

# FM 01

## REFRACTOMETER FOR FERMENTERS

The **FM-01** system is designed and implemented to monitor the fermentation processes for red and white wine and beer. The sensor is a refractometric analysis unit with microprocessor and has the very special feature of being extremely compact and offers a high level of precision.

The unit is installed directly onto the body of the fermenter and is capable of measuring sugar concentration in real time, thus rendering control over alcoholic fermentation in musts completely automatic.

The unit can be connected, via a RS485 serial connection, to a receiver on which a specific Maselli software has been installed. The measured values are processed by the software, stored in the database and displayed in a graph form (fermentation curve), making interpretation of the results quick and easy.

Furthermore, this automatic monitoring system makes it possible to swiftly detect any anomalies, for example any deceleration or stoppage of the fermentation process and to send out the relative alarm messages.



## TECHNICAL FEATURES

### Application:

Measurement of natural musts during fermentation process

### Type of measurement:

Refractometric, with temperature compensation, and conductivity measurement

### Measurement limits:

1.3330...1.3902 nD.

Automatic conversion of reading in the following measurement scales:

0...35 degree Brix

0...80 g/l for Total Extract

0...30% v/v for Potential Alcohol

0...5 mS/cm for Conductivity

### Accuracy:

$\pm 0.0006$  nD ( $\pm 0.05$  Brix) or equivalent for corresponding scales.

>2 g/l on fermenting must.

>0.05 mS/cm

### Product temperature:

2...50 °C with automatic compensation of temperature measured by means of internal Pt1000.

### Interfaces:

Digital: RS485 for connection to the receiver

### Supply:

- AC/DC 24V ( $\pm 10\%$ ) 2.5W

## CONSTRUCTION FEATURES

### Measurement prism:

Spinel

### Light Source:

High efficiency LED electronically compensated

### Element of refractometric measurement:

High resolution CCD

### Element of temperature measurement:

- With internal Pt1000

### Execution:

- AISI 316 stainless steel

- Protection IP67 (EN60529)

### Weight:

1.5 kg

### Materials in contact with the process fluid:

- AISI 316 stainless steel

- Spinel

- Viton

## PROCESSING SYSTEM

### Electrical section:

- Industrial monoboard microprocessor "CPU".

- Graphic displays on 800x600 10.4" LCD touchscreen.

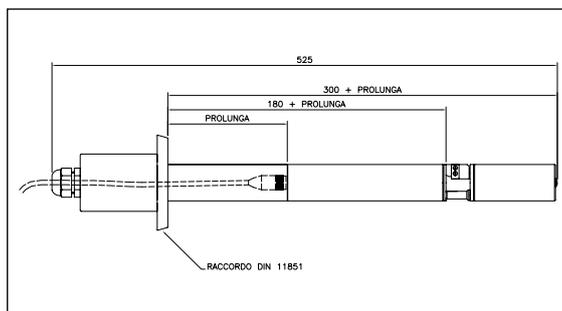
- Flash Memory of 512 MB.



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FM 01 dimensions



Receiver dimensions

