Standard Specifications Type: MS3763 MS3700

Slim-shaped Plug-in RTD Temperature Differential Transmitter with Isolated Single/Dual Output

Overview

KS3763 is a slim-shaped plug-in RTD temperature differential transmitter with isolated single/dual output to detect temperature differential between two two-wire RTD sensors and convert the differential into various DC signals as selected. (RoHS-conformed)

Ordering Format

MS3763 -□-□□□

Type

Power Supply

A: AC 85 ～ 264V D: DC 24V
P: DC 85 ～ 264V

Input Signal

RTD Input×2 (2-wire system, JIS-conformed)

P1: Pt 100Ω J : JPt 100Ω

Output-1

A: 4 ～ 20mA DC
D: 0 ～ 20mA DC
Z: Designated DC

1 : 0 ～ 10mV DC
2 : 0 ～ 100mV DC
3 : 0 ～ 1V DC
4 : 0 ～ 10V DC
5 : 0 ～ 5V DC
6 : 1 ～ 5V DC
3W: ± 1V DC
4W: ±10V DC
5W: ± 5V DC
0 : Designated VDC

Output-2

No entry: None.
Similar to Output-1.

☞When Out-1 is set for Voltage, Out-2 cannot be designated for Current.
☞When both outputs are set for 4～20mA, the Output Load of Out-1 will be less than 550Ω, and that of Out-2 will be 350Ω.

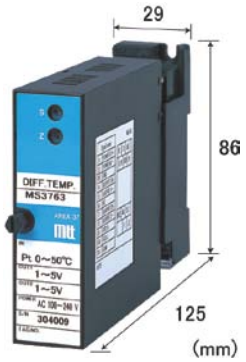
Option

No entry: None.
／K : Fast Response (Faster than 10msec:0～90%)
／X : Custom Order… Additional cost required.
*Contact us for custom-order requirement.

Please specify upon ordering

・Product Model Number
(Example) MS3763-A-P1A6

Other items to be specified:
・For output "0": MS3763-A-P1A0(Output 2～10V)
・For option "X":MS3763-A-P1A6/X(Response Frequency 50Hz)
・For more than one option: Enter Option Codes in succession(/KX)



Specifications

●Power Supply Section

Power Supply	AC85～264V (Rating 100～240V) 47～63Hz 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
Single Output	5.5VA max. / 1.6W max.	/ 6.0W max.	
Dual Output	6.5VA max. / 1.8W max.	/ 7.2W max.	

●Input Section

Measuring Temperature Range	0～50℃ (Fixed)
Input Temperature Difference	0～20℃ (Fixed)
Excitation Current	Approx. 2mA
Input Wire Resistance	50Ω max. per wire

●Output Section

Maximum Output Load

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

Zero Adjustment Range	Approx. ±5% of Span (Adjustable by Trimmer on front panel)
Span Adjustment Range	Approx. ±5% of Span (Adjustable by Trimmer on front panel)
Burnout	Upscale (Despite any of H, L or COM is disconnected.)

Range of Products 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%

*For current output signal smaller than 0.1mA, the accuracy is not guaranteed.
(e.g.1) 4～20mA⇒Output Span 16mA, Bias 25%
(e.g.2) -1～4V⇒Output Span 5V, Bias -20%

●Standard Performance

Conversion Accuracy	Within ±0.2%/F.S.@ Input range15～ (@25℃±5℃)
Temp Characteristics	Within ±0.2% of Span with every 10℃ variation
Response Time	200msec max.(0～90%)@100% step input
CMRR	100dB min. (500V AC, 50/60Hz)
Signal Isolation	Between Input - Out1-Out2-Power Supply-Ground
Isolation Resistance	100MΩ min.(@500V DC) Between Input-Out1-Out2-Power Supply-Ground
Dielectric Strength	Between Input－[Out1,Out2]－[Power Supply, Ground] :2000V AC , Shut Down Current 0.5mA for 1 minute Between Power Supply - Ground :2000V AC , Shut Down Current 5mA for 1 minute Between Out1 - Out2 :500V AC , Shut Down Current 0.5mA for 1 minute
Measures against SWC	Conform to ANSI/IEEE C37.90.1-1989
Operating Environment	Temperature: -5～55℃ Humidity : 5～90%RH(Non-Condensing)
Storage Temp.	-10～60℃

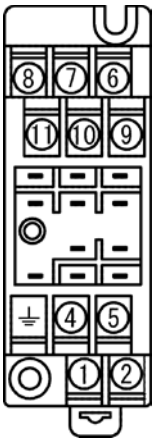
●Installation / Physical Specifications

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 Dimension	W29×H86×D125mm (incl. set screws & 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	0.2μm / Gold plated
P.C. Board	Glass-Epoxy (FR-4:UL-94V-0)
Moisture-proof Coating	HumiSeal 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	RTD H	
⑩	RTD L	
⑪	COM	

Block Diagram