

DESCRIPTION

The MS3727 is a slim, plug-in signal selector that switches between two input signals by switching input. The selector is available in three input types: DC current input, DC voltage input, and DC current input with a 50Ω shunt resistor. (For the DC current input, the input terminals on the non-selected side will not open.)

ORDERING CODE

Model _____ **MS3727** - - /

Power Supply _____
A: 100 to 240V AC (50 to 60Hz)
D: 24V DC **P:** 100 to 240V DC

Input _____
A: DC current signal **C:** DC voltage signal
B: DC current signal (Shunt resistor 50Ω)

Options _____
No code: None
/X: Special order
 * For non-standard options, ask MTT for availability.

ORDERING INFORMATION

To place an order, please use the ordering code format as shown above.
(e.g.) MS3727-A-A

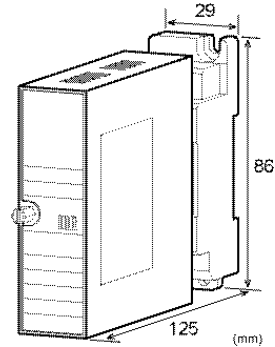
SPECIFICATIONS

● **POWER SECTION**

Power Requirements	100 to 240V AC: 85 to 264V AC (47 to 63Hz) 24V DC: 24V DC±10%		
Power Line Fuse	100 to 240V DC: 85 to 264V DC 160mA fuse is installed (standard).		
Power Consumption			
Power	100-240V AC	24V DC	100-240V DC
	3.5VA max	0.6W max	6.0W max

● **INPUT SECTION**

Input Signal	2 channels (INPUT-1, INPUT-2)
Shunt Resistor	For the input code B, a built-in 50Ω shunt resistor is provided.
Allowable Input Range	DC current signal: ±50mA DC max. (Minimum span: 1mA DC) DC voltage signal: ±50V DC max. (Minimum span: 10mV DC)
Switching Input	Dry contact (Internal pull-up: 24V DC at 10mA)



● **OUTPUT SECTION**

Output Signal	Input code A or C: Equivalent to the input signal level Input code B: Input signal × Shunt resistor (50Ω) Note: Either INPUT-1 or INPUT-2 is output.
Operation	When the power is ON and the switching input is ON, INPUT-1 is output. When the power is ON and the switching input is OFF, INPUT -2 is output. When the power is OFF, both INPUT-1 and INPUT-2 give no output. * For details, refer to the Switching Configurations.

● **PERFORMANCE**

Accuracy Rating	Input code B: ±0.1% (shunt resistor's accuracy)
Temperature Effect	Input code B: ±0.25ppm/°C
Response Time	5ms max.
Internal Resistance between Input and Output	50Ω max. per wire (ON resistance of photo MOS relay)
Condition of Non-selected Input Channel	Input code A: 50Ω max. (due to the ON resistance of photo MOS relay) Input code B: Shunt resistor 50Ω Input code C: Open (leakage current 1μA max.) Note: When the power is OFF, the above-described condition applies to both channels.
Isolation	4-way isolation between [input/output], switching input, power, and ground.
Insulation Resistance	100MΩ min. (@ 500V DC) between [input/output], switching input, power, and ground.
Dielectric Strength	[Input/Output] / Switching Input / [Power, Ground]: 2000V AC for 1 minute (Cutoff current: 0.5mA) Power / Ground: 2000V AC for 1 minute (Cutoff current: 5mA)

Operating Environment	Ambient temperature: -5 to 55°C
	Humidity: 5 to 90% RH (non-condensing)
Storage Temperature	-10 to 60°C

Printed Circuit Board	Glass fabric epoxy resin (FR-4: UL 94V-0)
Anti-Humidity Coating	HumiSeal® 1A27NS (Polyurethane)

*HumiSeal® is a registered trademark of Chase Corporation.

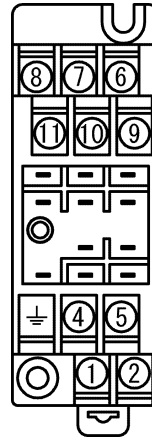
● PHYSICAL

Installation	Wall/DIN rail mounting
Wiring	M3.5 screw terminal connection (with a power terminal block cover & drop-out prevention screws)
Screwing Torque	0.8 to 1.0 [Nm] * Recommended
External Dimensions	W29 × H86 × D125mm (including the mounting screw and socket)
Weight	Main unit: 120g max. Socket: 80g max.

● MATERIALS

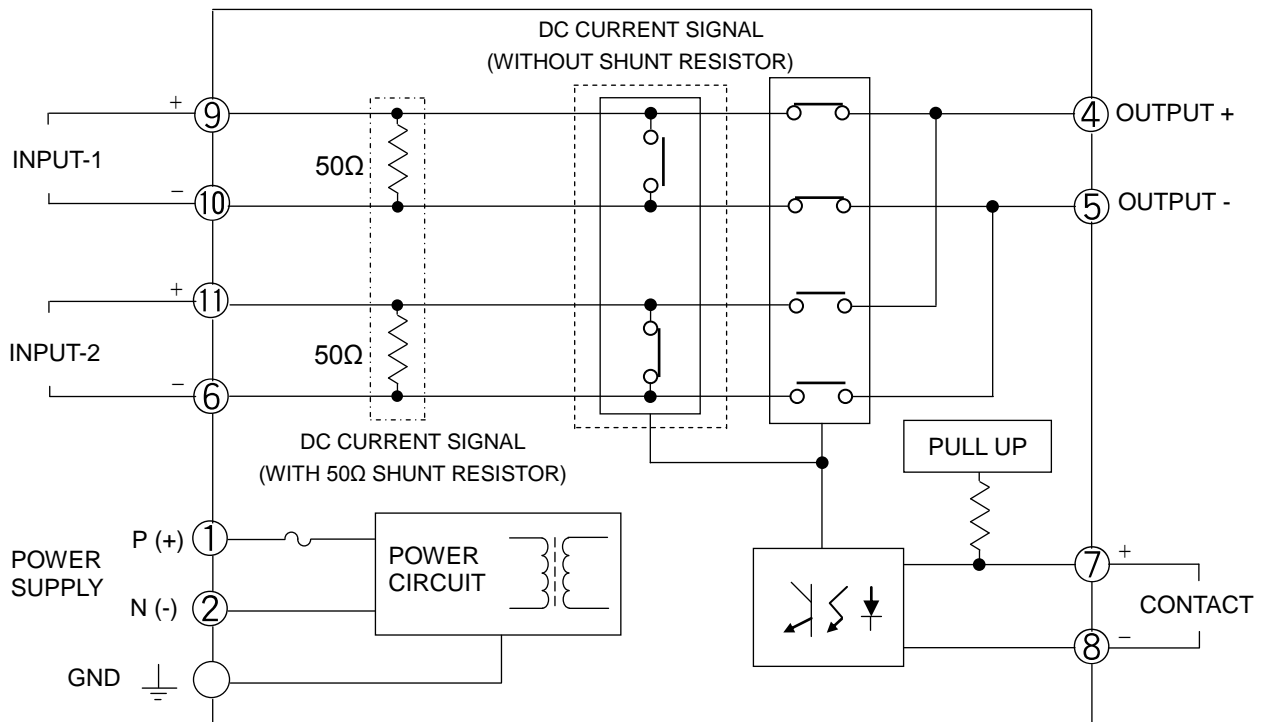
Housing	ABS resin (UL 94V-0)
Terminal Block	PBT resin (UL 94V-0)
Terminal Block Cover	PC resin (UL 94V-2)
DIN Rail Stopper	PP resin (UL 94HB)
Screw Terminal	Nickel-plated steel
Contacts Material and Finish	Brass with 0.2µm gold plating

TERMINAL ASSIGNMENT



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

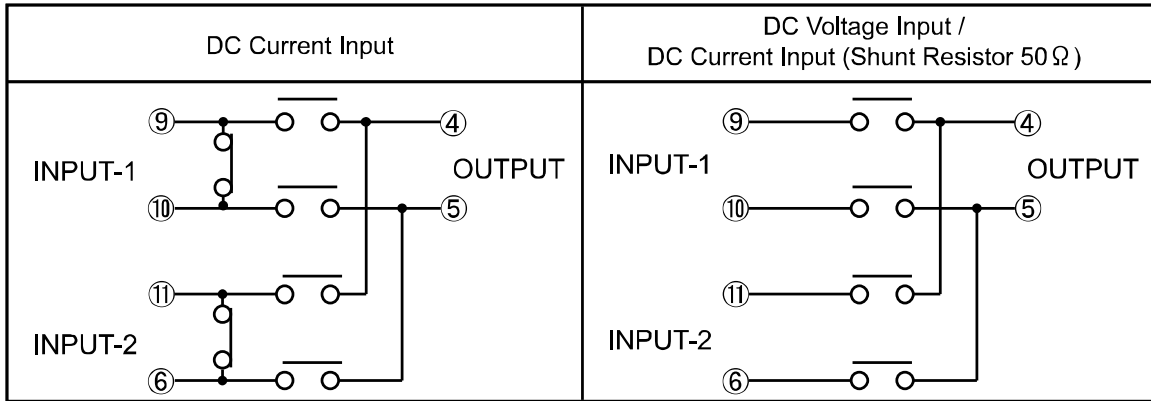
BLOCK DIAGRAM



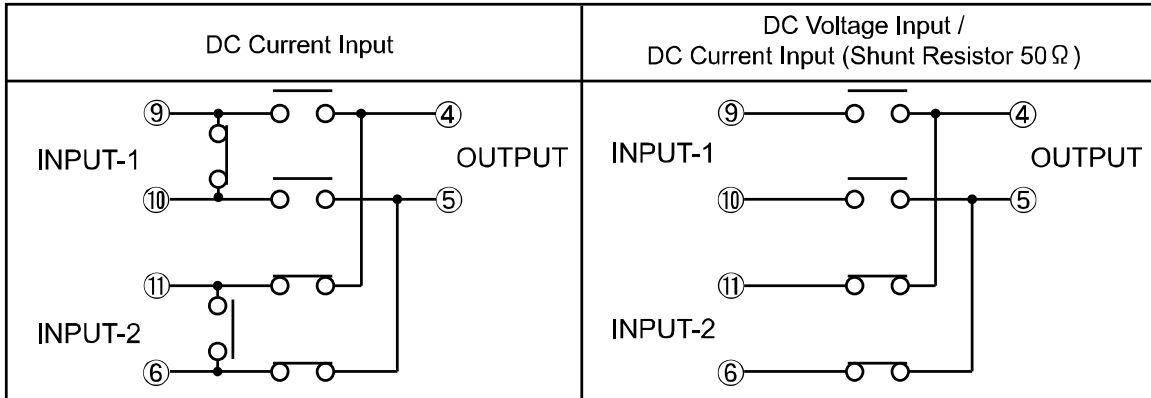
* For switching configurations, refer to page 3.

SWITCHING CONFIGURATIONS

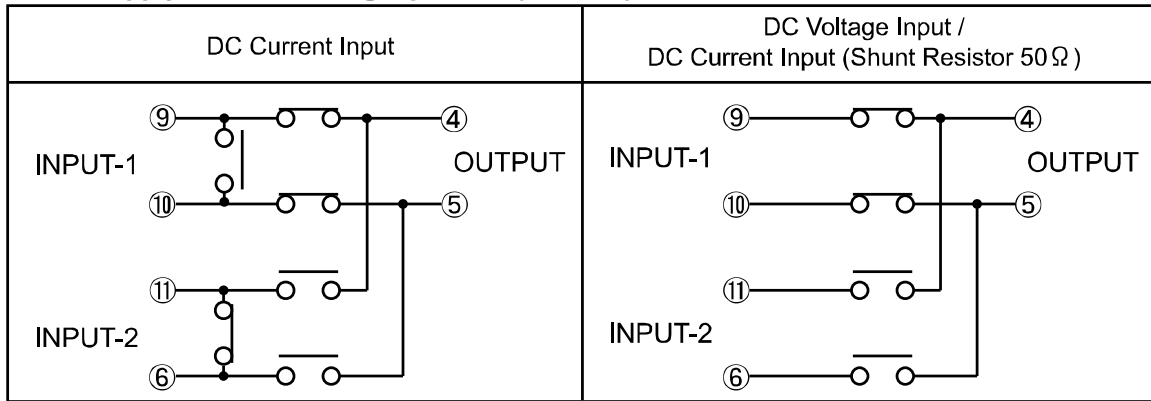
● **Power Supply: OFF**



● **Power Supply: ON; Switching Input: OFF (Open)**



● **Power Supply: ON; Switching Input: ON (Shorted)**



● **Power Supply: ON; Switching Input: Transition (ON to OFF or OFF to ON)**

* Transition time is included in response time.

