



# ADTECH

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## FREQUENCY SCALING MODULE MODEL NO. FSM 55

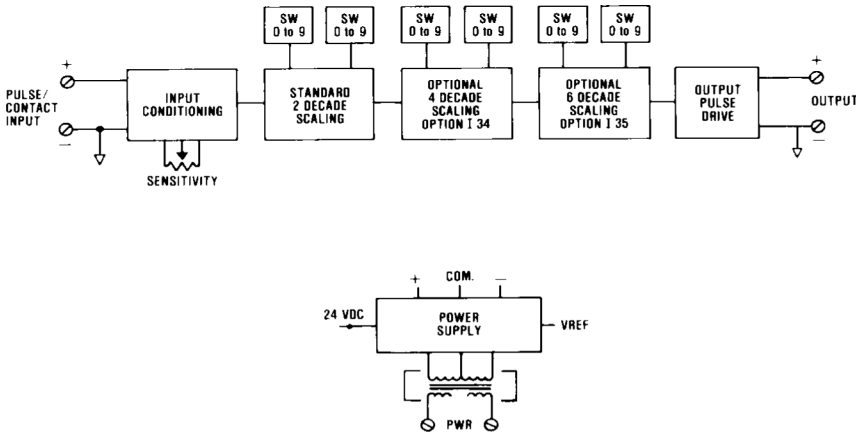
THE ADTECH MODEL FSM 55 FREQUENCY SCALING MODULE CONVERTS OR SCALES THE PULSE RATE OUTPUT OF A WIDE VARIETY OF PRIMARY FLOW SENSORS TO CONVENIENT ENGINEERING UNITS FOR DISPLAY ON A TOTALIZING COUNTER. IT CAN BE USED FOR SUCH APPLICATIONS AS TURBINE METERS, POSITIVE DISPLACEMENT METERS, OR SPEED MEASUREMENTS BY MAGNETIC PICK-UPS.

IN MANY MACHINE AND COUNTER APPLICATIONS, SELECTING A SENSOR ARRANGEMENT THAT PROVIDES THE PROPER RATIO OF PULSES PER UNIT OF TIME CAN BE DIFFICULT AND CUMBERSOME.

THE FSM 55 SOLVES SCALING PROBLEMS ECONOMICALLY AND ACCURATELY. IT ACCEPTS GIVEN INPUT PULSE RATE AND SCALES IT TO THE DESIRED ENGINEERING UNITS FOR DISPLAY ON A TOTALIZING COUNTER, I.E. OPTIONS T 10 THRU T 14.

CONTACT ANTI-BOUNCE CIRCUITS PREVENT FALSE INPUT INFORMATION AND LOSS OF PULSES DURING OPERATION. MINIMUM DISCRIMINATION TIME BETWEEN INPUT PULSES IS 0.01 MILLISECOND.

TWO DECADES OF SCALING ARE STANDARD, FOUR AND SIX DECADES ARE OPTIONALLY AVAILABLE AS OPTIONS I 34 AND I 35 RESPECTIVELY.



## FEATURES

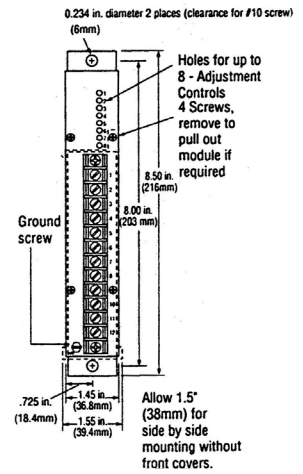
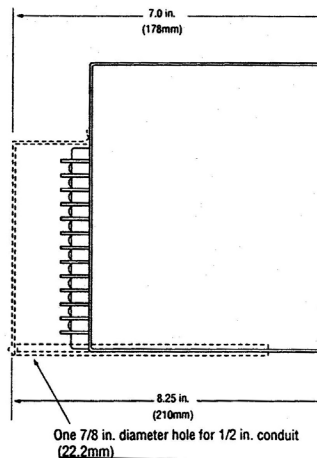
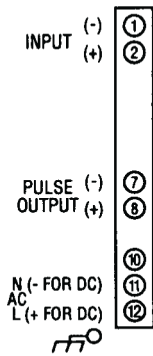
- TYPES OF INPUT: SINE, SQUARE WAVE, OR CONTACT CLOSURE
- INPUTS, VOLTAGE, OR CONTACT WITH ADJUSTABLE SENSITIVITY: TURBINE/FLOWMETER, TACHOMETER/SPEED
- INPUT VOLTAGE RANGE: 300 MV TO 30 V P/P
- INPUT FREQUENCY RANGE: DC TO 20 KHZ
- HIGH INPUT IMPEDANCE: 100K OHMS
- CONTACT ANTI-BOUNCE INPUTS
- RESPONSE TIME: INSTANTANEOUS
- SCALING RANGE / MULTIPLIER: 0.000001 THRU 0.999999 WITH 6 DECADE SWITCHES
- DISCRIMINATION TIME: 0.01 MILLISECONDS
- OUTPUT PULSES: 24 VDC, 50 MILLISECONDS-STANDARD  
OTHER VOLTAGES AND PULSE WIDTHS-OPTIONAL

## TYPICAL APPLICATIONS

- READING OR SCALING
- MACHINE SPEED SCALING
- TURBINE METER SCALING
- POSITIVE DISPLACEMENT METER SCALING
- LINEAR DISPLACEMENT TRANSDUCER SCALING
- WATT-HOUR SCALING



# CONNECTIONS / DIMENSIONS



## INPUT/OUTPUT

INPUT SIGNALS:  
 VOLTAGE: SINE OR SQUARE WAVE 300 mV TO 30 V P/P  
 FREQUENCY RANGE: DC TO 20 KHZ FULL SCALE  
 CONTACT: DRY, 2 MA @ 24 VDC RATING- SPECIFY  
 OUTPUT SIGNALS  
 24 VDC PULSES NOMINAL INTO 100 OHMS MINIMUM, 50 MILLISECOND PULSE WIDTH NOMINAL. OTHER VOLTAGES AND PULSE WIDTHS ARE AVAILABLE.  
 SCALING RANGE  
 TWO DECADES- STANDARD, SCALING FACTOR OF 0.01 THRU 0.99  
 FOUR DECADES- OPTIONAL, SCALING FACTOR OF 0.0001 THRU 0.9999 (OPTION I 34)  
 SIX DECADES-OPTIONAL, SCALING FACTOR OF 0.000001 THRU 0.999999 (OPTION I 35)

## PERFORMANCE

CALIBRATED ACCURACY: EXACT ALL-DIGITAL COUNTING  
 REPEATABILITY/RESOLUTION: EXACT ALL-DIGITAL COUNTING  
 TEMPERATURE STABILITY: NO EFFECT OVER RANGE  
 RESPONSE TIME: INSTANTANEOUS  
 DISCRIMINATION TIME: 0.01 MILLISECONDS  
 TEMPERATURE RANGE: 0° TO 140 °F (-18° TO 60 °C)  
 OPERATING: -40° TO 185 °F (-40° TO 85 °C) STORAGE  
 POWER SUPPLY EFFECT: NONE OVER RATED RANGE

## POWER

115 VAC: 50/60 HZ, 0.7 PF	(STANDARD)	48 VDC: ISOLATED	(OPTION P3)
12 VDC: ISOLATED	(OPTION P8)	125 VDC: ISOLATED (105-140 VDC)	(OPTION P4)
24 VDC: NON-ISOLATED	(OPTION P1)	230 VAC: 50/60 HZ, 0.7 PF	(OPTION P5)
24 VDC: ISOLATED	(OPTION P2)		

NOTE: ALL UNITS 3 WATTS MAXIMUM, AND A ±10% POWER VARIATION UNLESS NOTED.

## MECHANICAL

ELECTRICAL CLASSIFICATION: GENERAL PURPOSE  
 CONNECTION: BARRIER TERMINAL STRIP (3/8" SPACING, NO. 6 SCREWS)  
 CONTROLS: MULTITURN SENSITIVITY CONTROL:  
 INTERNAL: 10-POSITION INTERNAL DECADE SWITCHES  
 MOUNTING: SURFACE MOUNTING STANDARD. SEE HOUSINGS SECTION FOR OPTIONS.  
 WEIGHT: NET UNIT: 2.6 POUNDS (1.18 KILOGRAMS); SHIPPING: 3.0 POUNDS (1.36 KILOGRAMS)

## OPTIONS

OPTION NUMBER	DESCRIPTION
I 34	4-DECADE SCALING
I 35	6-DECADE SCALING
H 10	THIN-LINE CONDUIT MOUNTING PLATE AND TERMINAL COVER
H 13B, H 14B, H 15B	NEMA 4.7, AND 12 ENCLOSURES
H 16 THRU H 17	HIGH DENSITY, PLUG-IN ENCLOSURE

### Ordering Information

- Model number
- Input pulse rate and voltage
- 2, 4, or 6 decades of scaling for input and output
- Prime power with option no.
- Input/output options
- Housing and miscellaneous options

Please refer to the Housing and/or Option Section for more specific and detailed information.