

# NTCサーミスタセンサ自動車用

## NTC thermistor sensor for automobiles

- 厳しい使用環境条件に耐えられるように設計された自動車用NTCサーミスタセンサは高精度、高信頼性のご要望にお応えして、益々需要と用途が拡大しております。
- 用途：カーエアコン用（外気・内気・エバポレータ等）、電子燃料噴射装置用（吸気温・エンジン冷却水温・EGR温度等）、エンジン潤滑油温用、オートマチックトランスミッション油温用、燃料タンク液位検知用、HEV用（二次電池・モータ温等）

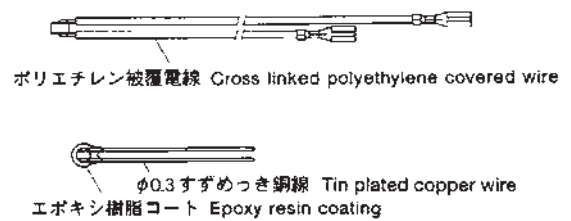
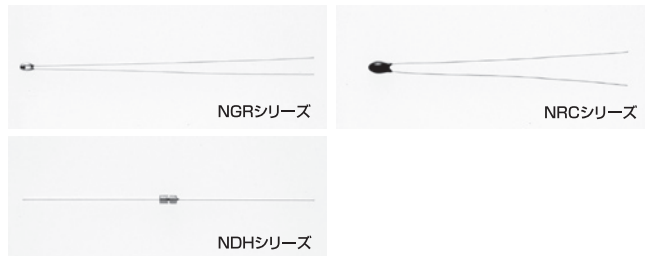
NTC thermistor sensors for automobiles and vehicles are designed so as to withstand various severe environmental testing. It feature high accuracy and reliability.

Typical application : Automobile air conditioner (ambient, in car, evaporator temp. etc.), electronic fuel injection devices (intake air, water, EGR temp. etc.), engine oil temp., ATF temp., warning fuel level, for HEV (secondary battery, motor temp. etc.)

### エンジン制御用センサ For engine control

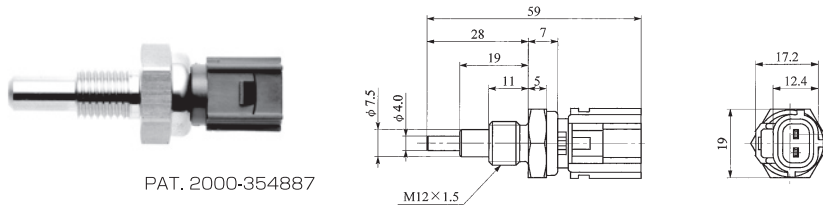
#### ● 吸気温度・冷却水温検知 Intake air temperature, Water temperature sensor

カスタム対応いたします。 To accept to your custom-made



#### ● 水温センサ Water temperature sensor

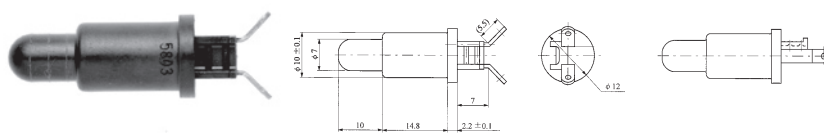
カスタム対応いたします。 To accept to your custom-made



| 品名<br>Item                                    | 水温センサ<br>Coolant sensor |
|---|-------------------------|
| 抵抗値範囲 (kΩ)<br>Resistance                      | 2.45 (at 20°C)          |
| 使用温度範囲 (°C)<br>Operating range                | -30 ~ 120               |
| 応答性 (sec)<br>Thermal time constant            | ≤ 7 (in Water)          |
| 絶縁耐圧条件 (MΩ)<br>Insulation Resistance          | -                       |
| 熱放散定数 (mW/°C)<br>Thermal dissipation constant | -                       |

#### ● 燃料温度センサ Fuel temperature sensor

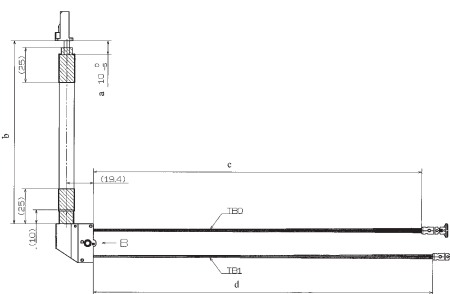
カスタム対応いたします。 To accept to your custom-made



| 品名<br>Item                                    | 燃温センサ<br>Fuel temp. sensor |
|---|----------------------------|
| 抵抗値範囲 (kΩ)<br>Resistance                      | 2.3 ~ 2.7 (at 20°C)        |
| 使用温度範囲 (°C)<br>Operating range                | -30 ~ 70                   |
| 応答性 (sec)<br>Thermal time constant            | ≤ 60 (in Fuel)             |
| 絶縁耐圧条件 (MΩ)<br>Insulation Resistance          | ≥ 100 (500VM)              |
| 熱放散定数 (mW/°C)<br>Thermal dissipation constant | -                          |

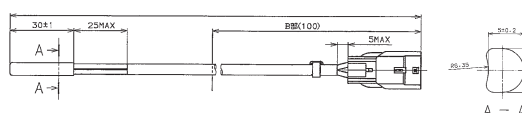
### HEV用温度センサ For HEV

#### ● 二次電池温度センサ Rechargeable battery temperature sensor



| 品名<br>Item                                    | 二次電池用センサ<br>for Rechargeable battery |
|---|--------------------------------------|
| 抵抗値範囲 (kΩ)<br>Resistance                      | 10                                   |
| 使用温度範囲 (°C)<br>Operating range                | -35 ~ 85                             |
| 応答性 (sec)<br>Thermal time constant            | ≈ 30 (in Air)                        |
| 絶縁耐圧条件 (MΩ)<br>Insulation Resistance          | ≥ 100 (500VM)                        |
| 熱放散定数 (mW/°C)<br>Thermal dissipation constant | 1.6                                  |

#### ● 配管センサ laying pipe sensor



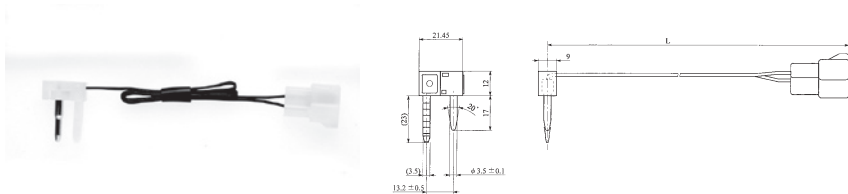
| 品名<br>Item                                    | 配管センサ<br>laying pipe sensor |
|---|-----------------------------|
| 抵抗値範囲 (kΩ)<br>Resistance                      | 6 (at 0°C)                  |
| 使用温度範囲 (°C)<br>Operating range                | -40 ~ 105                   |
| 応答性 (sec)<br>Thermal time constant            | ≤ 8                         |
| 絶縁耐圧条件 (MΩ)<br>Insulation Resistance          | ≥ 100 (500VM)               |
| 熱放散定数 (mW/°C)<br>Thermal dissipation constant | -                           |

# NTCサーミスタセンサ自動車用

## NTC thermistor sensor for automobiles

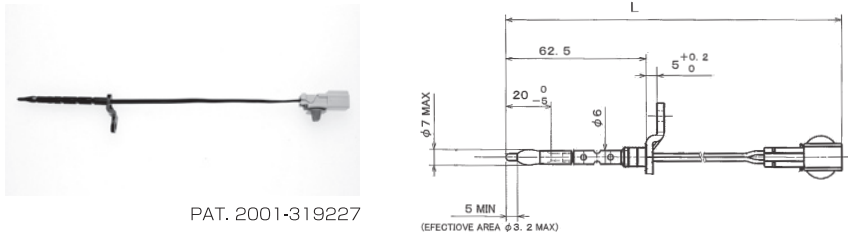
### カーエアコン用センサ For automobile air conditioner

#### ●エバポレータ温度センサ(フィンタイプ) Temperature sensor for Evaporator(Fin-type)



| 品名<br>Item                                   | フィンセンサ<br>for Evaporator(Fin-type) |
|--|------------------------------------|
| 抵抗値範囲(kΩ)<br>Resistance                      | 6.65 (at 0°C)                      |
| 使用温度範囲(°C)<br>Operating range                | -30~80                             |
| 応答性(sec)<br>Thermal time constant            | 3±1                                |
| 絶縁耐圧条件(MΩ)<br>Insulation Resistance          | ≥100(500VM)                        |
| 熱放散定数(mW/°C)<br>Thermal dissipation constant | 4.5 (in water)                     |

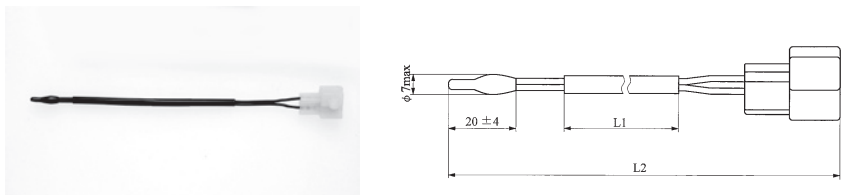
#### ●エバポレータ温度センサ(ブラケットタイプ) Temperature sensor for Evaporator(Bracket-type)



PAT. 2001-319227

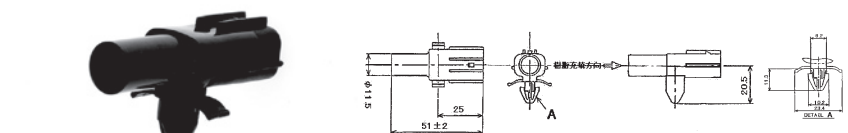
| 品名<br>Item                                   | ブラケットエバセンサ<br>for Evaporator(Bracket-type) |
|--|--|
| 抵抗値範囲(kΩ)<br>Resistance                      | 26.36 (at 3.2°C)                           |
| 使用温度範囲(°C)<br>Operating range                | -30~80                                     |
| 応答性(sec)<br>Thermal time constant            | ≤3   |
| 絶縁耐圧条件(MΩ)<br>Insulation Resistance          | ≥10(500VM)                                 |
| 熱放散定数(mW/°C)<br>Thermal dissipation constant | 1.5 (at 25°C still air)                    |

#### ●エバポレータ温度センサ(エアタイプ) Temperature sensor for Evaporator(Air-type)



| 品名<br>Item                                   | エバセンサ<br>for Evaporator(Air-type) |
|--|-----------------------------------|
| 抵抗値範囲(kΩ)<br>Resistance                      | 4.852 (at 0°C)                    |
| 使用温度範囲(°C)<br>Operating range                | -30~80                            |
| 応答性(sec)<br>Thermal time constant            | 4±1                               |
| 絶縁耐圧条件(MΩ)<br>Insulation Resistance          | ≥100(500VM)                       |
| 熱放散定数(mW/°C)<br>Thermal dissipation constant | 4.5 (at still air)                |

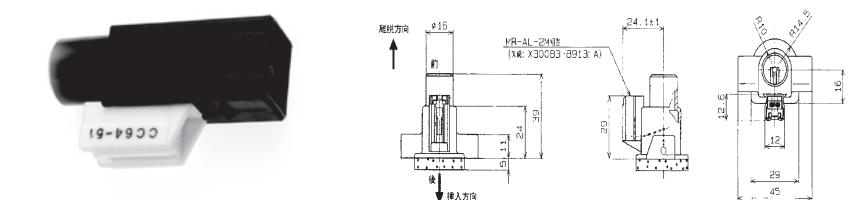
#### ●外気温度センサ Air temperature sensor



PAT. 8-282090

| 品名<br>Item                                   | 外気センサ<br>Air temp. sensor |
|--|---------------------------|
| 抵抗値範囲(kΩ)<br>Resistance                      | 6.6(at 0°C)               |
| 使用温度範囲(°C)<br>Operating range                | -40~80                    |
| 応答性(sec)<br>Thermal time constant            | ≤330 (in Air)             |
| 絶縁耐圧条件(MΩ)<br>Insulation Resistance          | ≥100(500VM)               |
| 熱放散定数(mW/°C)<br>Thermal dissipation constant | 3.5 (at still air)        |

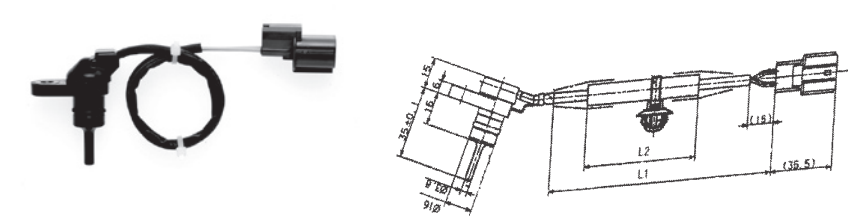
#### ●車室温度センサ Temperature sensor in car room



| 品名<br>Item                                   | 内気センサ(一般タイプ)<br>in Car room |
|--|-----------------------------|
| 抵抗値範囲(kΩ)<br>Resistance                      | 2.2                         |
| 使用温度範囲(°C)<br>Operating range                | -30~80                      |
| 応答性(sec)<br>Thermal time constant            | -                           |
| 絶縁耐圧条件(MΩ)<br>Insulation Resistance          | -                           |
| 熱放散定数(mW/°C)<br>Thermal dissipation constant | ≥3.5                        |

### その他自動車用センサ Other applications for automobile

#### ●ATFセンサ Automatic transmission fluid temperature sensor



| 品名<br>Item                                   | ATFセンサ(油温)<br>ATF oil temp. sensor |
|--|------------------------------------|
| 抵抗値範囲(kΩ)<br>Resistance                      | 3.5                                |
| 使用温度範囲(°C)<br>Operating range                | -40~150                            |
| 応答性(sec)<br>Thermal time constant            | ≤15                                |
| 絶縁耐圧条件(MΩ)<br>Insulation Resistance          | ≥1000(1000VM)                      |
| 熱放散定数(mW/°C)<br>Thermal dissipation constant | -                                  |