

ADM210K Thermocouple Transmitter / Isolator

- Suitable for SIL 1 & SIL 2 rated safety instrumented system (SIS) loop applications, as 1oo1 architecture HFT:0 (EN 61508-2)
- Suitable for combinations of any thermocouple type; J, K, N, R, S or T input and process voltage / current output
- Non-Smart / Non-uProcessor , Type A instrument
- Supply voltage options: 115Vac $\pm 20\%$
240Vac $\pm 20\%$
24Vdc $\pm 10\%$
48Vdc $\pm 10\%$
110Vdc $\pm 10\%$
- RFI protection to EN 61000-4-3:2006/A2:2010
- Amelec standard 10 year Warranty

TECHNICAL SPECIFICATION

INPUT

Any signal developed from a thermocouple, with $\geq 4\text{mV}$ span
E.g: 0-1000°C Type K, 0-250°C Type J, 0-600°C Type N
With Automatic Cold Junction compensation fitted as standard

OUTPUT

DC current or voltage specified in the range of:
Current up to 22mA max Source configuration (Internally powered)
Voltage up to 20Vdc max
Typical output range: 4 - 20mA (Source, max load 1200 Ω)
Current up to 100mA max in Sink configuration (externally powered)

'X' option: Isolated repeat of the input mV signal with automatic cold junction compensation is available for additional monitoring.
(Correct T/C extension wire to be used between output terminals & the additional t/c monitoring system / control device input port)

CONTROLS

15 turn blindset potentiometers
Zero $\pm 25\%$
Span $\pm 50\%$

INDICATOR

Power ON: LED, Amber.

PERFORMANCE

Linearity: $< \pm 0.1\%$ mV span
Response time: Typically $< 200\text{ms}$
Accuracy: $< \pm 0.1\%$ mV span
Supply consumption: $< 2\text{VA}$
Input open circuit response: Upscale drive as std
(Open circuit Downscale drive may be specified)

PROTECTION

Isolation: 500Vdc Input/Output/Supply/Earth
Internal Fuse.
Input over range up to typically 300%.
RF Immunity: 20MHz-3GHz/5.25GHz $\leq 10\text{V/m}$, 80MHz-1GHz/5.6GHz $\leq 30\text{V/m}$
(889MHz/1.75GHz $\leq 40\text{V/m}$)

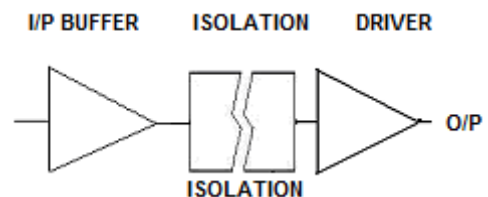
TERMINATION

INPUT +	1
INPUT -	2
Scn	3
	4
	5
	6
OUTPUT +	7
OUTPUT -	8
Scn	9
Earth	10
Live / +	11
Neutral / -	12

FRONT VIEW



FUNCTION BLOCK DIAGRAM



ENVIRONMENTAL CONDITION

Storage temperature: -40 to +70 °C
Operating Ambient: -15 to +55 °C
Relative Humidity: 5 to 95% RH (Non-Condensing)
EMC: 2014/30/EU , EN 61326-1:2013 (Generic Industrial Levels)

MOUNTING / DIMENSION

Enclosure: 50w x 75h x 182d mm
Mounting: DIN Rail (TS35) as standard
(Seismic / Surface keyhole plate or Front Panel mounting
Options also available)
Weight $< 500\text{g}$

ADD ON / OPTIONS

G: Output Linearisation to Temperature
DI: Digital Display (3.5 digit LCD or 4 digit LED display of the input temperature or output signal in units to suit application)
X: Non standard Power supply ranges available