

# EXcell 231 NIR Biomass Sensor Ø12mm



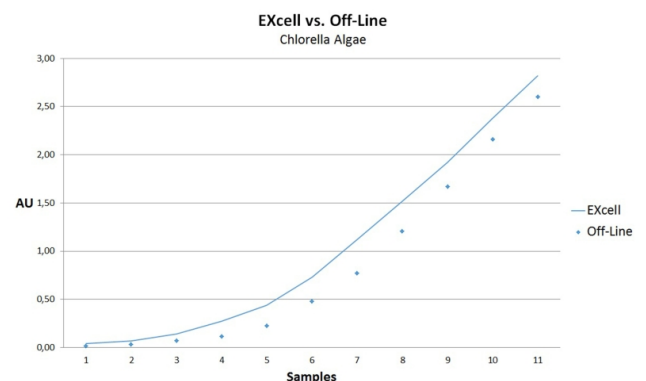
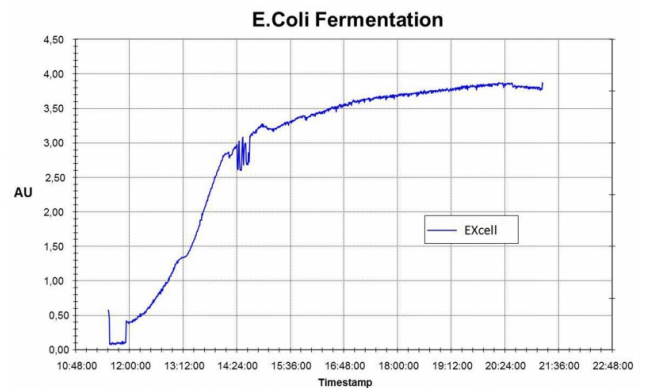
- » EBC / FAU / mg/l / AU / OD or customer defined units
- » Standardized 12 mm design with integrated amplifier
- » No traditional transmitter necessary
- » Wearless sapphire windows, CIP/SIP-capable
- » Hygienic design, autoclavable
- » Maintenance free due to LED light source
- » Data output directly on PC, Modbus RS485 or 0...20 mA

EXcell 231 is a high precision digital NIR-absorbance sensor in 12mm-hygienic design monitoring biomass measurement in biotech, food and pharma applications for both laboratories and industrial production processes.

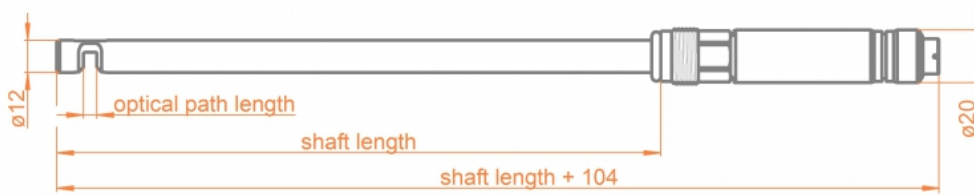
## Specifications

Measuring range:	0...6 AU, 0...6600 EBC
Resolution:	0,01 AU
Accuracy:	± 1 %
Reproducibility:	≤ 1 % from final value
Wave length:	850 nm
Light source:	LED
Optical path length:	5 / 10 / 20 mm
Shaft length (mm):	120 / 225 / 325 / 425
Wetted material:	stainless steel 1.4435 (316L)
Surface:	Ra <0.37 µm e-polished
Measuring window:	sapphire
Process connection:	thread PG13,5
Process temperature:	0...90 °C, 135 °C max. 1 hour (SIP cycle)
Process pressure:	max. 10 bar (150 psi)
Electrical connection:	Fischer Core Series
Cable length:	2 m / 5 m
Interfaces:	USB, RS485 Modbus, 4...20 mA
Protection class:	IP68

## Typical Measurements



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## Order code

Code	Measuring range	Delivery time
C	0...6 AU / 0...6600 EBC / 0...12 OD	3 Weeks

Code	Shaft length	Delivery time
120	120 mm	3 Weeks
225	225 mm	3 Weeks
325	325 mm	4 Weeks
425	425 mm	4 Weeks

Code	Optical path length	Delivery time
05	5 mm	3 Weeks
10	10 mm	3 Weeks
20	20 mm	3 Weeks

Code	Process connection	Delivery time
PG1	Thread PG 13.5	3 Weeks

Code	Interface	Delivery time
D0	Modbus RTU (RS485)	3 Weeks
DA	Modbus RTU (RS485) / Analogue 4...20 mA	3 Weeks

## Accessories



Communication interface ECI-03 with analogue output and switching contact



Communication interface ECI-02 RS485 Modbus



EXcap 110 - Set of optical reference filters