಾರ　നമസ്തേ　నమస్త్

UP TO 9 INTERNATIONAL LANGUAGES & UNICODE SUPPORT

| ENGLISH | FRENCH | JAPENESE |
| ITALIAN | SPANISH | GERMAN |

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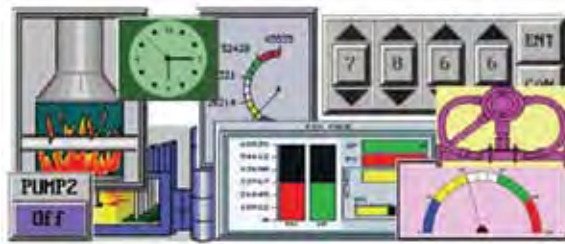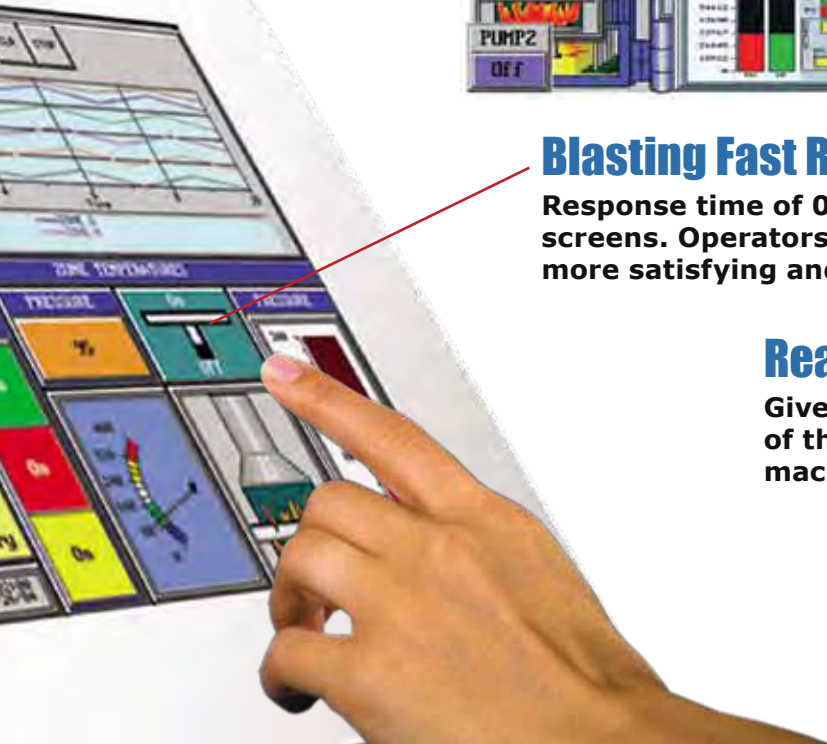**Tel:: 61 2 9482 4000**
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High-End SCADA and Uniquely Innovative Features without needing an Industrial PC!

Trend Graph / Data Acquisition / Scripting

Track up to 6 variables in one trend graph. Acquire and store data. Perform statistical process control. Scripting allows Logical and Mathematical Operations on PLC data.

Dazzling 3D Graphics

Operator Friendly

Toughpanels have the best looking pre-built as well as multi-state bitmap objects.

Blasting Fast Response to Touch Imput

Response time of 0.75 sec to touch inputs even for complex screens. Operators have almost immediate response for a more satisfying and efficient experience

Real Time Animation

Give machine operators a better understanding of the machine process by animating the machine's motion or process on the screen
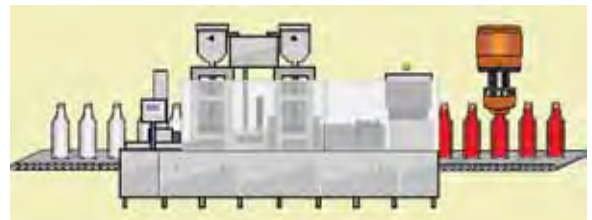
Toughpanels displays have a typical rating of 55° C supported by "Unicode".

Exclusive

### Drop-in, Plug-n-Play Replacement for those Obsolete and feature-limited Touchpanels.

Toughpanels offer Drop-in replacement for Allen Bradley Panelview and Panelview Plus, as well as General Electric's Quickpanels (also Proface GP Series). Program conversion cost is minimal.

Same foot-print

Longer Bulblife

Toughpanels have the best specifications for bulblife 50,000 - 60,000 hours of operation

Tough Panel ™

Industrially Robust, Intuitive, Simple to Program

FREE 4,000 Symbol Library

Built in library of 4,000 objects available for you to copy and paste directly to a project screen and use them in any arrangement or position them just the way you like.
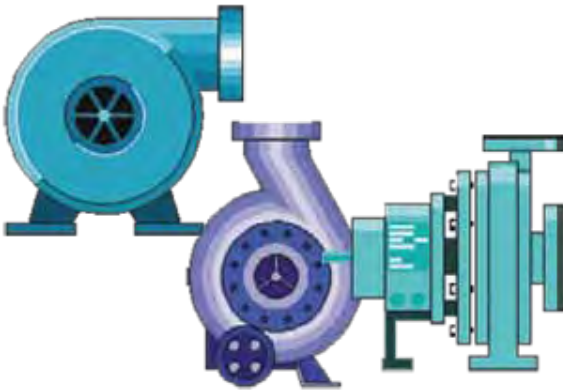
Built like a *smart* Tank

Advanced Alarming

Advanced Alarm System comprises:
- ● **Alarm Database**
- ● **Alarm Preview**
- ● **Alarm History**
- ● **Alarm Count**
- ● **Alarm Protection**
- ● **Send Alarm to Marquee and lot more.**

Fine-tune and Edit Recipe without Laptop

Multi-state Indicator & Bitmap Buttons

The Multi-state indicators allow you to visualise process conditions such as three states of a traffic light. Toughpanel also offers bitmap based multi-state indicators where you can use up to 256 bitmaps to indicate 256 different conditions.
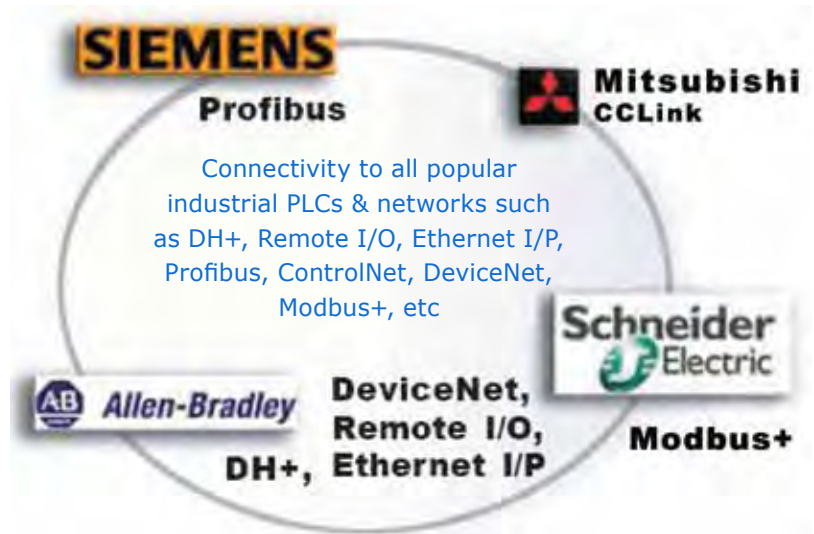
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High-End SCADA and Uniquely Innovative Features without needing an Industrial PC!

Most PLC and Network Protocols Supported with
Dual Driver Capability

Connectivity to all popular industrial PLCs & networks such as DH+, Remote I/O, Ethernet I/P, Profibus, ControlNet, DeviceNet, Modbus+, etc

SIEMENS Profibus

Mitsubishi CCLink

Allen-Bradley DeviceNet, Remote I/O, DH+, Ethernet I/P

Schneider Electric Modbus+

Statistical Process Control (SPC)

Toughpanel can perform a variety of Statistical computations such as Cpk
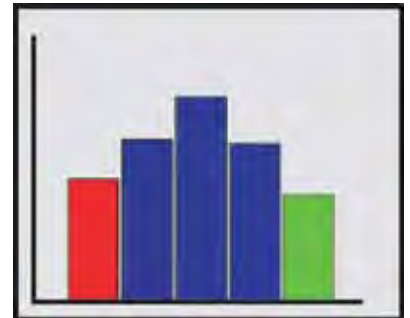
Net-View and Control

Toughpanels allow you to to view and control the touch-panels anywhere in the world via the internet. Allows for immediate trouble shooting worldwide without leaving the office.

avG Automation

UTICOR **ac AUTOTECH CONTROLS**

Tough Panel ™

Additional Features in...

Choice of Dedicated Processor or Windows Processor

**Toughpanels have a choice of dedicated or windows processor for different applications.
See pages 34 and 35.**

Show Training Video

View MPEG videos for installation/training, Machine/process changes, etc..
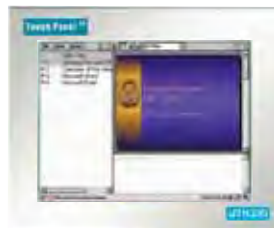
View PDF Manuals

Have fast and immediate access to PDFs for manuals on machine/ process.

View Power Point Presentations

View Powerpoint presentations for Weekly/ Monthly Maintenance walk-throughs, Machine/ process changes, etc..

View Excel Files

View Microsoft® Excel files, review/analyze data on the screen instead of sending it to the computer

Windows CE® Functions

Microsoft Terminal Services

FTP server for sending to/ receiving file from remote location

View Word Documents

View Microsoft® Word Documents to review/ analyze files right on the screen instead of sending it to the computer
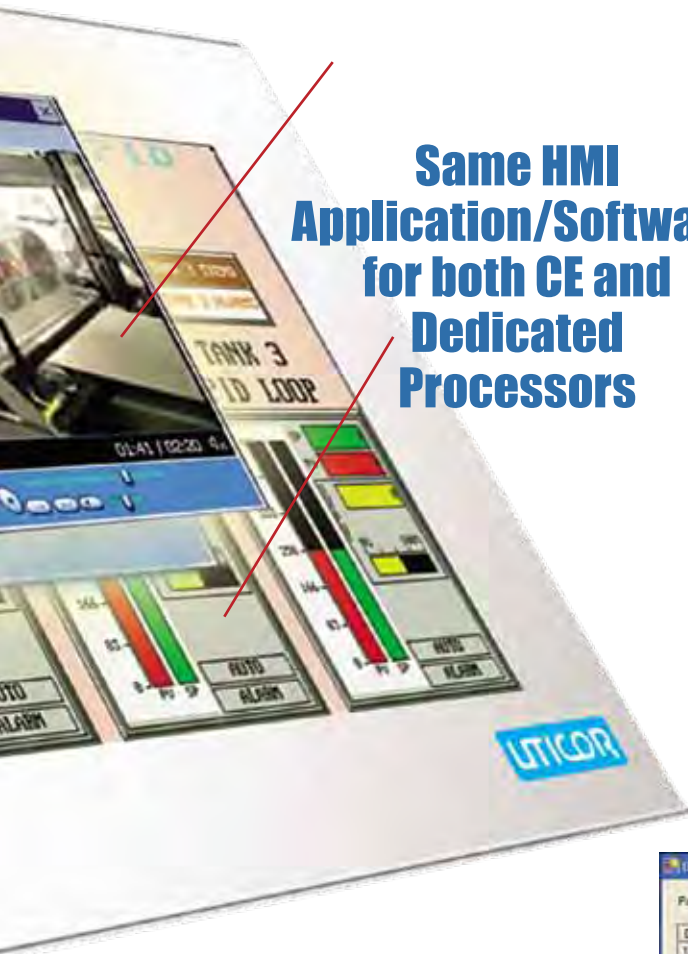
...Toughpanels with a Windows CE® Processor

Unique Built-in Quick Edit

Change your HMI Application... on the HMI itself, NO MORE LAPTOPS!
- *Make a Quik-EditTM to existing objects, screens, etc. in seconds...e.g. change colors, sizes, tag/ address associations and more...*
- *Add/Delete objects, screens, etc.*

Same HMI Application/Software for both CE and Dedicated Processors

Additional Hardware Features
- **AMD Alchemy 333 MHz CPU**
- **32 MB Flash, 64MB RAM**
- **Compact Flash Slot**
- **10/100 Base-T Ethernet with PLC protocols**
- **One RS232 Port, One RS232/422/485 Port, One USB Host Port**
- **Network Card Option**
- **Light weight / Low Power**
- **Complete NEMA 4, 4X Industrial Ratings**

Built-In Data Acquisition Software, stores data in Compact Flash in ".csv" file format
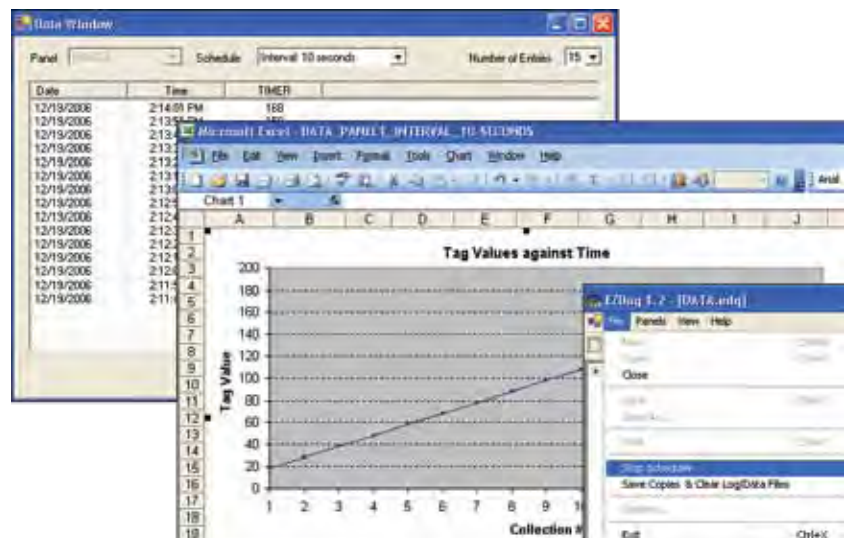
uWin⁰⁸ Editor, Simply the Most Intuitive Programming Software in the World!!

No training manual, no class-room, self-learn in less than 30 minutes!!

uWin ⁰⁸ Editor has full 32-bit windows attributes to develop screens in the shortest time. The programming software is very intuitive, requiring virtually No-Learning curve. If you are familiar with windows applications, you will be designing screens within minutes. Many new convenience features have been added to make the software even better.

Program this screen in less than 10 minutes
Simple as 1-2-3
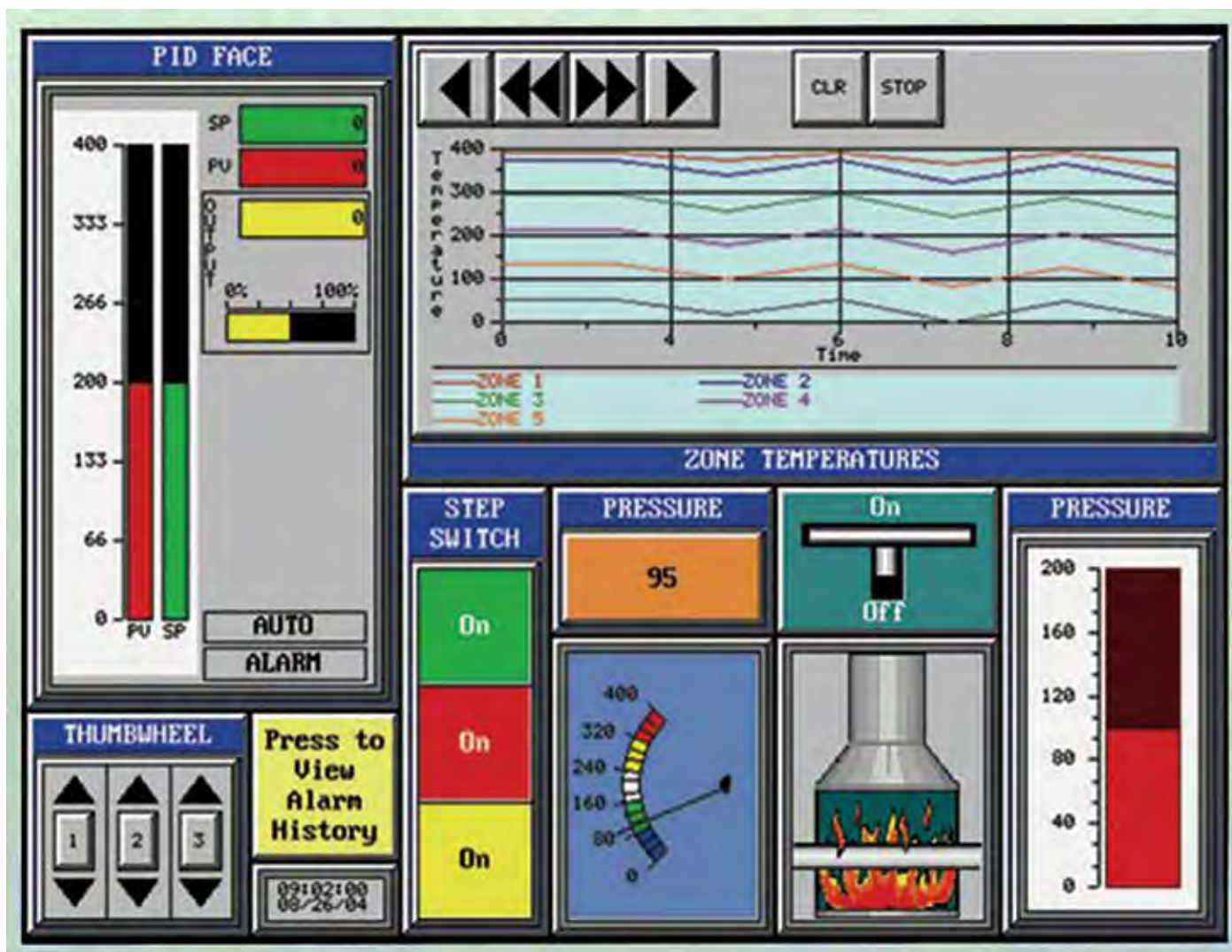
We made an easy to use, simple operator interface that will save you a lot of engineering hours and design time due to its simplicity and ease of use. You don't need prior programming knowledge to design a screen. You do not need to attend any classes to learn how to program the Toughpanel.
It is Intuitive, it is Simple!

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uWin⁰⁸ Programming Editor
## Screen Design so Simple, even your CEO can do it in minutes ™

1 Using the Objects pull-down menu or an icon in the toolbar, select the object you want to create. In this example, we are creating an Indicator button.
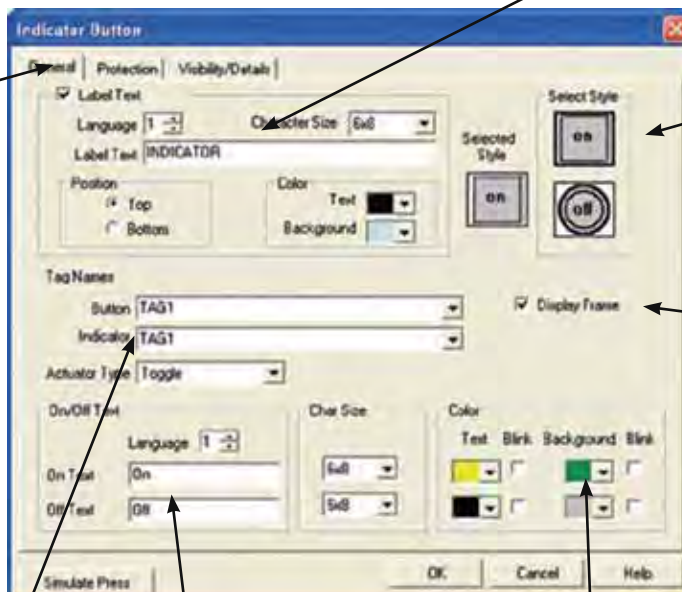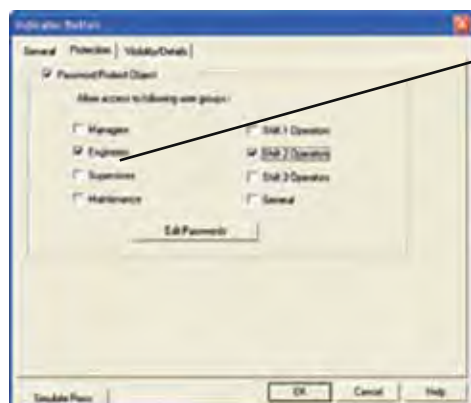
It's as Simple as

to Create an Object

2 Every object has an associated dialog box, as shown to the right. The different tabs at the top contain all the prompts for creating the object for your specific needs.
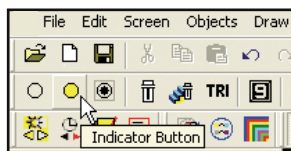
Object configuration dialog box
(Options vary upon object selected)

Custom label your objects to ensure that the objects purpose won't be mistaken.

Select the style in how you want your object to appear on the screen.

Display frame gives an object that desired 3D appearance, which can help differentiate it as a button. (Example shown at step 3)

Password Protection
Allow only authorised users or certain groups the appropriate level of access with password protection, as shown above.

PLC Addressing
Type in the tagname and then right click on the name you just typed. This will bring up the dialog box to the right, to enter the appropriate PLC address string and data type, which determines how the object links to the PLC.
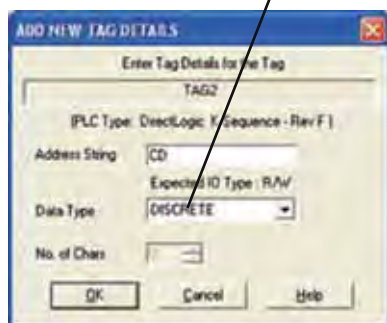
Color Palette
With 128 available colors for an object's text, background, label and more, making an object stand out or look as part of an organized grouping or category is easier than ever.

3 Once you are done creating your object, simply click OK and then click on the screen. Resize and move your object as needed. If you feel an edit is necessary, no problem! Double click the object and the dialog box will reappear. It's that EZ!!

with Display Frame

without Display Frame

Nine Different Languages
With Toughpanel's multiple language capabilities, you can now program the text for Panel components in up to 9-different languages. This means English reading operators can work with the panel in English, while the Spanish proficient operators can work in the Spanish language on the same panel. Also, with up to 9 different languages, OEMs exporting to other countries can develop programs to cover many of the commonly used languages.

uWin⁰⁸ Programming Editor

Display of Tag Addresses on Objects

The PLC addressing uses Tag names, so that you can associate meaningful, easy-to remember names to the addresses. Additionally tags are useful if you use different PLCs with the same HMI program. You will only need to design the HMI program once. Then just change the tag definitions to match the PLC you are using.

The enhanced ability to display tag addresses on the objects allows simpler screen development and troubleshooting. Here we are showing the tag address for block transfer on AB's Remote I/O.

Pick and Apply Styles...

When designing screens, there are many attributes assigned to objects, such as object's colors, object's shapes, text sizes, text colors. All these details in completing a style for the screen takes a great deal of time. This feature allows the ability to "copy and paste' these styles from one object to as many as you select. Another wonderful time saving feature!

The object's style that was picked has now been applied to the other objects

Select all the objects where you want the style to apply

Pick the object that has the style you want to copy
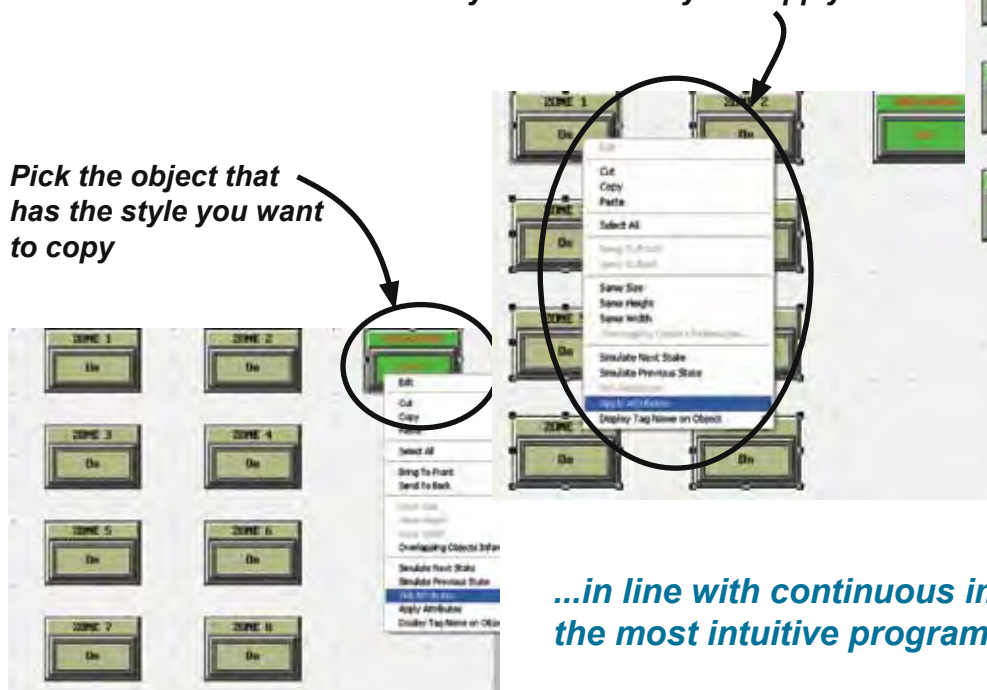
...in line with continuous improvement of already the most intuitive programming software

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uWin⁰⁸ Programming Editor
In Continual State of Improvement

Project Simulation

● **What is Project Simulation?**

This feature allows you to simulate, interact, navigate and debug an entire project right on your PC, before you transfer it to the panel. To be precise, it ensures that your project looks and operates exactly the same way you intended.

② **How to Interact with the Objects?**

On the PC you will have to click on the objects, as you do touch/press them on the panel.

③ **How to Test the functionality of the Objects?**

By changing the tag values of the objects and view their responses. Tag values can be changed either in the tag list or in the separate dialog boxes by right-clicking individual objects.
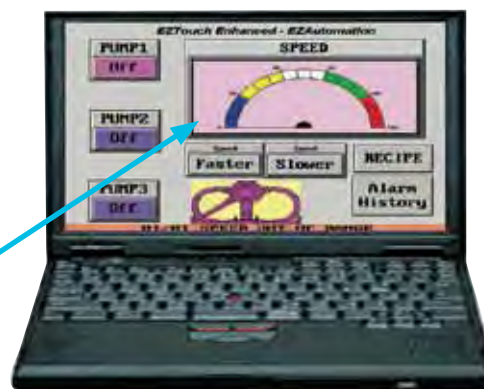
④ **What is the purpose of Screen Capture?**

This is an option to take the screen shots of the simulator screens and save them for further references. Basically, screen shots give you an idea that how the panel screens will look like?
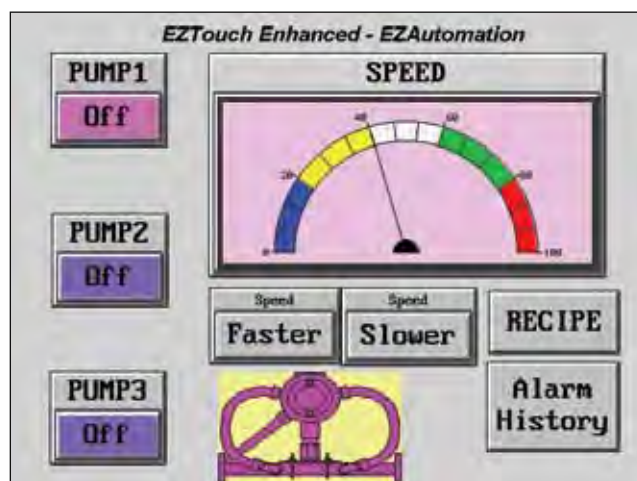
Distortion Free Sizing of Objects

The uWin⁰⁸ Programming Editor has a patent pending feature that saves the programmer from having to size a bitmap in another photo editing software, and then bring it onto the screen. You can size an object whichever way you want it within the uWin⁰⁸ Programming Editor itself. It saves you the headache of going back and forth between two software programs.
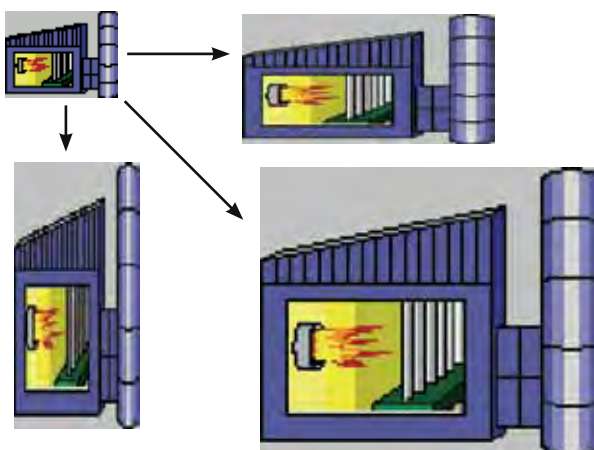
uWin ^{08} Programming Editor
Now with Built-in Photo Editor at no extra cost!!

NEW

The uWin^{08} programming editor has raised the bar further in HMI software by including an exclusive, advanced, patent pending, bitmap photo editor that allows any bitmap being imported (such as from the 4000 symbols library) to be edited almost like "Photoshop" within the uWin^{08} Software itself.

It eliminates the need to :
1. Have "Photoshop" or "MSPaint" program installed on your computer
2. Bring the bitmap into "Photoshop", edit it and then import it back to the HMI program
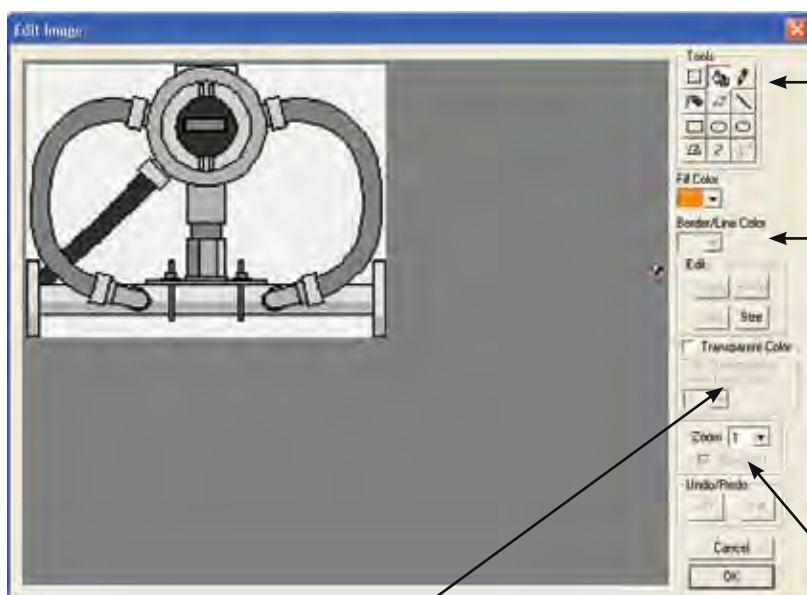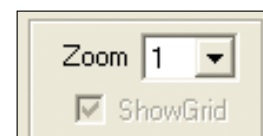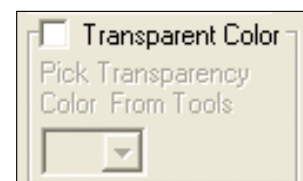
Built-In Shapes, Drawing Pencils, Spray Cans, Eraser and more ...
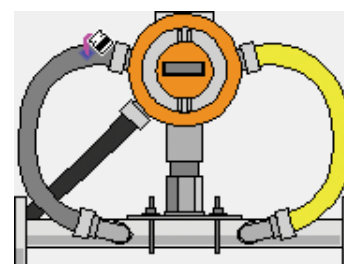
Fill Color
Fill the color on the bitmap of your own choice from the color palette.

Zoom Tool
Zoom tool has 1 to 4 level, making edits in tight spots is no longer a problem. For pixel-per-pixel level detail there is a zoom level 4
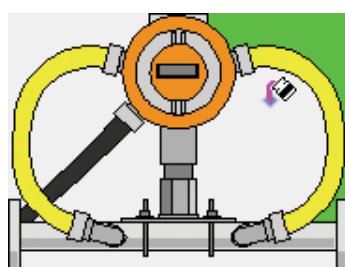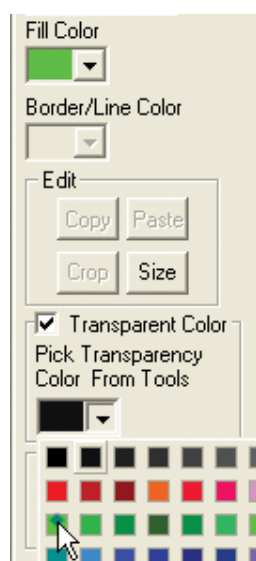
Transparent color
The transparent color is used to make all areas of that color which is as same as the fill color to be invisible or transparent.
In the above example the green fill and transparent color makes it invisible or transparent.
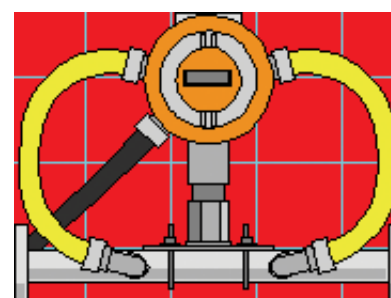
Final bitmap Image
With the above built-in photo editing feature in uWin^{08} software eliminates a need of photoshop on your PC

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uWin ⁰⁸ Programming Editor
Database Management

Import / Export of Tag Database

uWin⁰⁸ programming software allows both import and export of tag database from and to an Excel sheet. This saves a tremendous amount of time when developing PLC software using the same tag names.

High-light Unused Tags

The Tags in the uWin⁰⁸ Software can easily be sorted by name, by type and by PLC address. On top of that you can high-light unused tags in yellow to make it simple for the programmer to manage his/her project.
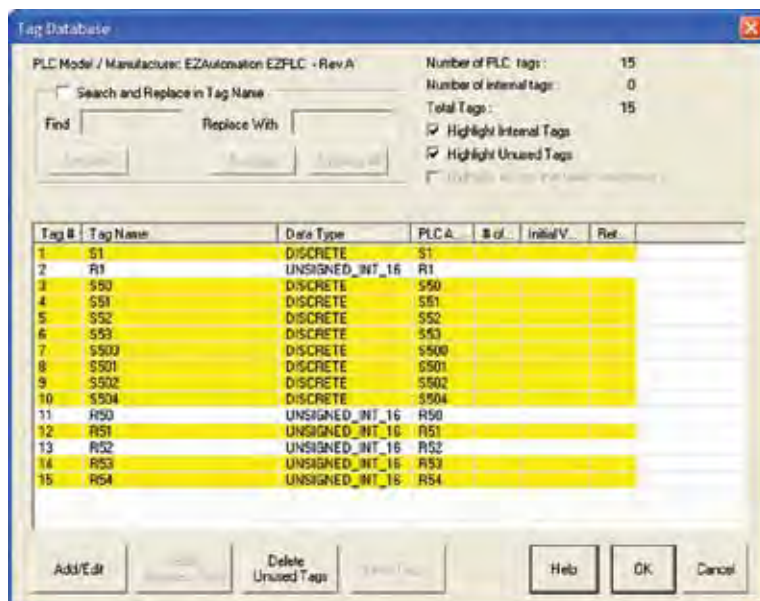
The enhanced ability of Importing/Exporting the tag database, Highlighting the unused tags, and Instant Syntax checking makes it extremely convenient for the programmer to manage his/her project.

Instant Syntax Checking

The uWin⁰⁸ software is unique in that, it checks the address syntax of all the PLCs and PLC Networks supported, before the address is allowed to be entered. This feature saves a tremendous amount of time in implementing an HMI PLC Project. You find you errors at the time of making the error not when you are finished and saving or downloading the project.

Tough Panel ™
Unique Features

Your Choice of Operating System

The standard Uticor Toughpanel has a dedicated processor, as opposed to running on a computer platform. This offers a much faster response time for touch inputs, typically 0.75 seconds instead of slightly more than a second in a Windows CE environment. A Windows® device is inherently slower in response time because it has a lot of overhead to cover during start-up and operation. A dedicated processor uses less memory, does not require a boot -up, requires only 2MB to trend data, and is not subject to hardware tampering. Nor can it be infected with a virus from the Internet.

A Windows CE system has the advantage, however, of running user selected software in applications such as Word, Excel, Adobe Acrobat, PDF, and MPEG (Video). Many users desire to run a program to show machine operation or key maintenance issues. Others want to imbed the Operating or Maintenance Manual as a PDF file. There are as many unique applications as memory available to run them.

Which should I choose?

Complex automation systems with a built-in redundant design or non critical machinery or process applications may have tolerance for the shortcomings of a Windows based operating system. Smaller or simpler applications or those that require robust/critical operation or a fast operating speed may be best served by a dedicated processor. We offer both platforms.
The programming software is the same for both.

INSTANTANEOUS TOUCH RESPONSE

Windows CE Touchpanel playing maintenance video!

You choose which is right for your application (uses same software)

1: Dedicated Processor Touch Panel
• Motorola Coldfire 32-bit CPU operating at 40MHz
• Fastest response time for touch inputs (typically 0.75 seconds)
• Fast and simple flash-based operating system, easily field upgradeable
• 512KB and 1MB battery back RAM
• 512KB ,1MB, and 2MB Flash Memory
• Will accommodate innovative NetView and Control card for Internet connectivity

2: The Window CE Touch Panel
• Same protocols supported as standard touch panel
• Same programming software
• Same screen sizes are available from 5.7" and up.
• AMD Alchemy 333 MHz 32 Bit Processor
• 32 MB Flash and 64 MB RAM built in
• Compact Flash slot
• 10/100 base-T Ethernet Port
• USB Host Port
• Network card for future expansion

Seamless Migration between the two Operating Systems

**Dedicated Processor
Higher Speed, Less Memory**

**Windows CE Processor
Windows Functions, More Memory**

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Tough Panel ™

Troubleshoot your Panel/Project Half way across the World without leaving your Desk!!

Toughpanels have an exclusive unique feature that allows you to view and control any screen on your touchpanel over the internet. Toughpanels with dedicated processor need an NVC option card whereas Toughpanels with Windows processor has this function built-in. This optional card has its own processor that allows remote monitoring and control. View and control operator screens over the internet from your PC as if you were right on the touch panel on the factory floor. **This is also a great tool for management/quality personnel in any plant to monitor production over intranet.**

NetView & Control (NVC) option card

NVC option card plugs into the extension connector of the Toughpanels. It has an Ethernet Port that allows a PC, anywhere in the world, to view any screen in the Panel in real-time as well as control the operation of the Panel using your mouse, also in real-time. This card can also be configured to send emails from the Panel. As a side benefit NVC card also gives you the ability to store up to 2GB of Data in an SD card onboard. Each NVC card has a static I/P address assigned to it which issued to address the card/panel over the internet/intranet.

Built-in NetView & Control (NVC) in CE Toughpanel

Toughpanels with Windows CE Processor has a built-in Ethernet port that allows it to perform NetView and Control function without the need for the additional NVC optional card. It should however be noted that the response time of the CE Toughpanel would be slightly slower than the Toughpanel with dedicated processor and NVC option card because the latter has a separate processor to perform the NVC function.

High Level of Password Security

For Obvious reasons RMC feature has multiple levels of password protection.
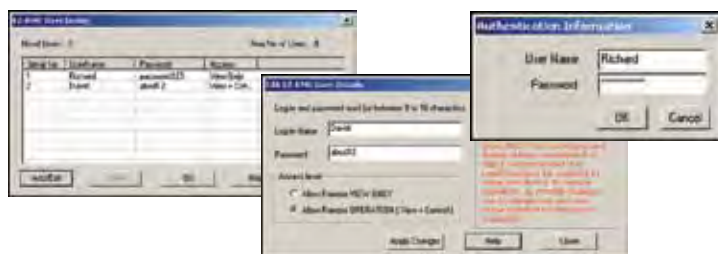
Monitor Machine/Process operation through the Panel

With UT-NVC software installed in your PC you could monitor any screen on the Touchpanel addressed by the software in Real-Time allowing system troubleshooting and/or management review of the machine operation.

Control Machine/Process operation through the Panel

Under multiple password security UT-NVC software allows you to operate the Touchpanel just as if you are standing right next to it. Clicking on a mouse or entering a preset thru your PC in Chicago will perform the same actions as if an operator was doing the same on the touchscreen half way across the world.

Tough Panel ™

Unique Features

For more than a decade on-line programming with PLC's has been a necessity in the programming, startup, and maintenance of PLC applications. **The concept of writing a program completely, downloading it, and redoing this process as modifications are discovered is unacceptable. Why should it be acceptable with the touch panel programming?** It is important that changes can be made on-line in that different colors or animations can only be fine- tuned while the application is running. It is much easier to troubleshoot system logic by adding objects while the application is still running. All our touchpanels offer complete on-line programming, as they had from the earliest units.

You know the power of On-Line programming if you deal with machine/process start-up

On-Line Edit allows changes in screen design without shutting down the machine. You can also add new objects or simply create a new screen just for troubleshooting logic

1 Connect Computer to Panel

2 Create a temporary Troubleshoot Screen in "Edit On-Line" Mode

3 Troubleshoot without ever having to shut down the machine

On-Screen Recipe Edit

With the On Screen Recipe Edit instruction, you fine tune your recipes on-line while the operation is running, without a PC. Consider the time savings and simplicity:

Previous Method -
1. Interrupt and shut down the machine or process
2. Modify the recipe in the PC
3. Download the new program from the PC to the touch panel
4. Restart the machine or process
5. Repeat until the desired results are achieved

Method with the On Screen Recipe Edit instruction -
1. Bring up the OnScreen Recipe Edit Object on the touch panel
2. Increment / Decrement until you get the perfect results

The instruction also includes up and down (Increment/ Decrement) buttons. The operator intuitively fine-tunes the recipe during operation anytime.

After fine-tuning you can the recipe inside panel's memory.

Trial-n-Error... Trial-n-Error... Trial-n-Error... Trial-n-Error... Trial-n-Error... Trial-n-Error... Trial-n-Error... Trial-n-Error Trial-n-Error.................

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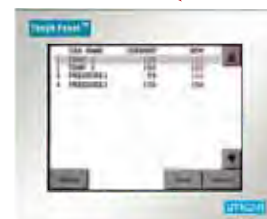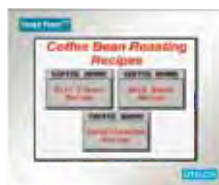
Unique Features, Universal Connectivity

Universal Ethernet Drivers

Ethernet RJ45 Connector

Motherboard for Toughpanel with CE processor

RJ45 Connector in place of 15-pin D-Sub for Universal Ethernet models in standard Toughpanels with dedicated processor.

☑ **Allen-Bradley Control-Logix with Native Tags**

☑ **Allen-Bradley SLC or MicroLogix DF1 over Ethernet**

☑ **Modbus TCP/IP**   **GE SRTP**

☐ **Profinet (coming soon)**

High Speed Dedicated Network Drivers

☑ **DH+/Remote I/O (Rockwell)**   ☑ **CC-Link (Mitsubishi)**

☑ **Modbus Plus (Schneider)**   ☑ **Profibus**

☑ **DeviceNet**

Hardware Network Drivers

Uticor Toughpanels connect to more than 90% of PLCs and Networks

Siemens Profibus   **Toughpanel**   **A-B DH485**

Simultaneous Communication

Serial Drivers

- Allen-Bradley DF1 Half and Full Duplex (PLC-5, SLC 500, MicroLogix 1000, 1200 and 1500)
- DH485/AIC/AIC+ for MicroLogix 1000, 1200, 1500, SLC500, 5/01, /02, /03
- Aromat Mewtocol COM
- Baldor
- Control Techniques - Unidrive 2-wire, 4-wire (binary)
- Control Technology Corp. (CTC) - CTC2600, 2700 and 5100 (CTC Binary)
- GE Fanuc SNPX (90/30, 90/70)
- Idec Computer Link
- All Mitsubishi FX Series
- Modicon MODBUS RTU
- Omron Host Link (C200 and C500)
- Parker Hannifan

- Siemens S7 MPI Adapter series PLCs
- Siemens S7-200
- Square D Symax - 300 Series CPU, 400 Series CPU (Symax)
- Texas Instruments - TI5x5 Series, TI505, TI545-1102, TI545-1104 (Transparent Byte Protocol or Non-Intelligent Terminal Protocol)
- Uni-Telway - Telemecanique TSX 37 Micro (UNI-TE Version 1.1)
- Yaskawa (Memobus protocol)
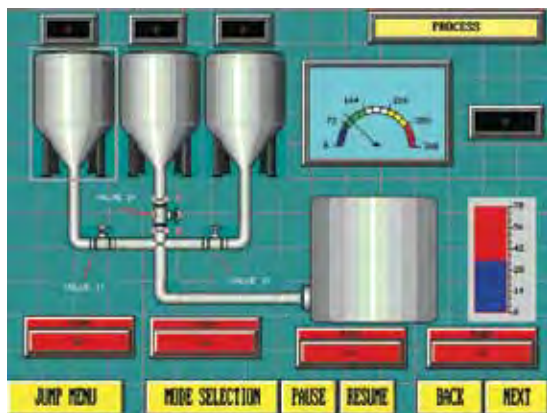
Dual Drivers

Toughpanels have the ability to communicate to two PLCs simultaneously. For example you can connect to profibus on network side and DH485 or DF1 on the PLC side. Only one network card is allowed in a Toughpanel.

More Features

Freely Overlap and Size Objects

You can take any combination of the Toughpanel objects and overlap them on the screen, which means an operator can stick to one screen without having to navigate through several screens to execute a specific operation. Also objects on screen are not restricted to the touch cell grid and can be resized freely.

Multiple Languages and Unicode

The panel can be programmed to give the operator the language of their choice.

Multiple languages are supported (up to nine) .While configuring the panel, a "language button" can be created to let the operators select the language that is the most comfortable. For example, one operator can change the whole screen to Spanish by pressing a "Spanish" button. The next operator can change the whole screen to English by pressing an "English" Button. And so on...

Unicode feature allows the programmer to further enhance the multi language capability by providing means to display text in any language supported by "Unicode". Microsoft Windows has this feature built-in and needs to be activated for its use. You can select the language input, size of font and type of font for the following objects:
1. TextEntry
2. IndicatorButton
3. IndicatorLight
4. Multi-State Indicator

Unicode Universal Language

Unicode objects are based on the Unicode Character Encoding System. There are four different types of Unicode Objects- Unicode Text, Unicode Indicator Lights, Unicode Indicator Buttons and Unicode Multi-state Indicator. These objects are exactly the same as their non unicode counter part objects except with an ability to use international languages..

What is a Unicode System?

It is a character encoding system and can be used to create and place multilingual text using any font/script available on your PC.

Why use Unicode Text object vs. Static Text object?

Static Text object allows the user to display static text on a screen in only one custom font for Toughpanels with pre-set sizes of 6x8, 8x16, 8x32 etc.
Whereas with Unicode Text object, users can use any font in any size already installed on the user PC. Unicode Text object also allows the user to enter static text in any supported International Language including complex script (e.g. Chinese) and right-to-left languages (Thai, Arabic etc).

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Tough Panel ™

More Features

Built like a *smart* Tank

Alarms and Password Protection

Toughpanels offer comprehensive alarming tools, allowing you to trigger alarms based on events (Bits) and values (registers), with, the values being monitored for a variety of conditions (in/out of range). The alarm history also stores details and counts and all this information can be printed or logged. Also Toughpanels offer the flexibility of not only password protecting your alarms but also every object.

Eight levels of password security for every input object.

Real-Time Animation Objects

Great for the machine operators to view and understand the tool motion, machine status or the whole process in real time.

Single Position

Single position animation allows you to display a sequence of images at a fixed location on the screen. The images in the animation can be updated either periodically, using a numeric tag, or when a discrete tag changes state.

Multi Position

Multi position animation allows you to display a sequence of images at different locations on the screen. The images in the animation can be updated either periodically, using a numeric tag, or when a discrete tag changes state.
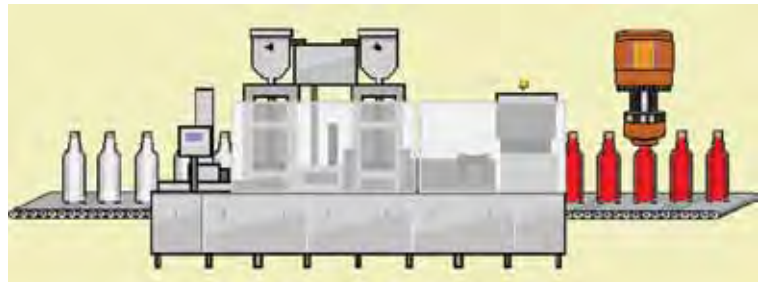
Multi-function Button

The multi-state indicators allow you to visualize process conditions, such as three states of a traffic light. Toughpanel also offers bitmap-based multi-state indicators, where you can use up to 256 bitmaps to indicate 256 different conditions. The bitmaps allow you to design very intuitive screens.

Unique Features

Because of the use of vector based graphics and a dedicated processor, Toughpanels are universally recognized as having the fastest response to touch inputs, typically less than 3/4 of a second even with complex screens. This means no waiting and also less wear on a panel from operators pounding an object on a screen waiting for a response.
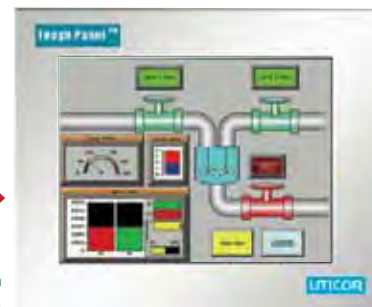
Switch between screens in less than a second!

TYPICAL 0.75 SEC and not 2-3 sec. like others

Dazzling Graphics & 256 Colors

Though extremely easy to configure, these touch panels are much more than push-button & pilot-light replacements. These panels provide high-end panel components & compelling real-life graphics that you would normally expect only on an expensive PC-based software HMI. Additionally, with 128 colors, blinking abilities, and extensive bitmap support, the unit offers dazzling graphics that would please any discerning user.

Pre-Built Panel Components (copyrighted)

In addition to pushbuttons, indicator lights, numeric entry and displays, the PowerPanel offers panel components such as Analog Meters, PID Faceplates, Bar Graphs, Trend Graphs, Alarms, Recipes, Radio Buttons, Thumbwheels, a variety of Switches, and a rich library of Bitmaps.

Also, the user can select from a palette of 128 rich colors for all these components. Each color can be selected to blink in order to create components that will grab the operator's attention.
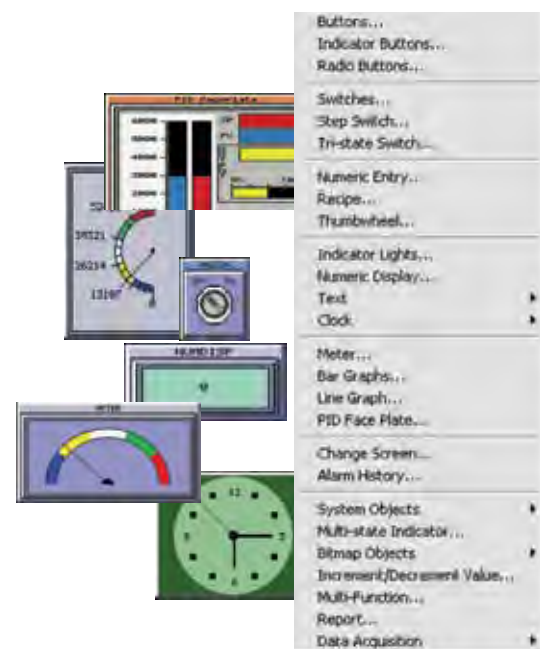
Wide Range of Data Entry Tools

The Toughpanel also comes with a wide range of data entry tool

allow an operator to easily enter both text or numeric data.
• A pop-up ascii keyboard, allows operators to enter part numbers and/or leave messages on the panel for another operator.
• A pop-up numeric keypad allows operators to set passwords, reset setpoints and other data variables.
• Don't like numeric keypads, no problem, we also support pop-up thumbwheel switches, just like those old mechanical one's.

POP-UP Keypad allows you to enter data into a pre-defined PLC register.

POP-UP Electronic Thumbwheel emulates a mechanical thumbwheel switch.

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Tough Panel ™

Unique Features

Alarm data can be set up in alarm reports. If an alarm occurs, an active alarm appears at the bottom of the screen and the alarm report can be selected to appear on the screen when the Alarm History button is pressed. The operator or maintenance department can view the alarm history, alarm count, and specific details of the alarm. The Alarm detail shows the cause of the Alarm, tag value, hi-low limits and when it was cleared.

Alarms tables do not need to take up operating screen real estate if alarms are not active.

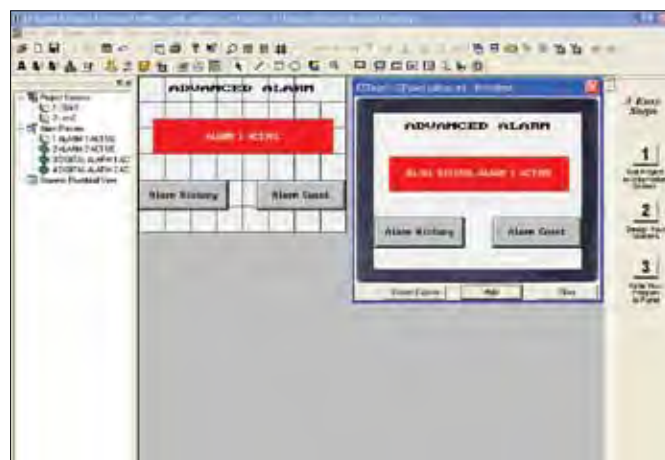The alarms can be triggered from any PLC tag value, either discrete On/Off or set points of variable data. The alarm database can be imported from Excel and exported to Excel. Multiple alarm banners can be displayed on the same page.

Project Update Utility

This simple utility allows OEM's (machine builders, conveyor manufacturers, etc.) and system integrators to make changes to the touch panel program and make these modifications available to the end user without the requirement for the end user to possess the programming software, or to be at all familiar with it.

The OEM sends the new program by email (as a zip file with simple and automatic unpacking) or makes it available on their website for downloading. The end user needs only web access and a laptop computer .

This utility can also be used to send new programs from a central engineering department to various plants.

While we also offer the capability to modify the user programs by sending a new flash memory card, many programmers find this utility a quicker and more direct method requiring less chance for errors by the end-user personnel.

Visibility Tags - Maximun Use of Screen

All objects have the unique ability to appear and disappear based upon discrete and variable PLC tag data.
This allows objects to be hidden for maximum utilization of screen real estate.

Uticor NetView Card has Additional Data Acquisition Feature at No Extra Cost!!
Store upto 2GB of Data on NetView Card

Hot plug-in and removable SD card

Local data storage prevents any missed data due to communication loss between Touchpanel and a PC.

Local data acquisition and storage on SD card that plugs into the RMC card

Collect 20 variables every second to store data for one (1) year

NetView option card that plugs into any Uticor Toughpanel with Proprietary OS and having 512K or more memory allows you to store any number of variables in the Toughpanel in an on-board SD card. The data is stored in a ".csv" file which can be conveniently read by Microsoft Excel. This huge 2GB memory capability will give you the ability to store, for example, 20 two byte variables every second for 1 year. The local storage prevents any data loss due to communication loss between Toughpanel and a PC.

Any Toughpanel with dedicated processor and having 512K or more memory

Ethernet Connector for Remote Monitoring and Control

Plug-in NetView option card

Quick (hot) Insert and Remove SD card

Remove SD Card from Panel, Plug into any SD USB reader and open into Excel file

SD cards have become a common medium of storage in the consumer market. Most digital cameras today have the capability to plug-in an SD card, store your pictures or video in the SD card and transfer to your PC. The Machine/ Process data stored in the SD card can easily be read into your PC the data is stored in ".csv" format which can be easily read into and graphed on an Excel sheet.
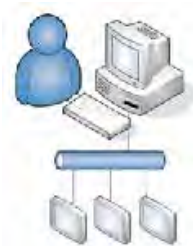
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Log Data For Any PLC Tag

Available on RS232 Serial Port as well as Ethernet

It's as Simple as **1-2-3**
collect, save and store PLC tag data

What is UTDaq?

UTDaq is a data acquisition utility, designed to collect and save tag data from one or more (connected and running) Toughpanels.
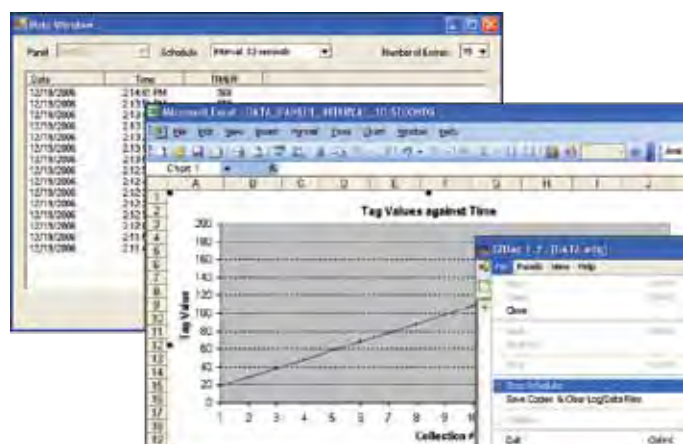
What kind of communication medium is required?

UTDaq works on both **Ethernet** as well as **Serial** communication medium.

How to view data?

Data files are organized in a convenient user selectable format (tab delimited or CSV) and can viewed in excel or any text editor.

How does it work?

1. Run the UTDaq application on a PC to create a Data Acquisition Schedule file.
2. Specify the tags and a schedule for each tag for data acquisition.
3. The Schedule can be set either on the basis of time or an event.
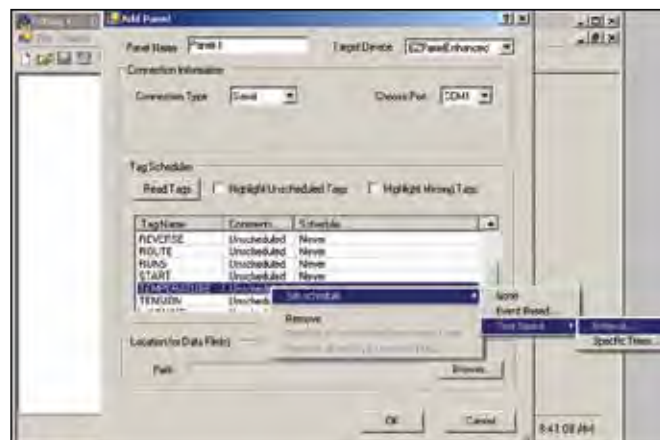
4. While creating the Data Acquisition Schedule file, Panel (from which data has to be collected) must be connected to the PC.

5. Once the Schedule file is created, the application can start collecting and storing acquired data.

6. *For the CE Toughpanels, you have an option to collect the data on the panel itself but to create the Schedule file, you still need a PC.*

Math-logic/Multi-function Buttons, Scripting

Move
Allows to Set a bit,
Reset a bit,
Variable=Constant,
Variable1=Variable2
Math
Absolute Value
Add
Division
Modulo
Multiplication
Negate
Round
Logical
AND
NOT
OR
Shift Left shift Right
Subtract
XOR

Toughpanels offer a sophisticated control, called the Multi-function Object. As the name implies, this Object allows you to perform multiple functions, including Mathematical and Logical operations on PLC data. For example, you can set/reset multiple bits & transfer constants or variables or expressions to tags. Remarkably, this Benefit allows a user to perform up to 20 operations with one Object. Toughpanel also allows you to perform these Multiple functions under the PLC control a very useful feature to offload mathematical & logical computations from the ladder logic to the panel.
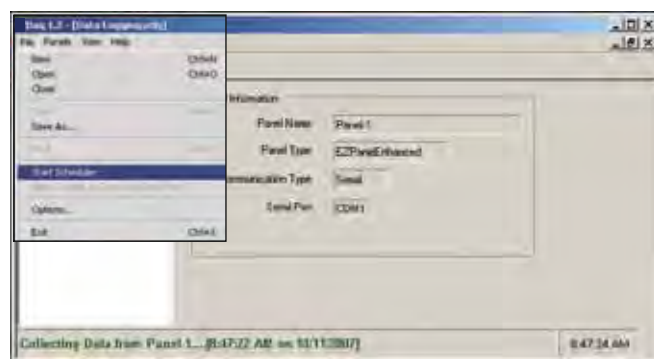
Built like a smart Tank

Unique Features

Toughpanels offer Drop-in replacement for Allen Bradley Panelview and Panelview Plus, General Electric's Quickpanels and equivalent GP series touchpanels from Proface. Program conversion is cost minimal. Panel cut-out and external dimensions are identical. Imput/Output wiring is the same. All Toughpanels have flat panel LCD display. *In addition Toughpanels have many more advanced features such as PC like graphics, flash modules for program storage, recipe and advanced alarm capability, Remote NetView and Control, Data Acquisition and storage, Unicode implementation, Super fast response to touch input, Project upgrade utility, Multi-state indicators, 4000 symbol library, bitmap buttons, dual drivers, scripting, SPC, visibility control of objects, your choice of operating system, database management, syntax checking, On-Line Edit, On-Screen Recipe Edit and many many more....*

**Quickpanels from TCP/GE
GP Series from Proface**

**Panelviews, Panelview Plus
from Allen Bradley**

Implementation Cost

You will be pleasantly surprised to find out that Toughpanels with all this additional features not only cost less, the cost of project conversion is minimal. Whereas typical outside services charge thousands of dollars for redevelopment of project screens Uticor can do the same at fraction of the cost.

Competitor's Panel	Toughpanel
AB PanelView - 5", PV550	Toughpanel, 6" TFT Color
GE Quickpanel - 6", QP Jr. Monochrome	Toughpanel, 6" TFT Color
GE Quickpanel - 6", QP Jr. STN or TFTColor	Toughpanel, 6" TFT Color
AB PanelView - 6", PV600 Monochrome	Toughpanel, 6" TFT Color
AB PanelView - 6", PV600 STN Color	Toughpanel, 6" TFT Color
AB PanelView Plus - 7", PVPlus700 TFT Color	Toughpanel, 6" TFT Color
GE Quickpanel - 9"	Toughpanel, 8" TFT Color
AB PanelView - 9", PV900 Monochome	Toughpanel, 10.4" TFT Color
GE Quickpanel - 10" Mono, STN or TFT Color	Toughpanel, 10.4" TFT Color
AB- PanelView Plus - 10", PVPlus1000 TFT Color	Toughpanel, 10.4" TFT Color
AB PanelView - 10", PV1000, PV1000E TFT Color	Toughpanel, 10.4" TFT Color
AB PanelView E - 12", PV1200, PV1200E CRT Monochrome	Toughpanel, 10.4" TFT Color
AB PanelView E - 14", PV1400E CRT Monochrome	Toughpanel, 15" TFT Color
AB PanelView Plus - 15", PVPlus1500 TFT Color	Toughpanel, 15" TFT Color

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Tough Panel ™

More Features, Simply

Advanced Bitmap Objects

This object displays images within a given frame on the ToughPanel. The object displays one image at a time based upon the bit that is on or the value of a tag. The maximum number of images is limited only by memory size. Our bitmaps use significantly lower memory because of our vector graphics.

Default Bitmap
Bitmap of bit 1
Bitmap of bit 2
Bitmap of bit 3
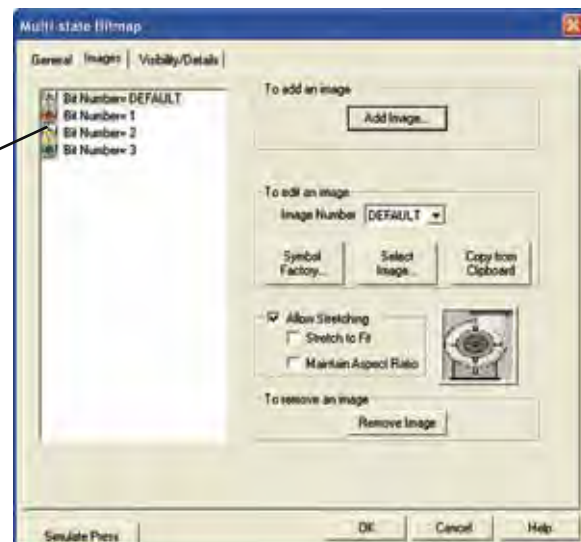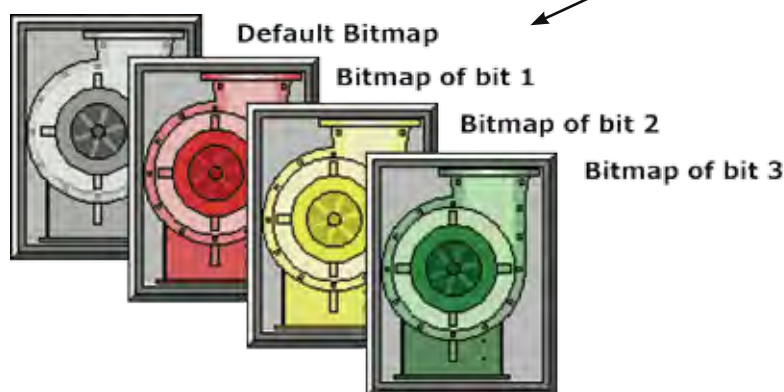
Multi-state Indicator Object

The Multi-state Indicator Object has been created to display pre-programmed messages within a frame on the ToughPanel. Each object has its own message storage and does not need an external database. 256 messages can be displayed based upon the value of a bit or of a tag.

Default Message
Message 1
Message 2
Message 2
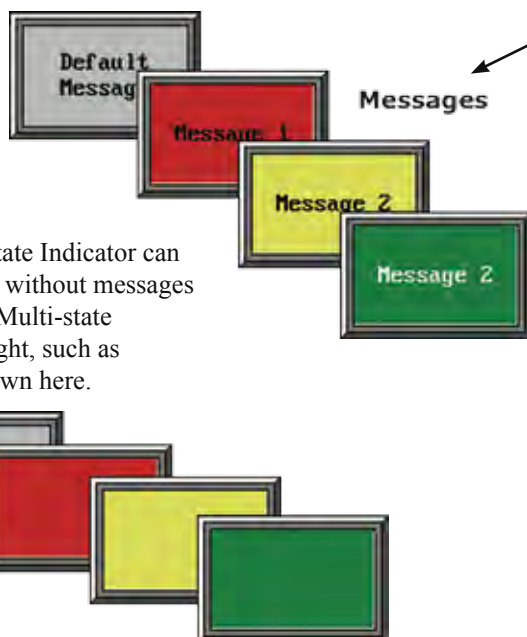
Messages

The Multi-state Indicator can also be used without messages as simply a Multi-state Indicator Light, such as the ones shown here.
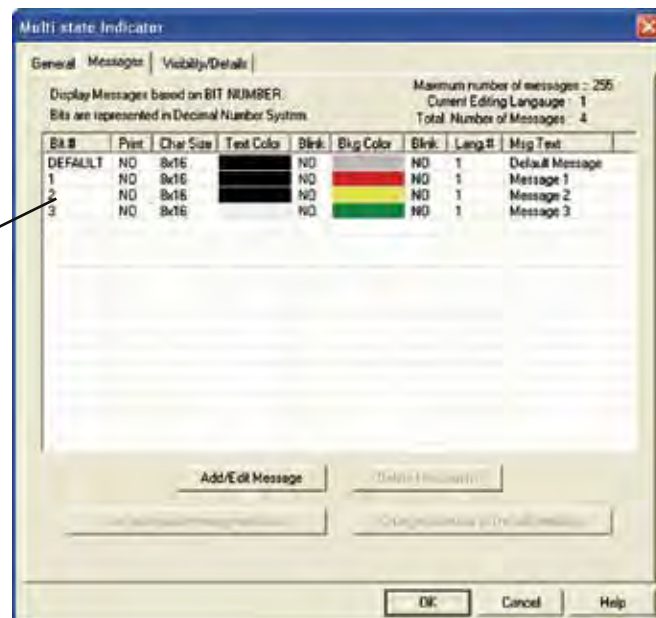
Tough Panel ™ More Features, Simply

Simple yet Powerful 3D Objects that Look Great... Now that's Simple!

Pushbutton
Allows you to write to a tag, and offers 5 types of button states: Momentary ON/OFF, Set ON/OFF and toggle.

Indicator Pushbutton
Combines a regular pushbutton with an indicator light, allowing you to write to one bit and read from a second location, determining what the button displays.

Radio Pushbutton
One button can be on at any given time. When a button is pressed it releases any button that may be on, and becomes the active button.

Switch
Simulate mechanical switches of the same type, e.g.; Throw, selector, slide, toggle, etc.

Step Switch
Simulates a mechanical step switch, allowing simultaneous monitoring & control of up to 4 different bits.

Tri-State Switch
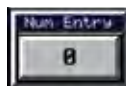This object controls two bits at a time from 2 different tags. If the first button is pressed, both the bits are off. If the second button is pressed, the first bit on and second bit is off. If third button is pressed, the first bit is off and the second bit is on.
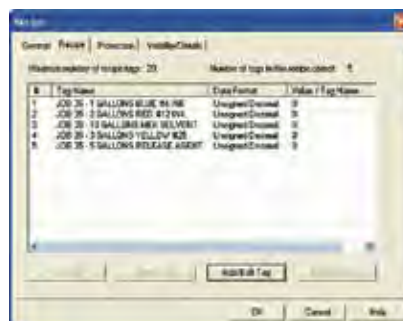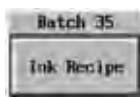
Numeric Entry
Write a value to a PLC register. A numeric keypad will pop up when this object is pressed on the screen.

Recipe
Download up to 20 preset or variable PLC registers per recipe in the EZTouch. This object can also be used to set values in PLC registers to change a process all together!

Thumbwheel
Simulating a mechanical thumbwheel, this pop-up thumbwheel allows operators to scroll each digit up or down, then "ENT" to download entry to the PLC.

Indicator Light
Monitor and display the state of a bit. For example, the indicator light could display the status of a bit linked to a push button.

Numeric Display
Display a numeric tag value on the screen within a frame.

Analog Clock   Digital Clock
Two options for displaying time.
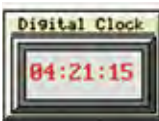
Meter
The meter object is an excellent graphical representation of an analog gauge, such as a speedometer or thermometer. Custom design the color bars for alarm zones, select the number of divisions to be displayed and the values of the meter.

Bar Graph
Allows you to monitor and display a tag value in a bar graph form on the screen. The bar graph can be displayed in various formats and can be programmed to read from top to bottom, left to right, right to left, etc.
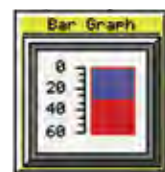
Line Graph
Monitor specific tags and display the value of these data tags as they change over time. You can custom design the legend for X and Y axis and assign labels to major "tic" marks on a chart. This object also has VCR type forward/backward controls to view historical data.
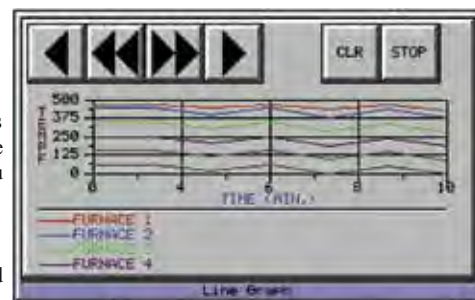
PID Faceplate
Use our PID faceplate for PLC systems capable of PID loops. PID faceplate allows you to display values for three PID loop controlled parameters in the form of bar graphs. These graphs then provide valuable and timely process information. This object also monitors two discrete bits: Mode Bit and Alarm Bit, telling the operator whether the process is in Auto or Manual mode, and if any alarm for the process is active or not.
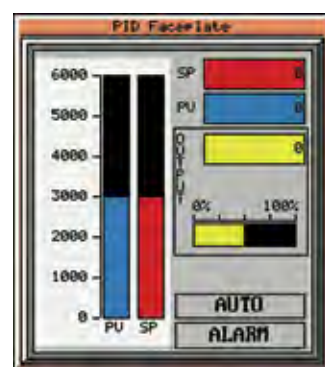
Screen Change
Use this object to jump or change to (display) another screen.

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Alarm History

Use our pre-built Alarm History button to show Alarm Count and Alarm History with one touch of a button. Alarm History displays all the alarms triggered sequentially with the most recent one right on the top, whereas Alarm Count displays the exact number of times a certain alarm has been triggered. Use this great preventive maintenance tool to replace any components that need to be changed. Any time an alarm is highlighted and selected, it will show you all the details that you'll ever need to know including the time it was triggered, the time it was cleared, date stamp, upper and lower limits along with the limit that tripped an alarm.

Multi-state Indicator

Display pre-programmed messages within a frame. Each object has its own message storage and does not need an external message database. Up to 256 messages can be stored, and the one message that is displayed is based upon the value of a bit or a tag. Messages can also embed data variables. In addition, this object can be used as an indicator light, displaying only colors without messages.

Increment/Decrement Value

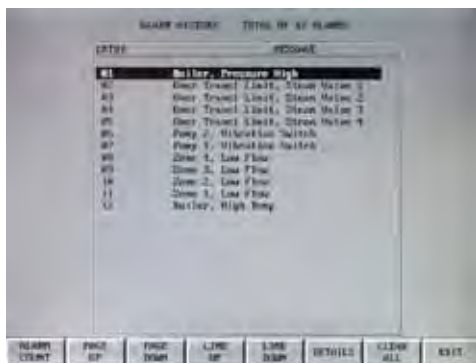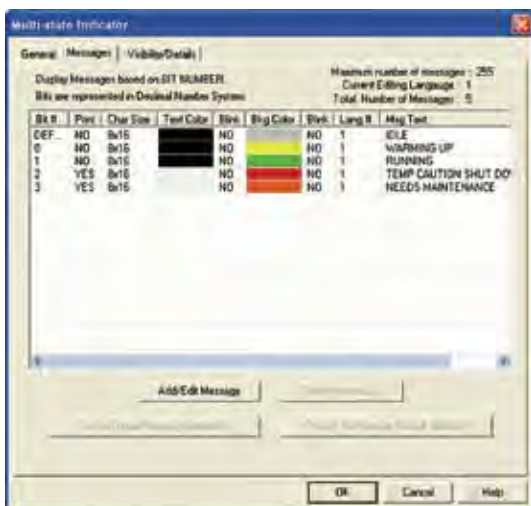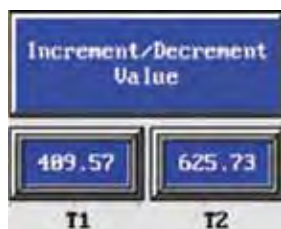This button allows addition or subtraction from a value using two predefined tags and a pre-programmed value. Once pressed, this object will read the value from the first tag, add/subtract the value defined, and write the new value to the second tag.

Static Text

Place text anywhere on the screen to provide information, screen description, etc. As with any other object, you can fully customize the colors and size, choose whether to display a frame or not, and whether or not you want its background to be transparent.
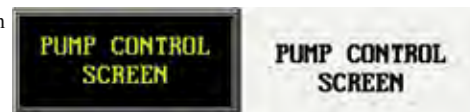
Trigger Text

This object monitors a bit to display different text strings for "ON" and "OFF" conditions. This would be used in applications where you want to provide a message or a description of the process or condition.

Lookup Text

Similar to the Multi-state indicator object, create a Lookup Text object to display pre-programmed messages within a frame on the screen. The difference is these messages are stored in the "Message Database" which acts as a global database for any lookup text object to reference throughout the project. A value corresponding to the tag name is the message number that will be displayed inside the frame. Messages are numbered from 1 to 999, so if the value corresponding to the tag name is 10 for example, the message number 10 will be displayed.

Dynamic Text

The Dynamic Text object will allow you to display the characters from ASCII values stored in a Tag. The tag will read a block of registers in the PLC. Each 16-bit register in the PLC can contain 2 ASCII characters. The maximum number of PLC registers in the block is 20 (a maximum of 40 ASCII characters). This object is typically used for displaying part numbers, VIN numbers, or production numbers. Dynamic Text is triggered by a bit Tag in the PLC. You choose whether the Text is triggered by the bit when it is in the ON state or the OFF state. The Dynamic Text object will then display a text string that is programmed in the PLC.

Text Entry

The Text Entry object, when pressed on the panel, brings up a character entry (alphanumeric) keypad. This allows the operator to enter text up to 40 characters to send to a tag assigned to an address in a PLC.

It has many uses, some of which may be: to send part numbers or production numbers to a PLC, or to send a message to a PLC that will, in turn, route it to one or more plant floor message display(s), such as EZMarquee.

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Adjust Contrast

Use the Adjust Contrast object to place a button on the EZTouch screen that gives you access to the panel's adjust contrast feature. Use the UP and DOWN arrows that appear on the bottom to adjust the screen contrast.

Increment/Decrement Hour

Place an object on the screen that allows you to adjust the hour (up or down) of the internal Real-time clock.
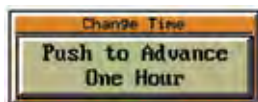
Multi-Function Math/Logical Operation

The Multi-function Object allows you to configure a button, that when pressed, will perform a Boolean or Arithmetic operation using two tags and will store the result in a third tag. The operations supported are + (ADD), - (SUBTRACT), * (MULTIPLY), / (DIVIDE), % (MODULO), ~ (NEGATE), ll (ABSOLUTE), (ROUND), &(AND), l (OR), ~l (XOR), ! (NOT), << (LEFT SHIFT), >> (RIGHT SHIFT), and (MOVE).

Activate Screen Saver

Place a button on the screen that enables you to activate the panel screen saver, to lengthen the longevity of the panel.
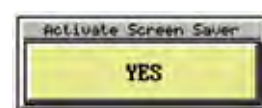
Select Language

This object allows the operator to change the language by pressing the button on the panel. Text that has been programmed for that language will convert to the language that the operator selects.

Statistical Process Control (SPC)

Toughpanel can perform a variety of Statistical computations on the data stored in the FIFO, which is useful for SPC (Statistical Process Control).

The Toughpanel performs and displays the following computations:
• Mean or X-bar   • Min-Max
• Median   • Mode
• Range   • Cpk
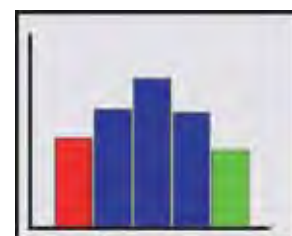
uWin ⁰⁸ Programming Editor allows you to create Dynamic Bitmaps, Multi-state Bitmaps, Button Bitmaps, and Static Bitmap Objects in a breeze.

There is a built in library of 4,000 objects available for you to copy and paste directly to a project screen and use them in any arrangement or position them just the way you like.

Static Bitmap

A static bitmap lets you simply display a bitmap which can be resized within the editor and stays static on a screen, e.g. a company logo.

All bitmaps can be imported, copied from the clipboard, or pulled in from the symbol factory (as shown to the below) and the EZTouch supports the following formats: .bmp, .wmf, .emf, .gif, .jpeg, .jpg, and .ico.

The Symbol Factory's 4,000+ symbols are available to all bitmap objects in the uWin ⁰⁸ Programming software.

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Bitmap Button

The Bitmap Button object allows the use of bitmaps for the ON/OFF states, instead of text or colors. For example, you could place a throw switch and static text labeling on/off states. When the operator presses the switch, the bitmap is replaced with the OFF state bitmap, showing the switch down. This is a simple toggle between ON/OFF states. You can also have buttons stay ON or turn OFF only when the operator is pressing the button, as shown farther right. There is even one more option in which a button, once pressed, can only be turned ON or OFF by a non-HMI source, like a PLC.

ON   ON

OFF   OFF

OFF
(not pressed)

ON
(pressed)

Dynamic Bitmap

A Dynamic Bitmap object, while not an interactive button, can show a dynamic visual representation of a process. Simply select a bitmap to represent the process running and another to represent the process not running, as the ON/OFF states of the bitmap.

For example, if your process uses a pump, and you want a visual representation of when the pump is on or off, then select the dynamic bitmap object. Click the symbol factory button from the On Bitmap section of the dialog box to access the symbol factory. After selecting the pumps category from the list on the bottom left and then the desired pump, click Options. This gives you the ability to change the object's shading, color, orientation, etc.
When finished and out of the Symbol Options box, click Copy, which copies the bitmap to the clipboard. Then click Copy From Clipboard. This places the symbol into the object's On Bitmap state. Repeat these steps for the Off Bitmap, and you are done!

Multi-state Bitmap

Similar to the Multi-state Indicator, this object displays predefined bitmaps instead of messages. Choose up to 16 different bitmaps to represent various conditions of a process. The bitmap shown is based on the value of a bit in a word or a word address. The example below shows how an operator would know the condition of the machine based on the colored bitmap which is displayed.

Off or Idle

Warming Up

On or Running

Caution or Malfunction

Down for Repair or Needs Maint.
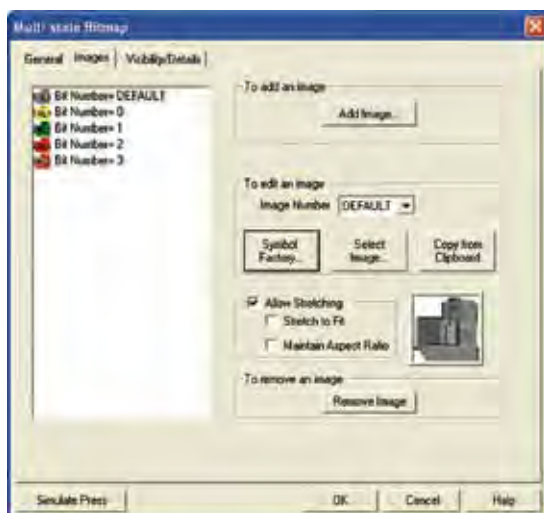
Tough Panel ™ — Communication Ports, Memory...

Toughpanel with Dedicated Processor

Flash Card & Flash Firmware

Flash card module can be used to back up the user program and provide program portability. Flash firmware allows you to quickly upgrade the firmware in the field. 512K, 1M or 2M flash modules are available.

Flash memory location
RAM memory location
Battery

Connector
for network interface or
other option cards
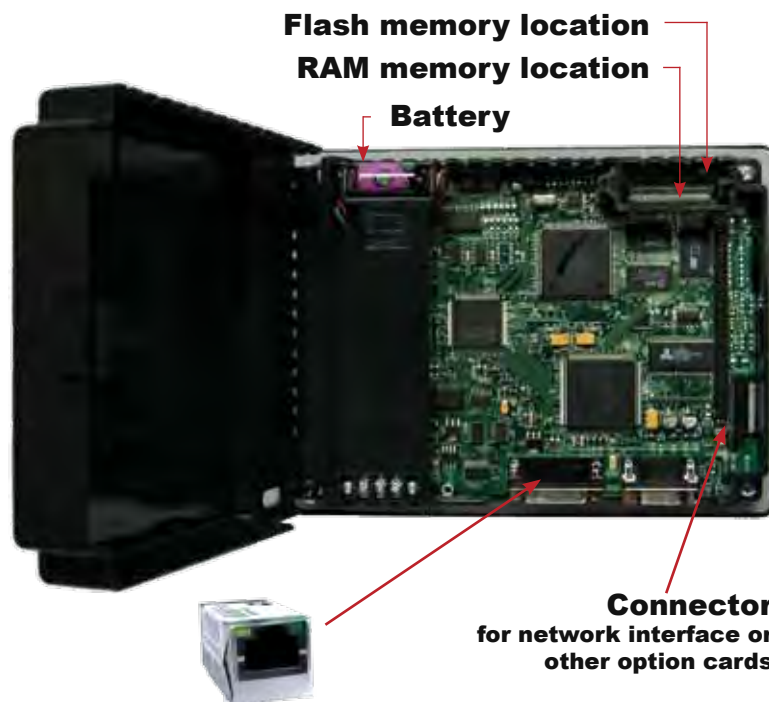
RJ45 Connector
in place of 15-pin D-Sub for Universal Ethernet models

Memory Types

Store user program in the battery backed RAM memory or a Flash memory card is required to maintain the program if battery power is lost.

Power Connector   PLC Port   COM1 Port
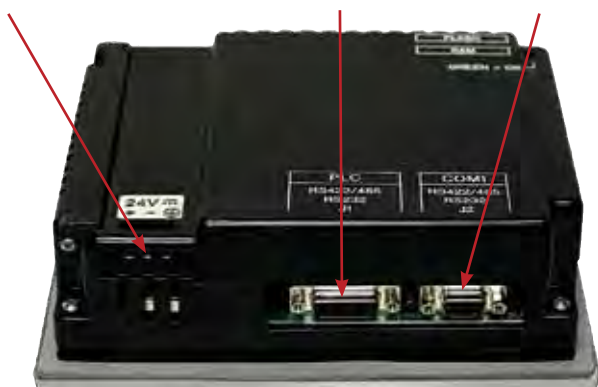
RAM memory card installed

RS232 and RS 422/485 Ports

Com1 is RS232 which can be used for both PLC communication or programming the panel from a PC. RS 422/485 is an auxiliary port that can be used for PLC communication or connection to another device like a barcode printer

Additional RAM

512K or 1MB RAM modules are available for memory expansion sometimes recommended for bitmap extensive larger screens.

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Toughpanel with Windows CE Processor
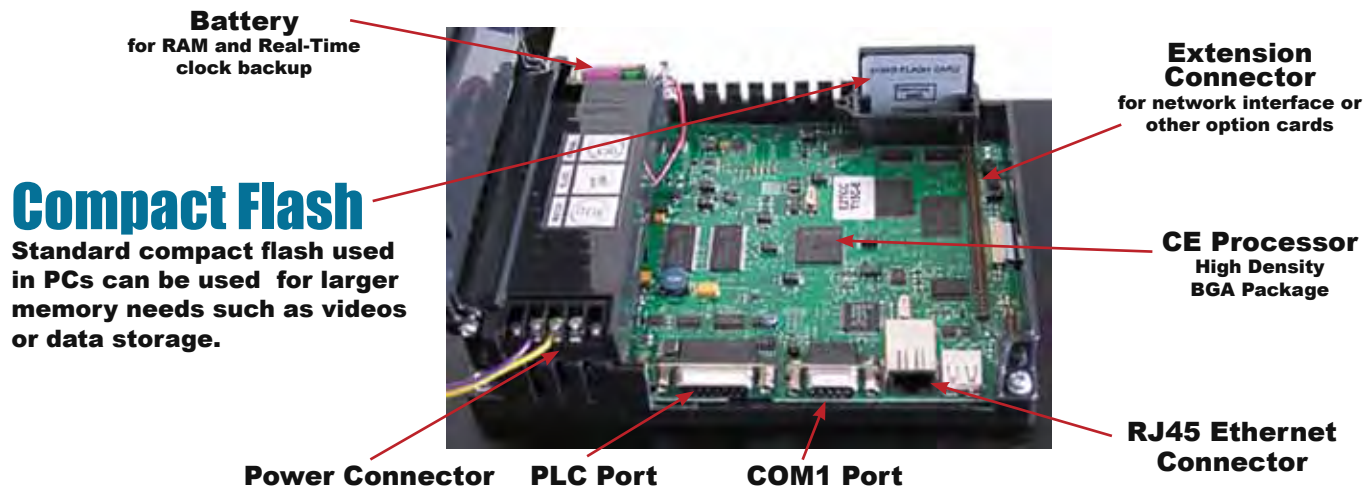
Battery
for RAM and Real-Time clock backup

Extension Connector
for network interface or other option cards

Compact Flash

Standard compact flash used in PCs can be used for larger memory needs such as videos or data storage.

CE Processor
High Density BGA Package

Power Connector   **PLC Port**   **COM1 Port**

RJ45 Ethernet Connector

RS232 and RS 422/485 Ports

Com1 is RS232 which can be used for both PLC communication or programming the panel from a PC.Com 2 is RS422/485 is an auxiliary port that can be usedfor PLC communication or connection to another device like a barcode printer

Ethernet Port

Ethernet port can be used simultaneously for communicating to PLC, programming the panel, UTDaq and for NetView and Control.

All Toughpanels have Conformal Coating as a Standard

AVG, Uticor and Autotech produce a number of products such as Autotech's legendary Digisolver which has Epoxy potting. All Toughpanels have a conformal coat on its Printed Circuit Boards which increases the life of the product by protecting inner circuits and components from moisture, salt spray, aggressive chemicals and vapors. Conformal coating also protects the Toughpanel from airborne particles and dust which make Toughpanels ideal for rough environments such as found in the tire, mining and metal industries.

NetView and Control (NVC) option Card for Toughpanels with Dedicated Processor

Available on any Toughpanel with dedicated processor and having 512K or more RAM and Flash memory

Plug-in NVC option card

Ethernet Connector for Remote Monitoring and Control

Quick Insert and Remove SD card

Uticor Drop-in Replacement Selection

Tough Panel ™

Allen Bradley Panels	GE Quick Panels	Uticor Toughpanels
PV550 6" STN Color		UTP-06TC-X-A
PV600 6" STN Color	QP 6" Monochrome or Color Series	UTP-06TC-X-A
PVPlus 700 7" TFT Color		UTP-06TC-X-A-PVP700
	QP 9" EL/Monochrome	UTP-08TC-X-A
PV 900 9" EL & Color		UTP-10TC-X-A
PV 1000 & 1000E 10" TFT		UTP-10TC-X-A-PV1000
PVPlus 100010" TFT Color	QP 10" Series	UTP-10TC-X-A
PV 1200 12" CRT		UTP-10TC-X-A-PV1200
PV 1400E 14" CRT		UTP-15TC-X-A-PV1400
PVPlus 1500 15" TFT		UTP-15TC-X-A

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Tough Panel ™

Part Numbers and Specifications

How to select Part Numbers and Order ?

$$\underset{1}{\underline{UTX}} - \underset{2}{\underline{XXXX}} - \underset{3}{\underline{X}} - \underset{4}{\underline{X}} - \underset{6}{\underline{XXXXXX}} - \underset{7}{\underline{X}}$$

1 Choice of Operating system,
    P for Dedicated/Proprietary,
    C for Windows CE®

2 Size of Display,
    04 for 3.5", **06** for 6",
    08 for 8", **10** for 10",
    15 for 15" display

3 Type of Display,
    MG for monochrome gray only
    (4" only),
    TC for TFT Color
    S - Serial Communications only,
    TFT, 6" & 10" only, no options.
    SE - Serial plus Ethernet Comms
    TFT, 6" & 10" only, no options.

4 Optional Driver/NetView card
    0 - Standard, RS232 and RS422/485
    ports, all serial drivers
    C - Mitsubishi CCLink*
    CN - ControlNet (Allen Bradley contrologix)
    D - DeviceNet*
    E - Ethernet Modbus TCP/IP, Ethernet I/P, Uticor I/P, available only on
    4" and 6" models (except 6" PV700)
    H - DH+ and Remote I/O
    I - Ethernet Modbus TCP/IP*
    M - Modbus Plus*
    N - Netview-Control and Data storage*
    P - Profibus*
    U - Universal Ethernet (not required when
    selecting C in Field 1)
    * Note: optional network drivers
    C, D, H, I, M, P, U and Netview option **N**, are
    available only on 6" PV700, 8", 10" and 15"
    models. Allowed in item 4 is a **UN** model
    for **UTP** panels only.

5 Bezel Material,
    A for Aluminium,
    S for Stainless Steel

6 Special Bezel,
    Ø : **Standard Tough Panel** (10" Tough Panel = PV900)
    PV700 for PanelView Plus 700 (6" Tough Panel only)
    PV1000 for PanelView 1000 or 1000E (10" Tough Panel only)
    PV1200 for PanelView 1200 (10" Tough Panel only)
    PV1400 for PanelView 1400E (15" Tough Panel only)

7 Outdoor High Bright option
    H - High Bright outdoor high bright options only.
    Available in 5.7" and 10" TFT.
    0 - Normal Brightness.

Toughpanel Bezel Dimensions and Panel Cut-Out

Model Number	Panel Width	Panel Height	Panel Cut-out (W)	Panel Cut-out (H)
UTX-04XX-X-X*	152 (5.98")	122 (4.80")	132 (5.20")	102.4 (4.03")
UTX-06XX-X-X*	170.5 (6.71")	137 (5.39")	155 (6.10")	123.5 (4.86")
UTX-06TC-X-X-PVP700	246 (9.69")	179 (7.05")	220 (8.67")	154 (6.08")
UTX-08TC-X-X	274 (10.79")	216 (8.50")	259 (10.20")	201 (7.91")
UTX-10TC-X-X	317.5 (12.5")	241 (9.48")	305 (12.00")	224 (8.81")
UTX-10TC-X-X-PV1000	370 (14.57")	282 (11.10")	338 (13.31")	257 (10.12")
UTX-10TC-X-X-PV1200	351 (13.82")	342 (13.46")	318 (12.52")	316 (12.44")
UTX-15TC-X-X	416 (16.38")	330 (12.99")	391 (15.39")	305 (12.01")

* - With only serial or Ethernet (E) models

Note -
A - Panel Width, **B** - Panel Height, **C** - Product Depth,
D - Panel Cut-out Width, **E** - Panel Cut-out Height
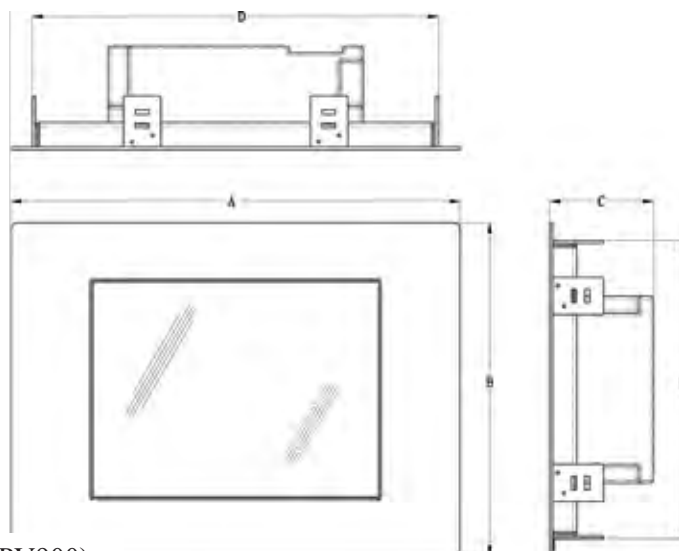
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Uticor Tough panel Selection Guide and Specifications

Uticor ToughPanel 3.8, 3.5 and 5.7-inch Model Specifications

Part Number	UTP-04MG-X-X (No option card capability)	UTP-04TC-X-X (No option card capability)	UTP-06TC-X-X (No option card capability)
Specification	3.8" Monochrome	3.5" TFT Color	5.7" TFT Color
Enclosure	NEMA 4/4X, Class I, Div. II with FDA Compliance, Aluminum or Stainless Steel		
Display View Area	3.14" x 2.39" (79.8 x 60.6mm)	2.87" x 2.18" (72.9 x 55.4mm)	4.57" x 3.44" (116.2 x 87.4 mm)
Screen Pixels	320 x 240		
Brightness (Nits)	140	400	
Life (Hours)	50,000	75,000	
Cell Matrix	8 x 6 - 48 resistive cells		16 x 12 for a total of 192 resistive cells
CPU Type	Motorola Coldfire 32-bit, 40 MHz		
Power Supply Required	24VDC (20-30VDC operating range), 1.5A switching		
Power @ 24 VDC (watts)	12 Watts	15 Watts	16 Watts
Approvals	UL, CUL, CE (Pending only Part number change)		
Operating Temp.	0° to 40° C (32 to 113° F)	0° to 55° C (32 to 131° F)	
Storage Temp.	-20° to 60° C (-4 to 140° F)		
Humidity	10-95% RH, relative humidity		
Electrical Noise	NEMA ICS 2-230 showering arc ANSI C37.90a-1974 SWC Level C Chattering Relay Test		
Withstand Voltage	1000VDC (1 minute), between power supply input terminal and protective ground (FG)		
Insulation Res.	Over 20 MΩ, between power supply input and terminal and protective ground (FG)		
Vibration	5 to 55Hz 3G for 2 hours in the X, Y and Z axes		
Shock	20G for under 12ms in the X, Y and Z axes		
User Memory - System RAM	512 KB		
User Memory - Exp. RAM	None		
User Memory - Flash	1 MB		
Number of Screens	Up to 999 limited by memory		
Real Time Clock	None		
Screen Saver	Yes, Backlight off		
Serial Comunications	PLC port: RS-232/RS-422/RS-485 15-pin D-sub (female); Download/program port: RS-232/RS-422/RS-485 9-pin D-sub (female); Optional Ethernet for PLC or Programming		
Weight	1.8 lbs for Aluminum, 2.6 for Stainless Steel	1.8 lbs for Aluminum, 2.6 for Stainless Steel	2.3 lbs for Aluminum, 3.3 lbs for Stainless Steel

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Uticor Tough panel Selection Guide and Specifications

Uticor ToughPanel 5.7-inch Model Specifications

Part Number	**UTP-06TC-X-X - PV700** (Dedicated OS or CE OS option cards, universal ethernet option)
Specification	5.7" TFT Color
Enclosure	Enclosure NEMA 4/4X, Class I, Div. II with FDA Compliance, Aluminum or Stainless Steel
Display View Area	4.57" x 3.44" (116.2 x 87.4 mm)
Screen Pixels	320 x 240
Brightness (Nits)	400
Life (Hours)	75,000
Cell Matrix	16 x 12 for a total of 192 resistive cells for Dedicated OS, Analog Resistive for CE OS
CPU Type	Motorola Coldfire 32-bit, 40 MHz for Dedicated OS, Alchemy 333 MHz
Power Supply Required	24VDC (20-30VDC operating range), 1.5A switching
Power @ 24 VDC (watts)	16 Watts
Approvals	UL, CUL, CE (Pending only Part number change)
Operating Temp.	0° to 55° C (32 to 131° F)
Storage Temp.	-20° to 60° C (-4 to 140° F)
Humidity	10-95% RH. relative humidity
Electrical Noise	NEMA ICS-2-230 showering arc ANSI C37.90a-1974 SWC Level C Chattering Relay Test
Withstand Voltage	1000VDC (1 minute), between power supply input terminal and protective ground (FG)
Insulation Res.	Over 20 MΩ, between power supply input and terminal and protective ground (FG)
Vibration	5 to 55Hz 3G for 2 hours in the X, Y and Z axes
Shock	20G for under 12ms in the X, Y and Z axes
User Memory - System RAM	512 KB for Dedicated OS and 64MB for CE OS
User Memory - Exp. RAM	512 KB and 1 MB for Dedicated OS and No expansion on CE OS
User Memory - Flash	For Dedicated OS: 1MB or 2MB Flash card for user program back-up For CE OS: 2MB internal for HMI application with slot for external compact flash
Number of Screens	Up to 999 limited by memory
Real Time Clock	Built into panel (PLC clock is still accessible if available)
Screen Saver	Yes, Backlight off
Serial Comunications	PLC port: RS-232/RS-422/RS-485 15-pin D-sub (female) Download/program port: RS-232/RS-422/RS-485 9-pin D-sub (female) for Dedicated OS & additional USB and Ethernet for CE OS For Universal Ethernet models wtih Dedicated OS: 15-pin D-sub is replaced by Universal Ethernet port
Weight	2.8 lbs for Aluminum, 3.8 lbs for Stainless Steel

Uticor Tough panel Selection Guide and Specifications

Uticor ToughPanel 8 and 10-inch Model Specifications

Part Number	UTX-08TC-X-X (Dedicated OS or CE OS option cards universal ethernet option)	UTX-10TC-X-X (Dedicated OS or CE OS option cards universal ethernet option)	UTX-10TC-X-X - PV1000 (Dedicated OS or CE OS option cards universal ethernet option)
Specification	8.2" TFT Color	10.4" TFT Color	10.4" TFT Color
Enclosure	NEMA 4/4X, Class I, Div. II with FDA Compliance, Aluminum or Stainless Steel		
Display View Area	6.73" x 5.10" (170.9 x 129.6mm)	8.31" x 6.22" (211.07 x 158 mm)	8.31" x 6.22" (211.07 x 158 mm)
Screen Pixels	640 x 480		
Brightness (Nits)	330	370	370
Life (Hours)	54,000	50,000	50,000
Cell Matrix	16 x 12 for a total of 192 resistive cells for Dedicated OS; Analog Resistive or CE OS		
CPU Type	Motorola Coldfire 32-bit, 40 MHz for Dedicated OS; Alchemy 333 MHz		
Power Supply Required	24VDC (20-30VDC operating range), 1.5A switching		
Power @ 24 VDC (watts)	18 Watts		
Approvals	UL, CUL, CE		
Operating Temp.	0° to 55° C (32 to 131° F)		
Storage Temp.	-20° to 60° C (-4 to 140° F)		
Humidity	10-95% RH, relative humidity		
Electrical Noise	NEMA ICS 2-230 showering arc ANSI C37.90a-1974 SWC Level C Chattering Relay Test		
Withstand Voltage	1000VDC (1 minute), between power supply input terminal and protective ground (FG)		
Insulation Res.	Over 20 MΩ, between power supply input and terminal and protective ground (FG)		
Vibration	5 to 55Hz 3G for 2 hours in the X, Y and Z axes		
Shock	20G for under 12ms in the X, Y and Z axes		
User Memory - System RAM	1 MB for Dedicated OS and 64MB for CE OS		
User Memory - Exp. RAM	512 KB and 1 MB for Dedicated OS and No expansion on CE OS		
User Memory - Flash	For Dedicated OS: 1MB or 2MB Flash card for user program back-up. For CE OS: 2MB internal for HMI application with slot for external compact flash		
Number of Screens	Up to 999 limited by memory		
Real Time Clock	Built into panel (PLC clock is still accessible if available)		
Screen Saver	Yes, Backlight off		
Serial Comunications	PLC port: RS-232/RS-422/RS-485 15-pin D-sub (female). Download/program port: RS-232/RS-422/RS-485 9-pin D-sub (female) for Dedicated OS & additional USB and Ethernet for CE OS. For Universal Ethernet models with Dedicated OS: 15-pin D-sub is replaced by Universal Ethernet port		
Weight	1.8 lbs for Aluminum, 2.6 for Stainless Steel	4.8 lbs for Aluminum, 6.8 lbs for Stainless Steel	6.8 lbs for Aluminum, 8.8 lbs for Stainless Steel

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Tough Panel ™

Uticor Tough panel Selection Guide and Specifications

Uticor ToughPanel 10 and 15-inch Model Specifications

Part Number	UTX-10TC-X-X - PV1200 (Dedicated OS or CE OS, option cards, universal ethernet option)	UTX-15TC-X-X (Dedicated OS or CE OS, option cards, universal ethernet option)
Specification	10.4" TFT Color	15" TFT Color
Enclosure	NEMA 4/4X, Class I, Div. II with FDA Compliance, Aluminum or Stainless Steel	
Display View Area	8.31" x 6.22" (211.07 x 158 mm)	12.02" x 9.01" (305.28 x 228.96 mm)
Screen Pixels	640 x 480	
Brightness (Nits)	370	250
Life (Hours)	50,000	55,000
Cell Matrix	C16 x 12 for a total of 192 resistive cells for Dedicated OS, Analog Resistive or CE OS	
CPU Type	Motorola Coldfire 32-bit, 40 MHz for Dedicated OS, Alchemy 333 MHz	
Power Supply Required	24VDC (20-30VDC operating range), 1.5A switching	
Power @ 24 VDC (watts)	15 Watts	20 Watts
Approvals	UL, CUL, CE	
Operating Temp.	0° to 55° C (32 to 131° F)	
Storage Temp.	-20° to 60° C (-4 to 140° F)	
Humidity	10-95% RH, relative humidity	
Electrical Noise	NEMA ICS 2-230 showering arc ANSI C37.90a-1974 SWC Level C Chattering Relay Test	
Withstand Voltage	1000VDC (1 minute), between power supply input terminal and protective ground (FG)	
Insulation Res.	Over 20 MΩ, between power supply input and terminal and protective ground (FG)	
Vibration	5 to 55Hz 3G for 2 hours in the X, Y and Z axes	
Shock	20G for under 12ms in the X, Y and Z axes	
User Memory - System RAM	1 MB for Dedicated OS and 64MB for CE OS	
User Memory - Exp. RAM	512 KB and 1 MB for Dedicated OS and No expansion on CE OS	
User Memory - Flash	For Dedicated OS: 1MB or 2MB Flash card for user program back-up. For CE OS: 2MB internal for HMI application with slot for external compact flash	
Number of Screens	Up to 999 limited by memory	
Real Time Clock	Built into panel (PLC clock is still accessible if available)	
Screen Saver	Yes, Backlight off	
Serial Comunications	PLC port: RS-232/RS-422/RS-485 15-pin D-sub (female)	
	Download/program port: RS-232/RS-422/RS-485 9-pin D-sub (female) for Dedicated OS & additional USB and Ethernet for CE OS	
	For Universal Ethernet models with Dedicated OS: 15-pin D-sub is replaced by Universal Ethernet port	
Weight	6.8 lbs for Aluminum, 9 lbs for Stainless Steel	8.9 lbs for Aluminum, 11.9 lbs for Stainless Steel