

AZIMA DLI DCA-31™ DATA COLLECTOR / REALTIME ANALYZER

THE DCA-31B™ IS A HANDHELD AND RUGGED DATA COLLECTOR CAPABLE OF CAPTURING A WIDE RANGE OF VIBRATION AND PROCESS DATA.

The DCA-31B is lightweight and small making it easy and convenient to use. It is also rugged and well sealed, suitable for tough industrial or marine environments. The DCA-31B has a backlit color screen for easy route navigation as well as data presentation and interpretation. The DCA-31B comes standard with enough memory onboard (1 Gigabyte) to load large routes that can include hundreds of machines.

The enclosure is well sealed (IP65) so that you don't need to worry about using it in wet or dirty locations. In addition, the DCA-31 offers optional CSA International Certification for Class 1, Division 2, Groups A, B, C & D Hazardous Environments.

DCA-31B FEATURES INCLUDE:

- On screen user assistance
- Spectrum, waveform and overall vibration data
- Harmonic cursor for in-field data analysis
- FFTs up to 12,800 lines for accurate troubleshooting



- Real-time overall vibration, time waveform and frequency spectrum in off-route mode
- Envelope demodulation for bearing fault detection
- Time synchronous averaging (with optional tachometer)

LATEST TECHNOLOGY

The DCA-31B incorporates the latest advances in analog and digital electronics, including a blazing fast X-Scale processor and Motorola DSP to harness the precision and speed of two 20-bit Sigma-Delta A/D converters. The DCA-31B is available in single or two-channel configurations. Should you decide to upgrade your DCA-31B later, only a firmware upgrade is required to enable its two-channel capability. This two-channel analysis upgrade offers faster data collection, cross-channel phase measurement, and orbit displays.



STANDARD FEATURES

- Windows CE™ operating system
- Intuitive hierarchical tree route & off-route data collection format
- Real-time overall vibration, time and frequency
- Envelop demodulation for bearing fault detection
- Sealed to IP 65 rating (dust and splash proof)

OPTIONS

- Single & Two Plane Field Balancing
- Two-channel capability for faster data collection, and orbits
- CSA rated (Class 1, Division 2, Groups A, B, C, D) for explosive environments
- Stroboscope/Tachometer for speed analysis
- Motor Current Analysis
- Temperature/Pressure Monitoring

SPECIFICATIONS

Input Signal Types

- ICP Accelerometers
- Velocity Transducers
- Displacement Probes
- Infrared Temperature Sensors
- Photo-Optical Pickups
- Triaxial Transducers
- Acc/Vel Transducers
- DC Inputs
- Keypad

Signal Inputs

- 3 x ICP, AC Signals, DC Signals
- Tacho from Trigger
- Power in Battery Charge
- Trigger In

Input Channels

- 1 channel: Triaxial ICP™/AC/DC
- 2 Simultaneous (Optional firmware upgrade); Channel 1 - Triaxial ICP™/AC/DC, Channel 2 – ICP™/AC/DC

Input Signal Range

- +/- 40 Volts Max.

Signal

- RMS / Pk / Pk-Pk / dB

Measurement Parameters

- Acceleration, Velocity, Displacement, Demod, Temperature, Phase, Voltage, User Specified.

Measurement Types

- Overall, Spectrum, Time Waveform, Phase, Order Normalized, Spectral Band Alarm.

Transducer Check

- Bias Voltage Integrity

Auto Range

- Yes

Dynamic Range

- >90 dB

Frequency Range

- DC to 40 kHz Max.

AC/ICP

- 0.16 Hz Min.

Integrated

- 0.24 Hz Min.

Filters

- High Pass - 2, 10, 70 Hz
- Demodulated Vibration: 0.6-1.25, 1.25-2.5, 2.5-5, 5-10, 10-20 kHz

Real Time Rate

- 40 kHz single channel

Windowing

- Hanning, Hamming, Rectangular, Flat-top

FFT Resolution

- 100 - 12,800 lines, single channel

Time Block Length

- 256-32,768 samples, single channel

Averaging

- Time and Spectral

Power

- Rechargeable Li-Ion

Operating System

- Windows CE™

Processors

- Main Processor - xScale PXA255 @ 400MHz
- DSP: Motorola DSP56L307

Internal Operating RAM

- 64 Megabytes RAM

FLASH Disk

- >40 (up to 50) Megabytes Flash (internal), 1 Gigabyte removable flash disk

Alarms

- Overall and Spectrum

Physical

- Display - 1/4 VGA, 240 x 320, 3 1/2", backlit color LCD
- Indicators - LED Red-Amber-Green
- Size - 8 in x 5 in x 2in. (200mm x 130mm x 50mm)
- CSA Certification (Hazardous Environments) – Class 1, Division 2, Groups A, B, C & D.
- Drop Test – 6.5 Feet (2 Meters) (Mil Std 810)
- Sealing - IP 65
- Weight - 1.5 lb. (700grams)
- Temperature - -10°C to + 50°C (Operating)
- Temperature - -20°C to + 60°C (Storage)

Optional Accessories

- Transit Case
- Soft Carry Case
- Neck Strap
- Belt Clip
- Accelerometer Cable
- Transducer Loop
- Trigger Input Cable
- Utility Belt
- Spare Battery
- External Battery Charger
- Flash Storage Card

Specifications are subject to change without notice

