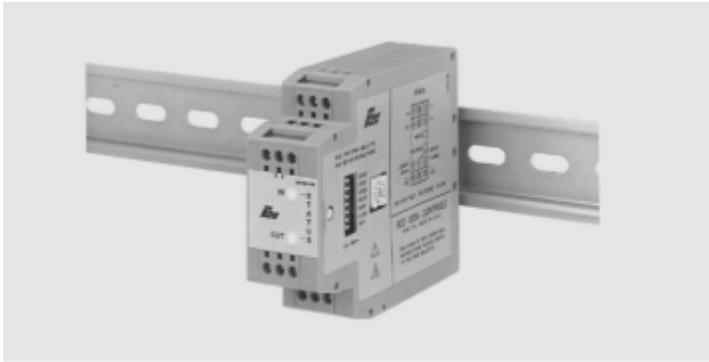


# MODEL IFMA - DIN-RAIL FREQUENCY TO ANALOG CONVERTER



- SIMPLE ON-LINE RANGE SETTING  
(Using Actual Input Signal or Signal Generator)
- USER SETTABLE FULL SCALE FREQUENCY FROM 1 Hz to 25 KHz
- FOUR OUTPUT OPERATING RANGES  
(0 to 5 V, 0 to 10 V, 0 to 20 mA, and 4 to 20 mA)
- PROGRAMMABLE INPUT CIRCUIT ACCEPTS OUTPUTS FROM A VARIETY OF SENSORS
- 85 to 250 VAC and 9 to 32 VDC POWERED VERSIONS AVAILABLE
- LOW FREQUENCY CUT-OUT AND OVERRANGE INDICATION
- 3-WAY ELECTRICAL ISOLATION (POWER/INPUT/OUTPUT)
- INPUT AND OUTPUT INDICATION LED's



 and  UL Recognized Component,  
File #E137808

## DESCRIPTION

The Model IFMA accepts a frequency input, and outputs an analog voltage or current in proportion to the input frequency, with 0.1% accuracy. The full scale input frequency can be set to any value from 1 Hz to 25 KHz, either with a frequency source, or digitally with the on-board rotary switch and push-button.

The IFMA utilizes a seven position DIP switch, a rotary switch, a push button and two indication LED's to accomplish input circuit configuration, operational parameter set-up, and Input/Output indication. The input circuitry is DIP switch selectable for a variety of sources.

The indication LED's are used during normal operation to display the input and output status of the IFMA. These LED's are also used to provide visual feedback to the user of the existing parameter settings during parameter set-up.

The IFMA operates in one of four output modes. The programmable minimum and maximum response times provide optimal response at any input frequency.

The unit is equipped with a universal mounting foot for attachment to standard DIN style mounting rails, including top hat profile rail according to EN 50 022 - 35 x 7.5 and 35 x 15, and G profile rail according to EN 50 035 - G 32.

## SAFETY SUMMARY

All safety related regulations, local codes and instructions that appear in the manual or on equipment must be observed to ensure personal safety and to prevent damage to either the instrument or equipment connected to it. If equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

## SPECIFICATIONS

### 1. POWER:

**AC Operation:** 85 to 250 VAC, 48 to 62 Hz; 6.5 VA

**DC Operation:** 9 to 32 VDC; 2.5 W

**Power Up Current:**  $I_p = 600$  mA for 50 msec. max.

2. **SENSOR POWER:** (AC version only) +12 VDC  $\pm 25\%$  @ 60 mA max.

3. **OPERATING FREQUENCY RANGE:**

From 0 Hz to 25 KHz; user selectable.

4. **SIGNAL INPUT:** DIP switch selectable to accept signals from a variety of sources, including switch contacts, outputs from CMOS or TTL circuits, magnetic pickups, and all standard RLC sensors.

**Current Sourcing:** Internal 1 K $\Omega$  pull-down resistor for sensors with current sourcing output. (Max. sensor output current = 12 mA @ 12 V output.)

**Current Sinking:** Internal 3.9 K $\Omega$  pull-up resistor for sensors with current sinking output. (Max. sensor current = 3 mA.)

**Low Bias:** Input trigger levels  $V_{IL} = 0.25$  V,  $V_{IH} = 0.75$  V; for increased sensitivity when used with magnetic pickups.

**Hi Bias:** Input trigger levels  $V_{IL} = 2.5$  V,  $V_{IH} = 3.0$  V; for logic level signals.

**Max. Input Signal:**  $\pm 90$  V; 2.75 mA max. (With both Current Sourcing and Current Sinking resistors switched off.)

5. **SIGNAL VOLTAGE OUTPUT (Selectable):**

0 to 5 VDC @ 10 mA max.

0 to 10 VDC @ 10 mA max.

6. **SIGNAL CURRENT OUTPUT (Selectable):**

0 to 20 mA @ 10 VDC min.

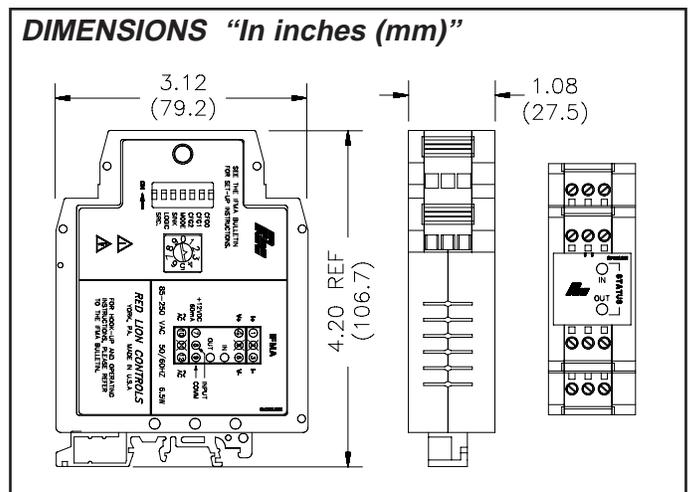
4 to 20 mA @ 10 VDC min.

7. **OUTPUT COMPLIANCE:**

**Voltage:** 10 V across a min. 1K $\Omega$  load (10 mA). Factory calibrated for loads greater than 1 M $\Omega$ .

**Current:** 20 mA through a max. 500 $\Omega$  load (10 VDC).

8. **ACCURACY:**  $\pm 0.1\%$  of full scale range ( $\pm 0.2\%$  for 0 to 5 VDC range).



## ORDERING INFORMATION

MODEL NO.	DESCRIPTION	PART NUMBERS FOR AVAILABLE SUPPLY VOLTAGES	
		9 to 32 VDC	85 to 250 VAC
IFMA	Pulse Rate to Analog Converter	IFMA0035	IFMA0065

For more information on Pricing, Enclosures & Panel Mount Kits refer to the RLC Catalog or contact your local RLC distributor.



**CAUTION:** Read complete instructions prior to installation and operation of the unit.



**CAUTION:** Risk of electric shock.

