HAFFMANS RefraSonic-i
IN-LINE ALCOHOL/EXTRACT METER

PRODUCT LEAFLET

GENERAL PRODUCT INFORMATION

Obtaining accurate alcohol and original extract measurements enables breweries and producers of alcoholic beverages to run closer to government tax requirements, which increases plant efficiency, reduces product losses, and optimizes output volume.

Pentair Haffmans combined the proven ultrasound and refractive index measurement technologies to create the In-line Alcohol/Extract Meter, type RefraSonic-i. The refractive index and sound velocity signals, along with the measured temperature are used to calculate the alcohol and real and original extract levels. Products with similar characteristics are measured with one product adjustment, which greatly reduces the necessity of specific product calibrations.

The In-line Alcohol/Extract Meter can be installed anywhere in the process where the determination of alcohol and/or extract is critical to the quality of the product. The meter achieves an accurate and fast performance because the ultrasonic and refractometric probes are installed directly in the production process with the product remaining in the line. This is possible even in a stop and go operation in front of the filler.

The alcohol/extract probe is constructed according to the CE hygienic directive and EHEDG hygienic design recommendations. It is easy to mount in a process connection and the user-friendly control unit can be supplied in either field or panel mounted versions.

BENEFITS

- Cost saving
  - optimization of the beverage output volume of a production plant
  - no maintenance
  - two in one measurements for different product types
- Accurate process control
  - quick response time enabling improvements in plant efficiency

APPLICATIONS

- In-line, at critical locations in the production line where the determination of alcohol and/or extract of beverages is required, typically after filtration, carbonation and blending/mixing, and also in front of the filler.

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TECHNICAL DATA

CONTROL UNIT

Power supply
24 V DC / 50 W

Dimensions
310 x 160 x 123 (L x W x H mm)

Weight
4 kg

Mounting
Wall/panel/pipe mounting

Protection class
IP 65

ULTRASONIC PROBE AND REFRACTOMETRIC PROBE

Connection
Varivent® (>DN 65)

Dimensions
176 x 161 (L x D mm)

Weight
8 kg

Protection class
IP 67

MEASURING UNITS

Alcohol
% w/w, % v/v,

Extract
ºPlato, Brix

Temperature
ºC, ºF

MEASURING RANGE

Alcohol
0.00 - 10.00 % w/w

Real Extract
0.00 - 30.00 ºPlato

Original Extract
0.00 - 30.00 ºPlato

Temperature
-10 to +40 ºC

Process temperature
-20 to +120 ºC

Process pressure
Max. 10 bar(a)

ACCURACY [REPEATABILITY]*

Alcohol
± 0.02% [± 0.01%] w/w

Real Extract
± 0.05º [± 0.01º] Plato

Original Extract
± 0.05º [± 0.01º] Plato

* with CO_2 compensation, after on-site calibration to the specific product

SCOPE OF SUPPLY

- Control unit with probe cables, standard length 5 meters (other length on request)
- Wall/panel mounting set for control unit
- Ultrasound probe
- Refractometric probe
- Instruction manual

OPTIONS

- Control unit with Profibus DP
- Pipe mounting set for control unit (pipe size to be specified)
- In-line housing with Varivent® connection, inspection glasses and clamps (pipe dimension to be specified)
- Power supply transformer box, 115-230 Vac to 24 Vdc
- In-line CO_2 Meter, type AuCoMet-i (for CO_2 correction)