



MTN/5032

**Microcontroller-based
condition monitoring system**



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The MTN/5032 is a cost-effective, versatile and easy-to-use condition monitoring system for viewing the health of plant and equipment, raising alarms and indicating when further investigations may be warranted.

Established in 1986, Monitran remains a privately owned company, based near High Wycombe 35 miles west of London.

We manufacture in the United Kingdom and source the majority of our materials and components from selected quality-managed local and national suppliers. This enables us to respond quickly to orders both for standard products and for custom-built solutions.

We believe that customer service is of paramount importance. For this reason our experienced engineers are always on hand to offer advice and assistance in the selection of sensors and solutions to best suit your application.

Primarily a supplier of cost effective sensors, we are steadily increasing our portfolio of project management clients, providing sophisticated turnkey solutions, incorporating vibration sensors with monitoring and display hardware to integrate with other sensor types and customer control systems.

Our team of expert engineers and service specialists are always on hand to help you integrate our products into your specific project and develop control and monitoring systems that are built around you and your needs.

Housed in a stainless steel enclosure this system features a 7.0 inch TFT colour touch screen with a high-performance ARM Cortex-M3 processor. It has an easy-to-navigate menu that enables users to set data sampling periods, alarm threshold levels and delay times on a channel-by-channel basis or across all 96 channels. Integration is also possible via Modbus TCP/IP plus the raw signals from the sensors are made available via BNCs for bearing analysis.

Applications

Vibration and temperature monitoring and logging

Technical

Sensors: 32

Analogue input channels: 96

Sampling resolution: 12 bit

Input range: Dependent on sensor

Screen: 5.0" (178mm) TFT

touchscreen 800 x 480 x 24 bit colour

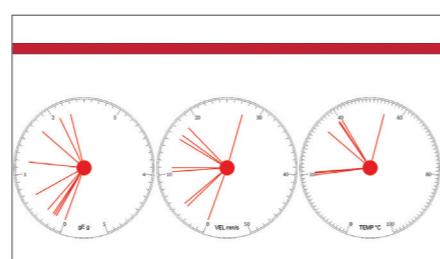
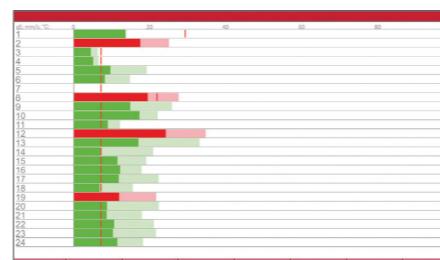
Sample buffer: 96 x 100 samples

Operating voltage: 100-240VAC

Alarms: 96 (user-configurable alarm level and alarm delay)

Enclosure: Stainless steel

Dimensions (enclosure only): 600 x 400 x 210 mm



Above

Screenshots showing the different data display modes.

The MTN/5032 is a redesign of our MTN/5000, a mature and proven monitoring system. The MTN/5000 has been used in a number of high-profile turnkey projects Monitran has undertaken during recent years. A selection of these projects are shown opposite.



Left
MTN/5032 exterior.

Below
MTN/5032 interior.



Hovercraft vibration monitoring system:

The modern fully amphibious hovercraft is unique in its ability to travel over both water and flat land with equal facility and without any interruption during transition between the two.

We were approached with a view to providing an integrated engine and gearbox vibration monitoring system. The brief was to provide real-time condition monitoring direct to the pilot on a fleet of 12 vessels designed for coastguard use.

Our development team was able to combine microcontroller technology with well-established and field-tested sensors to provide a tailored solution to meet this challenging brief.

Protecting crisp production:

Crisp production runs 24/7 and requires a variety of machines with rotating and moving parts, as well as flowing water, hot oils and pneumatics. The servicing and repair of equipment needs to be carefully scheduled to maximise up-time using planned preventative maintenance.

We were asked to design and install a hard-wired site-wide condition monitoring system for one of the UK's leading producers of crisps.

Several elements of the project required our team of experts to build in one location before moving to the next for a factory test prior to installation to work around the site's busy schedule.

Biomass power station:

Biomass power stations quickly generate power in order to meet fluctuations in demand. This particular station was in operation 24/7 and fuel transported to the station's burners via a biomass rail load-out system.

We were approached to develop a bespoke condition monitoring system to protect the rail load-out system of a new biomass power station and to incorporate their current SCADA system.

The team had to factor in the environment, as biomass fuels represent a fire and explosion hazard and the main fuel handling area has been categorised as ATEX zone II. This was a complex project due to the hazardous environment and having to work alongside numerous other contractors and engineers on site.



Monitran is a world leader in the design, development and manufacture of sensors and systems for vibration and displacement measurement.

For further information on our cost-effective and versatile MTN/5032 condition monitoring system please contact us using the details opposite.

Please also contact us or visit our website if you wish to learn more about our transducer ranges, which include accelerometers, velocity sensors, LVDTs and eddy current probes, or wish to discover more about our turnkey project capabilities.

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