PyroCAN

Infrared Temperature Sensor with CAN Bus Interface

- Temperature range: -20°C to 1000°C
- Raw CAN communications
- Adjustable emissivity setting for measuring a variety of materials
- Fast 200 ms response with high stability
- Stainless steel housing, sealed to IP65
- Ideal for vehicle-based applications in automotive testing, motorsport testing, industry, construction and agriculture, among many others.
- Conforms to industrial EMC standards

The PyroCAN series is a range of general purpose infrared temperature sensors (pyrometers) that measure the temperature of surfaces without contact.

The temperature is transmitted digitally every 200 ms via a CAN interface. The sensor's CAN ID and emissivity setting may be changed via a CAN command.

The sensor is suitable for measuring a variety of non-metal surfaces, including painted materials, rubber, plastics, asphalt, soil, plants, organic materials, food and pharmaceuticals. Metals can be measured if they are painted or heavily oxidised.

The PyroCAN is easily connected to existing networks with other CAN devices.

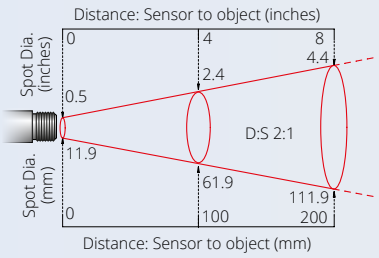
OPTICS

All PyroCAN sensors have precision silicon optics with a well-defined measurement area. The sensor measures the average temperature within the measured spot shown.

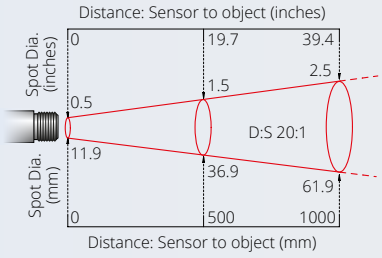
The wide-angle 2:1 optics of model PCAN21 provide a relatively large measurement area. They are ideal if the target is large, or the sensor is positioned very close to the measured surface.

The general-purpose 20:1 optics of model PCAN201 provide a small, precise measurement area.

Accessories for laser sighting are available, either to aid aiming during installation, or for continuous indication of the measurement area.



21 models



201 models

All models can measure at longer distances than shown, with a larger measured spot size.

Diagrams show the diameter of the measured target spot versus the distance from the sensing head. Given measured spot sizes contain 90% of the energy detected by the sensor. We recommend the target should be at least twice the size of the measured spot for maximum accuracy.

SPECIFICATIONS

General	
Interface	Raw CAN
Temperature Range	-20°C to 1000°C
Accuracy	±1% of reading or ±1°C, whichever is greater
Repeatability	± 0.5% of reading or ± 0.5°C, whichever is greater
Emissivity Setting	0.2 to 1.0, adjustable via CAN
Response Time	<200 ms (90% response)
Spectral Range	8 to 14 µm
Supply Voltage (at Sensor)	12 V DC to 24 V DC
Supply Current	50 mA max.
Baud Rate	250 kbps

Mechanical	
Construction	Stainless Steel
Dimensions	18 mm diameter x 103 mm long
Thread Mounting	M16 x 1 mm pitch
Cable Length	1m (longer lengths available to order)
Weight with Cable	95 g

Environmental	
Environmental (IP) Rating	IP65
Ambient (Operating) Temperature Range	0°C to 90°C
Ambient (Operating) Humidity	95% max. non-condensing

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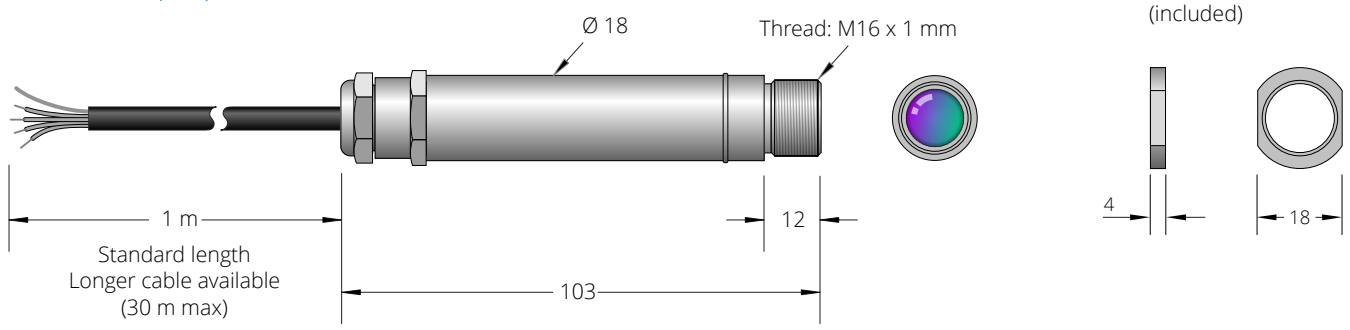
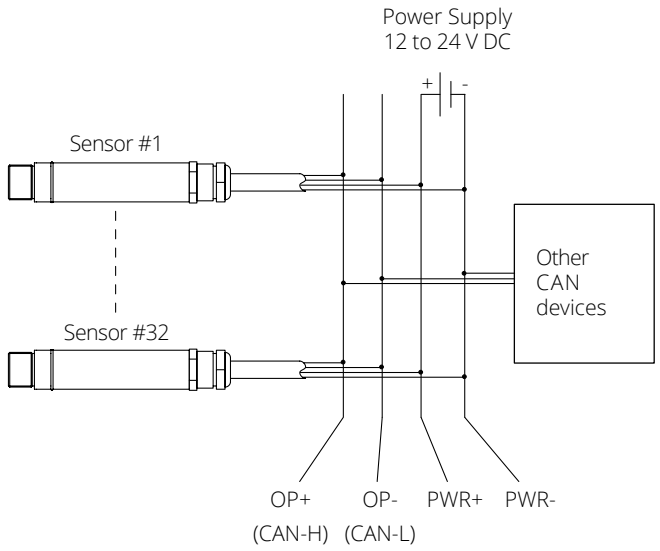
DIMENSIONS (mm)



CONNECTIONS



WIRE COLOUR CODES

Wire Colour	Identity Tag	Function
Brown	PWR+	Power supply +12 to +24 V DC
White	PWR-	0 V
Yellow	OP+	CAN-H
Green	OP-	CAN-L

CAN INTERFACE

The sensor transmits an 8-byte message every 200 ms containing the target temperature and sensor body temperature.

For a full description of the protocol, please see the PyroCAN Series Operator's Guide.

MODEL NUMBERS

Optional

PCAN | **201** | WJ - 3M

Example Model Numbers:
PCAN21, PCAN201WJ-5M

Cable Length
(blank) Standard 1 metre cable length
***n*M** Extended cable, length *n* metres (30 m max)
User may extend cable further

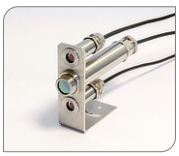
Cooling
(blank) Sensor without cooling
WJ Air/water cooled jacket with air purge collar

Field of view
21 2:1 divergent optics
201 20:1 divergent optics

Series
PCAN PyroCAN General purpose infrared temperature sensor with CAN communications

ACCESSORIES

Laser sighting tool **LSTS**



Dual laser sighting bracket, adjustable **DLSBAS** or fixed **DLSBFS**

Fixed mounting bracket **FBS**

Adjustable mounting bracket **ABS**

Air or water cooled jacket with air purge collar **WJ** (factory-fitted - see Model Numbers)

Air purge collar for 2:1 optics **APSW** or for all other optics (shown above) **APSN**

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Specifications subject to change without notice