

# OSI MULTIPLIER (DC OR AC WATT TRANSDUCER) MODEL MT-

## SHUNT INPUT

### DESCRIPTION

The MT Transducer provides an output signal which is directly proportional to the instantaneous product of two input signals. Each input and the output are isolated from one another up to 1000 Volts dc. The MT series should be used where two process quantities must be multiplied to obtain a useful quantity. For example, a shunt output may be multiplied with the system voltage to obtain dc power delivered to a load. The multiplier provides full four-quadrant operation so signals that may change polarity during operation may be accurately multiplied.



### CALIBRATION

All standard models are calibrated at the factory with the values listed below in the Model Selection Table. For instance, the model MT-1-06B would be calibrated with inputs of 50mV and 100 Volts for a full-scale output of 1mA. To compute the power when using a 50mV shunt, multiply the current value of the shunt times 100V. In the case where the shunt equals 1000A, multiply 1000 times 100 for an output of 1mA which equals 100 kilowatts. EXAMPLE: 50mV (Shunt Value) X 100V = 1mA Full-Scale Output

MODEL MT — □ — □ □ □ □

**5 YEAR WARRANTY**

INPUT ONE (SHUNT)	INPUT TWO (VOLTAGE)	OUTPUT	INSTRUMENT POWER	FREQUENCY
(1) = 50mV (2) = 100mV (3) = 1V (4) = 5V (5) = 10V	(01) = 1V (02) = 5V (03) = 10V (04) = 25V (05) = 50V (06) = 100V (07) = 150V (08) = 250V (09) = 300V (10) = 400V *(11) = 500V *(12) = 750V	(B) = 1mA (D) = 10V (E) = 4-20mA (EA) = 0-20mA	(Blank) = 115Vac (G) = 230Vac	(Blank) = DC (AC) = 60Hz
<b>ORDERING INFORMATION</b> Example: Input #1 0-50mV, Input #2 0-100Vdc, with a 0-10Vdc Output. <b>MT-1-06D</b>				
* DC Only				

## SPECIFICATIONS

### INPUT

Input One..... (Shunt) ..... See Table  
 Burden ..... >100kΩ  
 Over-range ..... 2 X Rated Input  
 Input Two ..... (Voltage) ..... See Table  
 Burden ..... (to 100V) ..... 100kΩ  
 (150V to 300V) ..... 500kΩ  
 (400V to 750V) ..... 1MΩ  
 Over-range ..... 2 X F.S. or 600Vac/850Vdc max.  
 Frequency ..... Standard ..... DC  
 AC Option ..... 50-70Hz

### DIELECTRIC TEST

Inputs to Output ..... 1000Vdc  
 Inputs/Output to Instrument Power ..... 1500Vac

### INSTRUMENT POWER

Standard ..... 90-135Vac, 50-400Hz, 7VA  
 "G" Option ..... 180-270Vac, 50-400Hz

### OUTPUT

Load on Output..... 1mA ..... 0-10kΩ  
 10V ..... ≥2kΩ  
 20mA ..... 0-500Ω  
 Response Time to 90% ..... DC Models ..... 10ms  
 AC Option ..... 200ms

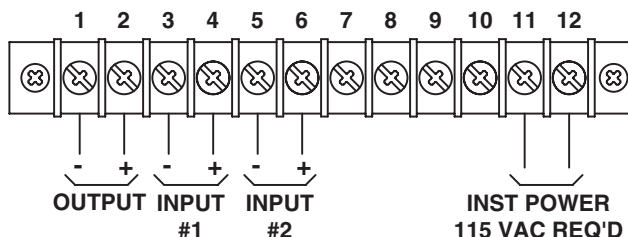
### ACCURACY & LINEARITY

..... ±0.5% F.S.  
 Including Set-point, Repeatability, Voltage & Current Linearity  
 Ripple ..... ±1% F.S.

### TEMPERATURE & PHYSICAL

Temperature Effect ..... (-20°C to 65°C) ..... ±0.02%/°C  
 Net Weight ..... 2.2 lb

## CONNECTION DIAGRAM



## CASE DIMENSIONS

