

The new compact class for
process and automation technology

0 ... 12 V
0 ... 24 mA



cUL[®] US pending

■■■ pulses for automation

Set-point generator/ time-based Process adjuster *CODIX 533*

for output of standard voltages and currents

- **Innovative:** Function of a digital timer with analog output.
- **User-friendly:** Realize processes easier than with any PLC or process control device.
- **Cost-saving:** Also suitable for simulated runs – the processes are getting more economic.

Set-point generator/ time-based process adjuster **CODIX 533**

CODIX 533 – the new nominal value compact class for process and automation technology

The set-point generator/adjuster **CODIX 533** triggers a standard signal or a freely programmable signal sequence from 0 ... 12 V or from 0 ... 24 mA.

The set-point generator/adjuster **CODIX 533** is a real innovation opening up new application potentials in process technology and automation.



Innovative:

- Function of a digital time controller with analogue output.
- Manual functions with direct input or stepped incremental output of the setpoint.
- 4-digit 8 mm high top-quality LED display.
- Physical variables output in the form of 0 to 12 V or 0 to 24 mA analogue signals.
- Units of display can be freely programmed and displayed – no conversion of the specified output value required.
- High accuracy of < 0.1 % of the final value.



Cost-saving and compact:

- Ideal for simulation runs without the need for expensive, time-consuming running-in of processes.
- Processes become more cost-effective.
- DIN 48 x 24 mm panel-mount housing with installation depth of only 59 mm.

User-friendly:

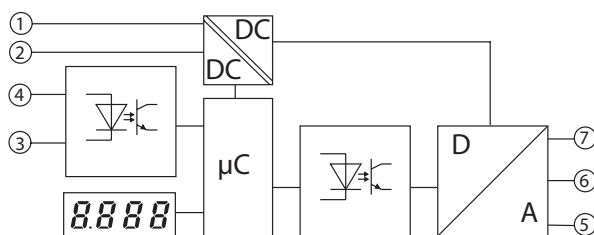
- Simpler to run processes than with a PLC or process controller.
- Everything can be programmed easily by means of 2 keys and the text menu.
- Digital setting – no additional DIP switches or potentiometers.
- Display allows simple monitoring of the specified setpoint output.
- Comfortable display form as direct digital value.
- 3 functions integrated as standard in the **CODIX 533**, manual and time-based.

Technical data:

Supply voltage:	10 ... 30 V DC, galvanically isolated with integrated protection against incorrect polarity
Power consumption:	max. 1W
Display:	4-digit display, red 7-segment LEDs; height 8 mm [0.35"]
Data backup:	EEPROM
Housing:	housing for control panel 48 x 24 mm [1.89 x 0.945"] accord. to DIN 43 700; RAL 7021, dark grey
Protection:	IP65 (front)
Operating temperature:	-20 ... +65 °C [-4 ... +149 °F]
Storage temperature:	-25 ... +85 °C [-13 ... +185 °F]
Conformity:	conforms to CE requirements acc. to the EC directive 89/36/EEC
EMC:	interference emissions EN 55011 class B interference resistance EN 61000-6-2

Test voltages:	EN 61010-1, degree of soiling 2 and overvoltage category 2
Test voltage:	500 V, 50 Hz., 1 min.
Current output:	0 ... 24 mA, increment 10 µA load 20 mA up to ≤ 500 Ohm, > 20 mA up to ≤ 400 Ohm
Voltage output:	0 ... 12 V, increment 10 mV load ≥ 2 kOhm
Control input	High: 4 ... 30 V DC
Hold (high active):	Low: 0 ... 2 V DC
Accuracy:	< 0.1 % of the terminal value ±0.01 %/K
Weight:	approx. 50 g [1.764 oz.]
Connection technology:	screw terminal, pitch 5.08 mm, 7 poles

Block diagram:



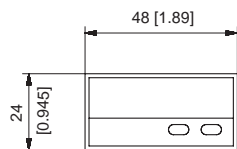
Inputs
1: 10 ... 30 V DC
2: GND_1
3: GND_2
4: Hold

Outputs
5: 0 ... 24 mA (I_{out})
6: GND_3
7: 0 ... 12 V DC (U_{out})

Set-point generator/ time-based process adjuster **CODIX 533**

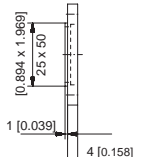
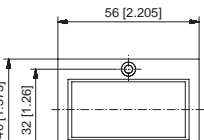
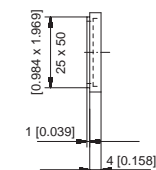
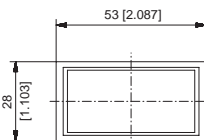


Dimensions:

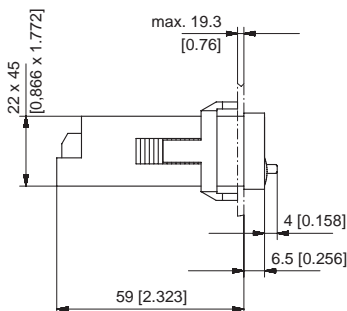


Panel cut-out:
22.2^{+0.3} x 45^{+0.6} mm
[0.874^{+0.012} x 1.772^{+0.024}]

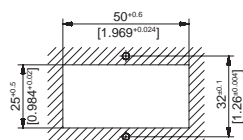
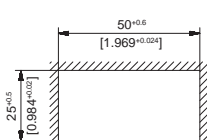
Bezel



Countersinking Af3, DIN 74



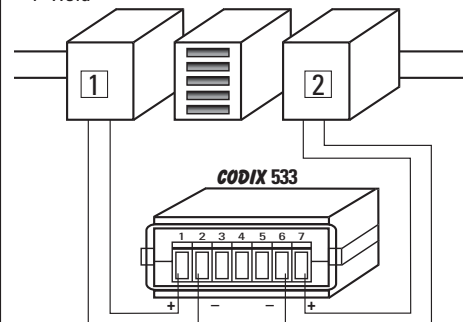
Panel cut-out:



Dimensions in mm [inch]

Terminal assignment:

- | | |
|-----------------|-----------------|
| 1 10 ... 30 VDC | 5 0 ... 24 mA |
| 2 GND 1 | 6 Analog GND 3 |
| 3 GND 2 | 7 0 ... 10 V DC |
| 4 Hold | |



- 1 Power supply
2 Analogue input

Delivery includes:

- Digital display
- Panel mounting clip
- Bezel for clip mount, panel cut-out 50 x 25 mm [1.969 x 0.984"]
- Bezel for screw mount, panel cut-out 50 x 25 mm [1.969 x 0.984"]
- Seal
- Tack dry symbols
- Multilingual operating instructions

Order code **CODIX 533:**

6.533.012.300

3 operating modes programmable

Manual direct input (Setup):

- The desired nominal value can be set quickly and approached manually
- Nominal value setting in V or mA directly via the keyboard during operation
- Output of the value 3 seconds after the last key actuation

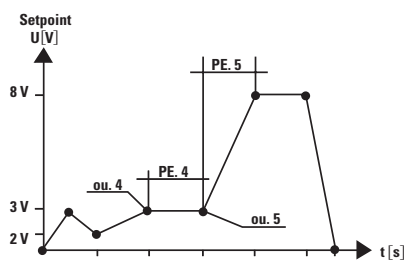
Manual ramp function (Man):

- An option for a progressive, stepped approach of the desired nominal value via the front key (optional via a separate input) exists.
- Input of the minimum and maximum nominal value and the increment per key actuation in the programming level.
- During operation, the device starts with the minimum nominal value: The right button is used to increase the value by the increment and the left button is used to reduce the value by the increment.
- The programmed maximum value cannot be exceeded.

Automatic ramp function (Auto):

- Function of a digital timer with analog output. Cyclical and time-dependent default values for the process to be run can be entered and executed: Watering, dosing, lubricating, filling, ventilating, mixing.
- With max. 20 current or voltage values.
- Cyclically limited (time) or unlimited.

Example of an automatic ramp function

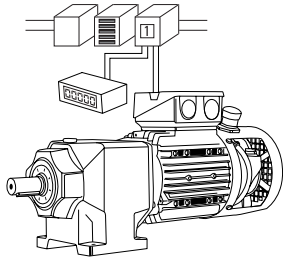
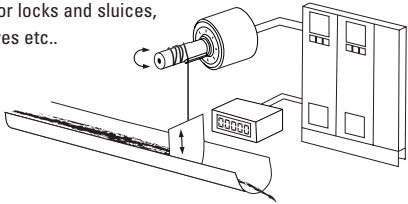
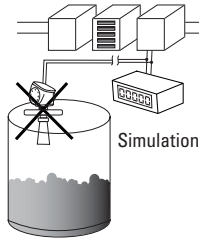
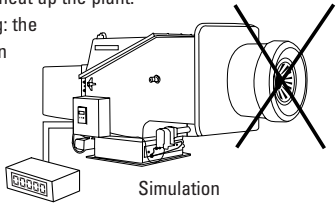


Example with 8 points	
ou. 1	0 V
PE 1	5 s
ou.2	3 V
PE 2	5 s
ou. 3	2 V
PE 3	10 s
ou. 4	3 V
PE 4	10 s
ou. 5	3 V
PE 5	10 s
ou. 6	8 V
PE 6	10 s
ou. 7	8 V
PE 7	10 s
ou. 8	0 V
PE 8	5 s

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Applications:

Application:	Easy control (fixed installation) in plants, machines and devices	To be used in the set-up mode of plants, machines and devices
	Time-based or manual ramping up or ramping down of:	Manual (direct) input or time-based/manual set-up (ramping up or ramping down) of:
Rotary speeds (e.g. frequency inverters), flow rates, temperature, position, pressure, level, i.e. all physical variables that can be displayed via analogue signals)		
	Simple time-switch with analogue output	
<p>Starting and running-in or speed control of motors via setpoint specification</p>  <p style="text-align: center;">1 frequency inverters</p> <p>Control of simple time-dependent processes by means of an analogue signal, e.g. ramping control for locks and sluices, flow valves etc..</p> 		<p>Calibration of fill levels and flow rates: the setpoint adjuster simulates the output signals of a level or flow sensor for configuring a PLC.</p>  <p>Adjustment of temperature-dependent processes, without the need to heat up the plant. Plant commissioning: the setpoint adjuster can simulate various processes for test purposes.</p> 
Solution with various modes:	To do this 2 selectable operating modes are provided	To do this, the following operating modes are provide
	<ul style="list-style-type: none"> - Manual ramp function - Automatic ramp function 	<ul style="list-style-type: none"> - Manual direct input - Manual ramp function - Automatic ramp function
Advantages:	Our Setpoint Adjuster can undertake this task as a stand-alone device, instead of having to use an expensive, complex, difficult-to-programme PLC. The user saves on costs and the job can be carried out quickly and flexibly – even by without specialised training being necessary.	The Setpoint Adjuster simulates the sensor signal, which detects the physical process, e.g. ramping up of temperature, filling of tanks. The expensive, time-consuming running-in of processes can be eliminated by using the Setpoint Adjuster to simulate the function.
The output signal can be displayed directly or can be scaled to any desired engineering unit. The user can see exactly what is happening at that particular moment in time.		
An easy-to-programme controller with three selectable modes is available.		

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