

Thermocouple ()

가
가
가
가
(degrees)

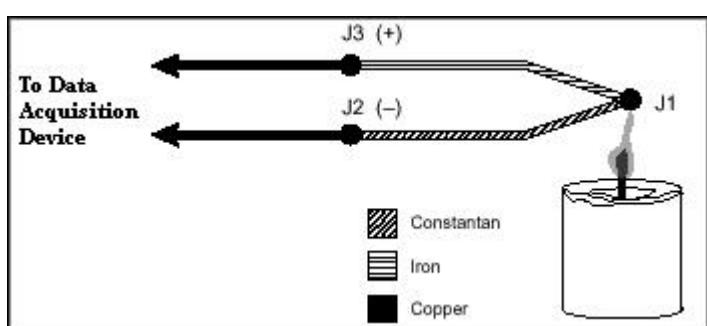
가
(Seebeck)
(Thomas Seebeck)
1821

$\Delta V = S \Delta T$ (1)

ΔV , S , ΔT

가
가
Institute: ANSI
(iron) (-)
가
(American National Standards
J-
B, E, K, N, R, S, T
가

가
가



1. J-

1

J1

J2 J3

J-

J1

J2

J3

(J1, J2, J3)

가

J1

J2 J3

가

Thermocouple Law of Intermediate Metals (

)

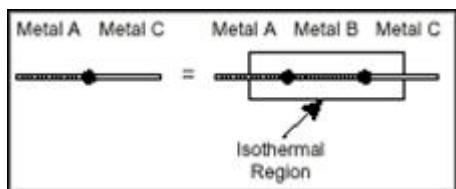
가

, J2, J3

(

2

가



2. Thermocouple Law of Intermediate Metals

3

1

J3

가

가

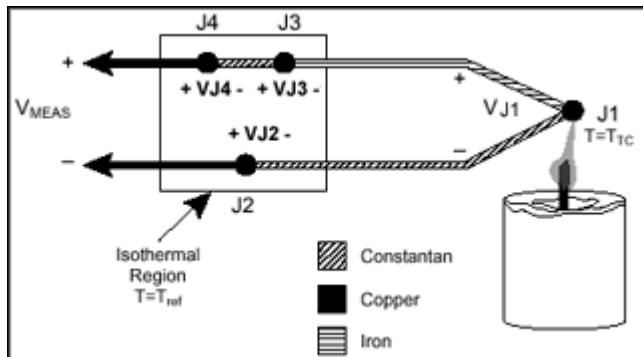
가

, Thermocouple Law of Intermediate Metals

3

J3 J4
가 1

3



3. 가

3

J2 J4

, J2 J4

()

, J4 (+)

-

)

가

0

, J2 (-)

-

, J1 J3

-

,

가

J3

J1 J3

가

\$T_y\$

\$J_x\$

\$V_{Jx}(T_y)\$

$$V_{MEAS} = V_{J1}(T_{TC}) + V_{J3}(T_{ref}) \quad (2)$$

\$V_{MEAS}\$
,\$T_{ref}\$

가

\$T_{TC}\$ \$V_{J1}\$

2 , \$V_{Jx}(T_y)\$

\$T_y\$

. \$V_{J1}\$

$\$V_{\{J3\}}$ 가$, NIST 가 2
 0°C
 J3 J1 , $\$V_{\{J3\}} (T_{\{\text{ref}\}}) = -V_{\{J1\}} (T_{\{\text{ref}\}}) $$
 $\$V_{\{J1\}}$ 가 $\$T_{\{\text{TC}\}}$$
 $\$V_{\{J3\}} (T_{\{\text{ref}\}}) = -V_{\{J1\}} (T_{\{\text{ref}\}}) $$
 $\$T_{\{\text{TC}\}}$
 $\$V_{\{\text{MEAS}\}} = V_{\{\text{TC}\}} (T_{\{\text{TC}\}}) - V_{\{\text{TC}\}} (T_{\{\text{ref}\}}) \text{ (3)}$$$

$\$V_{\{\text{MEAS}\}}$ $\$T_{\{\text{ref}\}}$$$

$\$V_{\{\text{MEAS}\}} = V_{\{\text{TC}\}} (T_{\{\text{TC}\}}) - V_{\{\text{TC}\}} (T_{\{\text{ref}\}}) \text{ (3)}$

RTD

$\$V_{\{\text{MEAS}\}} = V_{\{\text{TC}\}} (T_{\{\text{TC}\}}) - V_{\{\text{TC}\}} (T_{\{\text{ref}\}}) \text{ (3)}$

- NI -

From:
<http://www.obg.co.kr/doku/> - OBG WiKi



Permanent link:
<http://www.obg.co.kr/doku/doku.php?id=science:thermocouple>

Last update: 2020/11/29 14:09