

Bently Nevada* Asset Condition Monitoring TDISecure* Communication Processor Overview

fact sheet

Description

The TDISecure Communications Processor is a multi-channel data acquisition device that acquires up to 24 channels of dynamic signals using parallel sampling with bandwidths from DC to 30k Hz, and can acquire an additional 24 channels of process measurement inputs configurable as 4 -20 mA or a variety of DC voltage ranges. TDISecure is used with System 1* Optimization and Diagnostic Software and connects to a System 1 data acquisition computer using Ethernet TCP/IP.

TDISecure can be used to replace legacy Bently Nevada communication processors such as TDXNet, but more importantly can be used in new and current installations to acquire analog signals from any vibration monitor system or plant process points and bring the data into System 1 software—providing you with a plant-wide view into machinery asset condition.

Effective plant asset management, and particularly effective fleet management of machinery assets often depends on remote access using condition monitoring software such as System 1. In most vibration monitor systems, there is a module in the vibration monitor rack that acquires waveform data from monitors in the rack and serves the data over Ethernet to the condition monitoring software. In cases where cyber security is a significant concern, a direct Ethernet connection to the vibration monitor system (the machinery protection system) may not be desirable or even allowed. TDISecure can acquire the analog signals from a machinery protection system, and because it is not providing the protective function, it offers a cyber security solution that is more cost-effective than data diodes.



Key Features

- 24 Dynamic analog signal inputs with parallel sampling and synchronization to a Keyphasor*
- 24 Direct process measurement inputs that can be configured as independent process inputs or can be associated to a dynamic input
- Up to four Keyphasor inputs and ability to directly power four Keyphasor Proximitors
- 24 Discrete Inputs for Channel Alarm/OK
- 4 Discrete Inputs for Rack Alarm status. (one per Kph collection group)
- 4 Discrete Outputs for Rack Alarm Status (one per Keyphasor collection group) for daisy-chaining to other devices
- Waveform data collection configurable using time intervals or machine speed intervals
- Transient (startup/coastdown) waveform collection on rpm changes
 - Independent configuration for increasing and decreasing speed intervals
 - Configuration of two different speed windows to trigger start of transient data capture



- Simultaneous collection of synchronous and asynchronous waveforms (800 line asynch spectrum)
- Waveform collection triggered on Alarm Events from any of the configured Alarm Event sources
 - Collection of pre and post-event data
- Ability to replicate protection system configuration for common channel types; replication ensures data quality and integrity in cases where cyber security prevents direct connection to a machinery protection system
- Ethernet 10/100 Base-T communication to System 1 for configuration, data collection, and data display
- Serial Data Interface (SDI) RS-232 or RS-422/485 for Modbus communication
- Same footprint as legacy Bently Nevada communication processors such as TDXNet

Benefits

Use TDISecure to connect non-Bently Nevada Vibration Monitor Systems to System 1 Optimization and Diagnostic Software.

Connect process variable inputs to TDISecure for viewing, analysis and management in System 1, thereby increasing your level of analytic capacity.

Replace your legacy Bently Nevada TDXNet communication processors and upgrade to our current product for improved waveform collection performance equivalent to our 3500 Machinery Protection System.

If you are facing severe cyber security restrictions that prevent remote access to your protection system, TDISecure may provide a solution. TDISecure connects to a vibration monitor system (VMS) using only the buffered analog vibration signal outputs from the VMS so that even if TDISecure were taken over by a cyber-attack it cannot impact the VMS.



For additional information, please contact your local GE Representative, visit www.ge-mcs.com/bently.com

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