

# NIRS XDS Process Analyzer – SingleFiber



## Features and benefits

- Direct inline measurement yields real-time analysis and data availability in seconds
- Single fiber optic interface optimized for process stream analysis: up to 100 m away
- 1 to 9 interdependent sampling points
- Fiber to analyzer connection via SMA fittings
- Robust industrial design for operation in harsh environments
- NEMA 4X / IP65 rated
- ATEX certification available for Zone 0, Zone 1, Zone 2

## Near-Infrared Spectroscopy for process analysis

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The NIRS XDS Process Analyzer – SingleFiber provides the next generation of process analyzers for real-time analysis of industrial processes (production, quality control) across a wide range of industries. Non-destructive, accurate measurements are performed directly in the process line without need for any reagents. A data acquisition rate of 2 scans per second means that process deviations from specified targets are quickly detected.

Process analyzers are used throughout the process stream to ensure optimum performance for widely varying samples. Long-distance measurements are possible from up to 100 m away with the high quality low-dispersion optical fibers. Configure the analyzer with a reflectance probe, an immersion probe or a transmission probe pair for an optimized interface to your particular sample type.

The XDS Process Analyzer – SingleFiber is available as a single point instrument or in a multiplexer configuration with which up to 9 sampling points can be measured sequentially. This economical means of performing remote measurements enables the analyzer to be installed in an unrestricted area, reducing installation and operation costs.

The patented, industrial design of XDS Process Analyzers supplies a new level of consistent, dependable and reliable instrument performance and analysis while operating in harsh industrial environments.

Monitoring with near-infrared (NIR) fits in well with Process Analytical Technology (PAT) initiatives as proposed by the FDA.



NIRS XDS Process Analyzer – SingleFiber

### NIRS XDS Process Analyzer – SingleFiber Single Point/Multiplexer consists of the following items:

#### XDS Monochromator

- XDS NIR technology provides precise instrument matching and seamless calibration transfer, thanks to a state of the art digital encoder ensuring an accurate positioning of the grating at any point in time. An internal reference allows diagnostics of the performance without disturbing the sampling point.
- Spectral coverage: 800–2200 nm (extended InGaAs detector).
- Standard unit operation in environments 0–30 °C (32–86 °F).

#### XDS Accessory Kit

- Consists of a replacement lamp, 3 m (10 ft) network crossover cable, RJ-45 communications cable, assorted tools, and power supply fuses.

#### Optional multiplexer

- Up to 9 sample points can be measured sequentially when a multiplexer is used

#### NIRS XDS Process Analyzer – SingleFiber Manual

- Hardware description, technical specifications, installation instructions, instrument installation, maintenance

### Single fiber with SMA connection at the analyzer, up to 100 m

- Low-OH content
- 600 µm diameter
- A single fiber pair is necessary for any measurement

### Sample interfacing

#### Solids

- Diffuse reflectance probe

#### Liquids

- Flow through cells (SS316, PTFE)
- Single pass transmission probe
- Transflectance immersion probe
- Transmission probe pair with lenses and spacers

### Connection to process line

- Flanges
- Swagelok
- Sampling panels with recirculating loops

### Software

#### Vision® Single-User Vision for Chemical / Pharmaceutical Analysis

- Spectral acquisition, method development and routine analysis software for chemical/pharmaceutical analysis. Provides single-user access to NIR instruments on a network (one copy of Vision per instrument). Pharmaceutical version is fully validatable and 21 CFR Part 11 compliant software.

#### Vision® Multi-User Vision for Chemical / Pharmaceutical Analysis

- All features of the single user version are available. In addition, the centralized database management feature for all spectral databases is provided. 5 workstation licenses included. Pharmaceutical version is fully validatable and 21 CFR Part 11 compliant software.

### Environmental Options

#### Vortex cooling

- For environments 0–40 °C (32–104 °F)

#### A/C cooling

- For environments 0–51 °C (32–125 °F)

#### Shelters

- Industrial shelters available

### Ex-Proof Options

#### Power limiting board

- for all applications in Ex-Proof area

#### Purge and optical modem

- for instruments in Ex-Proof area

#### Shelters

- ATEX compliant shelters available

### Process Communication Options

#### OPC

- USB or parallel port dongle

#### Digital Protocols

- MODBUS, PROFIBUS, etc.

#### VISION I/O Module

- Available as 8, 16, or 24 Analog Channels, 24 Digital Channels

# Ordering information

## Instruments

A629280210	NIRS XDS Process Analyzer – SingleFiber Single Point (with heatsink & fans)
A629280211	NIRS XDS Process Analyzer – SingleFiber Single Point (with air conditioning)
A629280212	NIRS XDS Process Analyzer – SingleFiber Single Point (with Vortex)
A629280220	NIRS XDS Process Analyzer – SingleFiber 4 channel Multiplexer (with heatsink & fans)
A629280221	NIRS XDS Process Analyzer – SingleFiber 4 channel Multiplexer (with air conditioning)
A629280222	NIRS XDS Process Analyzer – SingleFiber 4 channel Multiplexer (with Vortex)
A629280230	NIRS XDS Process Analyzer – SingleFiber 9 channel Multiplexer (with heatsink & fans)
A629280231	NIRS XDS Process Analyzer – SingleFiber 9 channel Multiplexer (with air conditioning)
A629280232	NIRS XDS Process Analyzer – SingleFiber 9 channel Multiplexer (with Vortex)

## Software

A666069412	Vision 4.1
A666069413	Vision Pharma 4.1
A666069414	Vision Multi 4.1
A666069415	Vision Multi Pharma 4.1

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