

FEATURES

- Ideal for Embedded Applications directly on your own boards
- No multiplexing, 8 Independent channels
- Input Range from 0 to 640 Ohms
- 3 KVRms Isolation Input, Power and SPi Link
- 2 KVRms Channel-to-Channel Isolation
- Three wire Connection
- Highly stable Apix technology A/D Conversion
- 140 db Common Mode Rejection
- 90 db Normal Mode Rejection 50/60 HZ
- 50/60 Conversions/Sec for all 8 channels converting synchronously
- +5 Volt Supply, 250 mADC
- -40 to 85 °C Operating Temperature Range

DESCRIPTION

The Daqpak SPi Series Resistance Input Modules feature 8 independent channels and an SPi interface. They are fully isolated with 3 KVRms between Input, Power, SPi serial link and 2 KVRms Channel-to-Channel.

These are extremely compact and are ideal for embedded applications directly on your own boards. They combine Signal Conditioning, robust Isolation, linearization and highly stable A/D conversion technologies per channel. Each channel can be assigned a different RTD type and the output values can be temperatures degrees C or F.

Each channel is configured as a 3 wire connection. Sensor break and cable opens including most shorts are detected automatically.

All 8 channels convert synchronously. The sampling rate of 50/60 Hz per 8 channel set is the default setting in order to take advantage of the rejection notches in the frequency response, coinciding with the power line frequency and its harmonics.

SPECIFICATIONS

MAXIMUM RATINGS

Power Supply Voltage (Vdd)	-0.5 to 6 VDC
Analog Input	±36 VDC
Storage Temperature	-55 to 125 Deg C

ANALOG INPUT

Range	0 to 640 Ohms
Cable Resistance (Three Wire)	< 50 Ohms/wire
Bandwidth	7 Hz (-3db)
Normal Mode Rejection	90 db at 50/60 Hz
Excitation Current (Iref)	0.5 mA ±5 %

COMMON MODE

Maximum CMV Rejection	3 KVRms 140 db at 50/60 Hz
Leakage Current	2 µA rms at 1000 VRms 50/60 Hz per channel
Capacitance	4 pF Total per channel

DIGITAL OUTPUT

Resolution	16 Bits Serial SPi
Conversion Rate	50/60 Hz

PERFORMANCE

Initial Accuracy	±0.01 % Option
Total Drift	±20ppm /°C

POWER REQUIREMENTS

Supply Voltage Range	5 VDC ±5 %
Supply Current	250 mA Max
Power Consumption	1250 mW Max

ENVIRONMENTAL & MECHANICAL

Operating Temperature	-40 to 85 °C
Relative Humidity	< 95 % Non Condensing
Overall Dimensions	1.8 x 2 x 0.5 (inches) 46 x 51 x 13 (mm)