

Multichannel Fiber Optical Temperature Sensor Readout Module

Stability $\pm 0.1^{\circ}\text{C}$; Resolution of 0.01°C



DATASHEET

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The MFOR Fiber Optic Multichannel Temperature Readouts are compatible with all fiber optic sensor probes, delivering industry-leading accuracy, repeatability, and reliability for temperature monitoring applications. Each Readout can be configured with up to twelve measurement channels, providing significant cost reduction and space savings per measurement point.

The MFOR is specifically designed for OEM system integration, with customizable configurations available to meet your specific needs.

Features

- Highly accurate and repeatable across full temperature range
- Probes are fully interchangeable
- Systems do not require recalibration
- Excellent sensor-to-sensor precision
- Greater process uniformity and repeatability
- Advanced process performance
- Reduced form factor and cost per measurement point

Applications

- Medical applications
- Aerospace



Specifications

| Parameter | Min | Typical | Max | Unit |
|----------------------------|-----|-----------------|-----|--------------------|
| Number of Channels | 1 | | 12 | |
| Resolution | | 0.01 | | $^{\circ}\text{C}$ |
| Measurement Range | | Probe Dependent | | |
| Measurement Accuracy | | Probe Dependent | | |
| Stability | | ± 0.1 | | $^{\circ}\text{C}$ |
| Analog Output (16-bit DAC) | 4 | | 20 | mA |
| Operating Temperature | 5 | | 60 | $^{\circ}\text{C}$ |
| Input Power | | 24 | | VDC |
| Dimensions | | 141 x 25 x 100 | | mm |

Note: The specifications provided are for general applications with a cost-effective approach. If you need to narrow or expand the tolerance, coverage, limit, or qualifications, please [click this link](#):

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© Photonwares Corporation

[+1 781-935-1200](tel:+17819351200)

sales@photonwares.com

www.agiltron.com

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Mechanical Dimension (mm)

*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Ordering Information (Part Number)

| | □ □ | □ □ | □ | □ | 1 | 1 | 1 |
|--------------|--|---------------|--------------------|---|---|---|---|
| Prefix | Channel | Type | Power Supply | Interface | | | |
| MFOR- | 1 = 01 2 = 02 4 = 04 8 = 08 10 = 10 12 = 12 | Standard = 11 | Non = 1 Yes = 2 | USB = 1 RS232/Modbus® RTU = 2 Ethernet/EtherCat = 3 | | | |

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Caution Electrostatic Sensitivity



- Never touch laser diode and the module using hands
- Always use protections when handle a laser diode
- Recommend mounting the laser diode using an ionic gun and ESD finger cots



Laser Safety

This product meets the appropriate standard in Title 21 of the Code of Federal Regulations (CFR). FDA/CDRH Class 1M laser product. This device has been classified with the FDA/CDRH under accession number 0220191. All versions of this laser are Class 1M laser products, tested according to IEC 60825-1:2007 / EN 60825-1:2007. An additional warning for Class 1M laser products. For diverging beams, this warning shall state that viewing the laser output with certain optical instruments (for example eye loupes, magnifiers, and microscopes) within a distance of 100 mm may pose an eye hazard. For collimated beams, this warning shall state that viewing the laser output with certain instruments designed for use at a distance (for example telescopes and binoculars) may pose an eye hazard.

Wavelength = 1.3/1.5 μm .

Maximum power = 30 mW.



*Caution - Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

*IEC is a registered trademark of the International Electrotechnical Commission.