

# Thermistor Probes and Assemblies

## NPRL Series - Surface Temperature Sensing

### Ring Lug NTC Thermistor Probe Assembly



### Description

The ring lug NPRL series surface temperature sensing thermistor probe assemblies are manufactured using exceptionally stable NTC thermistors that are potted into a ring lug housing with thermally conductive epoxy. This series was designed for screw-in-place applications that offers a wide variety of mounting stud-hole sizes for different resistance and resistance tolerances,  $\beta$  beta values, as well as with a wide selection of lead wire materials and terminations. Designed for rapid thermal response and excellent long-term stability, these ring lug thermistor probe assemblies can be used in a broad range of surface temperature sensing applications such as HVAC systems, automated door and gate systems, and welding equipment.

### Features

- Screw-in-place mounting
- Fast response times
- High stability
- Various mounting hole-stud sizes
- Standard and UL
- Low cost

### Benefits

- Rapid thermal response
- Long-term stability
- Superior reliability
- Precise monitoring
- Easily mounted

### Applications

- Battery management systems
- Automotive electronics
- Building and home automation
- Home appliances
- Industrial electronics and automation
- HVAC systems
- Heat exchangers
- Welding equipment

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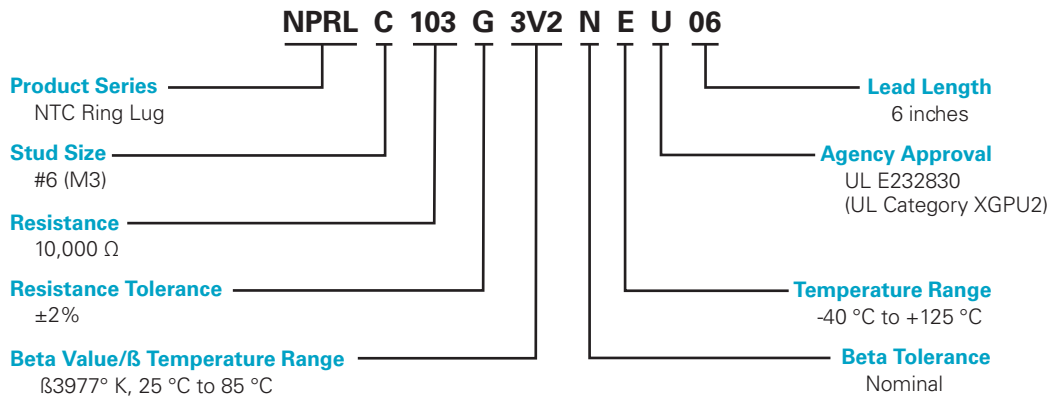
### Specifications

| PART NUMBER       | RESISTANCE<br>IN OHMS AT<br>25 °C (Ω) | RESISTANCE<br>TOLERANCE<br>± % AT 25 °C | BETA K<br>25–85 °C | OPERATING<br>TEMPERATURE<br>MIN °C | OPERATING<br>TEMPERATURE<br>MAX °C | POWER<br>RATING,<br>mW | RESISTANCE-<br>TEMPERATURE<br>CURVE |
|-------------------|---------------------------------------|---|--------------------|------------------------------------|------------------------------------|------------------------|-------------------------------------|
| NPRLC103G3V2NEU06 | 10000                                 | 2                                       | 3977               | -40                                | 125                                | 20                     | J                                   |

### Certification & Compliance

|              |  |
|--------------|--|
| <b>UL</b>    | UL file# E232830 (UL category XGPU2)                 |
| <b>REACH</b> | Reach Regulation (EC) No. 1907/2006                  |
| <b>ROHS</b>  | RoHS 2 Directive 2011/65/EU; Directive (EU) 2015/863 |

### Part Numbering System



### Ordering Information

| CATALOG<br>NUMBER | PACKING | AGENCY<br>APPROVALS |
|-------------------|---------|---------------------|
| NPRLC103G3V2NEU06 | Bulk    | UL                  |

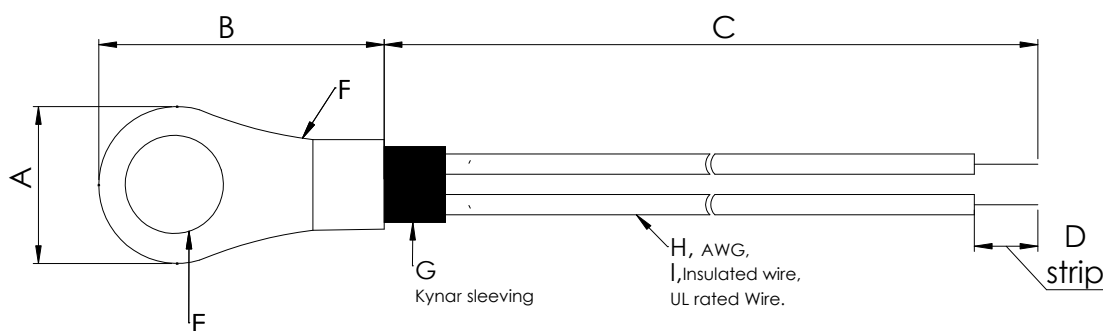
### Electrical Specifications

| RESISTANCE<br>(25 °C) Ω | RESISTANCE<br>TOLERANCE, ±% | ACCURACY<br>(± °C) | TEMP. COEFFICIENT<br>(%/°C) | BETA (K)    | TEMP RATING<br>(°C) | POWER<br>RATING (V) |
|-------------------------|-----------------------------|--------------------|-----------------------------|-------------|---------------------|---------------------|
| 1000 to 2000000         | 1 to 10                     | 0.1 ~ 1            | 3.31 to 4.4                 | 2000 ~ 5000 | -40 ~ +300          | 100 ~ 6000          |

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### Dimensions Inches (mm)



| A                                      | B                                       | C   | D                                  | E<br>(RING TONGUE<br>MOUNTING-<br>HOLE DIA) | F<br>(RING TONGUE<br>MOUNTING-<br>STUD SIZE) | G   | H           | I        |
|--|---|---|------------------------------------|---|--|---|-------------|----------|
| 0.157" to 0.766"<br>(3.987 to 19.45mm) | 0.530" to 1.563"<br>(13.46 to 39.70 mm) | 1" to custom lengths<br>(25.4mm to<br>custom lengths) | 0.250" ±0.07"<br>(6.35mm ±1.778mm) | 0.064" ~ 1.151"<br>(1.625 ~ 29.23mm)        | M2 ~ 1/18"                                   | It will be<br>determined<br>based on the<br>application | 16 ~ 34 AWG | Standard |

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