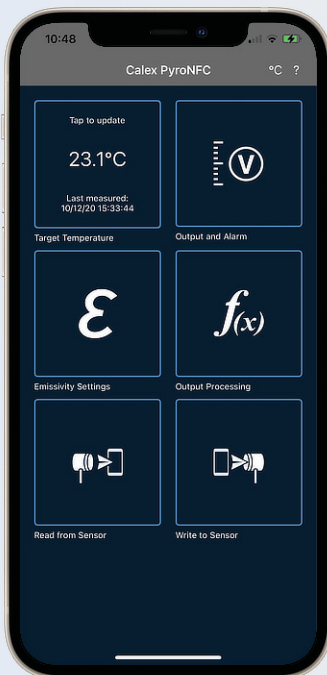# PyroNFC

Smartphone Configurable Infrared Temperature Sensor

- Non-contact industrial temperature sensor
- Fully configurable via iOS / Android app
- Choice of voltage or thermocouple outputs
- Simultaneous open collector alarm output
- Measures from 0°C to 1000°C, accurately and consistently
- Extremely small, with side-entry cable: ideal for mounting in tight spaces
- Fast response time: 125 ms
- Low cost, high performance
- Operates in ambient temperatures up to 80°C without cooling
- Form factor optimised or brake testing applications, plus many others

APP FEATURES

- Read the measured temperature from PyroNFC sensors
- Instantly configure PyroNFC sensors without powering them
- Simply touch the sensor with the device to communicate
- Compatible with NFC-equipped Android and iOS devices
- Get the app free from Google Play Store or Apple App Store (search "PyroNFC")

GENERAL SPECIFICATIONS

Temperature Range	0 to 1000°C (rescalable on model PN151)
Output	**Model PN151:** 0-5 V DC, 1-5 V DC or 0-10 V DC, linear with measured temperature, configurable and rescalable via app
	Model PN151K: Type K Thermocouple
Alarm Output	Open collector alarm output with temperature threshold and hysteresis, configurable via app
Field of View	15:1 (see OPTICS)
Accuracy	± 1.5% of reading or ± 1.5°C, whichever is greater
Repeatability	± 0.5% of reading or ± 0.5°C, whichever is greater
Response Time	125 ms (90% response)
Configuration	Via iOS/Android app using NFC-equipped smartphone/tablet
Emissivity Setting	Adjustable 0.2 to 1.0 via app
Max Span (Voltage Output Range)	1000°C
Min Span (Voltage Output Range)	100°C
Spectral Range	8-14 µm
Max. Supply Voltage	28 V DC
Min. Supply Voltage (at Sensor)	12 V DC (for 10 V output) 6 V DC (for 5 V or thermocouple output)
Max Current Draw	7 mA

ENVIRONMENTAL & CONFORMITY SPECIFICATIONS

Environmental Rating	IP65
Ambient Temperature Range	0°C to 80°C
Relative Humidity	95% max. non-condensing
Electromagnetic Compatibility	EN61326-1, EN61326-2-3 (Electrical Equipment for Measurement, Control and Laboratory Use - EMC Requirements - Industrial)
RoHS Compliant	Yes

APP SPECIFICATIONS

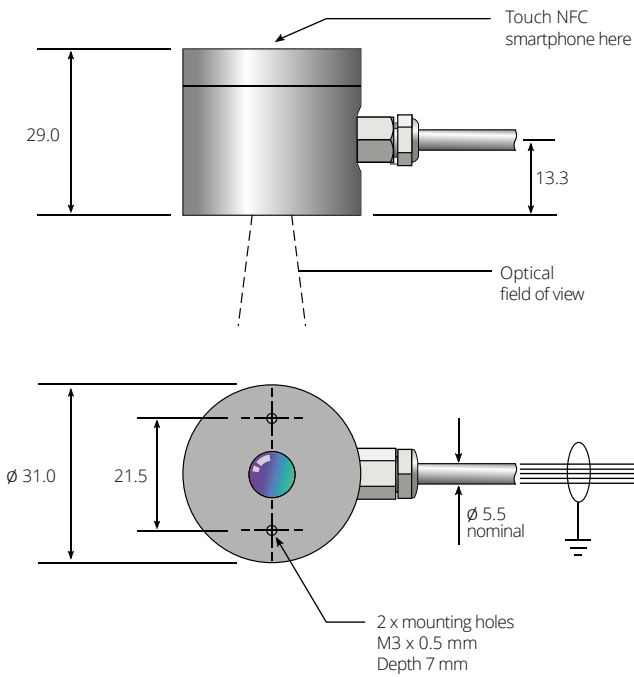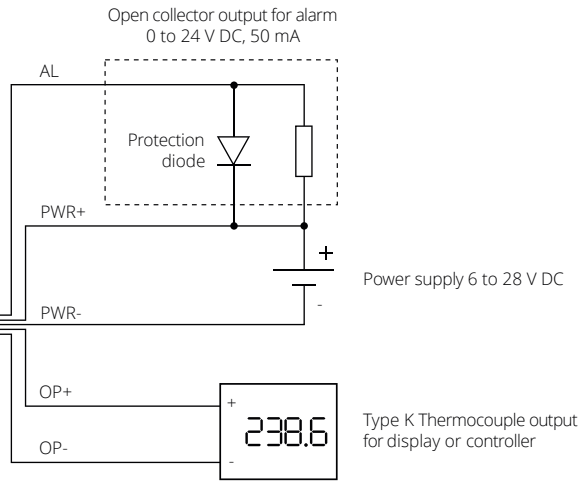|	
Configurable Parameters	Temperature range (linear output) Linear voltage output type and scale Alarm output threshold and hysteresis Emissivity setting Reflected temperature
Temperature Units	°C / °F
Signal Processing	Averaging Period (0.125 to 60 seconds) Peak / Valley Hold Hold Period (0.125 to 1200 seconds)
Temperature Measurement	Touch NFC device against sensor for in-app temperature updates (updates continuously on Android)

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DIMENSIONS AND CONNECTIONS

MODELS WITH TYPE K THERMOCOUPLE OUTPUT

Touch NFC smartphone here

29.0

13.3

Optical field of view

Ø 31.0

21.5

Ø 5.5 nominal

2 x mounting holes
M3 x 0.5 mm
Depth 7 mm

Open collector output for alarm
0 to 24 V DC, 50 mA

AL

Protection diode

PWR+

PWR-

Power supply 6 to 28 V DC

OP+

238.6

OP-

Type K Thermocouple output for display or controller

MODELS WITH VOLTAGE OUTPUT

Open collector output for alarm
0 to 24 V DC, 50 mA

AL

Protection diode

PWR+

Power supply 6 to 28 V DC

PWR-

0 V

Ø 3.2 nominal

OP+

238.6

Voltage output, configurable via app:
0-5 / 1-5 / 0-10 V DC
for display or controller

Sensor dimensions as above

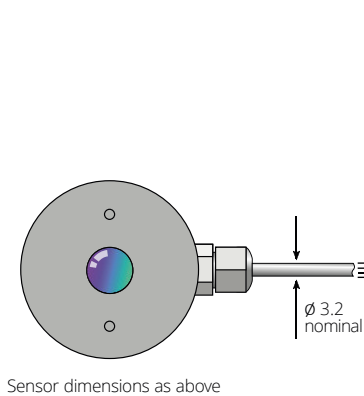## MECHANICAL SPECIFICATIONS
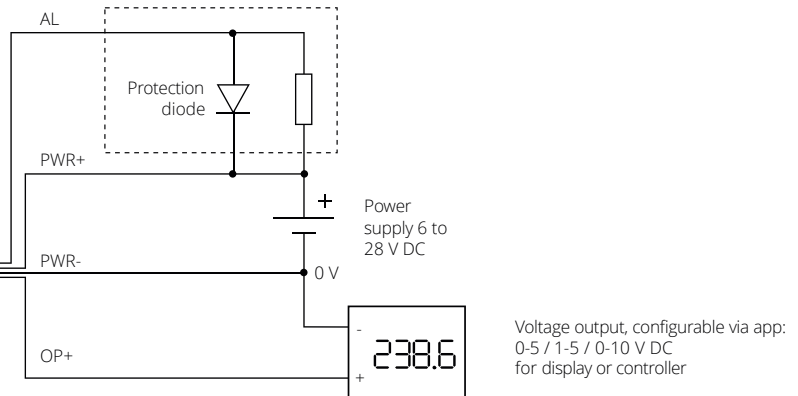
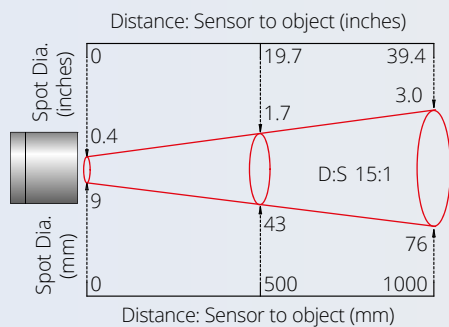|	
Construction	Black anodised aluminium and ABS
Cable Length	1 metre standard (longer lengths available to order)
Weight	65 g including 1 m cable

OPTICS

Diameter of target spot measured versus distance from sensing head (90% energy)

Distance: Sensor to object (inches)

Spot Dia. (inches)

0   19.7   39.4

3.0

0.4   1.7

9   D:S 15:1

43

76

Spot Dia. (mm)

0   500   1000

Distance: Sensor to object (mm)
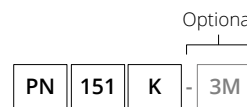
ACCESSORIES

Fixed mounting bracket **FBN**

Adjustable mounting bracket **ABN**

Air purge collar **APN**

3-point UKAS traceable calibration certificate **CALCERTA**

MODEL NUMBERS

Optional

| PN | 151 | K | - | 3M |

Cable Length

(blank) Standard 1 metre cable length

*n*M Extended cable, length *n* metres (30 m max)
User may extend cable further

Outputs

(blank) Configurable 0-5 / 1-5 / 0-10 V DC output for measured temperature, and open collector alarm output

K Type K Thermocouple output for measured temperature, and open collector alarm output

Field of view

151 15:1 divergent optics

Series

PN PyroNFC infrared temperature sensor, configurable via NFC