Standard Specification Sheet Model: MS2901

MS2900

Chassis-mounting Thermocouple Transmitter with Isolated Dual-output

OVERVIEW

The MS2901 is an instrument to perform, provided with cold-junction compensation circuit, amplification, linearization, and conversion of mV signal from thermocouples to output 2channels of mutually isolated DC signals.

- ▽ Cold-junction compensation, linearization and burn-out protection.
- ▽ Multi-unit-mountable chassis for ease of maintenance and high density installation.
- ▽ Perfect isolation mutually between Input — Output No.1— Output No.2—Power line.
- ▽ Fuse protection for power line.

ORDERING INFORMATION

Ordering Code
MS2901—□ (□～□) —8□□—B□ ① ②③④

SPECIFICATIONS

POWER SECTION

Power Requirement	24V DC±10%
Power Sensitivity	±0.1% max. of output (@10% variation)
Power Fuse	2.2Ω 1/4W Fuse resister on power line
Power Consumption	50mA max.

INPUT SECTION

Input Signal (Specify at ① when ordering)	Thermocouple Input For non-JIS T/C, EMF table shall be submitted. ■ B-T/C (JIS-C-1602-1995) ·····B ■ R-T/C (JIS-C-1602-1995) ·····R ■ S-T/C (JIS-C-1602-1995) ·····S ■ N-T/C (JIS-C-1602-1995) ·····N ■ K-T/C (JIS-C-1602-1995) ·····K ■ E-T/C (JIS-C-1602-1995) ·····E ■ J-T/C (JIS-C-1602-1995) ·····J ■ T-T/C (JIS-C-1602-1995) ·····T ■ Non-JIS T/C ·····X Specify the symbol mark and standard of T/C. Specifying Form X=□□□/□ A B (A:standard / B:symbol)
Span (Specify at ② when ordering)	* Specify a temperature range in ℃ for input span over 3mV within the range of the EMC table. ◆ A range (Input span 3mV min. 10mV max.) ◆ B range (Input span 10mV min.) Standard
Input Resistance	1MΩ min. (10kΩ @rated input without power)
Allowable Lead-wire Resistance	1kΩ
Allowable Input Voltage	30V DC max. continuous
Cold-Junction Compensation	±0.5℃ Not perform cold-junction compensation for B-T/C.
Linearizer	Built-in (6 segments max.)

OUTPUT SECTION

Output Signal (Specify at ③ when ordering)	1st Output Signal/2nd Output Signal ··Order 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 ＊The above combination only.
Maximum Output Load	Voltage output:2mA Current output:300Ω
Zero Adjustment	Approx.±2% of span (Adjustable by front-accessible trimmer)
Span Adjustment	Approx.±2% of span (Adjustable by front-accessible trimmer)
Burnout Protection (Specify at ④ when ordering)	■ Up scale ·····U ■ Down scale·····D (Selector switch adjustable) Factory setting:Up scale

PERFORMANCE

Accuracy Rating	± (0.1%F.S. + 0.3 ℃ (Cold Junction Compensation Error)+ Linearization Error) max. (25℃±5℃) ※Linearization Error varies with specified input range. (0.1%F.S typ.)
Temperature Effect	±0.2% max. of span (@10℃ variation)
Burn-out Time	Input Span (mV)×0.3sec, approx.
Standard Response Time	Approx. 2Hz-3dB
Insulation Resistance	100MΩ min. (@500V DC) Input—Output-1—Output-2—Power
Dielectric Strength	Input—[Output-1, Output-2, Power]: 1500V AC for 1 minute Output-1—Output-2—Power: 500V AC for 1 minute
Surge Withstand Capability	Tested for ANSI/IEEE C37.90.1-1989
Operating Environment	Ambient temperature:0～50℃ Humidity:90%RH max. (Non-condensation)
Storage Temperature	−10～60℃

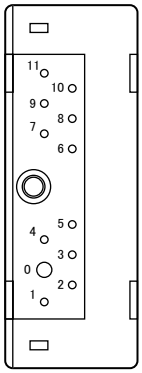
PHYSICAL

Mounting Method	Mountable on chassis (RC2900)
Wiring Method	Wired to chassis (RC2900)
Outer Dimension	W17.5×H48×D65mm (Including socket terminal block and fixing screws.)
Weight	Approx. 70g

MATERIAL

Case	ABS Resin UL94, flame resistant
PC Board	Glass Fabric Epoxy Resin

TERMINAL ASSIGNMENT



Terminal	Signal
①	T.C. +
②	T.C. −
③	C.J
④	
⑤	
⑥	+ OUTPUT 1
⑦	− OUTPUT 1
⑧	+ OUTPUT 2
⑨	− OUTPUT 2
⑩	+ DC24V
⑪	− POWER

BLOCK DIAGRAM