

**DESCRIPTION**

The MS3737LC is a slim plug-in distributor that powers a two-wire transmitter, converts its 4 to 20mA signals into commonly used DC signals, and provides a dual output. This model has no isolation between the input and output, providing a low-cost design. (The unit does not include a transmitter power ON/OFF switch.)

**ORDERING CODE**

**Model** \_\_\_\_\_ **MS3737LC** -

**Power Supply** \_\_\_\_\_

**A:** 100 to 240V AC (50 to 60Hz)  
**P:** 100 to 240V DC

**Input** \_\_\_\_\_

4 to 20mA DC from 2-wire transmitters

**Output 1** \_\_\_\_\_

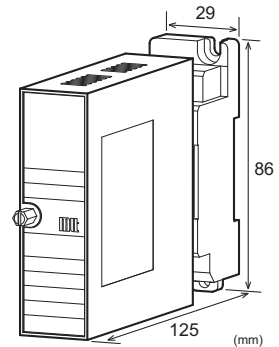
1 to 5V DC

**Output 2** \_\_\_\_\_

4 to 20mA DC

**Options** \_\_\_\_\_

**No code:** None  
**/H:** Polyurethane conformal coating


**SPECIFICATIONS**
**● POWER SECTION**

Power Requirements	100 to 240V AC: 85 to 264V AC (47 to 63Hz)	
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	100-240V DC
	3.5VA max	4.8W max

**● INPUT SECTION**

Input Signal	4 to 20mA DC from 2-wire transmitters
Input Resistance	250Ω
Transmitter Power Supply	Output voltage: 25V, typical. with 0% input 18V, typical. with 100% input (Output 2: short) Maximum current: 25mA, typical.
Limit Current for Short-Circuit Protection	26mA (typical)
Permissible Short-Circuit Duration	Continuous.

Note: If the transmitter power supply is used for sensor excitation, the sensor should be connected between the terminals INPUT (+) and OUTPUT-2 (-), while the OUTPUT-2 terminals (+) and (-) should be kept open.

**● OUTPUT SECTION**

Output Signal	Output 1: 1 to 5V DC Output 2: 4 to 20mA DC
Allowable Load Resistance	Output 1: 250kΩ min. Output 2: 10Ω max. (Up to 260Ω is allowable if the plus and minus terminals of OUTPUT-1 are short connected.)

**ORDERING INFORMATION**

To place an order, please use the ordering code format as shown above.  
(e.g.) MS3737LC-A

● PERFORMANCE

Accuracy Rating	Better than $\pm 0.1\%$ (Accuracy of the shunt resistor)
Temperature Effect	Better than $\pm 0.03\%$ of span per $10^{\circ}\text{C}$ change in ambient. (Temperature coefficient of the shunt resistor)
Isolation	Isolation between [Input, Output 1, Output 2] and power.
Insulation Resistance	100M $\Omega$ 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: 5.0mA)
Surge Withstand Capability	Tested as per ANSI/IEEE C37.90.1-1989.
Operating Environment	Ambient temperature: $-5$ to $55^{\circ}\text{C}$ Humidity: 5 to 90% RH (non-condensing)
Storage Temperature	$-10$ to $60^{\circ}\text{C}$

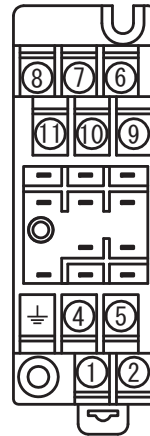
● PHYSICAL

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 $\times$ H86 $\times$ D125 mm (including the mounting screw and socket)
Weight	Main unit: 110g max. Socket: 80g max.

● MATERIAL

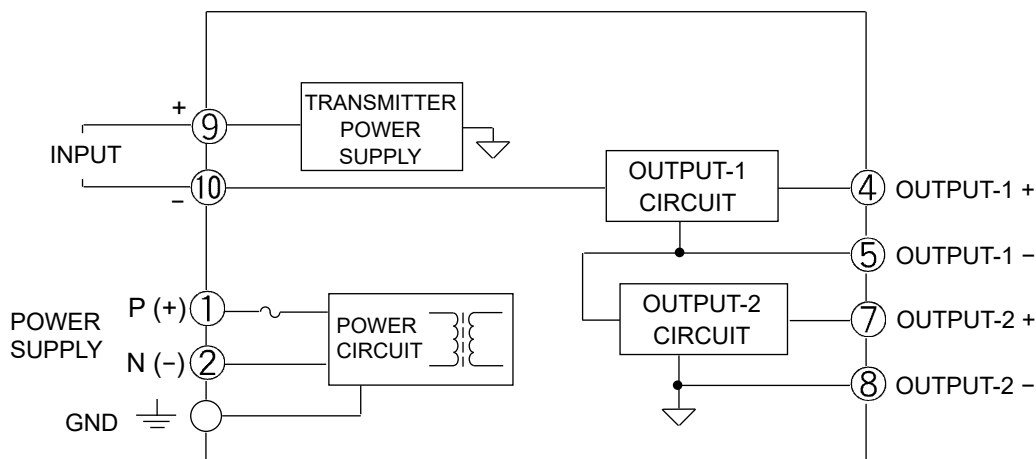
Housing	ABS resin (UL 94V-0)
Terminal Block	PBT resin (UL 94V-0)
Terminal Block Cover	PC resin (UL 94V-2)
DIN Rail Stopper	PP resin (UL 94HB)
Screw Terminal	Nickel-plated steel
Contacts Material and Finish	Brass with 0.2 $\mu\text{m}$ gold plating
Printed Circuit Board	Glass fabric, epoxy resin (FR-4: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

TERMINAL ASSIGNMENTS



①	P (+)	POWER
②	N (-)	
③	GND	
④	+ OUTPUT 1	
⑤	- OUTPUT 1	
⑥	N.C.	
⑦	+ OUTPUT 2	
⑧	- OUTPUT 2	
⑨	+ INPUT	
⑩	- INPUT	
⑪	N.C.	

BLOCK DIAGRAM



Note: If the OUTPUT-1 is only used for distributor applications, the OUTPUT-2 terminals #7 and #8 should be short connected. If these terminals are open, the OUTPUT-1 gives no output.