

# Dencytee RS485 325

Specification Sheet (Part/REF # 10064919-13)



Total cell density (TCD) measurement by the Dencytee Arc sensor is based on the optical density or turbidity derived from a transmission and reflection signal at NIR wavelengths. The signal can be correlated with off-line measurements to achieve higher accuracy.

## Product Specifications

<b>Sensor Family</b>	Dencytee Arc
<b>a-length</b>	325 mm
<b>Parameter</b>	Total Cell Density
<b>Electrical Connector</b>	VP8
<b>Sensor Output</b>	Arc: Modbus
<b>Measurement Principle</b>	Transmission and Reflection (including temperature compensation, daylight filter and subtraction)
<b>Wavelength</b>	860 nm
<b>Measuring Range</b>	e.g. 0-200g/l cell dry weight yeast 0-4 AU 0-30'000 NTU
<b>Accuracy at 25 °C</b>	Resolution: 0.05 g/l (0-10 g/l); 0.5 % (> 10 g/l) cell dry weight yeast Reproducibility: ± 1 % Linearity: < ± 1% of respective measuring range (specific to application with off-line correlation)
<b>Temperature Sensor</b>	NTC 22 kOhm
<b>Configurable Values</b>	TCD: PCV, AU, arb. Unit, NTU, g/l, CFU, e6 cells/ml, OD Temperature: K, °C, °F
<b>Diameter</b>	12 mm

<b>Process Connection</b>	PG13,5
<b>Wetted Parts</b>	Stainless Steel 1.4435 Sapphire glass EPDM (Ethylene propylene elastomer) See compliance details in Material Specification document
<b>Surface Quality of Steel</b>	Ra < 0.4 µm (N5)
<b>Digital Interface</b>	RS485 Modbus (max. 31 addresses)
<b>Baud Rate</b>	4800, 9600, 19200, 38400, 57600, 115200 Bd
<b>Operating Voltage</b>	+10 to +27 VDC
<b>Optical Path Length</b>	5 mm
<b>Serial Number</b>	Yes
<b>Certificate</b>	Yes, in water and at 10'000 NTU Standard
<b>ATEX Approval</b>	No
<b>IECEX Approval</b>	No
<b>Autoclavable</b>	Yes
<b>CIP</b>	Yes
<b>Steam Sterilizable</b>	Yes, max. Temperature 140 °C
<b>Storage Conditions</b>	-20 °C to 45 °C
<b>Operating Temperature Range</b>	0 to 140 °C; the sensor provides no TCD reading above 80 °C.
<b>Pressure Range bar g</b>	0 to 12 bar
<b>Protection Rating</b>	IP 68

Specifications are subject to change without notice

**Spec. Version A**

<https://www.hamiltoncompany.com/process-analytics/sensors/10064919-13>