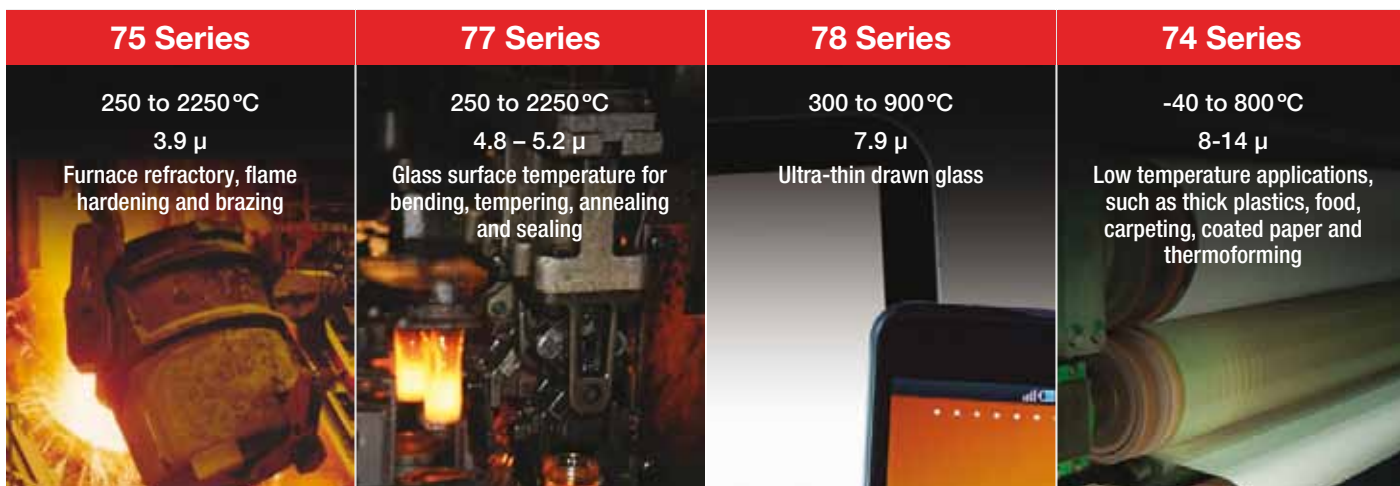


Modline[®] 7 Infrared Thermometers



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 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 2250 °C
- Spot size down to 1 mm

Performance

Accuracy

75	± 2 °C or ± 2%* for Tmeas < 350 °C ± 1 % of reading for Tmeas > 350 °C
77/78	± 1 % of reading
74	± 2 °C for Tmeas < 0 °C ± 1 % of reading or ± 1 °C* for Tmeas > 0 °C

*whichever is greater

Repeatability

75/77/78/74	± 0.5 % of reading or ±0.5 °C*
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*whichever is greater

Temperature Resolution

75/77/78/74	0.1 °C
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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

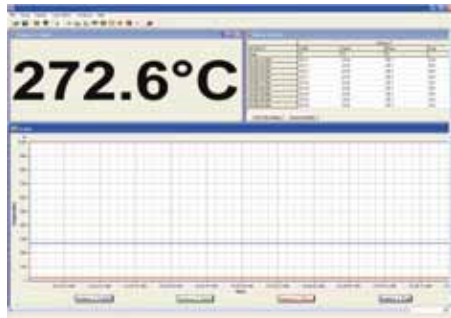
Environmental

Environmental rating	IP 65
EMI	CE compliant to IEC 61326
Relative Humidity	10 % to 95 % non-condensing
Storage Temperature	-20 °C to 70 °C
Ambient Temperature	without cooling: 5 °C to 65 °C with integral cooling: air cooling 10 °C to 120 °C water cooling 10 °C to 175 °C with high temperature waterjacket cooling: 10 °C to 315 °C
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	1.8 kg



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.

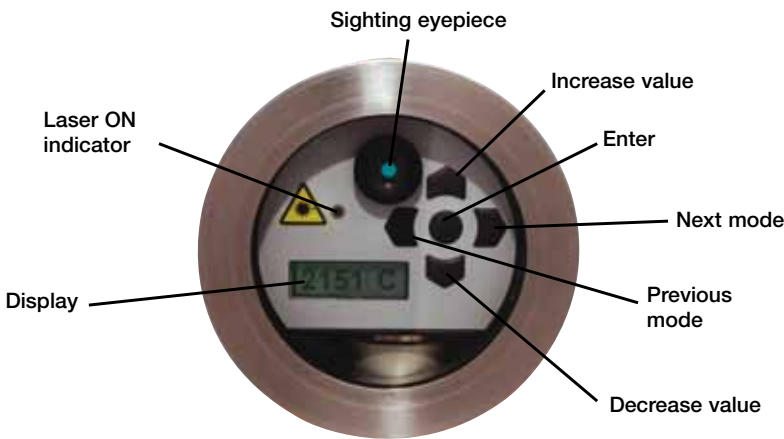


Modline 7 sensor with optional high temperature water jacket accessory

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.

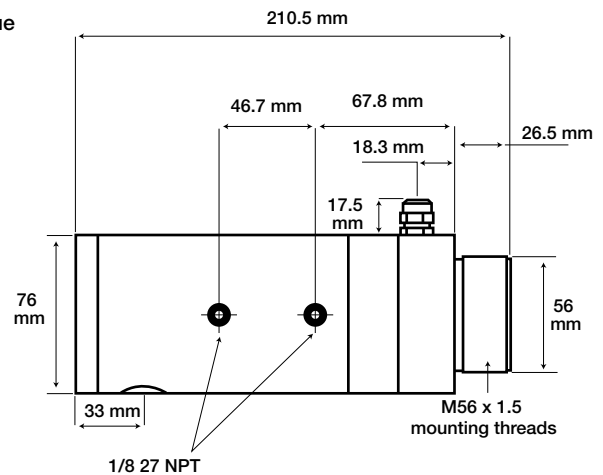


Easy-to-Use Interface

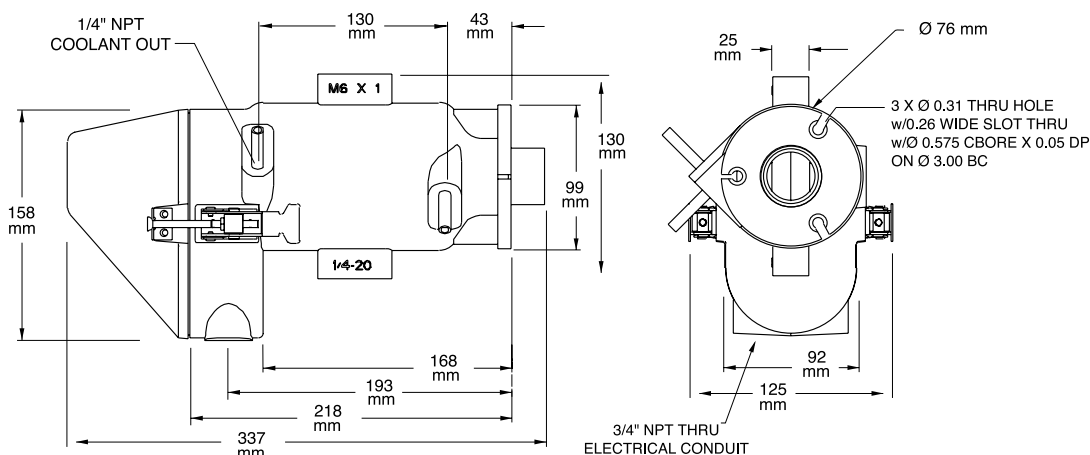


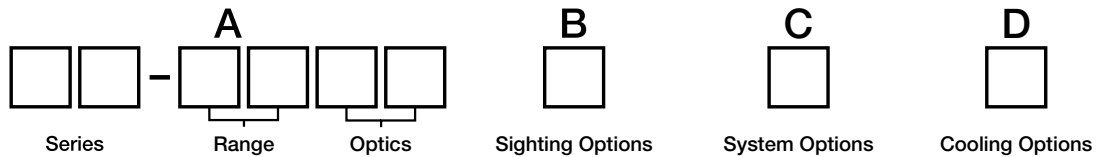
Physical Dimensions

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 75-2207	250-1100 °C 450-2250 °C	3.9 µm	D/70	120 ms	Furnace refractory, flame hardening and brazing
77-1607 77-2207	250-1650 °C 450-2250 °C	4.8–5.2 µm	D/70	60 ms	Glass surface temperatures for bending, tempering, annealing and sealing
78-0910	300-900 °C	7.9 µm	D/100	120 ms	Ultra-thin drawn glass
74-0807	-40-800 °C	8-14 µm	D/70	120 ms	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
1 Sensor supplied with WJ-7 waterjacket accessory for ambient temperatures up to 315 °C

Accessories

APA-7	Aluminum air purge collar	POI-7	Power supply (24 VDC, 100/240 VAC input) & terminal block mounted in a NEMA 4 (IP65) enclosure
APS-7	Stainless steel air purge collar	PS-7	24 VDC 1.2 A Industrial power supply, DIN rail mount (100/240 VAC 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	30 cm (12") Stainless steel sight tube (up to 800 °C)		

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.

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