



# M770S

## IR•ONMAN Series

### Digital Non-contact Infrared Thermometer

Mikron M770S Ir onman series represent another milestone in innovative infrared thermometry. Designed with integrating an advance non-parallax optical sighting with a fully digital electronics in a single package with unparallel accuracy and speed for demanding industrial and scientific applications. The linear analog 4-20 mA and RS-485 digital outputs provide the convenience of long distance signal transmission for temperature measurement, control and data collection. The M770S unmatched array of protective accessories, demonstrate Mikron commitment to long-term trouble free operation of these instruments. The M770S quickly measures temperature without contact in three ways to insure integrity of measurement.

- Bright Built-in Temperature Display
- Compact, rugged design, NEMA-4 rated
- Through-the-lens sighting with Variable-Focus Optics
- Fast response time down to 7.5 mSec
- Up to 32 M770S sensors in a single multidrop network
- Programmable relay output (temperature setpoint or "fail safe")
- Standard and close-focus versions available
- Simultaneous analog and digital output with user-defined alarms
- Ambient temperatures to 200°C (392°F) with optional cooling
- Sees Through Dirty Windows
- Field Calibration and sensor diagnostics software
- Single power Supply, 24 VDC Operation



**Sighting Methods:** Through the lens Sighting  
**Spectral Response:** Two narrow bands near 1  $\mu$   
**Working Distance:** 15" to inf (38 cm to inf).  
**Close Focus Option:** 6" to 15" or Fixed at 2"  
**Temperature Mode:** Current temperature, average temperature (up to 100 reading average), Peak with auto reset  
**Temperature Display:** LED, 4 digits 0.7 x 0.25"  
**Speed of Response:** 7.5 milliseconds for 95% of final reading. Adjustable to 10 seconds  
**Slope:** Adjustable from 0.80 to 1.20 in 0.001 steps  
**Emissivity:** Adjustable from 0.10 to 1.00 in 0.001 steps  
**Controls Remote/Push Button:** °C/°F, Configuration, Alarm, Wavelength, Peak, Ave Slope, Emissivity, Transmission, Scaling,  
**Analog Output:** 4-20mA (500 $\Omega$  max load) isolated and scaleable by user

**Digital Output:** Bi-directional RS-485 communications (networkable)  
**Relay :** Programmable Relay Output  
**Power Source:** 19 to 35 V DC at 150 mA Typical  
**Amb. Temp. Range:**  
 Operating 0° to 50°C ( 32 to 122°F)  
 With Air Cooling 0° to 100°C ( 32 to 212°F)  
 With Water Cooling 0° to 200°C ( 32 to 392°F)  
 storage -20° to 70° C  
**Housing Material:** Hard Anodized Aluminum  
**Housing :** NEMA 4 (IP 65 IEC529) (with Protective Jacket)  
**Dimensions:** 7" x 2.4" (177 mm x 60 mm )  
**Weight:** 1 lb (0.46 kg )  
**Weight with Cooling:** 7.2 lbs. (3.3 kg )  
**Field Calibration and Sensor Diagnostics Software:**

Model	M770S-0600-1400CR_L-1	M770S-0750-2000CR_L-1	M770S-1000-3000CR_L-1
Temperature Range	600 to 1400°C 1112 to 2552°F	750 to 2000°C 1382 to 3632°F	1000 to 3000°C 1832 to 5432°F
Temperature Resolution	1°C or 2°F	1°C or 2°F	1°C or 2°F
Accuracy	±0.5% of Full Scale Reading	±0.5% of Full Scale Reading	±0.5% of Full Scale Reading
Repeatability	±0.2% of Full Scale Reading	±0.2% of Full Scale Reading	±0.2% of Full Scale Reading
Field of View Ratio	60:1	90:1	180:1
Focusing Distance	15 " to infinity	15 " to infinity	15 " to infinity
Digital Output	RS-485	RS-485	RS-485
Analog Output	4—20 mA	4—20 mA	4—20 mA
Response Time	7.5 mSec for 95% of Final Reading	7.5 mSec for 95% of Final Reading	7.5 mSec for 95% of Final Reading

#### Optional Accessories

- 24 VDC Power Supply
- Interconnect Cable
- RS485 to RS232C converter
- Mikron family of protective jackets, air purges and aiming flanges
- NIST Certificate
- Junction Box for easy installation

#### Warranty:

All IR-ONMAN models are covered by a one year warranty period from date of shipment



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Mikron reserves the right to change specifications to reflect the latest changes in technology and improvements at any time without notice. These changes will be reflected in subsequent editions of our literature when warranted.

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