

# Versatil converter CUB-233



- 1 Input, multi-parameters  
mA, V, Pt 100, potentiometric, resistor
- Supply to the sensor
- 2 analogue outputs
- 2 relay outputs
- Setting by joystick or PC
- Linearization and taring function
- Wide range of main supply  
80 ... 256 V AC 50/60 Hz; 20 ... 240 V DC

## APPLICATIONS

For most of all use on signal conversion::

- Level measuring probe with potentiometric output
- Level measuring probe, 2-wire, 4-20 mA output
- Temperature probe with Pt 100 sensors or thermocouple
- Zooming on input signal
- Linearization along "up to" 100 points
- Alarming function for all the above sensor

## DESCRIPTION

Converter 233 is a great solution for any applications to convert or monitor output signals from sensors.

Both analogue outputs may be set up as mA or mV signals and both relay outputs may be set up all along the scale (thresholds, hysteresis and delay).

## TECHNICAL FEATURES

|                     |  |
|---------------------|--|
| Power supply        | 0... 256 V AC, 50/60 Hz<br>and 20 ... 240 V DC (no polarity) |
| Consumption         | < 4 VA   |
| Display             | LCD screen   |
| Ambient temperature | -10 ... +60 °C   |
| Protection          | IP 20  |
| Mounting            | Rail DIN 17.5 mm   |
| Connections         | 4 removable terminal blocks                                  |
| Programming         | Programming through a joystick or a PC                       |

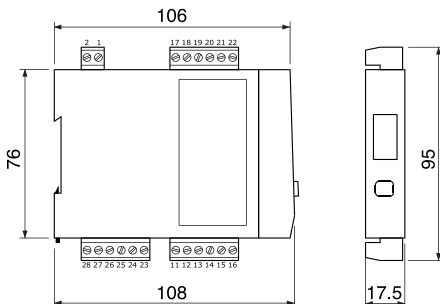
### Multi-parameters input:

|                        |   |
|------------------------|---|
| Current                | 0...20 or 4...20 mA   |
| Voltage                | 0... 100 mV or 0 ... 10 V   |
| Resistor thermometer   | Pt 100 / Pt 1000, 2-wire or 3-wire sensors                                  |
| R2-wire resistor       | Ranges: 1 kΩ; 5 kΩ; 10 kΩ; 50 kΩ  |
| PTC and NTC sensors    | Scales: 1 kΩ; 5 kΩ; 10 kΩ; 50 kΩ;<br>programming with the software BLOG-CUB |
| Thermocouples          | J, K, T, B, R, S, E, NiMo, N, W3/D, W5/C, P                                 |
| Potentiometric input   | From 470 Ω up to 100 kΩ   |
| Power supply to sensor | 2-wire or 3-wire sensors: Max. 19V and 26 mA                                |

### 2 Analogue outputs and 2 relay outputs:

|         |   |
|---------|---|
| Current | 0...20 and or 4...20 mA (Impedance < 700 Ω) |
| Voltage | 0...10 V (Impedance > 2 kΩ )                |
| Relay   | Change-over 500 mA / 250 V                  |

**CE conformity:** The device meets the legal requirements of the current European Directives.



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Versatil converter  
**CUB-233**

RE

233-02/1

21-06-2020

D-233.02-EN-AC

## CODE NUMBERS AND REFERENCES

| Code    | Reference | Description             |
|---------|-----------|-------------------------|
| 233 200 | CUB-233   | Versatil converter      |
| 233 205 | CUB       | Communication interface |
| 233 206 | BLOG-CUB  | Programming software    |

## FUNCTIONS

|                                   |   |
|-----------------------------------|---|
| Display unit                      | LCD, green, non-backlit   |
| Displayed information             | Real time input value and as programmed value<br>Outputs as set up values and percentage<br>Relays status   |
| Display adjustment                | Lighting display adjustment according to ambient temperature  |
| Input scale factor                | Allows a zoom effect on input signal or manual or automatically.  |
| Output scale factor               | Allows a zoom effect on input signal and displayed value.   |
| Programming                       | Programming through a joystick in front, 5 positions  |
| Memory, Min. / Max.               | Logging of Min. and Max. measurements   |
| Saved value                       | Possibility to store at the output, the last measured value in case of sensor failure   |
| Offset                            | Offset set up on input for any signal type  |
| Taring function                   | Taring function on signal inputs  |
| Simulation                        | Simulation programme actuates on analogue outputs, relays and display indedently of input value and without disconnecting the sensors neither output connections.   |
| Output signal restrictions        | Possibility of limiting the output value<br>High and low limits to set up   |
| Reference junction                | The reference junction is insured through a numerical sensor 16 bits  |
| Input safety signal               | In case of broken loop input signal, CUB 233 produces a set up value on display and outputs.  |
| Linearization with 100 points     | Allows an output signal from a segmented input signal.<br>e.g.: Volume of a cylindrical and horizontal tank vs. height of fluid   |
| Linearization PTC - NTC resistors | Allows to correct the PTC or NTC signal against segmented input signal.<br>(programming only with the software BLOG CUB)  |
| Thresholds                        | Simple mode or bandwidth mode, with positive or negative safety<br>Set up of hysteresis and delay, independently for decreasing or increasing signals.<br>Direct access to thresholds, memory and alarm reset |
| Alarm reset                       | Independently on each alarm   |
| Alarm saving                      | Independently for each alarm  |
| Other functions                   | Cut Off - 1 or 10 points resolution - Comma position - Filtering - Joystick lock - Contrast adjustment of display screen  |

## ELECTRIC CONNECTIONS

### Input signals (1 to choose)

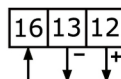
Current



Voltage



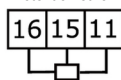
3-wire sensor



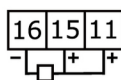
2-wire sensor



Potentiometric



RTD



PTC and NTC

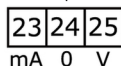


Thermocouple

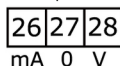


### Output signals

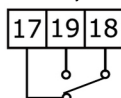
Output 1



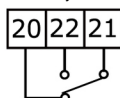
Output 2



Relay 1



Relay 2



### Power supply

Without polarity



20 ... 240 V DC

80 ... 256 V AC - 50/60 Hz

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