MODEL **SDC003**

LANSHARC™ SMART DIGITAL CONTROLLER

- Integral ICP® Sensor Power

- Affordable Digital Signal Processor

- 24 Bit Delta Sigma Analog to Digital Converter

- 20 Hz to 5 or 40 kHz Real-Time Bandwidth Across 4 Channels

- Integral IEEE P1451.4 TEDS Support

PROCESS VIBRATION SIMPLIFIED

The LanSharc™ Smart Digital Controller has been developed as a highly programmable and configurable platform for advanced machine process vibration applications development and deployment. It is designed for applications that protect critical process machinery and systems from either failure or degradation. As such, it combines analog to digital conversion and digital signal processing technology with ample memory and communications resources.

The LanSharc™ package supports two different development environments: Monitor DLL API Library and LanSharc™ Developer Kit. The standard package includes a complete DLL API library that allows the user to easily interface with the LanSharc™ from any C or Visual Basic program. This interface will enable the user to generate stand-alone application software or to integrate the LanSharc™ into a complete monitoring system.

The developer kit allows advanced users to develop proprietary algorithms programmed within firmware for their own use. This kit includes sample firmware source code and a firmware programmer's guide. Combined with user supplied Analog Devices' VisualDSP++™ for Sharc® and ADDS-SUMMIT-ICE, the developer can load these custom algorithms into their LanSharc™ unit.

SPECIFICATIONS

Performance

Inputs

Dynamic Channels	1-4, Vibration or Acoustic Channels, TEDS capable
Static Channels	0–4 Channels, 12 Bit, 0 - 5 volt
Digital	1 Tachometer, 1 Static Digital

Dynamic Inputs

Ranges	± 2.5 V
ICP® Interface	5 ± 1 mA IEEE P 1451.4 support
AC Coupling	-3 dB @ 20 Hz (or -3 dB @ 0.5 Hz)
Maximum Frequency Range	5 kHz or 40 kHz
Channel Crosstalk	< -90 dB
Amplitude Accuracy	< 3%
Amplitude Match	< 1%
Phase Match	5º
Harmonic Distortion	-70 dB
Dynamic Range	110 dB Typical

Static Input

Voltage Range	0 to + 5 V pk
Input Impedance	>100 kΩ
Maximum Frequency	5 Hz
Coupling	DC

Digital Input

Voltage Range	Approx 2 V @ 10-50 mA
Polarity	Any
Drive Current	(10-50) mA
Isolation	600 V

Digital Signal Processing

Primary ADC	24-bit Delta Sigma
Maximum Sampling Rate	128 kHz
Block Length	Application Dependent
Overall Units	Application Dependent
DSP	32-bit Floating Point DSP Processor
Memory	16 MB SDRAM and 8 MB Flash
Microcontroller	8-bit 8051 core Microcontroller

Output

Status	LED's indicate target machine status (3 green, 1 red)
Relay	Solid State, optically isolated 100 volts @ 120 mA (4)
Analog Output	2 Channels, 4–20 mA

Mechanical

Protection	NEMA 4

SPECIFICATIONS (continued)

Enclosure	2 X 4 X 7 inches aluminum
Power	24 VDC, ≤ 150 mA
Environment	Non-incendive Environment with Temperature Varying from 32° to 122° F (0° to 50° C) and 95 % Non-condensing Humidity

Communication

Host Computer	RS-232
Network	Ethernet - TCP/IP

Optional Accessories

SDC003-1H	LanSharc Process Analysis Box, 1 dynamic input channel
SDC003-2H	LanSharc Process Analysis Box, 2 dynamic input channels
SDC003-4H	LanSharc Process Analysis Box, 4 dynamic input channels
SDC003-LF1	LanSharc low frequency option for 1 channel unit, -3 dB at 0.5 Hz
SDC003-LF2	LanSharc low frequency option for 2 channel unit, -3 dB at 0.5 Hz
SDC003-LF4	LanSharc low frequency option for 4 channel unit, -3 dB at 0.5 Hz
SDC003-LAN2	LanSharc hardware option, internal ethernet
SDC003-BEAR	Band Energy Alert Recorder application firmware/software for Model SDC003 LanSharc hardware platform

THE MODAL SHOP
AN AMPHENOL COMPANY

10310 Aerohub Boulevard, Cincinnati, OH 45215 USA

modalshop.com | info@modalshop.com | 800 860 4867 | +1 513 351 9919