

Product Specification SheetModel: MS3954HIMS3900Chassis-Mount High-Level Signal Conditioner with Isolated SingleOutput(High Current Load Model, with Open Circuit Detection)

DESCRIPTION

The MS3954HI is a chassis-mount high-level signal conditioner that converts DC input signals into isolated DC output signals.

- ∇ Allowable output load: 750 Ω
- ∇ A multi-slot chassis provides ease of maintenance and high-density mounting.
- ∇ Input, output, and power circuits are all isolated from each other.
- \bigtriangledown Equipped with a fuse on the DC power line as standard.
- ∇ Features output open circuit detection.

ORDERING INFORMATION



SPECIFICATIONS

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

INPUT SECTION	
Input	■ 4–20mA DC ······C1
(Specify a code in	■ 2–10mA DC ······C3
the field [1].)	■ 1–5mA DC······C4
	■ 1–5V DC ······ V1
	■ 0.4–2V DC····· V7
Input Resistance	Voltage input: $1M\Omega$ min. with power
	$(10k\Omega \text{ min. without power})$
	Current input: 250Ω (Standard for 4-
	20mA)
Allowable Input	Voltage input: 30V DC max., continuous.
Voltage	Current input: 40mA DC max.,
	continuous.

OUTPUT SECTION

Output	4–20mA DC			
Allowable	250 to 750Ω			
Output Load	Note: If the output load is under 250Ω ,			
	the supplied 250Ω resistor must be			
	added to the output load.			



Zero Adjustment	Approx. $\pm 2\%$ of span			
-	(Adjustable by front-accessible trimmer)			
Span Adjustment	Approx. $\pm 2\%$ of span			
	(Adjustable by front-accessible trimmer)			
ADDITIONAL				
Option [2]	■ Polyurethane conformal coating ···· /H			
PERFORMANCE				
Accuracy Rating	Better than $\pm 0.1\%$ of span (at $25^{\circ}C\pm 5^{\circ}C$)			
Temperature	Better than $\pm 0.2\%$ of span per 10°C			
Effect	change in ambient.			
Response Time	15ms max. (0 to 90%) with a step input 100%.			
Open Circuit	Open collector output (Maximum rating:			
Detection	35V, 4mA)			
	If output falls below the detection level,			
	the transistor will be turned on.			
Detection Level	Approx. 10% of F.S.			
Time Constant	Approx. 1s (0 to 63%)			
for Detection				
Circuit				
CMRR	100dB min. (500V AC, 50/60Hz)			
Isolation	3-way isolation between input, output,			
	and power.			
Insulation	$100M\Omega$ min. (@ 500V DC) between			
Resistance	input, output, and power.			
Dielectric	Input / Power: 500V AC for 1 minute			
Strength	(Cutoff current: 0.5mA)			
	Output / [Input, Power]: 1500V AC for 1			
	minute (Cutoff current: 0.5mA)			
Surge Withstand Capability	Tested as per ANSI/IEEE C37.90.1-1989.			
Operating	Ambient temperature: 0 to 55°C			
Environment	Humidity: 5 to 90% RH (non-condensing)			
Storage	-10 to 60°C			
Temperature				

PHYSICAL

Installation	Mounted in an optional chassis			
	(RC3900A-□□AO).			
Wiring	Wired to an optional chassis (RC3900A-			
	$\Box \Box AO$).			
External	W19.5 \times H53 \times D82 mm			
Dimensions				
Weight	55g max.			

MATERIAL

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

PIN ASSIGNMENTS

	P	'IN	SIGNAL	PIN	SIGNAL
	(D	+ OUTPUT	0	+ INPUT
	G	2)	— OUTPUT	0	— INPUT
	(3	OPN. C	0	+ INPUT
	(e	4)	D. G.	4	- INPUT
0	(5	N. C.	6	+
-	(6	N. C.	6	- FOWER D024V
6 5 2 1		$\overline{}$		0	N. C.
				8	N. C.
		$\overline{\}$		0	F. G.
				0	N. C.



BLOCK DIAGRAM