

Omniflex facts

INTERNATIONAL EDITION

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New Lights - New Heights

The all-new Omni-16c Alarm Annunciator

Omni-16c



By listening to our customers, we've put our world beating annunciator back into the spotlight, this time in the form of an all-new design with a lot of exciting features that have been added as a direct result of market feedback.

The first thing to note is that the Omni-16c has individual windows, which not only look better but also offer the choice of either backlit LEDs or incandescent lamps in the same housing, or side-lit LEDs (using a separate front fascia). The incandescent lamp option has been re-introduced for cost-sensitive applications while LED displays are great for very long life. Legends for the backlit windows are printed out on a laser printer, cut up and placed into the individual windows.

We've also added an integral control pushbutton station which plugs into window no 16 if required, thus saving the need for an external pushbutton station. You can still cascade these pushbuttons between an array of Omni-16c annunciators.

What should really get your attention is the new Modbus Serial Port feature which enables the Omni-16c to plug into any PLC, RTU or DCS using standard RS232/485. In particular the savings for PLC

applications which require such a Serial Display are great: 1) no more I/O module in the PLC and 2) no more logic programming in the PLC as all the logic is built into the Omni-16c Serial Display.

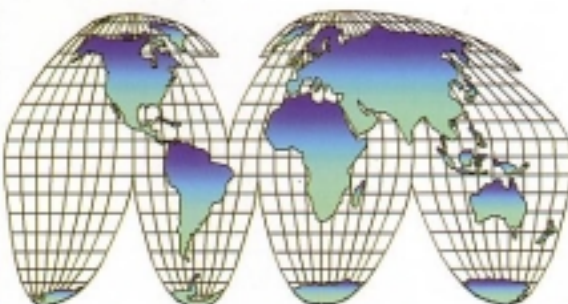
Because the Omni-16c is more intelligent than ever, you can now set it up from your Notebook PC using our standard setup utility to configure timer settings, sequences, group alarm allocations etc for each point individually.

It has all the standard sequences as its predecessor and offers the same specifications for inputs, repeats etc., conforming to all relevant IEC and EN specifications for environmental, safety, EMC and radiation specifications. However a new feature is the built-in repeat relay contacts, not just solid-state outputs and three group alarm relay outputs (one shared with the watchdog relay). There is also an integral horn relay capable of switching 220Vac at 1amp.

The Omni-16c now has its own built-in power supply options which accept either 24Vdc, 48Vdc or 85-264Vac, thus eliminating the need for an external supply.



New Omni-8c inside



www.omniflex.com
WORLDWIDENOW

So you see....it pays to send us feedback. We do listen!



New Omni-16/8c Series...

The Alarm Window Display still plays a vital part of the modern control room and the Omni-16 family now has a complete range of displays for all applications, including use with PLCs.



Omni-16c - New World Beater?



Omni-8c - perfect OEM annunciator

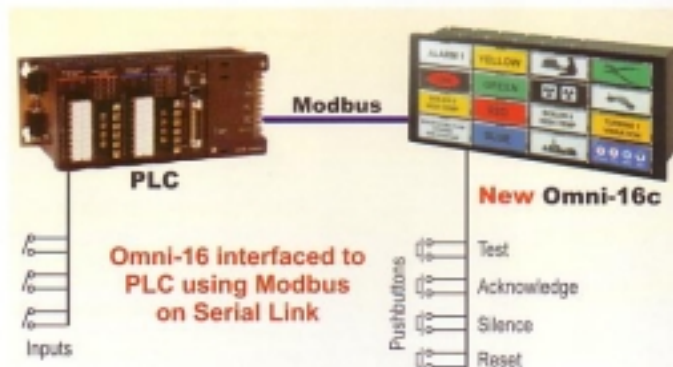
The new Omni-8c is half the size of the Omni-16c, with the same functionality and Serial Display option. It also has optional control pushbuttons which are inserted in place of window No 8. This product is ideal for OEM applications such as Motor Control Centres, RTU in remote telemetry and other smaller machine monitoring functions.

The Omni-8c can be positioned next to the Omni-16c in a single cutout. For both Omni-16c and Omni-8c the display inserts measure a large 70mm x 25mm in size for high visibility in the control room and are available in red, green, yellow, blue or white.

Alarm display windows are still a vital part of the modern control room and demand for alarm displays is as strong as ever, many of which are for use directly with PLCs. The traditional problem with using PLCs is that expense is added to the PLC in the form of an I/O module for the annunciator and the annunciator logic programming which is also required. However, a bigger problem than the cost of programming is that the annunciator logic in the PLC itself burdens the CPU with an unnecessary task overhead.

The solution is the new Omni-16c Serial Display which connects to the PLC via RS232/485 using the Modbus protocol. The PLC simply sends all input statuses (on or off) to the Serial Display which uses its built-in sequence logic to flash the lamps, activate timers (if used), drive the horn output, activate Group Alarms and handle the control pushbuttons. By contrast, using a dumb display (i.e. non-Omni-16) PLC programmers have to write all this code themselves, often falling short of a properly functional system, and having one which is difficult to maintain and expand.

Setup of the Omni-16c can be done from its own DIP switches or from a PC via the serial port and in this way the same setup can be downloaded to multiple Serial Displays. In addition to the savings on cost, programming time and PLC/DCS CPU overhead, the Serial Display option also means greater system reliability.



Field inputs to the PLC are used to flash the Omni-16 Serial Display via a cost saving Modbus link. Thus no additional PLC I/O hardware is required and the Omni-16 is already programmed to handle the annunciator sequences.

Products for Global Applications

Omni-8 μ - our smallest annunciator yet

Full annunciator value in the space of a panel meter

The new Omni-8 μ ("micro") annunciator is mounted in a standard DIN sized panel mounted housing and comes complete with integral pushbuttons, requiring no additional hardware to provide full functionality for smaller applications.

Typical uses include motor control panels, pump monitoring and many RTU applications where 8 points are sufficient for the application. It is ideal for use in restricted areas where panel space is at a premium, requiring only 48 x 96 mm on the front of panel and 190mm in depth not including wiring. RTUs generally need to monitor critical parameters such as battery health, mains health, radio health etc and the Omni-8 μ is ideal here.

The display continues the Omni-16 trend and uses a single laser printed legend on transparent film which is easy to create, modify and duplicate where multiple Omni-8 μ 's are required.

The built-in Test, Silence, Acknowledge and Reset pushbuttons function as other standard Omni-16 annunciators and a group alarm or horn output is provided as a change-over contact for external devices. This G.A. output can be set to one of 4 functions: follow input, follow alarm, follow horn or ringback horn.

The Omni-8 μ accepts 8 separate potential-free inputs which are individually DIP switch configurable for either N/O or N/C operation and the user has a choice of 7 standard alarm sequences which are also DIP switch configurable. Input no 8 can also be used as an external inhibit input to prevent any alarm activity during maintenance.



Omni-8 μ - ideal for MCCs and RTU applications.

Omni-8 μ can be powered by dc (12, 24 or 48Vdc) or ac (85-264Vac) with 1500Vrms isolation provided between the power terminals and the inputs. At only 300g unpacked, the Omni-8 μ annunciator is ideal for smaller applications that require annunciation but otherwise can not afford the space or mass.

It conforms to IEC environmental specifications for vibration, shock, temperature, humidity and also for human safety on electrical parameters. It is protected against EMI and has controlled EMC emissions.



Once again we exhibited our range of industrial electronics products at the 1999 Elenex and Automate Show held in Sydney. While the Omni-16 is the product that most people recognised, a lot of new interest was shown in both annunciator and other product ranges including Maxiflex, OmniWatch and Omniterm, with excellent orders being secured from major industries.

According to managing director, David Celine: "The outlook for business here is excellent and feedback from the two Elenex shows clearly validates our trends to niche markets within the instrumentation sector. Many of our ranges are now well known in industry here, having been marketed since the early 1970's."

SOME OF THE PRODUCTS ON SHOW....



Omni-Watch



Maxiflex



Omni-16 Modbus Interface



Powerterm



Omni-16



Elenex Australia, Sydney October 1999

OPC Server for Conet

Standardized data access for old and new Conet products

Our newly released OPC (OLE for Process Control) Server for Conet, functions with most major SCADA packages on the market, providing you with a standardized access to factory floor data at the Conet level. The good news is that this eliminates the need to write special drivers which can often take months and sometimes don't even perform properly.

While OLE (Object Linking and Embedding) has been available on the PC for a while, nothing has really existed for the process control environment. Therefore OPC, an open-architecture interface was defined by the OPC Task Force comprising more than 170 members

from over 30 countries and includes representation from the largest process control equipment vendors. The result of this effort is a global standard that can be trusted and one that will save time and money.

The Conet OPC Server is installed on the host NT 4 PC and provides access to any Conet product, both old and new, so no upgrades to existing products are required. Multiple clients (e.g. SCADA packages) are able to access data through a single Conet Server or through multiple Conet Servers, providing all layers in the plant with access to information in the format and frequency of choice. For example, SCADA, MES, MIS and individual office workstations can all access data simultaneously

from Conet devices (e.g. Maxiflex, Teleterm) for different applications.

In its simplest form, the server would typically populate a database (e.g. SQL Server) which, for example, could serve data to the production manager using Excel to count widgets or monitor downtime hours directly in a spreadsheet.

The OPC Server acts as a central 'gateway' for client applications by translating the requests into the Conet specific protocol and presenting the data in the format required. Being based on OLE and COM/DCOM processes within Windows, OPC functions across networks transparently to the user.

Modbus NIM Special Upgrade

Network Interface Module now has optional timestamping



Maxiflex Modbus NIM

The Maxiflex Modbus Network Interface Module (NIM) connects to any Modbus Slave device in the plant (e.g. analysers, special equipment) for data acquisition and control. Many such instruments are installed in very remote locations and Modbus has a limited communications distance. However, once the data is in the Modbus NIM, it can be sent over long distance Conet links to SCADA, DCS or PLC.

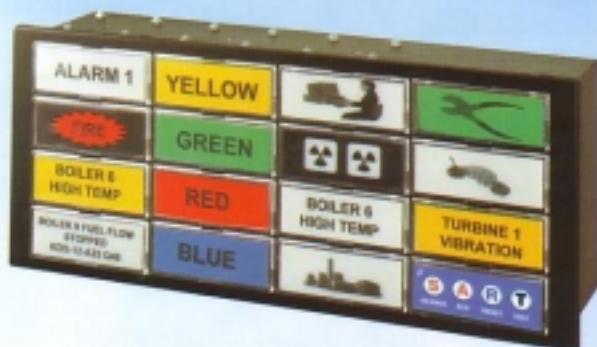
The good news is that is that the Maxiflex Modbus NIM now optionally time-stamps incoming events on the Modbus link to a resolution of 20ms, thus providing a sequence of events record for the SCADA/DCS. This feature alone breathes new life into these older plant instruments and it may

be for the first time ever that operators are able to obtain some meaningful data on screen.

Each Maxiflex CPU can accommodate up to 15 Modbus NIMs, each polling its own independent device in the plant, with no loading on the CPU as each NIM has its own CPU and Data Interchange Tables for storing information. The main Maxiflex CPU then copies the stored data and transmits it via Conet up to the SCADA/DCS, preserving the time-stamped data in the process. The Modbus NIM can also address up to 32 identical slave devices on a single RS-485 link.

From an overall topology point of view, the Modbus NIM operates in the same way as the HART NIM shown elsewhere in this newsletter. Both HART and Modbus NIMs can be used in the same Maxiflex rack.

GET ALARMED!



The all new Omni-16c alarm annunciator gives you the choice of LED or INCANDESCENT lamps in easy, front-access windows that come in a range of colours. It also interfaces directly to your PLC or SCADA via a built-in serial port using Modbus. Now you can have data acquisition and alarm functions at the same time!
So get alarmed - it could show!

The ALL NEW
Omni-16c
- Modbus
enabled with
display choices



AUTOMATION PRODUCTS

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SER 260 GLOBAL MARKET

Petrochem Industry interest in SER260 surges



SER-260 probably the world's most powerful sequential events recorder

While the SER 260 has been deployed in the power generation industry for years, monitoring critical events in both power stations and sub-stations, it has also found a ready market in the petrochemical industry. The SER 260 is a 4000 point sequential events recorder that time-stamps digital events at source to within 1 millisecond and transmits these in order to a SCADA/DCS or special alarm package such as Omniflex's Omni-4000.

The SER 260 has found a ready market in Europe, particularly in the UK petrochemical industry where there is a widespread need for critical events monitoring in many of the processes. With the inputs distributed on up to 32 sub-racks for close proximity to the inputs, the SER 260 has no real equal in this field. Furthermore, with the built-in display, printer and interrogation features, the product is a powerhouse of information and value in the hands of a 'power' user.

The simplicity of it all makes it so attractive to the end user especially for getting time-stamped data up to the SCADA. Each SER front end 32 channel card provides 1500 Vrms isolation, time-stamps its own events and then

passes them to a master queue. From here they move over the Conet LAN to the SCADA, with all events perfectly in sequence.

The SER is experiencing a growing market!

IT ONLY HAS EYES....



...FOR YOU

Omni-Watch The 5-in-1 Machine Monitor

Designed to protect large machinery, OmniWatch provides 5 vital functions in one package. It conditions inputs and shows on-line statuses, provides separate alarm and trip relay outputs, has 4-20mA retransmit outputs, keeps a sequential events recorder log, and is networkable up to 10km using the Conet fieldbus LAN. With 1500Vrms isolation on inputs, T/C and RTD linearization, alarm annunciator sequences, a built-in audible and self-programmability, its little wonder you won't need your own eyes anymore.

Omniflex - over 30 years industrial electronic experience.



AUTOMATION PRODUCTS

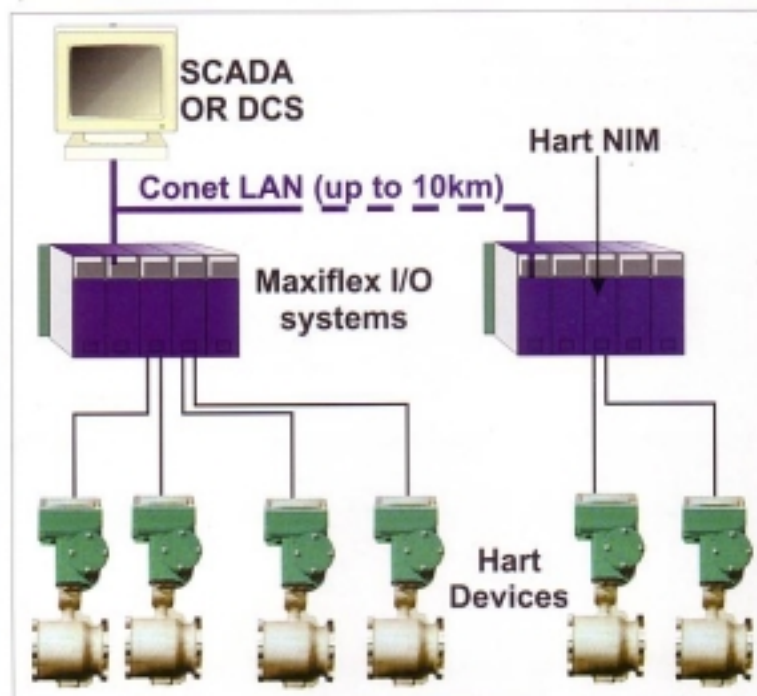
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GLOBAL PRODUCTS FOR GLOBAL APPLICATIONS

MAXIFLEX HART NIM

Network Interface Module connects up to 30 Hart devices...

For the vast number of HART enabled smart devices now installed in plants around the world, we have developed the Maxiflex HART NIM (Network Interface Module) which connects to these devices for data acquisition, control and calibration.



New HART Network Interface Modules (NIMs) can handle up to 30 devices each with up to 15 such NIMs per Maxiflex CPU. HART provides the best of both worlds - a standard 4-20mA current loop together with enhanced digital data acquisition on the same wires.

HART is a de-facto global standard for enhanced digital transmitter communications and petrochemical and other plants typically have thousands of HART devices measuring flow, pressure, temperatures, mass, mass flow and other process variables which are required by the DCS or SCADA for monitoring and control. It uses Frequency Shift Keying to superimpose digital communications at a low level on top of the 4-20mA signal, enabling 2-way communications to take place, making it possible for additional information beyond just the normal process variable to be communicated.

As HART is a Master/Slave protocol, each Hart NIM acts as a Primary Master which provides a permanent host interface for 2 HART networks simultaneously. These could be two single analog (4-20mA) loops or two groups of 15 digital loops operating in Multidrop mode. The NIM provides full 1500V rms isolation to the field to maintain integrity of signals in the presence of ground loops and electrical noise on the plant.

Because of the spread-out nature of many plants, it becomes very expensive to connect HART transmitters to the DCS and therefore many of these remain as stand-alone devices requiring manual readings, settings and regular calibration. Because Maxiflex and Conet offer a low-cost, long distance data acquisition solution, the HART NIM becomes an attractive, cost-effective option to integrate a wide range of instruments into the main process control system.

Each Maxiflex CPU can accommodate up to 15 Hart NIMs, and up to 126 such CPUs (one per rack) can be connected to a single Conet LAN. The solution can therefore be deployed on any size plant.

For ease of use, the NIM is also self-configuring and on power up, searches the Hart networks and builds an automatic inventory of connected devices found. Thereafter various data elements are continuously and automatically read from the devices and stored in the NIM's Data Interchange Table (DIT) for use by the rest of the Maxiflex System and also by the SCADA or DCS.

Visit <www.hartcomm.org> for more excellent information on HART.

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