

ENCORE ELECTRONICS INC.
Model FL228
Frequency to Voltage Converter

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Except -001, -002 versions
- Schematic B14529 for FL228-001, -002

SPECIFICATIONS
Model FL228
Frequency to Voltage Converter

INPUT VOLTAGE: Max $\pm 20V$ peak

INPUT THRESHOLD: FL228-000, -004, -011, -012, -016,
-024, -057: 0V with +70mV hysteresis
-001, -002: Switchable, 0V or 300mV with +10mV hysteresis
-003, -005, -009, -052: 1.0V with +70mV hysteresis
-010, -006: 300mV with +70mV hysteresis
-007, -008A, -056: 1.8V with +70mV hysteresis

INPUT IMPEDANCE: $>10M\Omega$ 0 to $\pm 0.5V$, $10K\Omega$ ± 0.5 to $\pm 20V$

FULL SCALE OUTPUT: See version chart on page 4
All outputs rated for 5mA max. load

LINEARITY ERROR: .01% max.

OPERATING TEMPERATURE: 0 to 50°C

POWER REQUIREMENT: See chart on page 4 for supply voltage; current = 30mA max.

PACKAGE: 3.12"H x 2.88"D x 0.88"W DIN-rail mount box

-009 TRANSIENT RESPONSE: 15ms 10% to 90% FS response

-009 RIPPLE: 5mV pk/pk @1kHz

OPERATION
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Connect the FL228 Input terminals to the desired signal source. If the source is an open collector output (as found on some proximity probes), an appropriate pull up resistor should be connected at the signal source to produce a voltage pulse for the Model FL228. Check your source's documentation for resistor value and connection information.

Connect the output terminals to the desired readout, recording, or control device.

For the 18-30VDC powered versions, connect a 24V power supply capable of at least 30 mA to the +24V and 24V COM terminals. For all other versions, connect a +12VDC power supply to the +12V Nom and Pwr Com terminals.

INPUT AND OUTPUT RANGES
 Model FL228
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Version	Power range	Input	Conversion	F.S. Out
FL228-000	24V (18-30VDC)	20Hz-10kHz	1.0mV/Hz	10VDC
FL228-001	12V (10-16VDC)	50Hz-25kHz	0.2mV/Hz	5VDC
FL228-002	12V (10-16VDC)	20Hz-10kHz	0.5mV/Hz	5VDC
FL228-003	12V (10-16VDC)	5Hz-150Hz	30mV/Hz	4.5VDC
FL228-004	12V (10-16VDC)	20Hz-10kHz	0.5mV/Hz	5VDC
FL228-005	24V (18-30VDC)	20Hz-5kHz	2.0mV/Hz	10VDC
FL228-006	12V (10-16VDC)	20Hz-1kHz	5.0mV/Hz	5VDC
FL228-007	24V (18-30VDC)	20Hz-10kHz	0.4mV/Hz	3.4VDC
FL228-008A	24V (18-30VDC)	5Hz-100Hz	45.mV/Hz	4.5VDC -0.6VDC
FL228-009	24V (18-30VDC)	1kHz-5kHz	2.0mV/Hz	10VDC
FL228-010	12V (10-16VDC)	20Hz-3kHz	1.67mV/Hz	5VDC
FL228-011	24V (18-30VDC)	1kHz-4kHz	2.5mV/Hz	10VDC
FL228-012	24V (18-30VDC)	3Hz-600Hz	8.3mV/Hz	5VDC
FL228-024	24V (18-30VDC)	20Hz-2kHz	4.5mV/Hz	5VDC
FL228-026	24V (18-30VDC)	20Hz-1kHz	10mV/Hz	10VDC
FL228-052	12V (10-16VDC)	5Hz-500Hz	10mV/Hz	5VDC
FL228-056	24V (18-30VDC)	20Hz-2kHz	5.0mV/Hz	10VDC
FL228-057	24V (18-30VDC)	20Hz-2kHz	5.0mV/Hz	10VDC

With a four pulse-per-rev pickup, the -003 output will be 4.0V at 2000 rpm.