

28000-RMS/DC4 & DC8

PRECISION
FILTERS, INC.

Quad and Octal RMS to DC Converter Output Adapters for the 28000 System



28000-RMS/DC4 Output Adapter Modules

DESCRIPTION

Most Precision Filters' quad and octal channel 28000 cards are fitted with front panel connectors that accept the output adapter modules, allowing the user to easily add RMS to DC conversion on the channel outputs. The adapters are secured to the 28000 card by two screws. The output adapter does not interfere with the primary 28000 signal conditioning card outputs.

28000-RMS/DC4

The 28000-RMS/DC4 output adapter for quad channel 28000 cards provides four channels of RMS to DC converters. The fully buffered outputs of the 28000-RMS/DC4 are provided on BNC and multipin (15-pin D) connectors.

28000-RMS/DC8

The 28000-RMS/DC8 output adapter for octal channel 28000 cards provides eight channels of RMS to DC converters. The fully buffered outputs of the 28000-RMS/DC8 are provided on a multipin high-density (26-pin D) connector.

APPLICATION

Measurement systems that require RMS to DC outputs on signal per conditioner channel.

SALIENT FEATURES

- Provides fully buffered RMS to DC outputs derived from primary signal conditioner outputs
- Compatible with quad and octal channel 28000 card with front panel DIN connectors
- RMS to DC outputs with Output Sense

SPECIFICATIONS

Note: Specifications apply to the 28000-RMS/DC4 and the 28000-RMS/DC8 adapters only. Signal conditioning card specifications must be added to the output adapter specifications to determine overall specs from the signal conditioner channel input to the adapter output. Ambient temperature is 25°C unless otherwise stated.

Number of Channels:

- 4 (DC4) for quad channel 28000 cards
- 8 (DC8) for octal channel 28000 cards

Input Connector:

48-pin DIN. Directly mates with most 28000 quad and octal channel signal conditioning cards.

Scaling:

- Standard: 1 Vpk sinewave in = 1 VDC out
- Option P: 1 Vpk-pk sinewave in = 1 VDC out
- Option R: 1 Vrms sinewave in = 1 VDC out

Input Signal Range:

- Standard: 0 to 7 Vrms
- Option P: 0 to 3.5 Vrms
- Option R: 0 to 7 Vrms

Input Coupling:

- Standard: DC coupled input,
- Option 2: AC coupled input at 2 Hz

Settling Time: 200 mS

Frequency Response:

$\pm 0.2\%$ to 10 kHz, $\pm 0.5\%$ to 50 kHz, $\pm 1\%$ to 100 kHz

Conversion Accuracy: 2 mV $\pm 0.3\%$ of reading

Additional Low Frequency Error:

$500/f^2$ in % where f is the input frequency in Hz

Output Type:

Fully buffered single-ended. The DC4 module outputs are equipped with output ground sense. Output ground sense is effective for driving circuits with single-ended inputs and serves two purposes: to refer the output to the ground at the load and to break ground loops that would otherwise pickup unwanted noise in the cables.

Output Ripple: 0.1% at 20 Hz, 0.01% at 200 Hz

Output Offset: Less than 1 mV

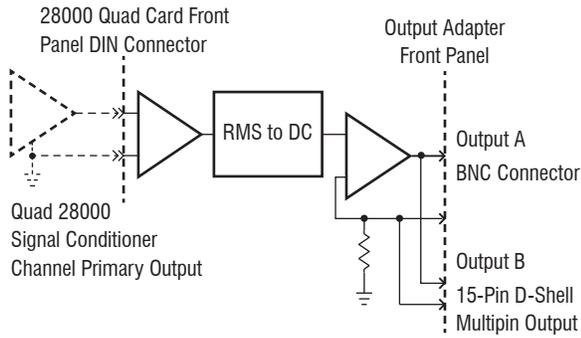
Max Output:

± 10 Vpk, ± 10 mA pk with short circuit protection

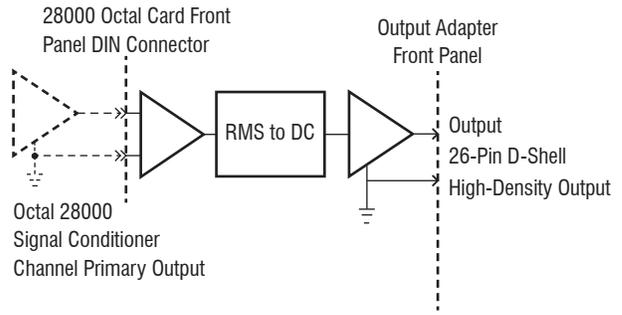
Output Impedance: 50 ohms

Output Connectors:

- DC4: Available on 4 BNCs and one 15-pin D connector
- DC8: One 26-pin high-density D connector



28000-RMS/DC4 Channel Diagram (1 of 4 Channels)



28000-RMS/DC8 Channel Diagram (1 of 8 Channels)

ACCESSORIES

CONN-OUT-15D: 15-Pin mating output connector, with crimp pins and strain relief backshell for 28000-RMS/DC4. PF pn A6862G2.

CONN-OUT-15D-SC: 15-Pin mating output connector, with solder cup pins and strain relief backshell for 28000-RMS/DC4. PF pn A6862G4.

CONN-OUT-26D-MTL: 26-Pin mating output connector, with crimp machined pins and metal backshell with large hole for 28000-RMS/DC8. PF pn A9405G1.

CONN-OUT-26D-SC: 26-Pin mating output connector, with solder cup pins and metal backshell with large hole for 28000-RMS/DC8. PF pn A9405G4.

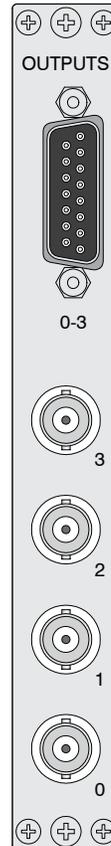
ORDERING INFORMATION

28000-RMS/DC?-<2, [P|R]>

Option P: Pk-Pk Scaling
Option R: RMS Scaling

Option 2: AC Coupled Input at 2 Hz

28000-RMS/DC4
28000-RMS/DC8



28000-RMS/DC4 Output Connectors



28000-RMS/DC8 Output Connector

