

**DESCRIPTION**

The MS5521 is a plug-in PT transmitter that calculates the rms values of AC current signals from a PT, converts them into commonly used DC signals, and provides an isolated single output.

**ORDERING CODE**

**MS5521** - □ - □ □

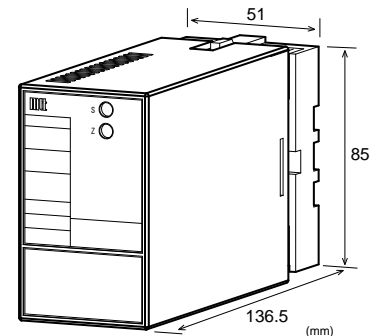
**Model** \_\_\_\_\_

**Power Supply** \_\_\_\_\_  
**A:** 100 to 240V AC (50 to 60Hz)  
**D:** 24V DC                      **P:** 100 to 240V DC

**Input (AC Voltage Signal)** \_\_\_\_\_  
**1:** 0 to 110V AC, 50/60Hz  
**2:** 0 to 150V AC, 50/60Hz  
**3:** 0 to 300V AC, 50/60Hz  
**0:** Other AC voltage signals, 50/60Hz

**Output** \_\_\_\_\_  
**A:** 4 to 20mA DC                      **1:** 0 to 10mV DC  
**D:** 0 to 20mA DC                      **2:** 0 to 100mV DC  
**Z:** Other DC current signals        **3:** 0 to 1V DC  
    **4:** 0 to 10V DC  
    **5:** 0 to 5V DC  
    **6:** 1 to 5V DC  
    **3W:** ±1V DC  
    **4W:** ±10V DC  
    **5W:** ±5V DC  
    **0:** Other DC voltage signals

**Options** \_\_\_\_\_  
**No code:** None  
**/X:** Special order  
\* For non-standard options, ask MTT for availability.



**SPECIFICATIONS**

**POWER SECTION**

<b>Power Requirements</b>	100 to 240V AC: 85 to 264V AC (47 to 63Hz) 24V DC: 24V DC±10%		
<b>Power Sensitivity</b>	100 to 240V DC: 85 to 264V DC Better than ±0.1% of span for each power supply range.		
<b>Power Line Fuse</b>	160mA fuse		
<b>Maximum Power Consumption</b>	Power	100-240V AC	24V DC
		Approx. 4.5VA	Approx. 1.2W
			100-240V DC
			Approx. 4.8W

**INPUT SECTION**

<b>Input Resistance</b>	1MΩ min. with or without power.
<b>Allowable Input Current</b>	Continuous: 120% of the rated input value Instantaneous: 1.5 times the rated input value (within 5 seconds)
<b>Crest Factor</b>	3 max.
<b>Ranges Available</b>	Between 0-10mV AC and 0-300V AC.

**OUTPUT SECTION**

<b>Allowable Output Load</b>	Voltage Output (DC)	1V span and up	2mA max.
		10mV	10kΩ min.
		100mV	100kΩ min.
	Current Output (DC)	4 to 20mA	750Ω max.
<b>Zero Adjustment</b>	Approx. ±5% of span. (Adjustable by the front-accessible trimmer.)		
<b>Span Adjustment</b>	Approx. ±5% of span. (Adjustable by the front-accessible trimmer.)		

**Ranges Available**

	Current Signal	Voltage Signal
<b>Output Range (DC)</b>	0 to 20mA	-10 to 10V
<b>Output Span (DC)</b>	4 to 20mA	10mV to 20V
<b>Output Bias</b>	0 to 100%	-100 to 100%

\* For current output signals, the accuracy of any current output smaller than 0.1mA is not guaranteed.  
Output Spec. Ex. 1: For 4 to 20mA output, the output span is 16mA and the bias +25%.  
Output Spec. Ex. 2: For -1 to 4V output, the output span is 5V and the bias -20%.

**ORDERING INFORMATION**

To place an order, please use the ordering code format as shown above.  
(e.g.) MS5521-A-16

Other Ordering Examples:  
For an input code of "0": MS5521-A-0A (Input: 0 to 200V)  
For an output code of "0": MS5521-A-20 (Output: 2 to 5V)  
For an option code of "X": MS5521-A-2A/X (0-90% response time: 100ms max.)

**● PERFORMANCE**

Accuracy Rating	Better than $\pm 0.25\%$ of span with at least 10% input (at $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$ ).
Temperature Effect	Better than $\pm 0.2\%$ of span per $10^{\circ}\text{C}$ change in ambient.
Response Time	400ms max. (0 to 90%) with a step input at 100%.
CMRR	100dB min. (500V AC, 50/60Hz)
Isolation	3-way isolation between input, output, and power.
Insulation Resistance	100M $\Omega$ min. (@ 500V DC) between input, output, and power.
Dielectric Strength	Input / Output / Power: 2000V AC for 1 minute (Cutoff current: 0.5mA)
Surge Withstand Capability	Tested as per ANSI/IEEE C37.90.1-1989.
Operating Environment	Ambient temperature: $-5$ to $55^{\circ}\text{C}$ Humidity: 5 to 90% RH (non-condensing)
Storage Temperature	$-10$ to $60^{\circ}\text{C}$

**● PHYSICAL**

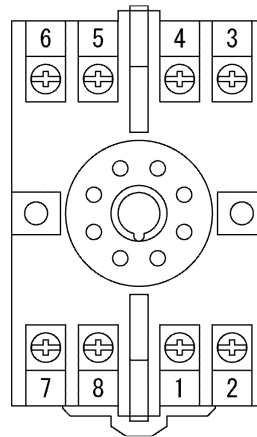
Installation	Wall/DIN rail mounting
Mounting Direction	Vertical
Screwing Torque	0.78 to 1.18 [Nm] * Recommended
Wiring	M3.5 screw terminal connection
External Dimensions	W51 x H85 x D136.5 mm (including the socket)
Weight	Main unit: 200g max. Socket: 60g max.

**● MATERIAL**

Housing	ABS resin (UL 94V-0)
Socket	ABS resin (UL 94V-0)
Screw Terminal	Galvanized steel with trivalent chromate finish
Printed Circuit Board	Glass fabric, epoxy resin (FR-4: UL 94V-0)
Conformal Coating	HumiSeal® 1A27NSLU (Polyurethane)

\* HumiSeal® is a registered trademark of Chase Corporation.

**TERMINAL ASSIGNMENTS**



①	+ OUTPUT	
②	- OUTPUT	
③	L INPUT	
④	N INPUT	
⑤	N.C.	
⑥	N.C.	
⑦	P (+)	POWER
⑧	N (-)	

**BLOCK DIAGRAM**

