

# IHVM-4P

4-Channel Isolated High Voltage & Current Input Module for Daxus® DXS-100 and SmartCorder® DDX-100 Data Acquisition Systems

## MODULE OVERVIEW

The IHVM-4P is a high voltage input module with advanced on-board processing capabilities for the AstroNova Daxus® DXS-100 and SmartCorder® DDX-100 data acquisition systems. The IHVM-4P is ideal for single phase power measurements or 3 phase measurements using two modules.



IHVM-4P for Daxus® DXS-100



IHVM-4P for SmartCorder® DDX-100

## MODULE HIGHLIGHTS

- **4 high voltage inputs (up to 1,000 V)**
- **Multiple input ranges provide maximum resolution**
- **Up to 50 KS/s/ch sampling rate**
- **Built-in digital filtering and counter-timer functions**
- **16-bit resolution**
- **Standard and Power modes of operation**
  - **Standard Mode provides 4 real-time power calculations per input for up to 16 measurements**
  - **Power Mode 8 power quality measurements per pair of inputs (voltage and current)**

## ORDERING INFORMATION

For the IHVM-4P Power Measurement Module

SYSTEM	PART NO.
Daxus® DXS-100	32950035
SmartCorder® DDX-100/Everest® EV-5000	32950635

## POPULAR ACCESSORIES

ITEM	PART NO.	DESCRIPTION
GL-40	13442000	General Use Lead Set contains 2 each — probe handles, right angle to straight plug test lead, test clips, and medium alligator clips (1 red, 1 black)
LC-40	13441003	1 pair of test leads / clips (1 red, 1 black)
LC-40S	13441201	Test Leads/Spades pair of test leads with spade connector for # 8 screw
CLM-420A	26487100	4 to 20 mA Current Loop Adaptor for current loop measurements
SL261	24661201	Current Probe reads AC or DC current, 100 A maximum
MR411	24661200	Current Probe reads AC or DC current, 600 A maximum
MR521	24661100	Current Probe reads AC or DC current, 1500 A maximum
MN255	24661300	Current Probe reads AC current, 240 A maximum
SR759	24661400	Current Probe reads AC current, 1200 A maximum

## IHVM-4P SPECIFICATIONS

INPUTS	
Input Channels Per Module	4
Viewable Channels Per Module	16 (includes processed math channels)
Connector	Guarded banana jacks (red/black)
Input	Differential, DC coupled
Bandwidth	14 KHz (-3dB)
Rated Isolation	600 VRMS or DC, Cat III (channel to chassis and other channels), 1000 VDC, Cat II (channel to chassis and other channels)
Sample Rate	50 KHz
A/D	16 bit SAR (one per channel)
Anti-Aliasing Filter	4 pole Bessel
Cold Start Drift	< 0.02% att + .02% span (60 min.)
Off Ground Measurements	Yes
Zero Suppression	Yes, digital.
Attenuator Ranges	40, 200 and 1000 Volt
Measurement Ranges	± 1000 V (1000 VFS or 2000 VFS w/ zero offset), ± 200 V (200 VFS or 400 VFS w/ zero offset), ± 40 V (40 VFS or 80 VFS w/ zero offset.)
Minimum Span	2VFS
Max Rated Input	600 Vrms or DC, Cat III, 1000V DC, Cat II
DC Accuracy (25°C)	± 0.06% of attenuator
Overshoot	< 0.1%
Intrinsic Noise (pk-pk)	< 0.047% of attenuator + .013% of span (40V att), < 0.013% of attenuator + .02% of span (200V att), < 0.005% of attenuator + .024% of span (1000V att)
IMR at 60 Hz	Better than -75 dB
Crosstalk	Better than -80 dB
Minimum Input Impedance	> 10 Megohm
ADVANCED PROCESSING	
Power Calculations	True power, apparent power, power factor, cycle based RMS voltage and cycle based RMS current (Power Mode)
Math Functions	Differentiation, integration, time based RMS, Cycle Based RMS (Std Mode)
COUNTER TIMER FUNCTIONS	
Frequency Counter Capability	Yes, all channels. Software selectable.
Counter Modes	Gated time frequency counter, cycle based frequency counter, pulse width detector, period width detector, duty cycle detector.
Counter Modes (Power Mode)	Cycle based frequency counter (0.1 Hz resolution, 1.0 Hz minimum)
Frequency Ctr Range (Menu)	Up to 20 KHz
Frequency Ctr Range (Spec'd)	2 – 12 KHz (Standard Mode)
Min Counter Input Amplitude	± 0.07% of Measurement + .002 Hz (Standard Mode)
Pulse Counter Range	4000000000 maximum. (16 bit display resolution)
Pulse Width Accuracy	.002% of measurement + .00167% of span + 0.7 µs
Pulse Width Range	25 µs – 2500000
Edge Separation Accuracy	.002% of measurement + .00167% of span + 0.7 µs
Edge Separation Range	25 µs – 5000000 µs
Period Width Accuracy	.001% of measurement + .00167% of span + 0.7 µs
Period Width Range	25 µs – 100000 µs (10 Hz – 30 KHz)
Duty Cycle Accuracy	.5% (Inputs in the 1 Hz - 5 KHz range with 5% - 95% duty cycles)
Counter Timebase	50 MHz

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