SPRITE i1600

16 CHANNEL DATA ACQUISITION HARDWARE

Multiplexed inputs offer comprehensive condition-based maintenance online monitoring.

The WATCHMAN™ Online System is a custom, permanently installed vibration condition-based monitoring system to automatically test your high-value assets. With SPRITE™ data acquisition hardware and ExpertALERT™ automated diagnostic software, you have access to actionable information to keep your production up and running.

Each SPRITE device is accessed over a local area network to deliver setup information, collection commands, and transmit vibration and process data. Practically an unlimited number of SPRITE devices can be used simultaneously and managed through the WATCHMAN Online System throughout your plant giving you near real-time access to the health of your machines. It can also integrate with portable, walk-around data collection to give you a robust maintenance program.

HARDWARE

- **SPRITE i1600 – 16-channel acquisition device**
  The SPRITE i1600 is a vibration and process data acquisition device which communicates using a standard Ethernet interface. It has 16 multiplexed analog inputs, which means it can be connected to as many as sixteen individual ICP accelerometers with data acquired one channel at a time.

  SPRITE i1600s communicate via a standard 10BaseT Ethernet interface and support UDP/IP and TCP/IP protocols. Each is housed in an IP-66 rated NEMA4X enclosure with a power supply.

SOFTWARE

There are two key software components that make WATCHMAN Online Systems effective for monitoring your assets.

- ExpertALERT™ – Diagnostic software that analyzes machine vibration data, maintains historical records, and reports the findings to your team
- ALERT Online Engine™ manages the data collection and communication on the network with configuration utilities

OTHER REQUIRED COMPONENTS

- Single or triaxial sensors per machine location
- Wired network connection
- System Server (physical or virtual) to host software and database

OPTIONAL COMPONENTS

- Server internet access for virtual database hosting
- OPC client software (scalar information)
- Relay Output Adapter and software for physical alarm notifications
- Can be combined with SPRITE i400 – 4 + 4 wireless data acquisition devices

 For more information on the SPRITE i1600 please visit www.AzimaDLI.com

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Azima DLI

SPECIFICATIONS

Dynamic Inputs:

- Number of Channels: 16
- Ranges: +-10mV to +-10V. 7 ranges (prog.)
- ICP Interface: 3.6mA @24Vdc, configurable per channel
- Other Coupling: AC or DC, configurable per channel
- Voltage Protection: Overvoltage and up to 2000V ESD
- Bias Check: Direct reading of ICP transducer bias voltage
- Anti-Alias Filter: Compound analog filter with roll-off better than 20th order filter with cut-off frequency related to sample rate
- High Pass Filters: Programmable 4th order with corner frequencies 0.5, 2, 10 and 100 Hz
- Channel Crosstalk: -75dB (typ.)
- Amplitude Accuracy: +-2% typical passband
- Harmonic Distortions: -75dB (typ.)
- Integration: One level of hardware integration stop-band edge at 0.5Hz
- Acquisition Modes: As controlled by ExpertALERT and ALERT Online Engine: Continuous, established intervals, set times/day
- Demodulation Function: Azima DLI's proprietary Impact Demod

Triggers:

- Number of Channels: 4
- Coupling: 5-24 VDC, isolated or non-isolated
- Tachometer Speed Range: 0.01Hz-10kHz using once-per-rev (divide-by-N up to 255 available)
- Order Analysis: Phase-lock-loop for order analysis function

Processing:

- ADC: 16 bit
- Sampling Rate: 64Hz to 51.2kHz
- Bandwidth Ranges: 0.15Hz-25Hz to 0.15Hz-20kHz
- Dynamic Range: 96dB (theoretical)
- Block Lengths: 256, 512, 1024, 2048, 4096, 8192, 16384 or 32768 (max length 16384 with pre-trigger)

Outputs:

- Status: 4 LED's indicate system communication status
- Interface Port: RS232, 9600 baud for diagnosis

Storage:

- Memory Buffer: 0.5 MB free space

Mechanical:

- Protection: NEMA 4X, IP66
- Enclosure:
  - Standard: Powder coated mild steel
  - Optional: Stainless steel
  - Dimensions: 400 mm x 300 mm x 155 mm

Environmental:

- Temperature: -20 C to 70 C

Power:

- Power Supply: 7-12Vdc or 24Vdc, or 85-260V ac power supply (optional)
- Power Consumption: 450mA approx. plus 20mA per transducer when powered from 7-12VDC, or130mA plus 5mA per transducer when supplied from 24Vdc

Communications:

- Network: Ethernet
- Medium: 10Base-T
- Cable: CAT5 recommended
- Connectors: Weidmuller terminal connectors
- Speed: 10Mbits/sec
- Isolation: 1000Vrms

Minimum Server Requirements

- Microsoft® Server 2008 or Server 2012 (English/US-Native Operating System)
- Physical server or virtual machine (VM)
- Free disk space: 100GB
- Processors: 2 CPU, 1.8 GHz minimum
- RAM: 4GB minimum
- Microsoft Message Queuing enabled
- Microsoft .NET framework 4.5.1

*Specifications are subject to change without notice