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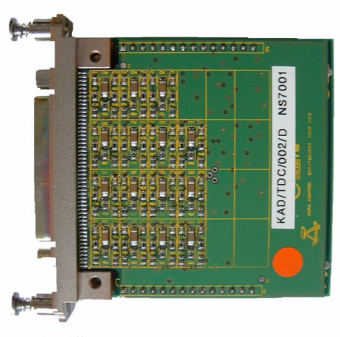
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Find the *Curtiss-Wright / ACRA Control KAD/TDC/002/D/00* at our website: ***Click HERE***

KAD/TDC/002/D

15-ch. thermocouple A/D converter with reference compensation



FEATURES

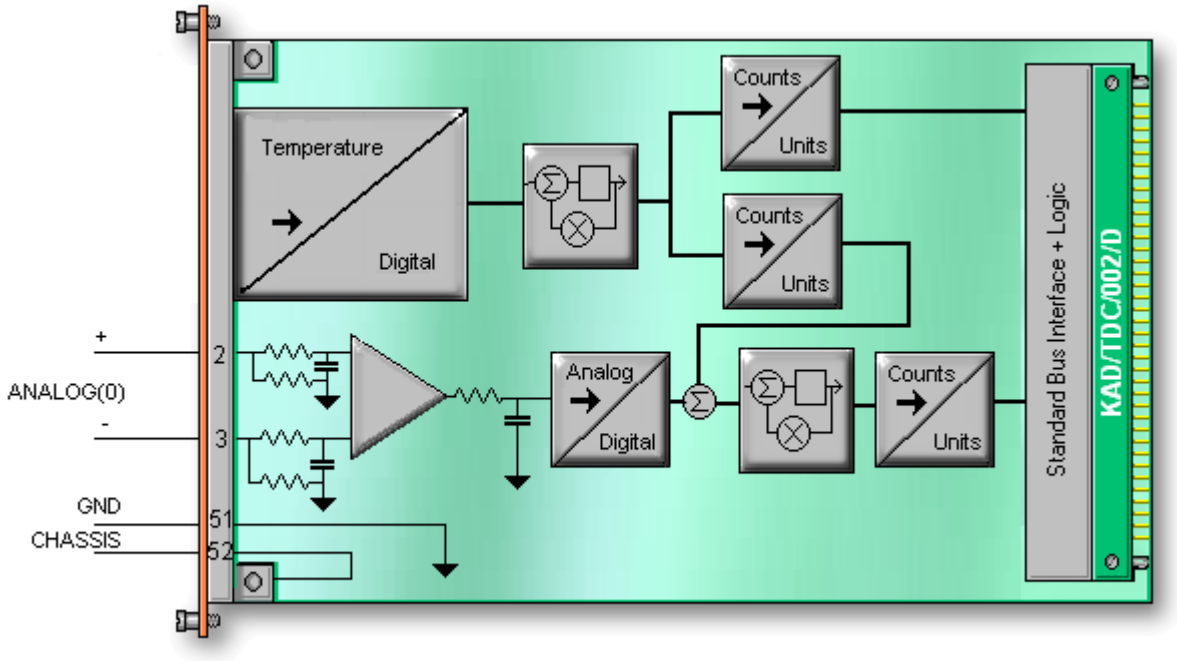
- 15 thermocouple (T/C) input channels
- Compensation block temperature measurement
- ±0.3% accuracy for K-type T/C
- Digital reference junction compensation
- Programmable T/C type (per module)
- Better than 12-bit resolution

DESCRIPTION

The KAD/TDC/002/D is used to digitize up to 15 thermocouple channels and the compensation block temperature. Note the compensation block refers to the double-density connector.

The compensation block temperature is a signal indicating the temperature of the compensation block. This signal is digitized and put to 2 x 65536 point linearization tables. One is used to produce a compensation value to add or subtract from the other 15 channels (this table is T/C type specific) and the other is used to scale the compensation block temperature between -55°C and +125°C.

The compensation offset is removed from each of the T/C channels. Each T/C channel is then linearized using a 65536 point linearization table specific to the thermocouple type selected. Finally, all channels are scaled to the selected range.



Compensation channel plus first of 15 T/C channels

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SPECIFICATIONS

Channels	15 Thermocouple + 1 reference junction temperature
Inputs	**Channels 0 to 14 (thermocouples)** **Range:** **Type** / **Tmin(°C)** / **Tmax(°C)** K / -270 / 1372 J / -210 / 1200 E / -270 / 1000 R / -50 / 1767 S / -50 / 1767 T / -270 / 400 **Type:** Differential ended There is onboard reference junction compensation and linearization. **Impedance (with thermocouple):** 20kΩ (off) 39kΩ (on) **Overvoltage protection:**±40V **DC response:** **Accuracy:** +-0.3% FSR for K type thermocouple. **AC response:** **CMRR:** >72dB (For frequencies < 1k) **Crosstalk:** ≤72dB 1Hz ≤ Fs ≤ 512Hz Fc=Fs/8, Fs/4, Fs/2, Fs, 2Fs Note that for *Fc*>20Hz the exact cutoff frequency is the combination of digital *Fc* and the first order analog filter F_{CA}=40Hz. The highest Fs is 512Hz. **Channel 15 (Reference temperature)** **Range:** -55°C to 125°C **DC response:** **Accuracy:** ±1.5% FSR
Sampling restrictions:	The maximum sampling rate per channel is 512Hz (note the analog bandwidth is 40Hz).

All the above specifications are met for a rate of change of the KAM-500 ambient temperature of 1°C per minute.

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