



SHORTFORM



Omniflex Products



Corporate Overview



OMNIFLEX has been designing and manufacturing electronic products and systems for the automation and control industry since 1965.

Through our world-wide partner network, we specialise in providing solutions to industry in the fields of Remote I/O, RTUs, Data Acquisition, Alarm and Events management, and Process Signal Conditioning Systems. More than 4 decades of experience in innovating products and systems such as these have resulted in a refined range of solutions for managing abnormal and critical events in Industrial processes. These proven solutions are being relied upon every hour of every day by major corporations round the world.

Whether it's four points or four thousand points, there is an OMNIFLEX solution to your need. Hallmarks of these solutions are reliability, flexibility and ease of use, which synergise to become your trusted eyes and ears, peak performing 24 hours a day

collecting data, analysing logical circumstances and providing the appropriate warnings to personnel and other systems.

Building on proven technologies, OMNIFLEX continues to research and develop new frontiers to create products that outperform expectations and provide true added value. Recognising that productivity, human safety and profitability depend largely on products such as these, reliability engineering assumes paramount importance to ensure operation under the most arduous and inhospitable conditions.

An investment in products that carry such a large responsibility requires confidence in our track record and the continued expansion of support. The Omniflex focus over the last decade has been to rationalise its product lines into groups to suit our business focus whilst maintaining growth paths for our existing customer base world-wide. We actively manufacture products in the following areas:



Core Business

Alarm and Events Management

- Alarm Annunciators (IEC61508)
- Remote Displays
- Mobile Alarms “ Silent Sentry”
- Sequential Events Recorders and Loggers
- Distributed Alarm Annunciation – Networked
- Alarm Management Packages for PC
- Integrated Machine Monitors
- Remote Data to Desktop Web-based Services



Remote I/O, Telemetry, Data Acquisition & Control

- Multidrop Point to Point Telemetry Systems on existing plant cable
- RTUs for Data Acquisition & Plant Wide Data Monitoring
- PLC/PAC Control Systems programmable to IEC61131-3
- Remote I/O Systems
- Temperature Monitoring Systems
- Radiological Monitoring Systems
- Cable Networking
- Radio Telemetry
- Cable Saving Signal Multiplexing



Signal Conditioning and I/O Systems

- Signal Conditioning
- Loop Isolators, Splitters and Repeaters
- Limit Alarms / Trip Amplifiers
- Modbus Interface Modules
- Power Supplies / Battery Chargers
- Signal Conditioners for IEC61508 SIL1



Systems Integration & Automation

- Process Automation Controllers (IEC61131-3)
- Remote I/O systems
- Temperature Monitoring Systems
- Radiological Monitoring Systems
- 19” Signal Conditioning Rack
- Sitewide Fire Alarm Monitoring



Alarm & Events Management



Alarm Annunciators (IEC61508 SIL 1)

A range of safety certified field proven (30 years experience) alarm annunciators. This third generation of modular design used on preceding Omni16 ranges has been taken to new levels to create even more flexibility with related savings in costs by omitting options not required or the ability to add them later.

Available in 8 or 16 Point Modules and expandable up to 256 Points with DIP switch or PC configurable for maximum flexibility. These annunciators are SCADA, DCS and PC compatible with options for serial communications.

Also available is the 8 point micro

Alarm Annunciator, the smallest 8 point annunciator available, only 48mm high x 96mm wide! The OMNI30, Annunciator range is a direct replacement for the "RIS UC30" Annunciators.

The Annunciator range covers:

- Integral Annunciators Backlit LED, Incandescent, Sidebar LED
- Remote Logic Units
- Remote Displays
- Serial Annunciators
- Hazardous Area Annunciators
- Micro Annunciators DIN 48 x 96 mm
- Functional Safety Systems
- Modular Systems

Omni16 Annunciators independently assessed for IEC61508 SIL 1



Remote Displays

The Omni-x Remote Displays provide from 8 to 120 points of annunciator display in a stand-alone panel-mount package to the size required. Use with remote alarm annunciator logic such as the Omni16C RLU series for you safety critical alarms, or connect to your PLC or SCADA for operator friendly simple display of essential alarm

information. Available in dual incandescent lamps or ultra-reliable solid state LED backlighting, these displays provide panel indication where no integral alarm handling logic is required. Common positive or common negative switching options are catered for. These displays provide an ideal low cost alternative to individual panel lamps.



Alarms to Mobile Phones with "Silent Sentry"

The TELETERM 'Silent Sentry' is a state-of-the-art Alarm Monitor capable of monitoring a wide range of input types and sending SMS Alarm messages to upon detection of an alarm condition. The Silent Sentry has got 12 direct Binary or Analogue inputs, plus a Modbus port allowing alarms from a variety of sources to be monitored. Up to 64 different messages can be sent

and the Silent Sentry can be configured for up to 10 message recipients, each in one of three escalating priority groups. The Silent Sentry can be connected to your existing alarm annunciator systems, and can even be used to remotely acknowledge alarms using your mobile phone. Simple to integrate with Omni16 annunciator systems or standalone.



Sequential Events Recorders

A discrete low end unit Omnilog is used in conjunction with Omni16 or as a stand alone unit for Sequential Events recording up to 128 points. With better than 1 millisecond for 32 inputs and 4 milliseconds for a full 128 inputs. All events are logged to integral printer. For larger systems requiring better resolution and events streams to SCADA or Databases SER260 or Maxiflex SER is used. SER260 is a 32 - 4064 point sequential event recorder with

1 millisecond discrimination between events, designed for critical plant monitoring applications. Distributed architecture in SER260 or Maxiflex allows multiple outstations and multiple operator display points over a wide plant area while still maintaining 1 millisecond accuracy. Events streams may be routed to SCADA/DCS or Database packages using the Conet Local Area Network and OPC server for Windows.



Distributed Alarm Annunciation – Networked

MaxiLarm is a powerful distributed Alarm Annunciation application on the Maxiflex hardware platform with I/O (analogue or digital) collection points distributed over up to 10km

of twisted pair cable. Events are time stamped to 10 millisecond resolution. Configuration is via PC based set-up program connected anywhere on the network.



Alarm Management with SCADA

Popular PC-based Alarm and Event Management systems accept Alarm inputs from all Conet Fieldbus enabled products via OPC servers. With integrated Analogue and Digital Input Alarms on the same time base accurate Sequence of Events is obtained.

Event streams from Conet (Time and Date Stamped at source) enter the SCADA via OPC server and stored to database. Alarm screens display dynamic alarm statuses while event streams can be viewed as alarm list dynamically or historically.



Integrated Machine Monitor

Pumps, fans, motors need protection in the case of component failure and information for predictive and preventive maintenance purposes can reduce failures and stoppages. Omniwatch logs with date and time stamp trip or alarms for maintenance personnel to view

on-screen. Omniwatch combines analogue signal conditioning with trips, digital process indication, alarm annunciation and sequential events recording in one package to provide the ultimate manned or unmanned monitoring system.





Remote I/O, Telemetry, Data Acquisition & Control

RTUs for Data Acquisition

Maxiflex can be used as Data Acquisition and Control elements for SCADA/DCS systems. No application programs are required for the Remote I/O nodes. All Inputs are automatically scanned, conditioned and made available via the Conet Fieldbus Network presentation layer to SCADA.

Pre-defined data interchanged tables (DITs) are simply accessed to read the Inputs. Outputs are written to the field in the same fashion, simply writing to the Data Interchange Table from SCADA, implementing programless SCADA front ends.



Multidrop Point to Point Telemetry Systems on cable

Modular 16 to 64 Point expandable Telemetry system provides point to point single direction communications on cable. The mode of operation is transmitter and receiver pairs (Tx Node and Rx node) to which expander units are added to achieve 64 points maximum per node. Up to 126 Nodes are allowed on a single cable. The modules are DIP switch configured for Network addresses and baud rate.

Maxitel a Maxiflex RTU based Telemetry Application providing program free Telemetry applications on cable. Signals may be transmitted between two Maxiflex Nodes bi-directionally e.g. Pump remote stop start with feedback application on the same cable. Analogue and digital I/O may be transmitted between the nodes. Up to 126 Nodes may share the same cable each node capable of supporting 240 inputs or outputs or combination of the two.

Teleterm Modular 12 universal I/O systems accommodate small I/O count, point to point bidirectional and pier to pier communications on single cable using Conet or Ethernet.



M2G Integrated GSM/GPRS RTU

The OMNITERM M2G is a state-of-the-art RTU designed to communicate with a wide range of devices and machines with state-of-the-art GSM connectivity.

Everyone is aware of the enormous advances to efficiency and productivity that the latest wireless telecommunications technology and the Internet have brought to our society. With an estimated three times as many machines in the world as people, can you imagine the benefits to you of being able to harness this technology to manage your hard assets as well – regardless of where they are located! “M2M” is the latest buzzword that encapsulates the technology of “machine-to-machine”, “machine-to-mobile”, and “machine-to-man” communications required to make this a reality. “M2M” is an enabling technology in remote sensing and asset management.

Using the capability that “M2M” provides, you need never feel out of touch or out of control again. The Omniterm M2G provides the ideal low cost interface to your assets or processes to provide the control and information that you need to optimise your operations. The M2G can be programmed to integrate with your IT infrastructure, to provide seamless information from across the globe, or just send SMS's, FAXes or emails to stay in touch.



Networking

Conet Omniflex's Fieldbus Network Provides the communications mechanism for Telemetry and Data Acquisition applications. Several Variants of Conet exist for various communications media or applications:

- Conet – Copper Cabling
- Conet/r – Radio Networking
- Conet/p – Serial access to Conet via programming Port
- Conet/s – Serial full duplex Conet implementation –
- Fibre or Copper
- Conet/e – Ethernet TCP/IP

Using DDE and OPC servers Conet may be used by any windows application to acquire and access Conet Data from the field devices.



Cable Networking

Sophisticated Cable Networking can be achieved with Maxiflex with up to 127 Nodes able to share a cable. The Conet Fieldbus Nodes can have application programs running to perform control functionality or running as Data Acquisition Nodes. Any combination of Conet enabled devices can use the Network.



Packet Radio Networking

Maxiflex and Teleterm can be used to implement packet Radio networks Conet/r. Point to point and point to multipoint systems can be implemented. Secure data transmission using spread spectrum radio communication.



Cable Saving

Conet Squeezer, Teleterm and Maxiflex can be used in cable saving applications multiplexing large numbers of signals down a twisted pair cable. The Squeezer system has the capability of 1008 Digital signals down a twisted pair cable. Maxiflex can accommodate 15000 signals down a twisted pair cable. Maxiflex can also incorporate analogue signal and Thermocouples or RTDs.



Configuration Management Software

A suite of Configuration Management Tools are available for Omniflex Products such as the Maxiflex System and Omni-16C Alarm Annunciators. These windows based Software Tools allows configurations to be saved and archived for future use.



Signal Conditioning and I/O Systems



Din Rail Mount Signal Conditioners & Transmitters

The latest “sigma/delta” conversion technology combined with full software configurability makes these products the most accurate and versatile in their class.

TXB – DIN Rail mount configurable universal 4-wire Transmitter

Use the TXB for all your dc signal conditioning needs. This instrument uses easy software configurability without the need for any calibration to set most input and output temperature, voltage and current ranges.

TWT – DIN Rail mount configurable temperature input 2-wire Transmitter

Use the TWT for all your two-wire temperature signal conditioning needs. This instrument uses easy software configurability without the need for any calibration to set all thermocouple and resistance bulb types to any input range.

TWA – DIN Rail mount configurable ac current/voltage 2-wire Transmitter

Use the TWA module to monitor ac current loads and ac voltage supplies. This instrument uses easy software configurability without the need for any calibration to set input range of ac current up to 5Amps ac, or any ac voltage up to 300Vac.

THZ – DIN Rail mount configurable frequency input 4-wire Transmitter

Use the THZ for all your frequency signal conditioning needs. This instrument uses easy software configurability without the need for any calibration to set most input and output ranges. This unit accepts a variety of frequency inputs such as ‘namur’ proximity switches, dry contacts and tacho signals, and produces a dc current or voltage proportional to the input frequency.



Loop Isolators, Loop Splitters & Repeaters

Din Rail Loop Isolators, Loop Splitters and Repeaters

The elimination of ground loops in your analogue 4-20mA signal loops is the key to reliable and accurate measurements. There are OMNITERM products can solve these system problems, whether you just need to isolate a transmitter from its power source, or whether you need to split the loop into two for the addition of data acquisition or monitoring.

LPI – Single Loop Powered Isolator

Use the LPI to remove ground loops in 4-20mA current loops where power is unavailable and there is sufficient spare volt drop in the loop to accommodate the insertion loss.

LPD – Dual Loop Powered Isolator

Use the LPD to remove ground loops in multiple

4-20mA current loops where space is at a premium. Incorporating the equivalent of two LPI's in a single 22.5mm housing, the LPD is useful where power is unavailable and there is sufficient spare volt drop in the loop to accommodate the insertion loss.

LPR – Current Loop Repeater

Use the LPR to increase 4-20mA loop drive capability or add instruments to an existing current loop where 24V power is available.

LPS – Current Loop Splitter

Use the LPS to create two independently isolated current loops from a single output loop. The LPS is identical to the LPR, but has two outputs instead of one.

Modbus Interface Modules

Modbus Interface Modules

The Modbus Interface modules can be used as general purpose digital input or output module from any Modbus network. These units can also be used as a Modbus Master to communicate with other Slaves or to move data from one Modbus Slave to another.

MIR – DIN Rail mount Modbus 16 channel Digital Input Module (ribbon header)

Use the MIR module as a general purpose digital input module from any Modbus network.

MIT – DIN Rail mount Modbus 16 Channel

Digital Input Module (Terminals)

Use the MIT module as a general purpose digital input module from any Modbus network.

MOR – DIN Rail mount Modbus 16 Channel Digital Output Module (ribbon header)

Use the MOR module as a general purpose digital output module from any Modbus network.

MOT – DIN Rail mount Modbus 16 Channel Digital Output Module (Terminals)

Use the MOT module as a general purpose digital output module from any Modbus network.





Limit Alarms / Trip Amplifiers

Limit Alarms / Trip Amplifiers

A range of alarm modules are available from simple limit alarms with manually adjustable set-points to software configurable units capable of rate-of-change alarming direct from the sensor input.

TTB – DIN Rail mount hardware adjustable Dual alarm/trip relay

Use the TTB to monitor a 0-20mA (4-20mA) or 0-10V (1-5V) signal and output two high or low alarm/trips via form C Relay contact.

TTP – DIN Rail mount universal input software settable dual alarm/trip relay.

Use the TTP to monitor any dc instrumentation signal and output two high or low alarm/trips via form C Relay contacts. This instrument uses Omniset configuration software.

TFX – DIN Rail mount maths computation module

Use the TFX to perform specialised analogue computation on 4-20mA and 1-5V Instrument signals.

PAF – AC power supply modules

Use the PAF to power a system of Signal conditioning modules when 24Vdc is not available.

TTT – DIN Rail mount universal input software settable combined dual alarm/trip relay with transmit.

The TTT is a universal input signal transmitter and dual limit alarm relay combining all the features of the TTP and TXB models.

THT – DIN Rail mount frequency input software settable combined dual alarm/trip relay with retransmit.

The THT is a frequency input signal transmitter and dual limit alarm relay combining all the features of the TTP and THZ modules. This unit accepts a variety of frequency inputs such as 'namur' proximity switches, dry contacts and tach signals, and produces a dc current or voltage proportional to the input frequency as well as two high or low alarm/trips via form C Relay contact.

OmniSet Configuration Utility

Most of the signal conditioning devices are configurable via PC. This applies in particular to universal inputs devices where configuration parameters such as thermocouple and RTD types, input ranges or span can be set via the program port on the Omniterm B series device. Input connections are set via DIP switch and the unit options like range and span are set via the OmniSet PC based utility giving infinite flexibility in choosing measuring range, as well as the convenience of setting other parameters for a PC environment. An added advantage of the system is the ability to save the Omniterm B series unit's configuration file for future use.





Power Supplies



Power Supplies

The POWERTERM family of Instrument Power Supplies provides a professional range of products specifically designed for industrial instrumentation applications. Use of carefully selected long-life components and conservative design parameters ensure increased reliability even in harsh

conditions. Features such as universal power input range, DIN Rail mounting, plug-in terminals on some models, built-in LED indication, and typically 50,000 hours design life, make these products suitable for automation and control applications. Available from 1Amp to 5Amp output.



Power Supplies with combined Battery Chargers

Combined Power Supply and Battery Charger system with integrated standby battery management for small uninterruptible instrument supply applications. Just connect mains supply, standby battery and load for an industrial grade standby power supply system. Ideal for RTU's, Data

loggers, Alarm Systems, remote field instrumentation, remote access systems etc. These units provide a complete solution in a single compact package. Add up all the functions and try to find a lower cost, more space efficient solution. Available to suite loads from 0/5A up to 4 Amps.



Dual Voltage PSU/Battery Charger (12 & 24Volt Combined)

The PTL50C-D and PTL120C-D are combined Power Supply and Battery Charger for small uninterruptible instrument supply applications where 12Volts and 24Volts are required. Providing both 24Volts and 12Volts in battery-backed systems can be inconvenient and costly. While 12Volts is available in 24Volt battery systems by centre-tapping the two series connected 12Vdc batteries, until now this has been impractical to use because of the different

charging requirements of the two batteries. The PTL50C-D and PTL120C-D dual voltage chargers now makes this possible by the provision of true split rail battery charging to provide balanced charging to both batteries even when 12Volts loads are tapped from the battery pack. Applications include RTU's, dataloggers, remote field instruments and alarm systems where the requirement exists to power both 12Volt radios and 24Volt instruments.



Systems Integration

Process Automation Controllers (IEC61131-3)

Omniflex provides System Integration expertise and solutions to many industries strongly based on it's own product lines with the Omniflex Range providing a flexible cross functional platform for Automation, Control, Data Acquisition and Remote I/O for DCS systems. The Maxiflex P3 CPU combines PLC (IEC61131), Remote I/O,

Analogue Control, PID Control with Auto Tune and data handling along with a wide range of Network Communication options into a singular flexible hardware and software platform ideal for automation projects. Full networking capabilities from Ethernet down to fieldbus levels allows integration at all levels of plant systems.



Remote I/O systems

Omniflex has accumulated a wealth of experience in interfacing to third party systems providing cost effective from end signal conditioning, data acquisition and control applications for PLC and DCS systems including legacy systems that need to be integrated into

more modern plant environments. Omniflex provides powerful local area networking capabilities with the ability to cost effectively connect plant locations previously deemed to costly to reach.



Temperature Monitoring Systems

Omniflex has earned a reputation for providing quality temperature measurement systems for plant monitoring and control. Fully programmable direct temperature input modules provide high density cost effective temperature measurement capabilities.



Radiological Monitoring Systems

Omniflex provide radiological monitoring systems for applications like PET centers. The Maxiflex system enables data from Harwell, ICAM, Lab Impex Alpha, Beta and Gamma monitors located anywhere within buildings or around larger site areas to be monitored by plant SCADA systems as well as providing REAL-TIME Alarm management and building evacuation logic systems.



Analogue Signal Conditioning and Interlocks

Omniflex supply signal condition interface systems for safety and shutdown interlock applications. DIN Rail and 19" 3U Eurocard based signal conditioning provides high-density reliable precision analogue conditioning and relay interlocks.



Sitewide Fire Alarm Monitoring

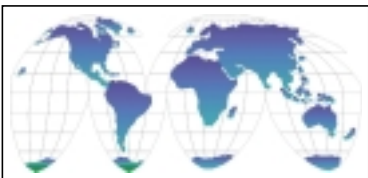
Omniflex provide interface and networking solutions for Site Wide Fire Alarm System Monitoring, specifically Polarity Swap bipolar detectors. Maxiflex network and signal conditioning flexibility allows the integration of these systems in widely distributed environments into single systems.



Solutions by Design



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