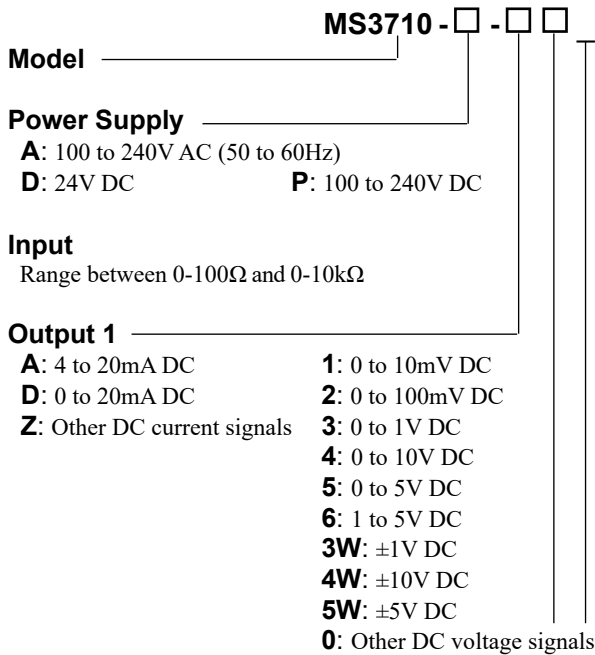


DESCRIPTION

The MS3710 is a slim, plug-in potentiometer transmitter that detects changes in the resistance of potentiometric sensors, converts them into commonly used DC signals and provides isolated single or dual output.

ORDERING CODE


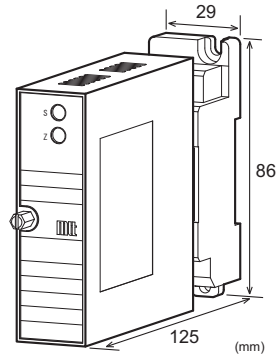
Output 2 _____

No code: None
The codes are the same as for Output 1.

Note 1: When a voltage output is selected for Output 1, a current output cannot be selected for Output 2.
 Note 2: When the code A (4 to 20mA) is selected for both of the two outputs, the output load will be 550Ω maximum for Output 1 and 350Ω maximum for Output 2.

Options _____

No code: None
/K: Fast response (0 to 90% response time: 10ms max.)
/L: Dual current output with high output load
 * Not subject to CE approval.
 (OUT-1: 750Ω / OUT-2: 550Ω)
/H: Polyurethane conformal coating
/X: Others (Special order)
 * For non-standard options, ask MTT for availability.


ORDERING INFORMATION

To place an order, please use the ordering code format as shown on the left.
 (e.g.) MS3710-A-A6

* Factory default: Factory testing is carried out with an input range of 0 to 5kΩ.

Other Ordering Examples:
 For an output code of "0": MS3710-A-A0 (Output: 2 to 5V)
 For a specific resistance range: MS3710-A-AA (0 to 500Ω)
 (When you specify a resistance range, our factory performs the test accordingly, the fact of which will be indicated in the label attached.)
 For an option code of "X": MS3710-A-AA/X (Response frequency: 50Hz)
 Note: If you wish to include multiple options in your order, specify the option codes in series (e.g. /KX).

SPECIFICATIONS

● POWER SECTION			
Power Requirements	100 to 240V AC: 85 to 264V AC (47 to 63Hz) 24V DC: 24V DC±10% 100 to 240V DC: 85 to 264V DC		
Power Sensitivity	Better than ±0.1% of span for each power supply range.		
Power Line Fuse	160mA fuse is installed (standard).		
Power Consumption			
Power	100-240V AC	24V DC	100-240V DC
Single Output	4.5VA max	1.1W max	4.8W max
Dual Output	5.5VA max	1.5W max	6.0W max
● INPUT SECTION			
Input Signal	Range between 0-100Ω and 0-10kΩ.		
Measuring Voltage	Approx. 0.5V		
Allowable Lead Wire Resistance	10% or less of total resistance per wire. (The resistance of all three wires must be equal.)		

● **OUTPUT SECTION**

Allowable Output Load		
Voltage Output (DC)	1V span and up 10mV 100mV	2mA max. 10kΩ min. 100kΩ min.
Current Output (DC)	4-20mA single output 4-20mA dual output	750Ω max. Output 1: 550Ω max. Output 2: 350Ω max.
Zero Adjustment	Approx. 0 to 50% of total resistance. (Adjustable by the front-accessible trimmer.)	
Span Adjustment	Approx. 50 to 100% of total resistance. (Adjustable by the front-accessible trimmer.)	
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%
Note: 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%.		

● **PERFORMANCE**

Accuracy Rating	Better than ±0.2% of span (at 25°C±5°C).
Temperature Effect	Better than ±0.2% of span per 10°C change in ambient.
Response Time	170ms max. (0 to 90%) with a step input at 100%.
CMRR	100dB min. (500V AC, 50/60Hz)
Isolation	4-way isolation between input, output 1, output 2, and power.
Insulation Resistance	100MΩ min. (@ 500V DC) between input, output 1, output 2, power, and ground.
Dielectric Strength	Input / [Output 1, Output 2] / [Power, Ground]: 2000V AC for 1 minute (Cutoff current: 0.5mA) Power / Ground: 2000V AC for 1 minute (Cutoff current: 5mA) Output 1 / Output 2: 500V 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°C Humidity: 5 to 90% RH (non-condensing)
Storage Temperature	-10 to 60°C

● **PHYSICAL**

Installation	Wall/DIN rail mounting
Wiring	M3.5 screw terminal connection (with a power terminal block cover & drop-proof screws)
Screwing Torque	0.8 to 1.0 [Nm] * Recommended
External Dimensions	W29 × H86 × D125 mm (including the mounting screw and socket)
Weight	Main unit: 120g max. Socket: 80g max.

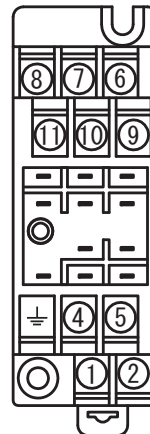
● **MATERIAL**

Housing	ABS resin (UL 94V-0)
Terminal Block	PBT resin (UL 94V-0)
Terminal Block Cover	PC resin (UL 94V-2)
DIN Rail Stopper	PP resin (UL 94HB)
Screw Terminal	Nickel-plated steel
Contacts Material and Finish	Brass with 0.2μm gold plating
Printed Circuit Board	Glass fabric, epoxy resin (FR-4: UL 94V-0)

● **STANDARDS CONFORMITY**

EC Directive Conformity	EMC Directive (2014/30/EU) EN61326-1:2013 Low Voltage Directive (2014/35/EU) IEC61010-1 EN61010-1:2010/A1:2019 Installation Category II Pollution Degree 2 Maximum operating voltage 300V Reinforced insulation between [input/output/GND] and power.
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TERMINAL ASSIGNMENTS



①	P (+)	POWER
②	N (-)	
⊥	GND	
④	+ OUTPUT 1	
⑤	- OUTPUT 1	
⑥	N.C.	
⑦	+ OUTPUT 2	
⑧	- OUTPUT 2	
⑨	POT A	
⑩	POT B	
⑪	POT C	

BLOCK DIAGRAM

