



Introducing Exner's In-Line Sensor

# EXcell

 **EXNER**  
Process Equipment

# About EXNER Process Equipment

EXNER Process Equipment GmbH, based in Ettlingen, is in the middle of the Karlsruhe technology region. The medium-sized company has operated as an international provider of high-quality process holders for pH measurement and optical sensors for the determination of cell growth and turbidity for 15 years. The owner-run company is characterised in particular by its accurate and long-lasting products, its agile and flexible way of doing things, and customer-specific solutions. The products developed and produced by the ISO9000-certified business offer the highest degree of variability and can therefore be configured to meet almost any requirement.

Customers from the chemical industry, in the bio and food technology sectors, and the pharmaceutical industry all benefit from their consulting and support services, as well as their innovative research and development division. Thanks to the combination of their expertise gained over many years and the use of new technologies, their products are being continuously developed and optimised for each area of application. So, the processes become safer, more efficient, and more accurate. In addition, EXNER products are being supplied by distribution partners and OEM customers all over the world.

## EXNER's Cell Growth Sensor „EXcell“

### Main advantages and benefits:



- » Modern, long-life LED technology with various Optical Pathlengths available
- » High density measurement range up to 6 AU (Absorption Units)
- » Integrated measurement amplifier, no additional (standard) transmitter required
- » Real-time in-line measurements with a huge amount of data points and an outstanding rapidity and repeatability
- » Revision and re-calibration by optical filters, no chemicals needed
- » Simple calibration against existing off-line standards
- » Switchable to all current turbidity units e. g. TEF, FTU, EBC, mg/l
- » Free configurable and adjustable unit of measurement (Customer Defined Unit)
- » Hygienic, maintenance free design applicable to changeover devices for automated cleaning of the optical unit such as EXNER's Extract Series
- » Connectable via USB, Modbus RS485 and 0-20 mA-Interface
- » Easy calibration compared to off-line measurement standards

# EXNER's EXcell – Sensing your needs.

The EXcell probe is easily applicable in many industrial sectors, such as:



## EXcell 231 Specifications

|                      |                                  |
|----------------------|----------------------------------|
| Measuring Range      | 0...6 AU<br>0...6.600 EBC        |
| Wavelength           | 850 nm                           |
| Light Source         | LED                              |
| Optical Path Lengths | 5, 10, and 20 mm                 |
| Wetted Materials     | Stainless Steel<br>1.4435 (316L) |
| Surface Finish       | electropolished<br>Ra <0.37 µm   |
| Windows              | Sapphire                         |

|                     |                                                       |
|---------------------|-------------------------------------------------------|
| Cable Connector     | Fischer Core Series                                   |
| Cable Length        | 2 and 5 meter                                         |
| Process Connection  | PG 13.5 Thread                                        |
| Process Temperature | 0 to 90 °C, 135 °C<br>maximum for 2 hours (SIP cycle) |
| Process Pressure    | 10 bar (150 psi)                                      |
| Probe Length        | 120, 225, 325, 425 mm                                 |
| Interfaces          | USB<br>Modbus RS485<br>0...20mA and switching contact |

## Dimensions



# EXNER's EXcell – In line with Your process.

Exemplary assembly

The EXcell probe

Fermenter

Laptop

for calibration and  
parametrization



Communication  
Interface ECI-02

Top Hat Rail Installation  
Modbus RS485  
24 V/DC



Communication  
Interface ECI-03

Control Panel Installation  
Touch Display  
0...20 mA / 2 Contactors



Set optical filters

EXcap 110  
Freely selectable filters  
Easy to use  
NIST traceable





The compact sensor "EXcell", which is unique in Europe and only 12 mm in diameter, embodies the ingenuity of EXNER like no other product. It is evidence use of the company's decades of experience of what the fluid analysis market needs.



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