Product Specification Sheet Model: MS3737

Slim Plug-In Distributor with Dual Output
(Non-Isolation between Input and Output)

DESCRIPTION

The MS3737 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 includes a transmitter power ON/OFF switch.)

ORDERING CODE

MS3737 - □

Model

Power Supply

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

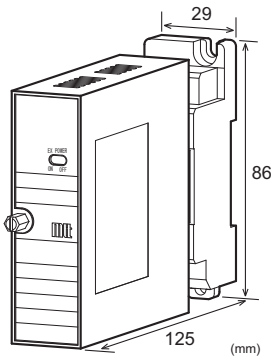
Input
4 to 20mA DC from 2-wire transmitters

Output 1
1 to 5V DC

Output 2
4 to 20mA DC

ORDERING INFORMATION

To place an order, please use the ordering code format as shown above.
(e.g.) MS3737-A



SPECIFICATIONS

●POWER SECTION

Power Requirements	100 to 240V AC: 85 to 264V AC (47 to 63Hz) 24V DC: 24V DC±10% 100 to 240V DC: 85 to 264V DC		
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 5.0VA max	24V DC 1.5W max	100-240V DC 5.8W max

●INPUT SECTION

Input Signal	4 to 20mA DC from 2-wire transmitters
Input Resistance	250Ω
Transmitter Power Supply	Output voltage: 26.4V, typical. with 0% input 21.6V, typical. with 100% input (Output 2: short) Maximum current: 22mA, typical.
Limit Current for Short-Circuit Protection	40mA max.
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.)

●PERFORMANCE

Accuracy Rating	Better than ±0.1%. (Accuracy of the shunt resistor)
Temperature Effect	Better than ±0.03% of span per 10°C change in ambient. (Temperature coefficient of the shunt resistor)
Isolation	3-way isolation between [Input, Output 1, Output 2], power, and ground.
Insulation Resistance	100MΩ 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: 0.5mA) Power / Ground: 2000V AC for 1 minute (Cutoff current: 5mA)
Surge Withstand Capability	Tested as per ANSI/IEEE C37.90.1-1989.
Operating Environment	Ambient temperature: -5 to 55°C Humidity: 5 to 90% RH (non-condensing)
Storage Temperature	-10 to 60°C

●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: 110g max. Socket: 80g max.

●MATERIALS

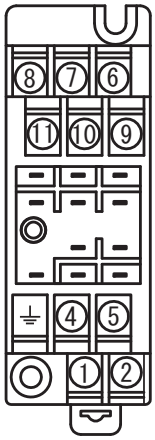
Housing	ABS resin (UL 94V-0)
Terminal Block	PBT resin (UL 94V-0)
Terminal Block Cover	PC resin (UL 94V-2)
DIN Rail Stopper	PP resin (UL 94HB)
Screw Terminal	Nickel-plated steel
Contacts Material and Finish	Brass with 0.2μm gold plating
Printed Circuit Board	Glass fabric epoxy resin (FR-4: UL 94V-0)
Anti-Humidity Coating	HumiSeal® 1A27NS (Polyurethane)

* HumiSeal® is a registered trademark of Chase Corporation.

●STANDARDS CONFORMITY

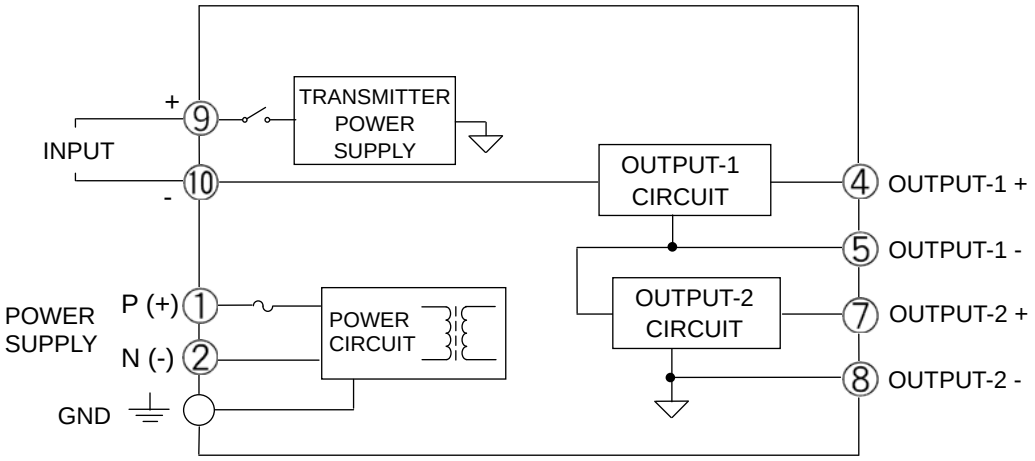
EC Directive Conformity	EMC Directive (2014/30/EU) EN61326-1: 2013 Low Voltage Directive (2014/35/EU) IEC61010-1/EN61010-1: 2010 Installation Category II Pollution Degree 2 Maximum operating voltage 300V Reinforced insulation between [input/output/GND] and power.

TERMINAL ASSIGNMENT



①	P (+)	POWER
②	N (-)	
⏚	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.