

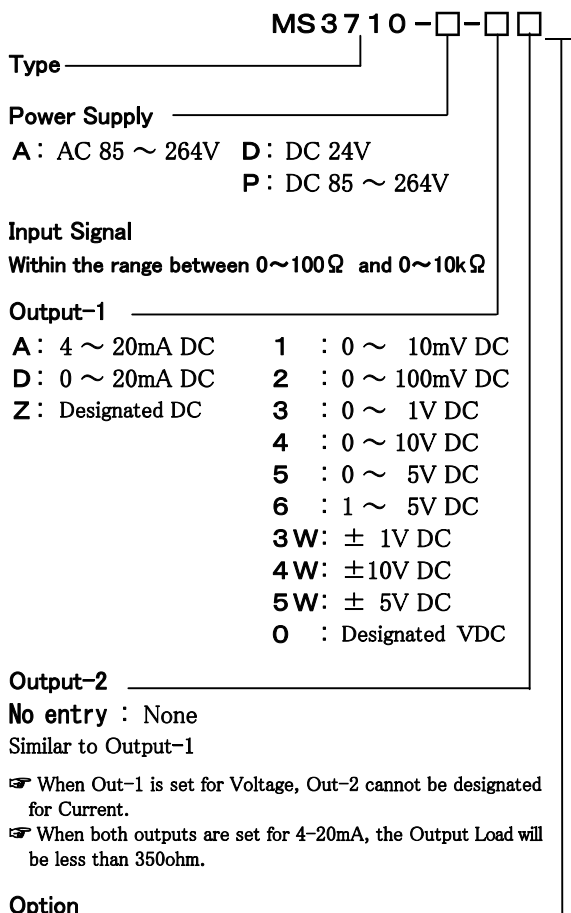


Standard Specifications Type: MS3710 MS3700
Slim-shaped Plug-in Isolated Dual Output Potentiometer Transmitter

Overview

This MS3710 functions to detect the variation of resistance value of Potentiometer (slide rheostat) type sensor and convert same into any desired isolated No.1 and No.2 (dual) DC output. (RoHS - conformed)

Ordering Format



SPECIFICATIONS

Power Supply Section

Power Supply AC85~264V (47~63Hz , Rating 100~240V)
 DC24V ±10%
 DC85~264V (Rating 100~240V)

Power Sensitivity Within ±0.1% of Span for each power supply voltage

Power Supply Fuse 160mA fuse

Maximum Power Consumption

Power Supply	AC85~264V	DC24V	DC85~264V
1 Single Output	4.5VA max. /	1.1W max. /	4.8W max.
2 Dual Output	5.0VA max. /	1.5W max. /	6.0W max.

Input Section

Input Signal Within 0~100 Ω and 0~10k Ω range

Measuring Voltage Approx. 0.5V

Maximum Input Leadwire Resistance
 10% (per wire) of total resistance.
 (Resistance of each wire should be identical.)

Output Section

Output Load

Voltage Output (DC)	1V Span min.	2mA max.
	10mV Span min.	10k Ω min.
	100mV Span min.	100k Ω min.
Current Output (DC)	4 ~ 20mA Single	750 Ω max.
	4~20mA Dual output	Out-1 550 Ω max. Out-2 350 Ω max.

Zero Adjustment Approx. 0~50% of total resistance

Range (Adjustable by Trimmer on front panel)

Span Adjustment Approx. 50~100% of total resistance

Range (Adjustable by Trimmer on front panel)

Range of Product available

	Current Signal	Voltage Signal
Output Range (DC)	0~20mA	-10~10V
Output Span (DC)	4~20mA	10mV~20V
Output Bias	0~100%	-100~100%

(Ex.1) 4~20mA ⇒ output span 16mA, bias 25%

(Ex.2) -1~4V ⇒ output span 5V, bias -20%

* The current output smaller than 0.1mA will be out the accuracy guarantee.

Items to be specified at ordering

- Type of Instrument (Ex.)MS3710-A-A6
- Factory Setting will be for measurement range of 0~5K Ω.
- Other items to be specified (examples)
 - For "0" output : MS3710-A-6A0 (Output 2~5V)
 - To specify resistance : MS3710-A-AA (0~500 Ω)
 (When resistance is specified, the measurement range as such will be indicated in affixed label.)
 - For Option "X" : MS3710-A-AA/X (Response Frequency 50Hz)
 - For more than one option : Enter Option Codes in succession (/KX).

● Standard Performance

Conversion Accuracy

Within $\pm[0.2\%/F.S.+0.5^\circ C\{Temp. Element Accuracy\} + Linearization Accuracy]$ (@ $25^\circ C \pm 5^\circ C$)

Temp. Characteristics Within $\pm 0.2\%$ of Span with every $10^\circ C$ variation

Response Time 170msec max. (0~90%) with 100% step input

C M R R 100dB min. (500V AC, 50/60Hz)

Signal Isolation Between Input-Out1-Out2-Power Supply-Ground, mutualby

Isolation Resistance 100M Ω min. (@500V DC)
Between Input-Out1-Out2-Power Supply-Ground

Dielectric Strength Between Input-[Out1,Out2]-[Power Supply] Ground
:2000V AC, Shut Down Cuent 0.5mA for 1 minute
Between Power Supply-Ground
:2000V AC, Shut Down Cuent 5mA for 1 minute
Between Out1-Out2
:500V AC, Shut Down Cuent 0.5mA for 1 minute

S W C Conformed to ANSI/IEEE C37.90.1-1989

Operating Environment Temperature : $-5\sim 55^\circ C$
Humidity : $5\sim 90\%RH$ (Non-Condensing)

Storage Temperature $-10\sim 60^\circ C$

● Installation / Physical Specifications

Installation Wall-mounting &/or DIN-rail mounting

Wiring M3.5 screw terminal connection
(with P.S. terminal cover/Screw drop-protection)

Screw tightening Torque
0.8~1[N·m] recommendable

Outer Dimensions W29×H86×D125mm
(incl. set screws and terminal block)

Mass Main Body 120g max, Terminal Block 80g max.

● Materials

Housing ABS resin (UL-94V-0)

Terminal Block ABS resin (UL-94V-0)

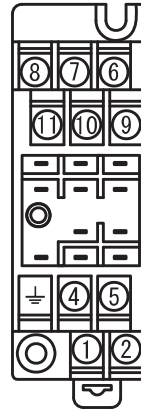
Terminal Screws Iron / Nickel-plated

Terminal Surface Treatment
0.2 μm gold-plated

P.C. Board Glass-Expoxy (FR-4:UL-94V-0)

Moisture-proof Coating
:HumiSeal 1A27NS(Polyurethane Resin)

Terminal Arrangement / Signal Assignment



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

Block Diagram

