



D501FL

Fiber Optic Temperature Monitor

D501FL

Durable and Adaptable Multi-Channel Monitoring Solution



Provides real-time insights with Fiber Optic Temperature sensing, Load measurement, and Power analysis.

D501FL is a cutting-edge monitoring solution designed for precise management of electrical assets. Supporting 1 to 6 Fluorescence FO sensors, it delivers accurate, real-time data, ensuring reliable condition monitoring for critical applications.

Designed to prevent asset failures and reduce downtime, the D501 takes a holistic asset health evaluation and maintenance scheduling approach. By integrating Fluorescence FO sensors and the Asset Performance Management System RM EYE, it offers seamless adaptability for both retrofit applications and new installations.

With its advanced predictive diagnostics, the D501FL delivers unparalleled visibility into asset performance, enabling early detection of potential issues. Built to monitor a wide range of electrical asset types, it empowers industries with enhanced reliability, operational efficiency, and long-term value.

» Applications



Transformer



Rotating Machines



Cables



Switchgear

» Features

- Simple, User-friendly visualization and easy-to-configure
- Versatile Communication and Protocol support
- Equipped with the most accurate and advanced health assessment analytics
- Highly secure visualization and configuration

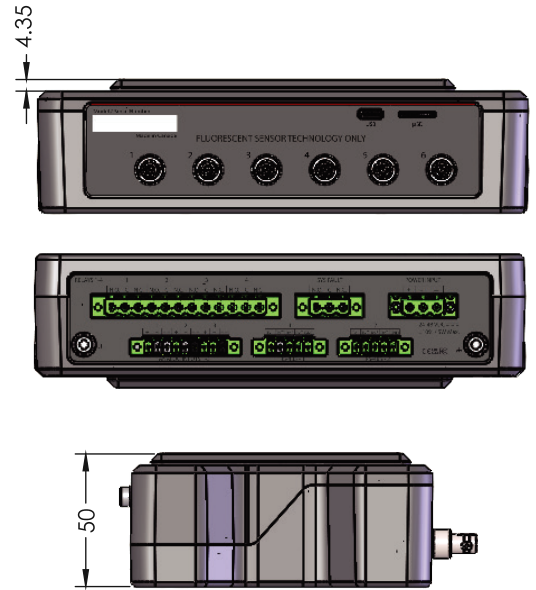
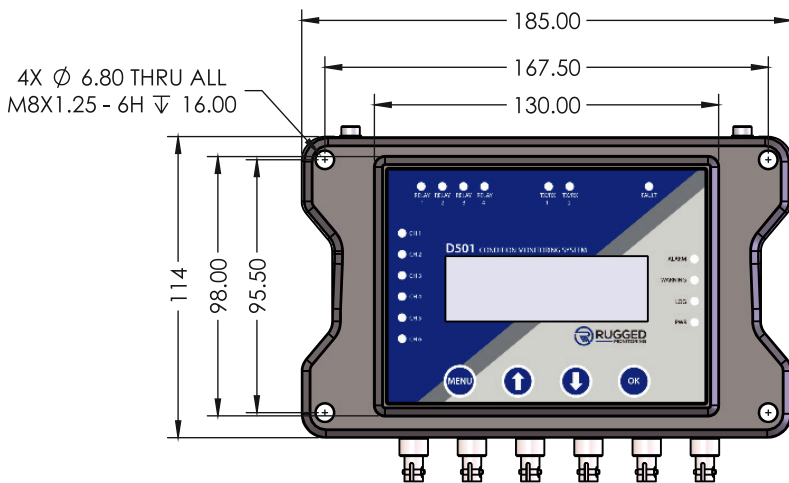
» Benefits

- Enhanced asset reliability
- Precision predictive analysis
- Remote Data Accessibility
- Increased asset lifetime
- Highest return on investment
- Field upgradable with no device downtime

» Technical Specifications

| | | |
|---|--------------------------------------|---|
| POWER INPUT | Input Power Requirement | 24 VDC \pm 10% |
| | Power Consumption | 10 Watts |
| FIBER OPTIC INPUTS | Measurement range | -80 °C to +250°C (cryogenic 4 °K range optional) |
| | Resolution | 0.1 °C |
| | Accuracy | \pm 1.0 °C (\pm 0.2 °C in relative temperature) |
| | Scan rate | 20 ms/channel (Optional: Faster scanning rates available) |
| | Number of channels | 1 to 6 channels |
| ANALOG INPUT | # of Channels | 3 inputs |
| | Input channel sample rate | 1Hz |
| ANALOG OUTPUT | # of Output Channels | 4 channels |
| | Output format | 4-20 mA or 0-5Vdc / 0-10Vdc (Configurable for any measured/calculated value) |
| OUTPUT RELAY | # of Output Channels | 04 Form C relays (5A) |
| | User programmable | Yes, from Rugged Connect Software |
| DATA STORAGE & CONFIGURATION | Data storage capacity | micro SD |
| | Logging Rate | User Configurable, 1 sec interval on USB |
| | System Fault Indication | 1 System Fault Relay, with Local LED light |
| | Config port | USB (to use with Rugged Connect Windows software) |
| COMMUNICATION | Serial Communication | 2 x RS-485 |
| | Protocol Supported | Modbus, DNP3.0, IEC60870-5-10, Other protocols provided on request |
| EMC TYPE TESTING | Conducted & Radiated Emissions | ICES-003 (2016), CISPR32 (2015), CISPR11 (2015) |
| | ESD and EM field immunity | IEC61000-4-2, C37.90-3, IEC61000-4-3, C37.90.2 |
| | Fast Transient & Surge Immunity | IEC61000-4-4, IEC61000-4-5, C37.90.2 |
| | Magnetic Field Immunity | IEC61000-4-8, IEC61000-4-10 |
| | Immunity from Conducted Disturbances | IEC61000-4-6, IEC61000-4-16 |
| | Ripple,Dips & Damped Oscillatory | IEC61000-4-17, IEC61000-4-18, IEC61000-4-29 |
| | Safety | IEC60255-26 and CE Certified |
| ENVIRONMENTAL AND MECHANICAL | Operating Temperature | -40°C to 72 °C |
| | Operating Humidity | 95% Non-Condensing |
| | Storage Temperature | -40°C to 85 °C |
| | Dimensions | W185 mm x H114 mm x D50mm |
| | Weight | App. 1.0 to 1.5 Kg. (based on number of configuration) |

» Product Drawing



» Ordering Code

Number of Channels

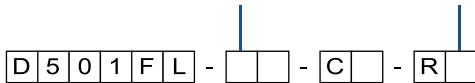
1 to 6 Channels

Ex: 06 = 6 Channels

Numbers of Relays

0 = No Relays

4 = 4 Relays



D501FL = Fluro Probes

Configuration of Analog Inputs (C 1) or Analog Outputs (C 2)

| Combination | CH1 | CH2 | CH3 | CH4 |
|-------------|-----------------------|-----------------------|-----------------------|-------------|
| C0 | 0 | 0 | 0 | 0 |
| C1 | RTD/ 4- 20 mA/ Type K | RTD/ 4-20 mA / Type K | RTD/ 4-20 mA / Type K | 0 |
| C2 | SSR/4-20 mA | SSR/4-20 mA | SSR/4-20 mA | SSR/4-20 mA |

CERTIFICATIONS



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