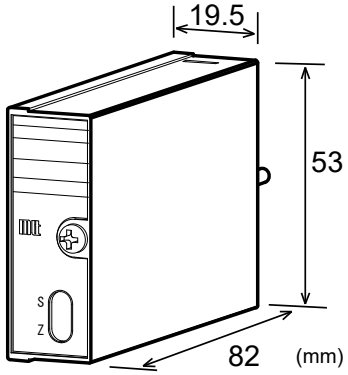
Product Specification Sheet **Model: MS3944** **MS3900**

Chassis-Mount High-Level Signal Conditioner (Fast Response Model)

DESCRIPTION

The MS3944 is a chassis-mount high-level signal conditioner that converts DC input signals into isolated DC output signals with fast response (10kHz, 20kHz, or 40kHz).

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



ORDERING INFORMATION

Ordering Code
MS3944-□□K-1□□-6□□_ [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	35mA max. at 24V DC

INPUT SECTION

Response Frequency (Specify a code in the field [1].)	■ Fc 10kHz–3dB ····· 10 ■ Fc 20kHz–3dB ····· 20 ■ Fc 40kHz–3dB ····· 40 ■ Others (Special order)····· 99 Specify a frequency in steps of at least 100Hz within the range of 200Hz–3dB to 10kHz–3dB. The response frequency of 40kHz-3dB is available only in the following input and output combinations: ・ MS3944-40K-1V1-6V1 (Input: 1–5V; Output: 1–5V) ・ MS3944-40K-1V5-6V5 (Input: 0–5V; Output: 0–5V) ・ MS3944-40K-1V6-6V6 (Input: 0–10V; Output: 0–10V) ・ MS3944-40K-1W5-6W5 (Input: ±5V; Output: ±5V) ・ MS3944-40K-1W6-6W6 (Input: ±10V; Output: ±10V) For special orders, ask our sales representatives for availability before ordering.
Input (Specify a code in the field [2].)	■ 1–5V DC·····V1 ■ 0–1V DC·····V4 ■ 0–5V DC·····V5 ■ 0–10V DC ·····V6 ■ ±5V DC ····· W5 ■ ±10V DC····· W6 ■ 4–20mA DC (input resistance 50Ω)C1 ■ Other DC voltage signals (special order)·····X2 For code "X2", specify a voltage range.
Input Resistance	Voltage input: 1MΩ min. with or without power Current input: 50Ω (Standard for 4–20mA)
Allowable Input Voltage	Voltage input: 30V DC max., continuous. Current input: 40mA DC max., continuous.

OUTPUT SECTION

Output (Specify a code in the field [3].)	■ 1–5V DC·····V1 ■ 0–5V DC·····V5 ■ 0–10V DC ·····V6 ■ ±5V DC ····· W5 ■ ±10V DC····· W6
Allowable Output Load	Voltage output: 2mA 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

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	3-way isolation between input, output, and power.
Insulation Resistance	100MΩ min. (@ 500V DC) between input, output, and power.
Dielectric Strength	Input / Output / Power: 1500V AC for 1 minute (Cutoff current: 0.5mA)
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

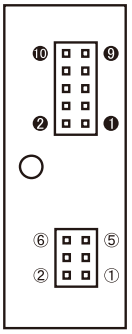
PHYSICAL

Installation	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	60g max.

MATERIAL

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

PIN ASSIGNMENTS



PIN	SIGNAL	PIN	SIGNAL
①	+ INPUT	❶	+ OUTPUT 1
②	− INPUT	❷	− OUTPUT 1
③	N. C.	❸	N. C.
④	N. C.	❹	N. C.
⑤	N. C.	❺	+ POWER DC24V
⑥	N. C.	❻	−
		❼	N. C.
		❽	N. C.
		❾	F. G.
		❿	N. C.

BLOCK DIAGRAM