



Standard Specifications Type: MS3761

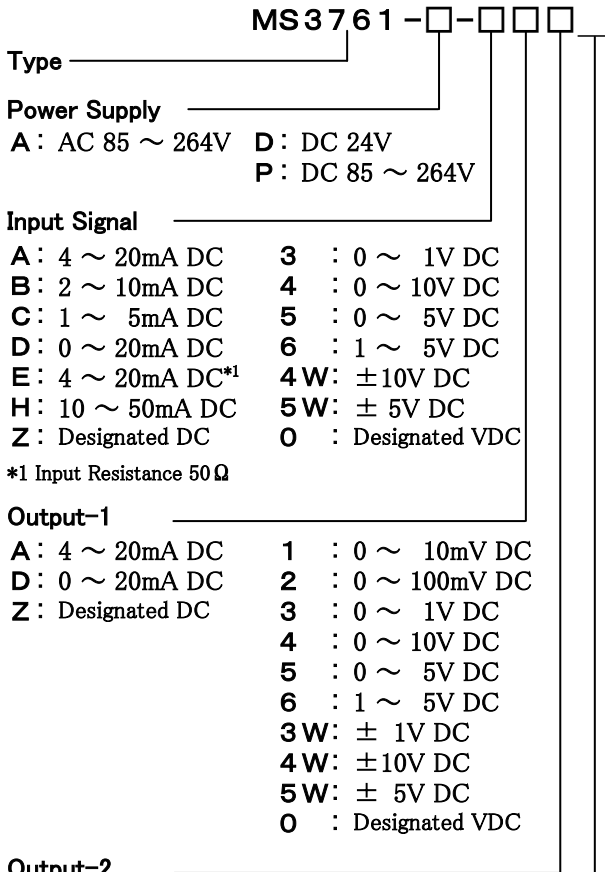
MS3700

Slim-shaped Plug-in Adder with Isolated Single/Dual Output

Overview

MS3761 is a slim-shaped plug-in Adder with isolated single/dual output to receive two DC current/voltage signals from sensors and convert them into a signal proportional to the sum of those signals. (RoHS-conformed)

Ordering Format



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 550 Ω, and that of Out-2 will be 350 Ω.

Option

No entry: None.

/K : Fast Response (Faster than 10msec:0~90%)

/X : Custom Order.....Additional cost required.

\*Contact us for custom-order requirement.

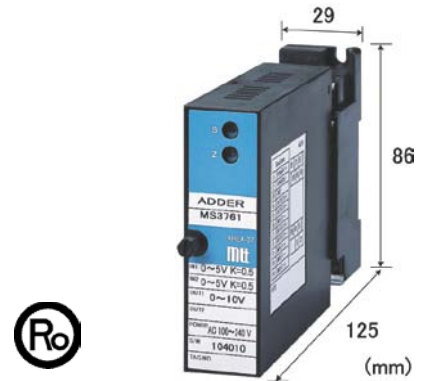
Please specify upon ordering

•Product Model Number (Input-1 factor/Input-2 factor)  
 (Example) MS3761-A-6A6 (K1=1.0/K2=1.0)

\*Please specify Input-1 factor (K1) and Input-2 factor (K2) from the range of 0.1~2.0 on condition that 0.4 ≤ K1+K2.

Other items to be specified:

- For input "Z": MS3761-A-ZAA(K1=1.0/K2=1.0/Input8~20mA)
- For output "0": MS3761-A-A60(K1=1.0/K2=1.0/Output2~5V)
- For option "X": MS3761-A-66/X (K1=1.0/K2=1.0/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	4.5VA max. / 1.4W max. / 4.8W max.		
Dual Output	5.5VA max. / 1.7W max. / 6.0W max.		

●Input Section

Input Resistance

Voltage Input (DC)	With excitation	1M Ω min.
	Without excitation	1M Ω min.
Current Input (DC)	4~20mA (Standard)	250 Ω
	2~10mA	250 Ω
	1~5mA	100 Ω
	0~20mA	250 Ω
	10~50mA	10 Ω

Input Voltage Allowable

Voltage Input	30V DC max. continuous (Span 10V max.)
Current Input	40mA DC max. continuous (4~20mA)

Range of Products Available

	Current Signal	Voltage Signal
Input Range(DC)	-100~100mA	-300~300V
Input Span (DC)	100 μA*1~200mA	200mV*2~600V
Input Bias	-100~100%	-100~100%

\*When negative input is contained, the span becomes \*1,200 μA~, \*2,400mV~  
 (e.g.1) 3~8V ⇒ Input span 5V, Bias 60%  
 (e.g.2) -5~0V ⇒ Input span 5V, Bias -100%

●Output Section

Maximum Output Load

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

● Output Section

<b>Output Range</b>	0~Approx. 120%	
<b>Arithmetic Expression</b>	Output(%)=IN1(%)×K1+ IN2(%)×K2	
	*IN1,IN2:0~120%	
IN1: Input-1 (%)	K1: Input-1 Factor	
IN2: Input-2 (%)	K2: Input-2 Factor	
(Example) Input 1~5V/Output 0~10V K1:0.7, K2:0.3		
Input-1 3V(50%), Input-2 2V(25%)		
⇒50%×0.7+25%×0.3=42.5%(4.25V)		

<b>Range of Products Available</b>		
	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 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

<b>Conversion Accuracy</b>	Within ±0.1%/F.S.(@25°C±5°C)
<b>Temp Characteristics</b>	Within ±0.2% of Span with every 10°C variation
<b>Response Time</b>	85msec max. (0~90%)@100% step input
<b>CMRR</b>	100dB min. (500V AC, 50/60Hz)
<b>Signal Isolation</b>	Between Input - Out1-Out2-Power Supply-Ground
<b>Isolation</b>	100MΩ min. (@500V DC)
<b>Resistance</b>	Between Input-Out1-Out2-Power Supply-Ground
<b>Dielectric Strength</b>	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
<b>Measures against SWC</b>	Conform to ANSI/IEEE C37.90.1-1989
<b>Operating Environment</b>	Temperature: -5~55°C Humidity : 5~90%RH(Non-Condensing)
<b>Storage Temp.</b>	-10~60°C

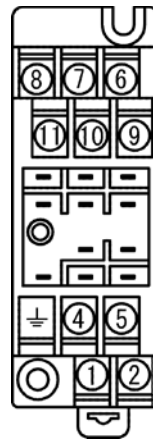
● Installation / Physical Specifications

<b>Installation</b>	Wall mounting &/or DIN-rail mounting
<b>Wiring</b>	M3.5 screw terminal connection (with P.S. terminal cover & screw drop-protection)
<b>Screw Tightening Torque</b>	0.8~1[N·m] Recommendable
<b>Outer Dimension</b>	W29×H86×D125mm (incl. set screws & terminal block)
<b>Mass</b>	Main body 120g max., Terminal Block 80g max.

● Materials

<b>Housing</b>	ABS Resin (UL-94V-0)
<b>Terminal Block</b>	ABS Resin (UL-94V-0)
<b>Terminal Screws</b>	Iron/Nickel-plated
<b>Terminal Surface Treatment</b>	0.2 μm / Gold plated
<b>P.C. Board</b>	Glass-Epoxy (FR-4:UL-94V-0)
<b>Moisture-proof Coating</b>	HumiSeal Coating :HumiSeal 1A27NS(Polyurethane Resin)

Terminal Arrangement / Signal Assignment



①	P(+)	POWER
②	N(-)	
⊥	GND	
④	+ OUTPUT 1	
⑤	- OUTPUT 1	
⑥	- INPUT 2	
⑦	+ OUTPUT 2	
⑧	- OUTPUT 2	
⑨	+ INPUT 1	
⑩	- INPUT 1	
⑪	+ INPUT 2	

Block Diagram

