



# ADTECH

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## ISOLATED MILLIVOLT TRANSMITTER MODEL NO. MVT 26

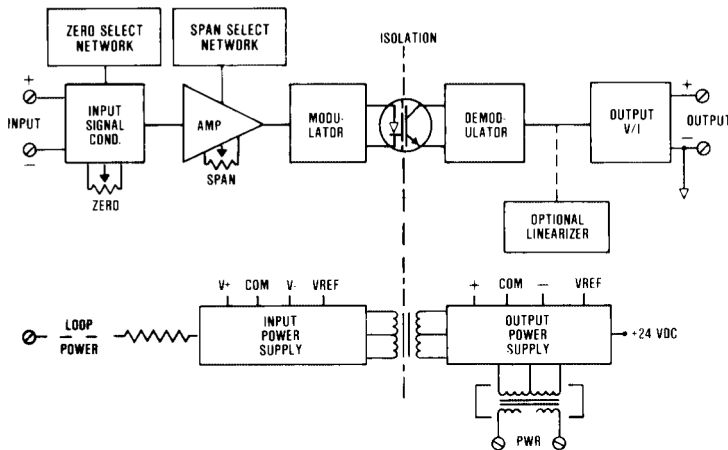
THE ADTECH MODEL MVT 26 ISOLATED MILLIVOLT TRANSMITTER PROVIDES HIGHLY ACCURATE CONVERSION OF DC MILLIVOLT SIGNALS TO ANY STANDARD PROCESS SIGNAL SUCH AS 4-20 MA DC, 1-5 VDC, OR ZERO-BASED OUTPUT.

MANY INSTRUMENTATION APPLICATIONS DICTATE INPUT/OUTPUT ISOLATION TO ELIMINATE THE ELUSIVE NATURE OF GROUND LOOPS OR THE CONDITIONING OF A MILLIVOLT SIGNAL RIDING ON HIGH COMMON MODE AC OR DC VOLTAGES COMMONLY FOUND IN MOTOR CURRENT MEASUREMENTS.

OTHER APPLICATIONS INCLUDE ANALYZER OUTPUTS, DIFFERENTIAL THERMOCOUPLE MEASUREMENT, AND GENERAL SENSOR OUTPUT CONDITIONING.

THE ADTECH MVT 26 OFFERS 600 VAC/1,000 VDC ISOLATION WITH A COMMON MODE REJECTION OF 140 DB AT 60 HZ. IT PROVIDES STANDARD PROCESS CURRENT OR VOLTAGE SIGNALS ON THE OUTPUT WITH A MAXIMUM OF 10 MV P/P OUTPUT RIPPLE, AND OFFERS A CONVENIENT WAY TO INTERFACE LOW-LEVEL SIGNALS TO A COMPUTER SYSTEM OR OTHER PROCESS INSTRUMENTATION FOR IMPROVED RESOLUTION.

A UNIQUE OPTION TO THE MVT 26 IS A FIVE-SEGMENT BREAKPOINT LINEARIZER FEATURE. THIS ALLOWS THE CONDITIONING OF NON-LINEAR INPUTS TO THE DESIRED LINEAR OUTPUTS USED FOR MONOTONIC CURVES. ZERO AND SPAN CONTROLS ARE PROVIDED BY TWO INFINITE RESOLUTION POTENTIOMETERS.



### FEATURES

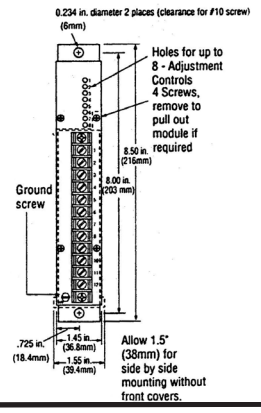
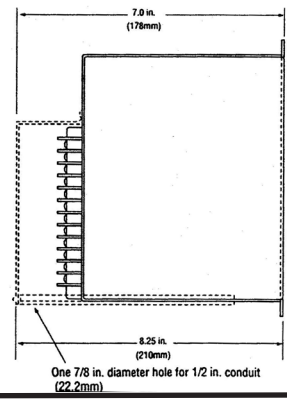
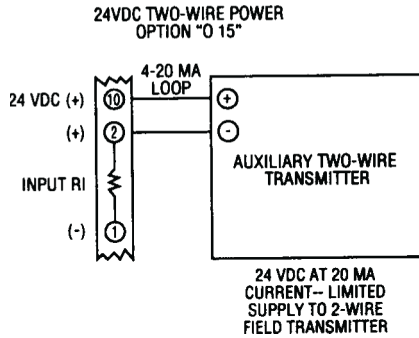
- DIRECT MILLIVOLT INPUTS
- INPUT SPANS: 3 mV TO 160 mV
- ZERO SUPPRESSION: -10 mV TO +100 mV
- HIGH INPUT IMPEDANCE: 10 MEGOHMS MINIMUM
- DC PROCESS SIGNAL OUTPUTS: CURRENT AND VOLTAGE
- REPEATABILITY:  $\pm 0.02\%$  OF SPAN
- HIGH ACCURACY:  $\pm 0.1\%$  OF SPAN
- ISOLATION: 600 VAC/1,000 VDC INPUT TO OUTPUT; 1,500 VAC POWER
- LINEARIZATION: OPTIONAL

### TYPICAL APPLICATIONS

- DC CURRENT SHUNT INTERFACE
- ANALYZER INTERFACE
- COMPUTER/PROGRAMMABLE CONTROLLER INTERFACE
- LOW IMPEDANCE CURRENT REPEATER
- INTERFACE OF DIFFERENT GROUND POTENTIAL SENSORS AND INSTRUMENTS
- DIFFERENTIAL TEMPERATURE MEASUREMENT BY USING THERMOCOUPLES
- AMPLIFICATION OF SMALL DC SIGNALS RIDING OVER HIGH COMMON MODE VOLTAGE
- MV SIGNAL LINEARIZATION



# CONNECTIONS / DIMENSIONS



## INPUT/OUTPUT

INPUT SIGNALS  
 3 mV TO 160 mV SPAN  
 (Z IN GREATER THAN 10 MEGOHMS)  
 ZERO SUPPRESSION: -10 mV TO  
 +100 mV

OUTPUT SIGNALS / OUTPUT DRIVE (RL)		
SIGNAL	AC POWER (RL)	DC POWER (RL)
4-20 mA DC	0-1,000 OHMS MAX	0-900 OHMS MAX
10-50 mA DC	0-400 OHMS MAX	0-350 OHMS MAX
0-1 mA DC	0-20,000 OHMS MAX	0-18,000 OHMS MAX
1-5 VDC	100K OHMS MIN	100K OHMS MIN
0-10 VDC	200K OHMS MIN	200K OHMS MIN

## PERFORMANCE

CALIBRATED ACCURACY:  $\pm 0.1\%$   
 LINEARITY:  $\pm 0.1\%$  MAXIMUM,  $\pm 0.04\%$  TYPICAL  
 REPEATABILITY:  $\pm 0.05\%$  MAXIMUM  
 TEMPERATURE STABILITY:  $\pm 0.01\%$  / °F MAXIMUM,  $\pm 0.004\%$  / °F TYPICAL  
 LOAD EFFECT:  $\pm 0.01\%$  ZERO TO FULL LOAD  
 OUTPUT RIPPLE: 10 mV P/P MAXIMUM  
 RESPONSE TIME: 150 MILLISECONDS  
 TEMPERATURE RANGE: 0° TO 140°F (-18°C TO 60°C) OPERATING;  
 -40° TO 185°F (-40° TO 185°C) STORAGE  
 POWER SUPPLY EFFECT:  $\pm 0.05\%$  FOR  $\pm 10\%$  POWER VARIATION  
 NOTE: ALL ACCURACIES ARE GIVEN AS A PERCENTAGE OF SPAN.

## 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  $\pm 10\%$  POWER VARIATION UNLESS NOTED.

## MECHANICAL

ELECTRICAL CLASSIFICATION: GENERAL PURPOSE  
 CONNECTION: BARRIER TERMINAL STRIP (3/8" SPACING, NO. 6 SCREWS)  
 CONTROLS: MULTITURN ZERO AND SPAN CONTROLS  
 MOUNTING: SURFACE MOUNTING STANDARD. SEE HOUSINGS SECTION FOR OPTIONS.  
 WEIGHT: NET UNIT: 2.6 POUNDS (1.18 KILOGRAMS); SHIPPING 3.0 POUNDS (1.36 KGS)

## OPTIONS

OPTION NUMBER	DESCRIPTION
I14	VOLTAGE INPUTS TO 200 VDC, 1 MEGOHM MIN. IMPEDANCE CURRENT INPUTS OF 100 mA MAX.
O 10	BIPOLAR CURRENT OUTPUT (LARGER THAN $\pm 1$ MA)
O 11	BIPOLAR VOLTAGE OUTPUT TO $\pm 10$ VDC : AT 1 MA, BIPOLAR CURRENT $\pm 1$ MA
O15	TWO-WIRE TRANSMITTER EXCITATION
H 10	THIN-LINE CONDUIT MOUNTING PLATE AND TERMINAL COVER
H 13B, H 14B, H 15B	NEMA 4, 7, & 12 ENCLOSURES
H 16	PFA 12 HIGH-DENSITY, PLUG-IN ENCLOSURES

### Ordering Information

- Model number
- Input signal
- Output signal
- 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.