QUALITROL® OFX-USB™

OmniFlex System



OmniFlex System

- Available with 1 to 512 channels
- Slide-in modules
- No gage factor or calibration
- Cryogenic range down to 0.86 Kelvin available
- Tested for aerospace use

- Voltage or current analog outputs
- Accuracy of ±1 °C
- Multiple chassis can be cascaded
- Transport case available
- Now with USB interface

Product Summary

Description: Multichannel fully upgradeable Fiber Optic Temperature Monitoring System. Field upgradable up to 512 channels

Application: The OmniFlex is the most versatile fiber optic temperature monitoring system available

Easy slide-in modules OmniFlex Sytem is upgraded

by simply sliding new modules called OmniModules. Any type of modules can be used in the chassis. Modules are recognized by

the chassis and the included software. Each module can be configured using the included OmniLink control and datalogging software.

Cascade up to 8 chassis together

Up to eight OmniFlex Sytems can be cascaded together to form an array of up to 512 optical channel. Only one cable is required for connection to PC.

Fibers by Neoptix







The Neoptix OmniFlex System is a fully upgradeable, multi-channel fiber-optic temperature monitoring system featuring up to 512 channels. It is designed with reliability, versatility and upgradability in mind

| Flexible rack mounted enclosure | The OmniFlex starts with a standard 4U / 19-inch rackmount chassis that can accommodate up to eight single- or multi-channel fiber optic modules, providing up to 64 channels per chassis. Multiple chassis can be cascaded together to form an array of up to 512 optical channels. You can easily add modules yourself – just remove the blank panel at the location where you want to add the new module and slide the module into the chassis. Fasten the module in place and the back panel connector will do the rest. Now run the software module configurator, and the new module will be automatically recognized by the OmniLink [™] software. | | | |
|--|---|--|--|--|
| Wide range of modules to select from | The OmniFlex System allows using various types of modules in the same chassis. These modules can easily be swapped between chassis to match the needs of specific projects in your laboratory or testing facility. Measurements rates of up to 6 Hz per channel. Two parameters should dictate how you select your modules: • Sampling speed • Number of desired channels | | | |
| Powerful yet simple OmniLink software | OmniLink is the perfect companion to the OmniFlex system. Indeed, it offers a seamless interface to any PC computer. It allows for displaying all channels at once, and provides a versatile logging facility to files that are directly readable by Microsoft Excel. OmniLink also includes a module configurator, that allows physical configuration of OmniModules with the software. And more | | | |
| Designed to address a large variety of applications | Since its introduction in 2006, the OmniFlex systems have been used in aerospace applications (flying in airplanes), R&D applications going from food packaging research to cryogenic research, medical applications, and much more. It has also been a tool of choice for monitoring temperatures during power transformer testing (heat run tests). | | | |
| The ideal tool for monitoring during transformer heat run tests | The OmniFlex is the ideal tool for monitoring T2 probes during heat run tests. It gives the user a constant system to work with. No more quick learning of a new conditioner with the danger of missing the heat run test altogether! The OmniFlex allows you to work within a known environment, with guaranteed data consistency. | | | |
| Now with a USB interface, with 2,000 V isolation | As the OmniFlex is mostly used as a laboratory instrument, we have upgraded its interface to USB. While making it easier to interface to modern PC computers, it offers full electrical isolation between the PC and the OmniFlex chassis. This is particularly important when working with high power devices, which could cause ground loops and large potential differences between electrical apparatus. | | | |
| Accessories | | | | |
| Temperature probes | The OmniFlex is compatible with all Neoptix fiber optic probes, the T1 and T2 probes. | | | |
| OmniLink software | <text></text> | | | |
| | Includes a Console to manage all acquisition and operation optimization parameters | | | |





CHASSIS — TECHNICAL SPECIFICATIONS

| Specifications | Model name | OmniFlex System |
|---------------------------------|--|--|
| | Number of channels per chassis | Up to 64 optical channels per chassis. Or 32 direct channels |
| | Maximum number of channels per system | Chassis can be linked to form an array of 512 optical channels |
| | Number of modules per chassis | Up to 8 modules (OmniModules) per chassis |
| | Upgradability | Upgradable by user with slide-in optical modules |
| Communication and I/O | Operating Mode | Neoptix™ OmniLink™ PC Software |
| | Communication (hardware) | USB, b-type connector (serial port emulation) |
| | Analog outputs | Standard: 0-10 V on each channel (-A1) Optional: 4-20 mA on each channel (-A2) Note: Must be specified at time of order |
| Mechanical and Environmental | Operating temperature | 0 to 50 °C (32 to 122 °F), non-condensing |
| | Storage temperature | -30 to 60 °C (-4 to 140 °F) |
| | Form factor | 19 inch / 4U rackmount |
| | Connectors | USB b-type on front panel Analog output: Screw connection plug with screw flange, 3.81 mm pitch, Power and chassis connectivity: DIN7 or Miniature cylindrical MIL-C-83723 connector |
| | Dimensions | Width: 482.6 mm (19 in) ; Height: 177 mm; Depth: 310.4 mm |
| | Weight of chassis | 2.2 kg |
| Power | Power requirements | 18 to 28 VDC. Universal medical grade power supply included (85 to 265 VAC, table mount) |
| | Power consumption | 1.6 A maximum (if eight 8-channel sequential modules in chassis). See each OmniModule for power consumption |
| | Power connection | Chassis can be linked together to share power and communication |
| Ordering Code | Chassis | OFX-CHA-USB |
| | OmniModules | OFX A |
| | 8S = 8 channe 4S = 4 channe 4D = 4 c 2D = 2 c 1D = 1 | Is, multiplexed Analog Output Is, multiplexed 1 = 0-10V hannels, direct 2 = 4-20 mA hannel, direct |

QUALITROL® OFX-USB[™] OmniFlex System



Available slide-in OmniModules:

OmniModule Model:

Number of channels:

Sampling method:

Sampling rate:

Operating Mode:

Analog outputs:

Module name

Power

Power requirement

Probe compatibility:

OMNIMODULES

Display:



OFX-8S

Multiplexed

Status LEDs

8 optical channels

250 ms switching

Through OmniFlex

0-10 V or 4-20 mA

All Neoptix probes

TECHNICAL SPECIFICATIONS

0FX-1D

between each channel







0FX-4D 4 optical channels Direct 6 Hz per channel Status LEDs Through OmniFlex 0-10 V or 4-20 mA

All Neoptix probes



| 0FX-2D |
|---------------------------------------|
| 2 optical channels |
| Direct |
| 6 Hz per channel |
| |
| Status LEDs |
| |
| Through OmniFlex |
| Through OmniFlex 0-10 V or 4-20 mA |

0FX-4S

OFX-4D



| 0FX-1D |
|-------------------|
| 1 optical channel |
| Direct |
| 6 Hz per channel |
| |
| Status LEDs |
| Through OmniEley |

I nrough OmniFlex 0-10 V or 4-20 mA All Neoptix probes

OFX-8S

8

2 Number of channels 4 4 1 Sampling method Direct measurement at 6 Hz per channel Multiplexing Sampling Rate 6 Hz per channel 250 ms switching between each channel Analog output One output per optical channel (-A1: 0-10 V ; -A2 : 4-20 mA) Upgradability Flash ROM firmware upgradable Display Status LEDs (Power, Link and Sensor) Data logging Available through chassis and OmniLink software (PC required) Units User selectable; Metric or Imperial Temperature range -80 to 300 °C (-112 to 572 °F), Cryogenic range available (down to 4.2 Kelvin) Communication and I/O **Operating Mode** Through Neoptix OmniFlex chassis Analog outputs Yes, through Neoptix OmniFlex chassis; Standard: 0-10 V on each channel, Optional: 4-20 mA **Mechanical and Environmental Operating temperature** 0 to 50 °C (32 to 122 °F) Storage temperature -20 to 60 °C (-4 to 140 °F), non-condensing Form factor Independent and totally enclosed module Dimensions Width: 50.6 mm; Height: 174 mm; Length: 231 mm Weight 0.98 kg 0.82 kg 1.2 kg 0.9 kg 1.6 kg

0FX-2D

Power consumption 400 mA 100 mA 200 mA 160 mA 200 mA Power connection Through Neoptix OmniFlex chassis. Each chassis has its own 24 VDC isolated power supply.

18 to 28 VDC through chassis

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