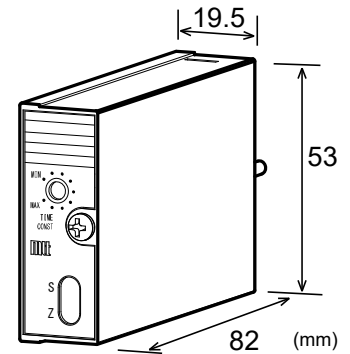




DESCRIPTION

The MS3916 is a chassis-mount first-order delay signal conditioner that adds a first-order delay to DC input signals and converts them into mutually isolated dual channel DC output signals.

- ▽ A multi-slot chassis provides ease of maintenance and high-density mounting.
- ▽ Input, output 1, output 2, and power circuits are all isolated from each other.
- ▽ Equipped with a fuse on the DC power line as standard.



ORDERING INFORMATION

Ordering Code
MS3916-1□□(□-□)-8□□_
[1] [2] [3] [4]

SPECIFICATIONS

POWER SECTION

Power Requirement	24V DC±10%
Power Sensitivity	Better than ±0.1% of span per 10% change in supply voltage
Power Line Fuse	160mA fuse
Current Consumption	45mA max. at 24V DC

INPUT SECTION

Input (Specify a code in the field [1].)	<ul style="list-style-type: none"> ■ 1-5V DC V1 ■ 0-1V DC V4 ■ 0-5V DC V5 ■ 0-10V DC V6 ■ ±5V DC W5 ■ ±10V DC W6 ■ Other DC voltage signals X2(□-□) <p style="margin-left: 20px;">Specify a DC voltage range in parentheses. The ranges available are from 0-200mV to 0-100V and from ±200mV to ±100V.</p> <ul style="list-style-type: none"> ■ 4-20mA DC C1 ■ 1-5mA DC C4 ■ 10-50mA DC C5 ■ Other DC current signals CY(□-□) <p style="margin-left: 20px;">Specify a DC current range in parentheses. The ranges available are from 0-100µA to 0-100mA and from ±100µA to ±100mA.</p>
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Input Resistance	Voltage input: 1MΩ min. with or without power Current input: 250Ω (Standard for 4 to 20mA)
Allowable Input Voltage	Voltage input: 30V DC max., continuous. (Standard for a span up to 10V) Current input: 40mA DC max., continuous. (Standard for 4-20mA)
Time Constant Setting Range (Specify a range in the field [2].)	A time constant setting range should be specified between 0.2 and 20 seconds.
Time Constant Setting Trimmer	Rotation of up to 270°
Time Constant Setting Accuracy	Minimum value: -30 to 0% of a customer specified value Maximum value: 0 to +30% of a customer specified value

OUTPUT SECTION

Output (Specify a code in the field [3].)	<table border="0"> <tr> <td>Output 1 / Output 2</td> <td>Code</td> </tr> <tr> <td>■ 1-5V DC / 1-5V DC</td> <td>V1</td> </tr> <tr> <td>■ 0-5V DC / 0-5V DC</td> <td>V5</td> </tr> <tr> <td>■ 0-10V DC / 0-10V DC</td> <td>V6</td> </tr> <tr> <td>■ 1-5V DC / 4-20mA DC</td> <td>C1</td> </tr> </table> <p>Note: Combinations of two outputs are only available as shown above.</p>	Output 1 / Output 2	Code	■ 1-5V DC / 1-5V DC	V1	■ 0-5V DC / 0-5V DC	V5	■ 0-10V DC / 0-10V DC	V6	■ 1-5V DC / 4-20mA DC	C1
Output 1 / Output 2	Code										
■ 1-5V DC / 1-5V DC	V1										
■ 0-5V DC / 0-5V DC	V5										
■ 0-10V DC / 0-10V DC	V6										
■ 1-5V DC / 4-20mA DC	C1										
Allowable Output Load	Voltage output: 2mA max. Current output: 300Ω max.										
Zero Adjustment	Approx. ±2% of span (Adjustable by front-accessible trimmer)										
Span Adjustment	Approx. ±2% of span (Adjustable by front-accessible trimmer)										

ADDITIONAL

Option [4]	■ Polyurethane conformal coating /H
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PERFORMANCE

Accuracy Rating	Better than ±0.1% of span (at 25°C±5°C)
Temperature Effect	Better than ±0.2% of span per 10°C change in ambient.

CMRR	100dB min. (500V AC, 50/60Hz)
Isolation	4-way isolation between input, output 1, output 2, and power.
Insulation Resistance	100MΩ min. (@ 500V DC) between input, output 1, output 2, and power.
Dielectric Strength	Input / [Output 1, Output 2, Power]: 1500V AC for 1 minute (Cutoff current: 0.5mA) Output 1 / Output 2 / Power: 500V AC for 1 minute (Cutoff current: 0.5mA)
Surge Withstand Capability	Tested as per ANSI/IEEE C37.90.1-1989.
Operating Environment	Ambient temperature: 0 to 55°C Humidity: 5 to 90% RH (non-condensing)
Storage Temperature	-10 to 60°C

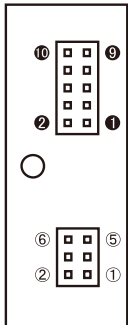
PHYSICAL

Installation	Mounted in an optional chassis (RC3900A-□□AI or RS3900-01TB).
Wiring	Wired to an optional chassis (RC3900A-□□AI or RS3900-01TB).
External Dimensions	W19.5 × H53 × D82 mm
Weight	80g max.

MATERIAL

Housing	ABS resin
PC Board	Glass fabric, epoxy resin (FR-4: UL 94V-0)

PIN ASSIGNMENTS



PIN	SIGNAL	PIN	SIGNAL
①	+ INPUT	①	+ OUTPUT 1
②	- INPUT	②	- OUTPUT 1
③	N. C.	③	+ OUTPUT 2
④	N. C.	④	- OUTPUT 2
⑤	N. C.	⑤	+ POWER DC24V
⑥	N. C.	⑥	- POWER DC24V
		⑦	N. C.
		⑧	N. C.
		⑨	F. G.
		⑩	N. C.

FACTORY DEFAULT SETTINGS

If you specify a time constant at the time you place your order, the product will be adjusted to your specified value prior to shipment as far as it is within the given constant setting range. The following example shows how you specify your desired time constant.

(Example)

When you specify a time constant of 10 seconds:
Time constant: 10s (63%)

If not specified, the time constant will be set to the minimum value of your specified range.

BLOCK DIAGRAM

