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Standard Specification Sheet   Model： MS3901   AREX-39
Chassis-mounting Thermocouple Transmitter with Isolated Dual-output (Analog Model)

OVERVIEW

This is chassis-mounting thermocouple transmitter with dual-output that converts thermocouple input signal into any desired standard process signal.

▽ Integrated with cold junction compensation, thermocouple linearization and burnout protection function.

▽ Anti-humid coatings on PCB are standard for improved environmental protection.

▽ Multiple installations on chassis provide ease of maintenance and high-density population.

▽ Self pop-up screws on chassis provide ease of wiring.

▽ Fuse on DC power line is installed standard.

ORDERING INFORMATION

Ordering Code		Standard Price
MS3901	8	OPEN

SPECIFICATIONS

POWER SECTION

Power Requirement	24V DC±10%
Power Sensitivity	±0.1% of span max. @10% variance
Power Line Fuse	300mA fuse is installed, (standard)
Power Consumption	50mA max.

INPUT SECTION

Input Signal (Specify at ① when ordering)	JIS or other standard thermocouples ■ K ·· K ■ E ·· E ■ J ·· J ■ T ·· T ■ B ·· B ■ R ·· R ■ S ·· S ■ N ·· N

	■ Other standard thermocouple ··········· X Specify the standard (A) and code (B) as: X=A/B ＊In case the thermocouple is specified by JIS symbol, the EMF chard used will be that of latest revision of JIS unless otherwise specified by the customer. ＊Submission of EMF chard may be required for ordering for special thermocouple.
Signal Span (Specify at ② when ordering)	Please specify measurement temperature range in centigrade. Such temperature range shall be within the range appearing in the EMF chart and be greater than 3mV when converted to voltage span.
Input Resistance	1MΩ min. （1MΩ minimum without power）
Allowable Lead-wire Resistance	1KΩ max.
Allowable Input Voltage	30V DC max, continuous
Cold-Junction Compensation Method	By means of Temperature Sensor installed with input terminals on the RC3900-□□AI. No cold-junction compensation is provided for B thermocouple.
Cold-Junction Compensation Error	±0.3℃ max.
Linearizer	Built-in （6 segments maximum）

OUTPUT SECTION

Output Signal (Specify at ③ when ordering)	OUT-1/OUT-2 ······················· Code ■ 1〜5V DC/1〜5V DC ··············· V1 ■ 0〜5V DC/0〜5V DC ··············· V5 ■ 0〜10V DC/0〜10V DC ············· V6 ■ ±5V DC/±5V DC ················· W5 ■ ±10V DC/±10V DC ··············· W6 ■ 1〜5V DC/4〜20mA DC ············· C1 Combinations of two output signals are limited to the above.
Maximum Output Load	Voltage output：2mA max. Current output：300Ω max.
Zero Adjustment	Approx. ±2% of span (Adjustable by front-access trimmer)
Span Adjustment	Approx. ±2% of span (Adjustable by front-access trimmer)
Burnout Protection (Specify at ④ when ordering)	■ Upward (standard) ····················· U ■ Downward ···························· D ＊Upward will be selected if not specified.

PERFORMANCE

Accuracy Rating	± (0.1%/F.S + 0.3℃ (Cold Junction Compensation Error) + Linearization Error) (25℃±5℃) ※Linearization Error varies with specified input range. (0.1%/F.S type.)
Temperature Effect	±0.2% of span @10℃ variance
Response Time	160msec max.（0→90%） @100% step input
CMRR	100dB min.（500V AC, 50/60Hz）

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Isolation	Across Input, Out-1, Out-2 and Power input mutually
Insulation Resistance	100MΩ min.（@500V DC） Across Input, Out-1, Out-2 and Power input mutually

Dielectric Strength	Across Input and other ports:
	     1500V AC for 1 minute
	 Across Out-1, Out-2, Power input mutually:
	     500V AC for 1 minute

Surge Withstand Capability	Tested for ANSI/IEEE C37.90.1-1989
Operating Environment	Ambient temperature：0〜55℃ Humidity：90% max. （Non-condensation）
Storage Temperature	−10〜60℃

PHYSICAL

Installation	Installed on mounting base（RC3900-□□AI）
External Connection	Wired to mounting base（RC3900-□□AI）
Dimension	W19.5×H53×D84mm
Weight	Approx. 70g

MATERIAL

Housing	ABS Resin（UL94V-0）
PC Board	Glass Fabric, Epoxy Resin（CEM-3）
Anti-humidity Coating	HumiSeal 1A27NS （Polyurethane）

ADDITIONAL

Other Options	Please consult our sales representatives for the availability of the following options before ordering:
	 〈Items〉・・・・・・・・・・・・・・・・・・〈How to specify〉
	 ■ Change response frequency ・・・・・・・・・・・・
	     Fc＝□□□Hz（Up to 200Hz）
	 ■ Change response time ・・・ Tc＝□□□sec
	     （Up to 2msec @90%）
	 ■ Change burnout drive timeBt＝□□□sec

TERMINAL ASSIGNMENT
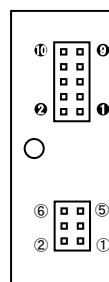
PIN	SIGNAL	PIN	SIGNAL
①	T. C. +	❶	＋ OUTPUT 1
②	T. C. −	❷	－ OUTPUT 1
③	N. C.	❸	＋ OUTPUT 2
④		❹	－ OUTPUT 2
⑤	C. J	❺	P （＋） POWER
⑥		❻	N （−）
		❼	N. C.
		❽	N. C.
		❾	F. G.
		❿	N. C.

BLOCK DIAGRAM