

INDUSTRIAL NIR ANALYSER



DESCRIPTION:

Industrial NIR analyser for real-time and continuous chemical composition monitoring adapted to diverse geometries and unit operations (conveyor belts, pipes, tank, etc.) and unit process machinery (e.g. blenders).

MAIN CHARACTERISTICS:

- Continuous monitoring of Quality Attributes (CQAs) ensuring the measurement of all product units and guaranteeing their standardisation.
- Real-time and simultaneous measurement of Critical Control Parameters (CCPs) for keeping the production process under control.

- Anomaly Detection: Early warning in the event of unexpected changes in the product's composition.



FOOD

- Fraud detection
- Fat, moisture and protein content
- Water and protein content monitoring in milk
- Routine quality control of edible oils
- Total acidity and polar compounds concentration in frying oil

- Routine quality control of edible oils by-products: water-in oil, water-in-marc.



PHARMA

- API content uniformity
- Blending and drying end-point determination



OTHER INDUSTRIES

- Polymer identification
- Black plastic coated with an inorganic compound classification
- Ethanol & sugar concentration monitoring during fermentation process



TECHNICAL SPECIFICATIONS

| | |
|---|--|
| SENSOR | InGaAs photodiode array |
| SPECTRAL RANGE | 900 – 1700 nm |
| SPECTRUM ACQUISITION TIME | 10 ms |
| SPECTRAL RESOLUTION | 3 nm |
| ACQUISITION GEOMETRY | Diffuse reflectance, interactance and trasflectance |
| WEIGHT | 14 kg |
| DIMENSIONS | 325 x 243 x 240 mm ³ |
| INGRESS PROTECTION | IP65 |
| POWER SUPPLY FOR CHARGING THE BATTERY IN THE DOCK STATION | 230 VAC (1-phase). Consumption < 100 W |
| MATERIAL (ENCLOSURE) | AISI 304 |
| LIGHT SOURCE LIFETIME | 1 year (standard use) |
| BUILT-IN COMPUTER | A7 Dual-Core ARM® |
| USER INTERFACE | External-PC-based (for configuration and service tasks) |
| DATA OUTPUT | Profibus DP RS485 |
| OPERATION MODE | Slave / Continuous |
| CONNECTION TO THE PROCESS | Insertion flange for Varinline (R) Type N Housing from OD 1 1/2" to OD 3" (DN40 to DN80) pipe diameter |
| MAX PRESSURE ON THE WINDOW (PROCESS SIDE) | 16 bar |
| MATERIALS (INTERFACE WITH THE PROCESS) | Borosilicate glass and AISI 316L steel |
| SOFTWARE | VISUM® |
| CONNECTIVITY | PLC, SCADA, ERP |

