

# Dencytee RS485 425

Specification Sheet (Part/REF # 10064919-14)



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

|                          |  |
|--------------------------|--|
| Sensor Family            | Dencytee Arc   |
| a-length                 | 425 mm   |
| Parameter                | Total Cell Density   |
| Electrical Connector     | VP8  |
| Sensor Output            | Arc: Modbus  |
| Measurement Principle    | Transmission and Reflection (including temperature compensation, daylight filter and subtraction)  |
| Wavelength               | 860 nm   |
| Measuring Range          | e.g. 0-200g/l cell dry weight yeast<br>0-4 AU<br>0-30'000 NTU  |
| Accuracy at 25 °C        | Resolution: 0.05 g/l (0-10 g/l); 0.5 % (> 10 g/l) cell dry weight yeast<br>Reproducibility: ± 1 %<br>Linearity: < ± 1% of respective measuring range (specific to application with off-line correlation) |
| Temperature Sensor       | NTC 22 kOhm  |
| Configurable Values      | TCD: PCV, AU, arb. Unit, NTU, g/l, CFU, e6 cells/ml, OD<br>Temperature: K, °C, °F  |
| Diameter                 | 12 mm  |
| Process Connection       | PG13,5   |
| Wetted Parts             | Stainless Steel 1.4435<br>Sapphire glass<br>EPDM (Ethylene propylene elastomer)<br>See compliance details in Material Specification document   |
| Surface Quality of Steel | Ra < 0.4 µm (N5)   |
| Digital Interface        | RS485 Modbus (max. 31 addresses)   |
| Baud Rate                | 4800, 9600, 19200, 38400, 57600,115200 Bd  |
| Operating Voltage        | +10 to +27 VDC   |
| Optical Path Length      | 5 mm   |
| Serial Number            | Yes  |
| Certificate              | Yes, in water and at 10'000 NTU Standard   |
| ATEX Approval            | No   |
| IECEX Approval           | No   |
| Autoclavable             | Yes  |
| CIP                      | Yes  |

|                             |  |
|-----------------------------|--|
| Steam Sterilizable          | Yes, max. Temperature 140 °C                                 |
| Storage Conditions          | -20 °C to 45 °C  |
| Operating Temperature Range | 0 to 140 °C; the sensor provides no TCD reading above 80 °C. |
| Pressure Range bar g        | 0 to 12 bar  |
| Protection Rating           | IP 68  |