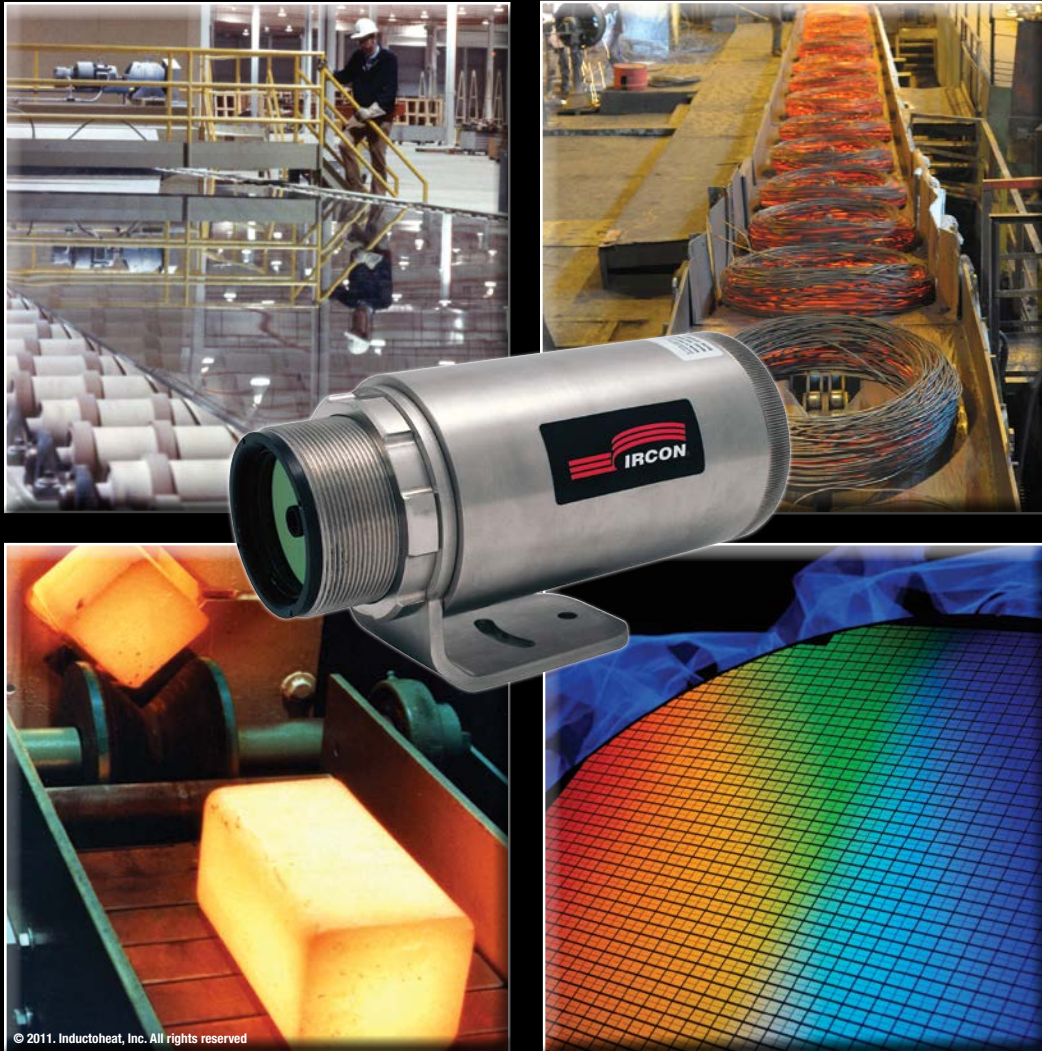


Modline[®] 7 Infrared Thermometers



Noncontact temperature sensors to serve
a wide range of applications



Modline® 7 Highlights

Designed for rugged industrial environments, the Modline 7 sensors have 4 different series to choose from (75, 77, 78 & 74). All sensor components are sealed within an IP65 (NEMA 4) enclosure featuring standard motorized focus control, as well as through-the-lens and laser sighting. Also included is an integral stainless steel water cooled enclosure. All Modline 7 systems are backed with a 5 year warranty.

The sensing head can operate as a stand-alone sensor, providing simultaneous analog and digital outputs of process temperatures.

Sensor setup and monitoring can be accomplished either through the rear panel of the sensor or through the Modview™ Pro software, allowing the user to perform PC-based temperature monitoring, trending and archiving with an intuitive graphical user interface.

Alarms:

A programmable relay output can be triggered by:

- Product Temperature (process alarm)
- Sensor Internal Temperature (sensor alarm)
- Manually

Communications:

- Bi-directional RS-485 communications
- Windows ModView™ Pro Software
- Field Calibration software

Features:

- Broad temperature range -40°C to 3000°C (-40°F to 5432°F)
- Spot size down to 1mm

Performance

Accuracy

75

± 2°C or ± 2%* for T_{meas} < 350°C (662°F)

± 1% of reading for T_{meas} > 350°C (662°F)

77 / 78

± 1% of reading

74

± 2°C for T_{meas} < 0°C (32°F)

± 1% of reading or ± 1°C* for T_{meas} > 0°C (32°F)

Repeatability

75

± 0.5% of reading or ± 0.5°C*

77/78/74

± 0.5% of reading or ± 0.5°C*

*whichever is greater

Temperature Resolution

All models

0.1°C

Electrical

Power Supply

24 VDC ± 20%, 500 mA

Outputs Analog

0 - 20 mA, 4 - 20 mA, 14 bit resolution, max. current loop impedance: 500 ohms.

Digital RS-485

Networkable to 32 sensors, Baud rate: 300, 1200, 2400, 9600, 19200, 38400, 57600, 115200. 4-wire mode (full-duplex) or 2-wire mode (half duplex), (2-wire: max. 38400 Baud),

Relay

Contacts max. 48 V, 300 mA, response time < 2 ms, (software programmable)

Display

5 digit backlit LCD display

External Input Voltage

0 to 5 VDC functions: trigger, ambient background temperature compensation, emissivity setting, or laser ON/OFF switching

Environmental

Environmental rating

NEMA-4 (IEC 529, IP 65)

EMI

CE compliant to IEC 61326

Relative Humidity

10% to 95% non-condensing

Storage Temperature

-20°C to 70°C (-4°F to 158°F)

Ambient Temperature with integral cooling

without cooling 5°C to 65°C (41°F to 150°F)

with air cooling 10°C to 120°C (50°F to 250°F)

with water cooling 10°C to 175°C (50°F to 350°F)

with high temperature waterjacket cooling

water cooled 10°C to 315°C (50°F to 600°F)

Vibration

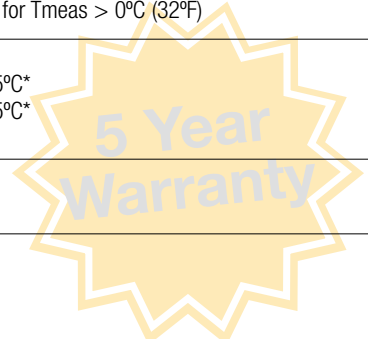
MIL-STD-810D (IEC 68-2-6) 2G's, 10 - 150 Hz, 3 axis

Mechanical Shock

MIL-STD-810D (IEC 68-2-27) 5G's, 11 ms duration, 3 axis

Weight

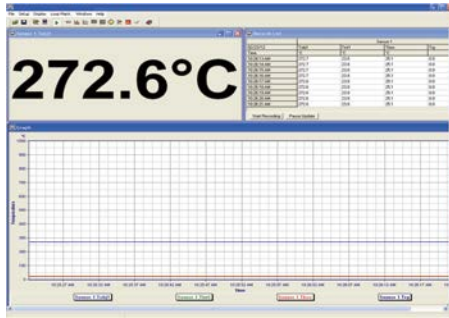
1.95 kg (4.3 pounds)



ModView™ Pro Software

ModView Pro PC based software with built-in user interface displays target temperature and allows for sensor parameter adjustment to configure or fine tune your sensor remotely.

Easily configure individual alarms for early warning detection, change temperature display from °F to °C, set or change emissivity levels, scale the range, focus the sensor, and turn on or off filters, such as peak hold, valley hold, and averaging, as well as save data for future reference, graphing or quality record keeping.

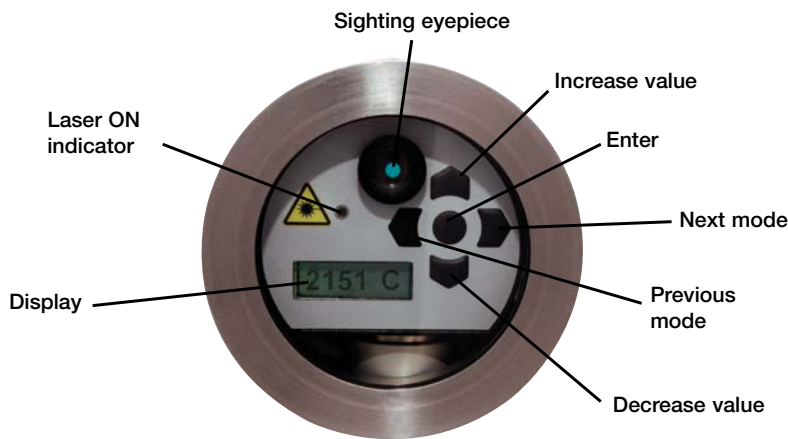


Modline 7 sensor with standard integral water cooling

The Modline 7 sensor with integral water cooling enclosure enables use in ambient temperatures up to 175°C (350°F).



Easy-to-Use Interface



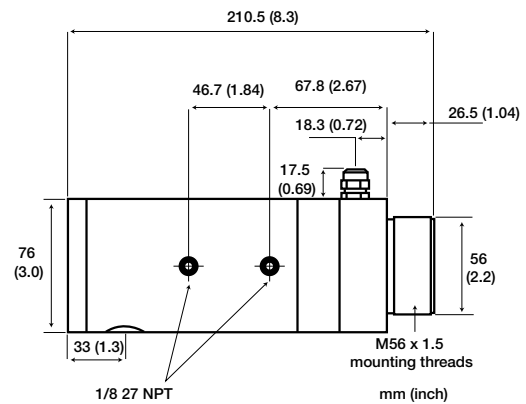
Modline 7 sensor with optional high temperature water jacket accessory

For high ambient temperature applications, the Modline 7 with high temperature water jacket and integrated air purge enables use in ambient temperatures up to 315°C (599°F).

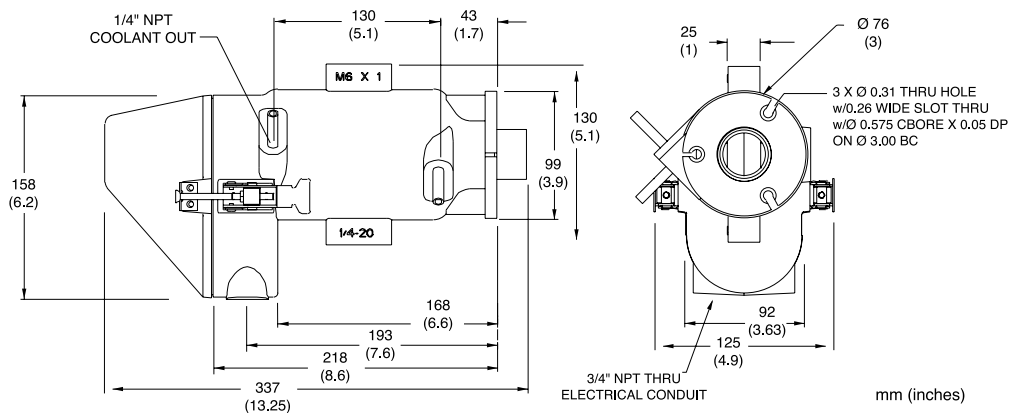


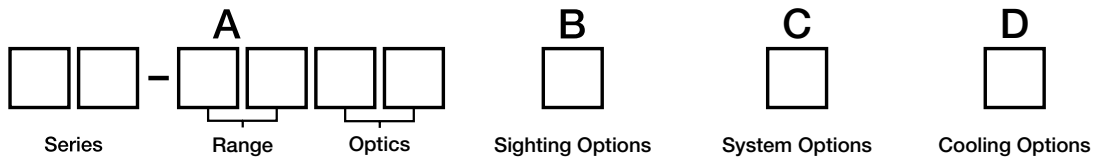
Physical Dimensions

Modline 7 sensor with integral water cooling and optional air purge collar



Modline 7 high temperature waterjacket





Block A	Temperature Range	Spectral Range	Optical Resolution (measured at focal point)	Response Time	Primary Applications
75-1107	250-1100°C (482-2012°F)	3.9µm	D/70	120ms	Furnace refractory, flame hardening and brazing
75-2207	450-2250°C (842-4082°F)	3.9µm	D/70	120ms	
77-1607	250-1650°C (482-3002°F)	4.8–5.2µm	D/70	60ms	Glass surface temperature for bending, tempering, annealing and sealing
77-2207	450-2250°C (842-4082°F)	4.8–5.2µm	D/70	60ms	
78-0910	300-900°C (572-1652°F)	7.9µm	D/100	120ms	Ultra-thin drawn glass
74-0807	-40-800°C (-40-1472°F)	8-14µm	D/70	120ms	Low temperature applications, such as thick plastics, food, carpeting, coated paper and thermoforming

Block B	Sighting Options
0	Visible/Laser Sighting

Block C	System Options
0	Stand Alone Sensor

Block D	Cooling Options
0	Sensor with integral water cooling for ambient temperatures up to 175°C (350°F)
1	Sensor supplied with WJ-7 waterjacket accessory for ambient temperatures up to 315°C (600°F)

Accessories

APA-7	Aluminum air purge collar	POI-7	Power supply (24VDC, 100/240VAC input) & terminal block mounted in a NEMA 4 (IP65) enclosure
APS-7	Stainless steel air purge collar	PS-7	24VDC 1.2A Industrial power supply, DIN rail mount (100/240VAC input)
RAM-7	Stainless steel adjustable bracket	TSP-7	Spare terminal block accessory
WJMB-7	Adjustable mounting base for water jacket		
WJMFST-7	Mounting flange for use with sighting tubes		
WJST12	30cm (12") Stainless steel sight tube (up to 800°C/1472°F)		

The accessories shown are only a few of the many products available for Modline 7 sensors to support a variety of application needs. A complete list of power and communication accessories, protective windows and environmental protection products, as well as mounting brackets, can be found in the Modline 7 sensor manual. Please contact your local IRCON sales representative for detailed information.

Fluke Process Instruments

Worldwide Service

Fluke Process Instruments offers services, including repair and calibration. For more information, contact your local office.

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 12/2018 4162449D



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