

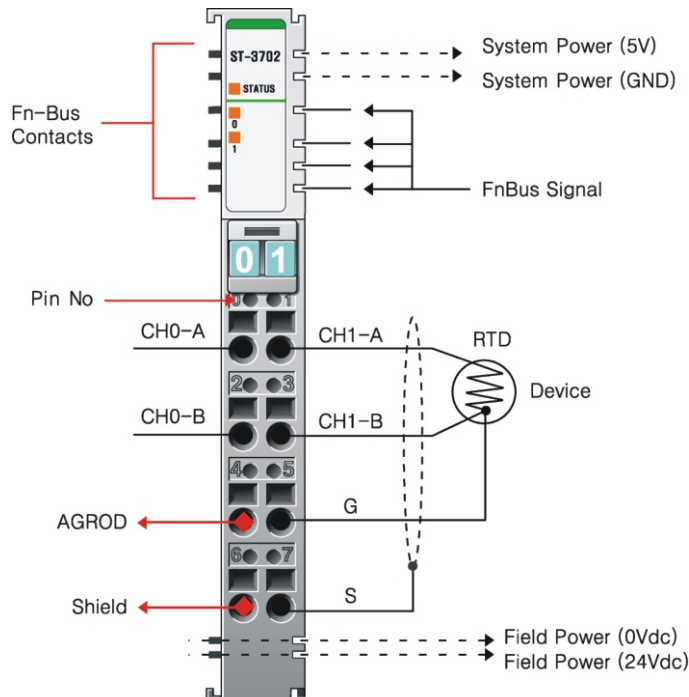
2 Channels RTD / Resistance Input Terminal

- ST-3702는 2 Channels RTD 모듈이며, Pt resistance sensor의 직접 연결하여 사용합니다.
- 이 module에는 3개의 상태 LED가 있으며, 하나는 network 상태, 나머지는 field devices 상태를 위한 것입니다.
- 접속방식은 2선식 혹은 3선식 sensor 연결이 가능하지만 권장사양은 3선식입니다.

| Items | RTD Input |
|------------------------------|--|
| Input Specification | |
| Number of Inputs | 2 Channels Single Ended, Non-isolated Between Channels |
| Indicators | 2 Green/Red state, 1 Green/Red FnBUS state |
| Sensor Types | PT50, PT100, PT200, PT500, PT1000, JPT100, JPT200, JPT500, JPT1000, NI100, NI200, NI500, NI1000, NI120, CU10, Resistance 100mΩ/Bit, Resistance 10mΩ/Bit, Resistance 20mΩ/Bit |
| Conversion Time | 200msec / All Channel |
| Data Format | 16bit Integer (2's compliment) |
| Dissolution ability | 0.1 °C / 10mΩ |
| Module Error | ±0.1% Full Scale @25 °C ±0.3% Full Scale @0 °C, 60 °C |
| Calibration | Not Required |
| Diagnostic | Range Over (if range over, Data=Dx8000) |
| Common Type | 2 Channels / 2COM |
| General Specification | |
| Power Supply | From System Power DC/DC |
| Power Dissipation | Max. 70mA @ 5.0Vdc |
| Isolation | I/O to Logic : Photocoupler isolation Field power : Not Connected |
| Connection | 2 or 3-Wire |
| Wiring | I/O Cable Max. 2.0mm ² |
| Weight | 70g |
| Module Size | 12mm x 99mm x 70mm |
| Environment Condition | Refer to " 2. Environment Specification " |

| Pin No | Description | Pin No | Description |
|--------|-------------------|--------|-------------------|
| 0 | Input Channel 0-A | 1 | Input Channel 1-A |
| 2 | Input Channel 0-B | 3 | Input Channel 1-B |
| 4 | Analog Ground | 5 | Analog Ground |
| 6 | Shield | 7 | Shield |

Wire Diagram



Mapping Data into the image Table

Input Module Data

| |
|------------------|
| Analog Input Ch0 |
| Analog Input Ch1 |



Input Image Value

| Bit No | Bit7 | Bit6 | Bit5 | Bit4 | Bit3 | Bit2 | Bit1 | Bit0 |
|--------|----------------------------|------|------|------|------|------|------|------|
| Byte 0 | Analog Input Ch0 Low byte | | | | | | | |
| Byte 1 | Analog Input Ch0 High byte | | | | | | | |
| Byte 2 | Analog Input Ch1 Low byte | | | | | | | |
| Byte 3 | Analog Input Ch1 High byte | | | | | | | |

Expansion Module Status LED

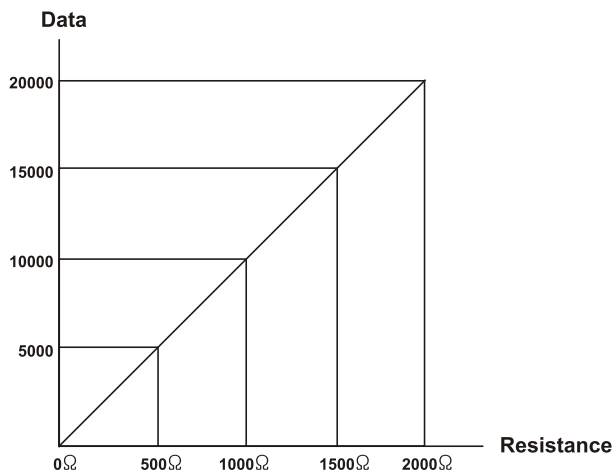
| State | LED is | To indicate |
|-------------------|----------------|--|
| Not Powered | Off | Device has no expansion Module or may not be powered |
| No Initialized | | The Parameter is not initialized yet. |
| Fn-Bus Connection | Green | FnBus normal Operation |
| Fn-Bus Ready | Flashing Green | FnBus Ready |
| Fn-Bus Fault | Flashing Red | FnBus Time Out FnBus Failed Communication |
| Device Fault | Red | Device Fault |

Channel Status LED

| State | LED is | To indicate |
|---------------|--------|------------------|
| Nominal | Green | Normal Operation |
| Channel Fault | Red | Channel Open |

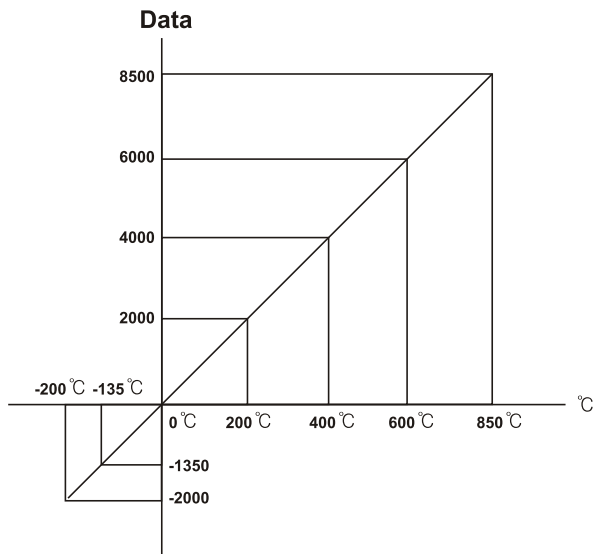
Resistance 100mΩ

| Resistance | 0Ω | 500Ω | 1000Ω | 1500Ω | 2000Ω |
|------------|-------|-------|-------|-------|-------|
| Data(Hex) | H0000 | H1388 | H2710 | H3A98 | H4E20 |



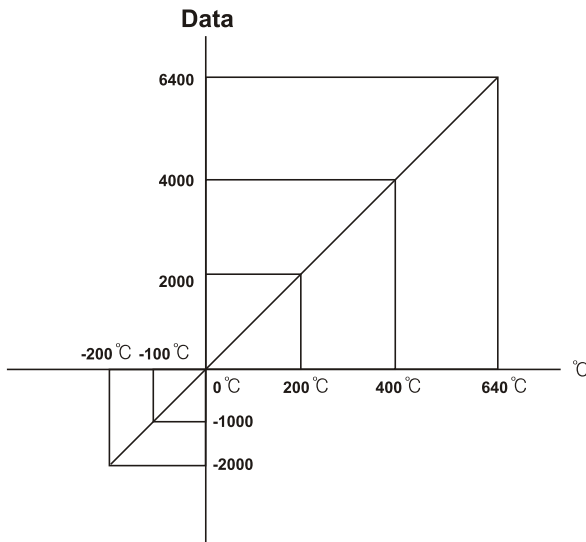
Sensor PT100

| °C | -200°C | -100°C | 0°C | 200°C | 400°C | 600°C | 850°C |
|-----------|--------|--------|-------|-------|-------|-------|-------|
| Data(Hex) | HF8330 | HFC18 | H0000 | H07D0 | H0FA0 | H1770 | H2134 |



Sensor JPT100

| °C | -200°C | -100°C | 0°C | 200°C | 400°C | 640°C |
|-----------|--------|--------|-------|-------|-------|-------|
| Data(Hex) | HF8330 | HFC18 | H0000 | H07D0 | H0FA0 | H1900 |



Sensor Type Data

| Sensor type | Degree | Counts | Resolution |
|-------------------|-----------|------------|-----------------------|
| Resistance 100mΩ | 1~2000Ω | 10~20000 | 100mΩ / 1count |
| Resistance 10mΩ | 1~327Ω | 10~3270 | 10mΩ / 1count |
| Resistance 20mΩ | 1~620Ω | 10~6200 | 20mΩ / 1count |
| PT50, 0.00385 | 200~850℃ | -2000~8500 | 0.1℃ or 0.1°F / count |
| PT100, 0.00385 | -200~850℃ | -2000~8500 | 0.1℃ or 0.1°F / count |
| PT200, 0.00385 | -200~850℃ | -2000~8500 | 0.1℃ or 0.1°F / count |
| PT500, 0.00385 | -200~850℃ | -2000~8500 | 0.1℃ or 0.1°F / count |
| PT1000, 0.00385 | -200~350℃ | -2000~3500 | 0.1℃ or 0.1°F / count |
| JPT100, 0.003916 | -200~640℃ | -2000~6400 | 0.1℃ or 0.1°F / count |
| JPT200, 0.003916 | -200~640℃ | -2000~6400 | 0.1℃ or 0.1°F / count |
| JPT500, 0.003916 | -200~640℃ | -2000~6400 | 0.1℃ or 0.1°F / count |
| JPT1000, 0.003916 | -200~350℃ | -2000~3500 | 0.1℃ or 0.1°F / count |
| NI100, 0.00618 | -60~250℃ | -600~2500 | 0.1℃ or 0.1°F / count |
| NI120, 0.00672 | -80~250℃ | -800~2500 | 0.1℃ or 0.1°F / count |
| NI200, 0.00618 | -60~250℃ | -600~2500 | 0.1℃ or 0.1°F / count |
| NI500, 0.00618 | -60~250℃ | -600~2500 | 0.1℃ or 0.1°F / count |
| NI1000, 0.00618 | -60~180℃ | -600~1800 | 0.1℃ or 0.1°F / count |
| CU10, 0.00427 | -200~260℃ | -2000~2600 | 0.1℃ or 0.1°F / count |