

CAH Card

Carrier Amplifier Hybrid Cards

Datasheet
502777
Issue 2
EDCR 18660



Features

- ▶ Single or dual channel
- ▶ Eurocard dimensions
- ▶ Voltage plus current outputs
- ▶ Summation plus average option
- ▶ DIN 41612 connection
- ▶ LVDT and Half Bridge use

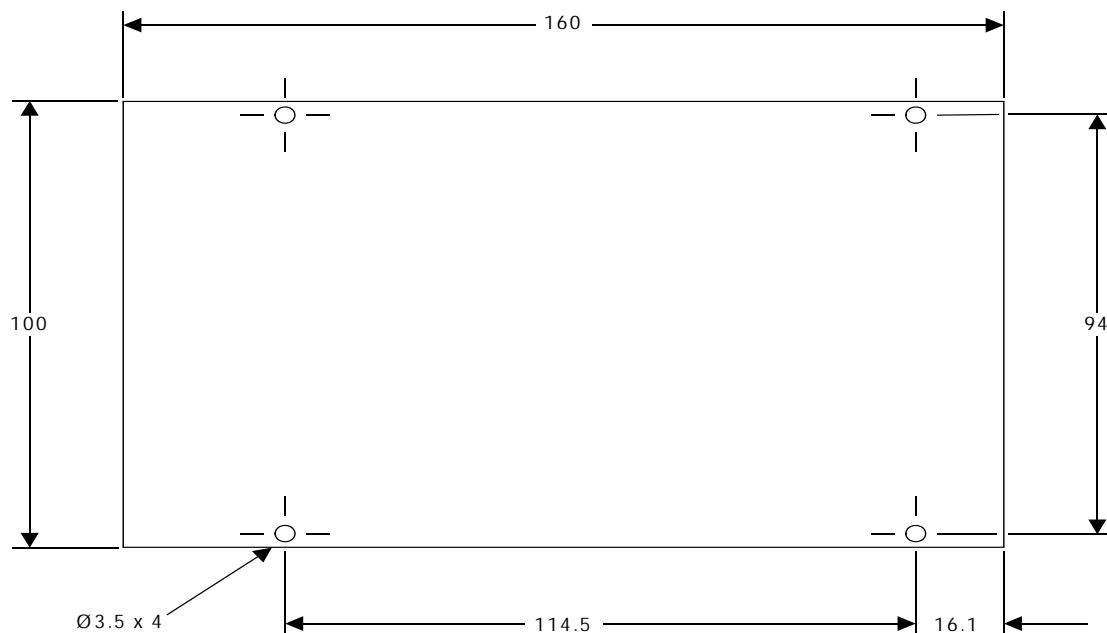
Description

The CAH series provides the OEM with flexible, low cost conditioning which can be packaged to suit individual requirements. The cards are particularly suited to industrial and laboratory applications where it is necessary to take the output of an inductive or resistive transducer and calculate mathematical functions and/or interface with remote data loggers or displays.

The cards are available in two styles: Single Channel or Dual Channel with $(A \pm B)/2$ facilities. Electrical connection is through a DIN connector type 41612. Each card provides both current and voltage output signals.

The $(A \pm B)/2$ facility offers four outputs, based on two independent transducer signal inputs (A and B). These are $A + B$, $A - B$, $(A + B)/2$ and $(A - B)/2$. Span is adjustable in 9 coarse ranges which, together with the integral fine control, allows the use of transducers with sensitivities in the range of 0.5 mV/V to 750 mV/V for a full scale output of 5 VDC. Coarse and fine zero controls are provided to enable the transducers to be zeroed anywhere within their measuring ranges. Two operating frequencies are provided, 5 kHz and 10 kHz and the output filter cut off frequency can be set to 500 Hz or 1 kHz, facilitating the optimum response time/output ripple compromise.

Mechanical Outline (mm nominal)



Technical Specification

Power Requirement

Voltage Range		± 14 VDC to ± 16 VDC ¹
Current Range	No Load	+40 mA, -45 mA nominal
	Full Load	+85 mA, -90 mA nominal
Supply Protection		Reverse polarity protected

Transducer Excitation

Primary Voltage		5 V rms
Primary Frequency		5 kHz or 10 kHz selectable

Signal Input (Transducer Sensitivity Range)

Input Range		0.5 mV/V to 750 mV/V
Input Load Resistance		1 k Ω , 10 k Ω or 100 k Ω selectable

Signal Output

Voltage Output		Up to ± 10 VDC ²
Current Output		Up to ± 20 mA into 500 Ω load
Output Ripple		<4 mV rms
Output Offset		Up to 100% (course & fine adjustment ²)
Temp. Co. Gain		<0.05%/°C ³
Temp. Co. Offset		<0.05%/°C ³
Warm-up		15 minutes recommended
Linearity		<0.02%
Bandwidth (-3 dB)		500 Hz, 1 kHz selectable

Environmental

Operational Temperature Range		0 to 60°C (32 to 140°F)
Storage Temperature Range		-20 to 85°C (-4 to 185°F)

Mechanical and Connections

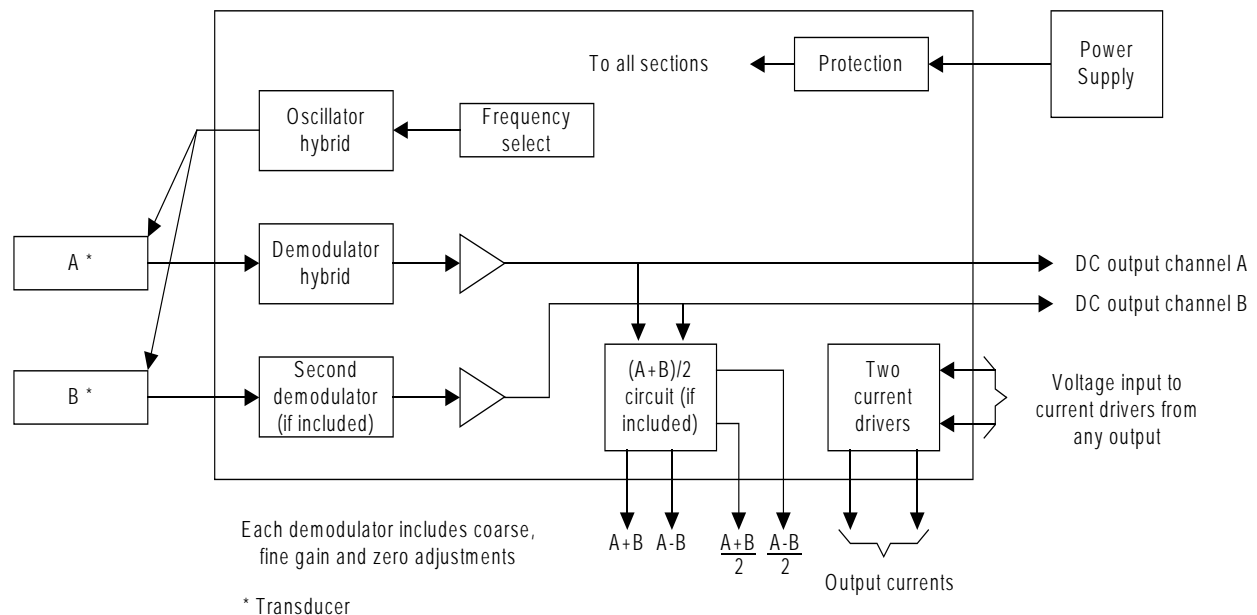
Transducer		Din 41612 Connectors
Power Supply		Din 41612 Connectors
Output Signal		Din 41612 Connectors
Size		160 x 100 mm (mounting holes 114 x 94 mm $\varnothing 3.5$ mm x 4)
Weight		Up to 120 g

Notes

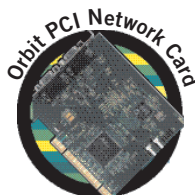
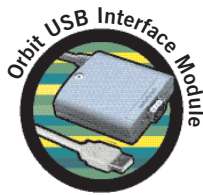
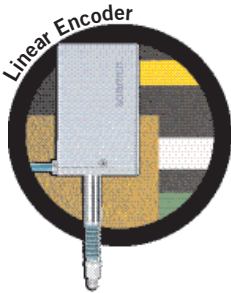
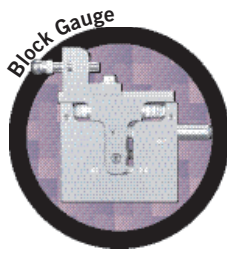
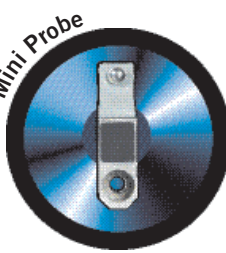
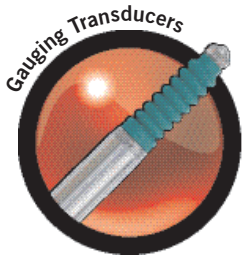
¹ The power supply may be reduced to ± 12 V if the output is not required to exceed ± 7 V.

² Fine adjustment via the front panel.

³ Assumes ± 5 V output.



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