

ITCU-16

Thermocouple and Low-Voltage Input Module for Daxus® DXS-100 and SmartCorder® DDX-100 Data Acquisition Systems

MODULE OVERVIEW

The ITCU-16 is a high-accuracy 16-channel thermocouple input module for the AstroNova Daxus® DXS-100 and SmartCorder® DDX-100 data acquisition systems. The ITCU-16 is ideal for high channel count applications requiring high accuracy.



ITCU-16 for Daxus® DXS-100



ITCU-16 for SmartCorder® DDX-100

MODULE HIGHLIGHTS

- Direct connectivity with standard Mini-TC connectors
- High accuracy (<1 deg C typical)
- High resolution (24-bit)
- 300 Vrms, Cat II rated isolation
- Open thermocouple detection
- 50/60 Hz noise rejection
- High sample rate mode (50 samples/sec)
- Cold junction compensation

ORDERING INFORMATION

ITCU-16 for the Daxus® DXS-100 and SmartCorder® DDX-100 data acquisition systems

SYSTEM	PART NO.
Daxus® DXS-100	32950010
SmartCorder® DDX-100	32950610

POPULAR ACCESSORIES

ITEM	PART NO.	DESCRIPTION
DAX-SW	14004910	Daxus® Offline Software additional license for one user
DDX-SW	14004912	SmartCorder® DDX-100 Offline Software
SC-DDX	41047200	Soft Carry Case for SmartCorder® DDX-100
HC-DDX	41047220	Hard Pelican Carry Case for SmartCorder® DDX-100
HC-DAX	41047300	Hard Pelican Transport Case for Daxus® DXS-100

ITCU-16 SPECIFICATIONS

GENERAL	
Channels Per Module	16
Connector	Type U miniature thermocouple
Rated Isolation	300 VRMS or DC, Cat II group to chassis and group to group.
Isolation voltage	3500 VDC group to chassis and group to group.
Update rates	1.0 Hz (Slow), 10 Hz (Medium), 50 Hz (Fast) (approx)
Absolute Max Input	+/- 10V (60 seconds - between any input terminal of a group of 4 channels)
A/D	Muxed 24 bit Sigma Delta (one per group of 4 channels)
Anti-Aliasing Filter	Inherent
50 Hz / 60 Hz Notch Filter	Yes (1.0 Hz rate only)
Resolution	0.01 °C
Open thermocouple detection	Yes
Thermocouple types	J,K,E,T,N,B,R,S,C
IMR	> 110 dB @ DC
Linearization	NIST ITS-90
Frequency Counter Capability	No
Cold Start Drift	+/- 0.0025% of attenuator
Cold Junction Compensation	Yes. Selectable internal or external
Compensation Error	Included in accuracy specification
MEASUREMENT RANGES	
Type J	-210 to 1200 °C
Type K	-200 to 1372 °C
Type E	-200 to 1000 °C
Type T	-200 to 400 °C
Type N	-200 to 1300 °C
Type B	600 to 1820 °C (250 to 1820 on menu)
Type R	0 to 1767 °C (-20 to 1768 on menu)
Type S	0 to 1767 °C (-20 to 1768 on menu)
Type C	0 to 2316°C
Voltage	100 mv
ACCURACY (@25 °C) (1.0 Hz Update Rate)	
Type J (<0)	+/- 2.0 °C
Type J (0 to 1200)	+/- 0.9°C
Type K (<0)	+/- 2.5 °C
Type K (0 to 1372)	+/- 0.9 °C
Type E (<-100)	+/- 2.5 °C
Type E (-100 to 1000)	+/- 1.0 °C
Type T (<-100)	+/- 2.5 °C
Type T (-100 to 400)	+/- 1.0 °C
Type N (<-50)	+/- 2.0 °C
Type N (-50 to 300)	+/- 0.9 °C
Type B	+/- 1.0 °C
Type R	+/- 2.0 °C
Type S	+/- 2.0 °C
Type C (W5ReM26Re)	+/- 2.5 °C
Voltage	+/-0.01% of attenuator
INTRINSIC NOISE	
J,K,E,T,N,C (pk-pk)	< 0.2 °C (1.0 Hz Update Rate)
B (pk-pk)	< 0.1 °C (1.0 Hz Update Rate)
R,S (pk-pk)	< 0.23 °C (1.0 Hz Update Rate)
Voltage	< 0.0009 % of attenuator (1.0 Hz Update Rate)

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