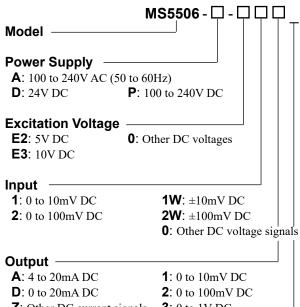


# **Product Specification Sheet** Plug-In Strain Gauge Transmitter with Isolated Single Output

### DESCRIPTION

The MS5506 is a plug-in strain gauge transmitter that supplies excitation voltage to strain-gauge type pressure sensors, load cells, and the like and converts their output signals into standard process signals. It provides an isolated single output.

# ORDERING CODE



- **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
- **0**: Other DC voltage signals

### **Options**

No code: None

**/K**: Fast response (0 to 90% response time: 10ms max.)

**/H**: Polyurethane conformal coating

**/X**: Others (Special order)

## ORDERING INFORMATION

To place an order, please use the ordering code format as shown above. Also specify a bridge resistance. (e.g.) MS5506-A-E31A (350Ω)

Other Ordering Examples:

For an excitation voltage code of "0": MS5506-A-011

 $(700\Omega / Excitation voltage: 4V)$ 

For an input code of "0": MS5506-D-E204 (120 $\Omega$  / Input: 0 to 20mV)

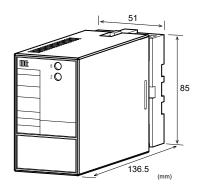
For an output code of "Z": MS5506-A-E32Z (350 $\Omega$  /

Output: 8 to 20mA)

For an option code of "X": MS5506-D-E215/X (Response

frequency: 50Hz)

Note: If you wish to include multiple options in your order, specify the option codes in series (e.g. /KX).



D/		ER	CE	CTI	ON
Р١	JVV	EK	SE	$\cup$ $\square$	UN

_	_				
Power	ower 100 to 240V AC: 85 to 264V AC (47)				
Requirements	to 63Hz)				
	24V DC:	$24V DC\pm10$	%		
	100 to 24	0V DC: 85 to	o 264V DC		
Power Sensitivity Better than $\pm 0.1\%$ of span for each			span for each		
power supply range.					
Power Line Fuse 160mA fuse					
Maximum Power Consumption					
Power	100-240V AC 24V DC 100-240V DC				
	Approx.	Approx.	Approx.		
	7.0VA 2.1W 7.2W				

●INPUT SECTIO	N
Input Resistance	With power: $1M\Omega$ min.
	Without power: $10k\Omega$ min.
Allowable Input	30V DC max., continuous.
Voltage	
Excitation Voltage	5V DC at 120Ω bridge resistance
	10V DC at 350Ω bridge resistance
	Other voltages
Range Available	
Input Range (DC)	-200mV to 200mV
Input Span (DC)	5mV* to 400mV
Input Bias	-100 to 100%
Excitation Voltage	3 to 10V

Note: For any input range including negative input signals, the input span ranges from \*10mV to 400mV.

Input Spec. Ex. 1: For 50 to 150mV input, the input span is 100 mV and the bias +50%.

Input Spec. Ex. 2: For -10 to 30mV input, the input span is 40mV and the bias -25%.

### OUTPUT SECTION

OUTPUT SECTION					
Allowable Output Load					
Voltage Output (DC)	1V span and up	2mA max.			
	10mV	$10$ k $\Omega$ min.			
	100mV	$100$ k $\Omega$ min.			
Current Output (DC)	4 to 20mA	$750\Omega$ max.			
Zero Adjustment	Approx. ±5% of spa	n.			
	(Adjustable by the f	ront-accessible			
	trimmer.)				
Span Adjustment	Approx. ±5% of spa	n.			
	(Adjustable by the f	ront-accessible			
	trimmer.)				

<sup>\*</sup> For non-standard options, ask MTT for availability.



Ranges Available		
	Current Signal	Voltage Signal
Output Range (DC)	0 to 20mA	-10 to 10V
Output Span (DC)	4 to 20mA	10mV to 20V
Output Bias	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%.

D		D	Е	$\cap$	D	B/	۱۸	M	0	
М	_	ĸ	_	IJ	ĸ	IV	ш	.IN	L	

TI LIN ONMAN	/ L
Accuracy Rating	Better than $\pm 0.1\%$ of span (at
	25°C±5°C).
Temperature	Better than ±0.2% of span per 10°C
Effect	change in ambient.
Response Time	85ms 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	$100M\Omega$ min. (@ 500V DC) between
Resistance	input, output, and power.
Dielectric Strength	Input / Output / Power: 2000V AC
	for 1 minute (Cutoff current: 0.5mA)
Surge Withstand	Tested as per ANSI/IEEE
Capability	C37.90.1-1989.
Operating	Ambient temperature: -5 to 55°C
Environment	Humidity: 5 to 90% RH
	(non-condensing)
Storage	-10 to 60°C
Temperature	

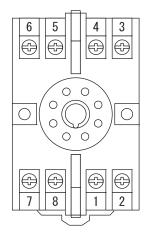
### PHYSICAL

OTTOOAL	
Installation	Wall/DIN rail mounting
Mounting Direction	Vertical
Screwing Torque	0.78 to 1.18 [Nm] * Recommended
Wiring	M3.5 screw terminal connection
External	W51 × H85 × D136.5 mm
Dimensions	(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	Glass fabric, epoxy resin
Board	(FR-4: UL 94V-0)

## TERMINAL ASSIGNMENTS



1	+ OUTPUT
2	- OUTPUT
3	+ INPUT
4	- INPUT
5	+ EX (Excitation voltage)
6	<ul><li>– EX (Excitation voltage)</li></ul>
7	P (+)
8	N (-)

## **BLOCK DIAGRAM**

