

# UC05

ON PRODUCTION LINE ANALYZER FOR MEASURING QUANTITIES OF CARBON DIOXIDE IN CARBONATED SOFT DRINKS

The UC-05 digital carbometric analyser with microprocessor is a multifunctional monobloc instrument which can be installed directly on the production line. This instrument measures in continuous cycles, the concentration of CO<sub>2</sub> dissolved in any carbonated soft drink, it displays the values of CO<sub>2</sub> in g/l or v/v, transmits the data via analogue or digital signal and has alarm relay features. The measurement of dissolved carbon dioxide is carried out on the basis of saturation pressure and temperature ratio as defined by Henry's Law. The UC-05's unique and avant-garde design uses modern technology such as:

- **high CO<sub>2</sub> extraction capacity**
- **accurate pressure and temperature sensors**
- **almost zero maintenance**
- **high resolution graphic display**

On the front of the instrument are situated the graphic indicator with back lighting and the control keyboard.

Using the keyboard the operator can make a language selection and configure data output mA and alarm options. The instrument also has an RS422/RS485 connection for remote devices. The connection to the production line, in bypass, is made using 1" Tri-clamp® attachments.



## GENERAL CHARACTERISTICS

### TECHNICAL CHARACTERISTICS

**Measurement limits:**

0...5 v/v (0...10 g/l)

**Accuracy:**

$\pm 0.05$  v/v ( $\pm 0.1$  g/l)

**Measurement scales:**

- v/v (volume CO<sub>2</sub> /volume soft drink)
- g/l (g CO<sub>2</sub> dissolved/litre)

**Temperature Compensation:**

Automatic between -5 °C...+35 °C  
(+23 °F...+95 °F)

**Interfaces:**

(optically isolated)

- Analogue:
  - N° 1 channel output 0...20mA or 4...20mA (470Ω) To be configured for values "Start and Bottom scale" Relative to measurement limits
  - N° 1 input mA/mV to be configured
- Digital:
  - RS485 for connection to remote control unit "CM00"
  - to PC con Software Labtech,
  - to PC (optomux protocol)
- Input contacts:
  - N° 2 inputs to be configured
- Output contacts:
  - N° 2 relay outputs for alarm signals with maximum contact 2A/24V DC/AC

**Supply:**

- AC 24V (18...27V) 50...60Hz 20VA
- DC 24V (20...34V) 20W
- Interconnection box with transformer (optional):  
AC 115/230V  $\pm 10\%$  50...60Hz 35VA

### CONSTRUCTION CHARACTERISTICS

**Element of pressure measurement:**

Pressure sensor in AISI 316 stainless steel & Hastelloy C276

**Element of temperature measurement:**

Thermometric sensor Pt1000 in AISI 316 stainless steel

**Controls:**

Keypad in scratch-proof polyester

**Display:**

Graphic backlit LCD 128x64 pixels

**Language:**

Choice of 5 interface languages (English, German, French, Italian, Spanish) for the display of menus and messages

**Execution:**

- Shell in 304-316 AISI stainless steel
- Protection IP64 (EN60529)

**Attachment:**

1" Tri-clamp®

**Weight:**

20 kg (44 lb)

**Materials in contact with the process fluid:**

- AISI 316 stainless steel
- HASTELLOY C276
- VITON
- EPDM
- TEFLON
- PE-UGMW
- Buna N white (others on request)

**FLUID OPERATING LIMIT**
**Temperature:**

-20 °C...+120 °C (-4 °F...+248 °F)

**Pressure:**

0...10 bar (0...145 psi) at 20 °C (68 °F)



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PROCESS ANALYZERS

