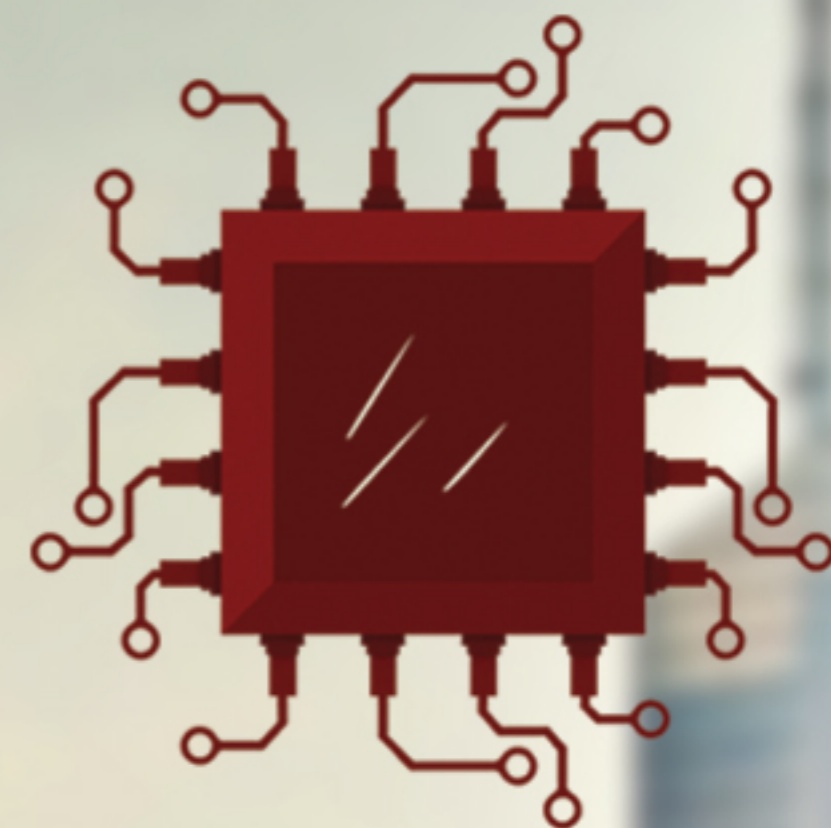


KHAMON

INFORMATION DISPLAYS



WWW.KHAMON.SK



ING. SZILÁRD SIMON

CONTACTS:

SLNEČNÁ 12,

903 01 SENEČ

SLOVAKIA

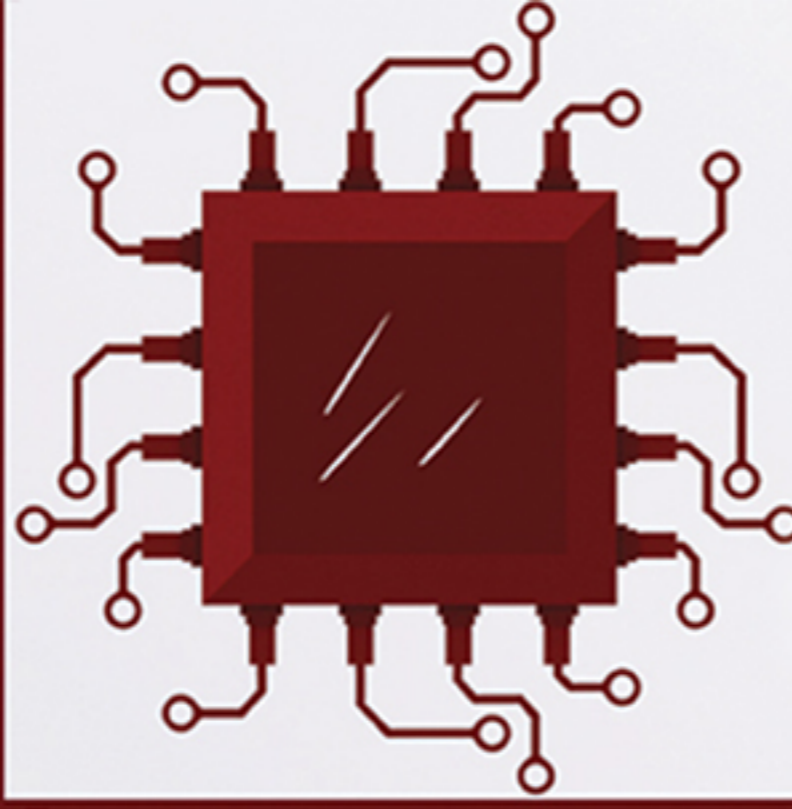
+421 2 459 222 69

+421 905 229 450

info@khamon.sk



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LED CLOCK 100MM WITH THERMOMETER

01

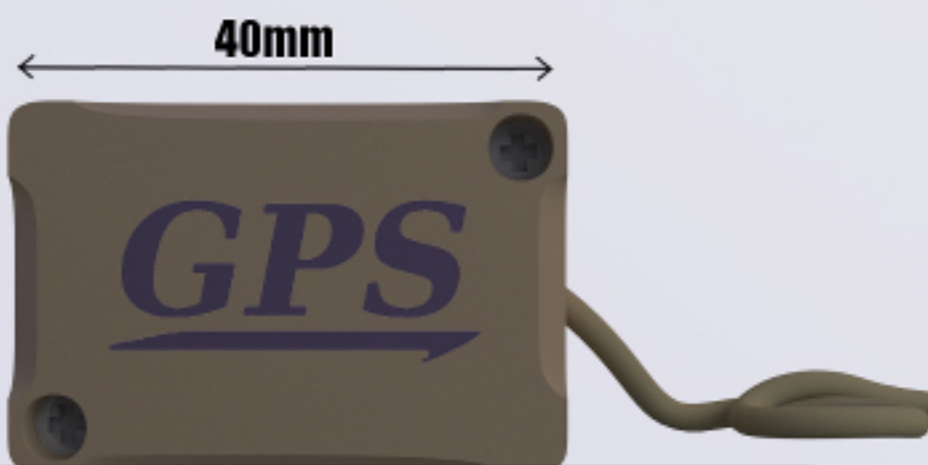
LED CLOCK WITH A BUILT IN THERMOMETER
AND GPS MODULE (OPTIONAL)



Power supply: 230 V / 35 W, or solar set
Operating temperature: from -20°C to +50°C
Mounting: fix it on the wall by two screws, or as requested
Size: 150 mm x 430 mm x 30 mm

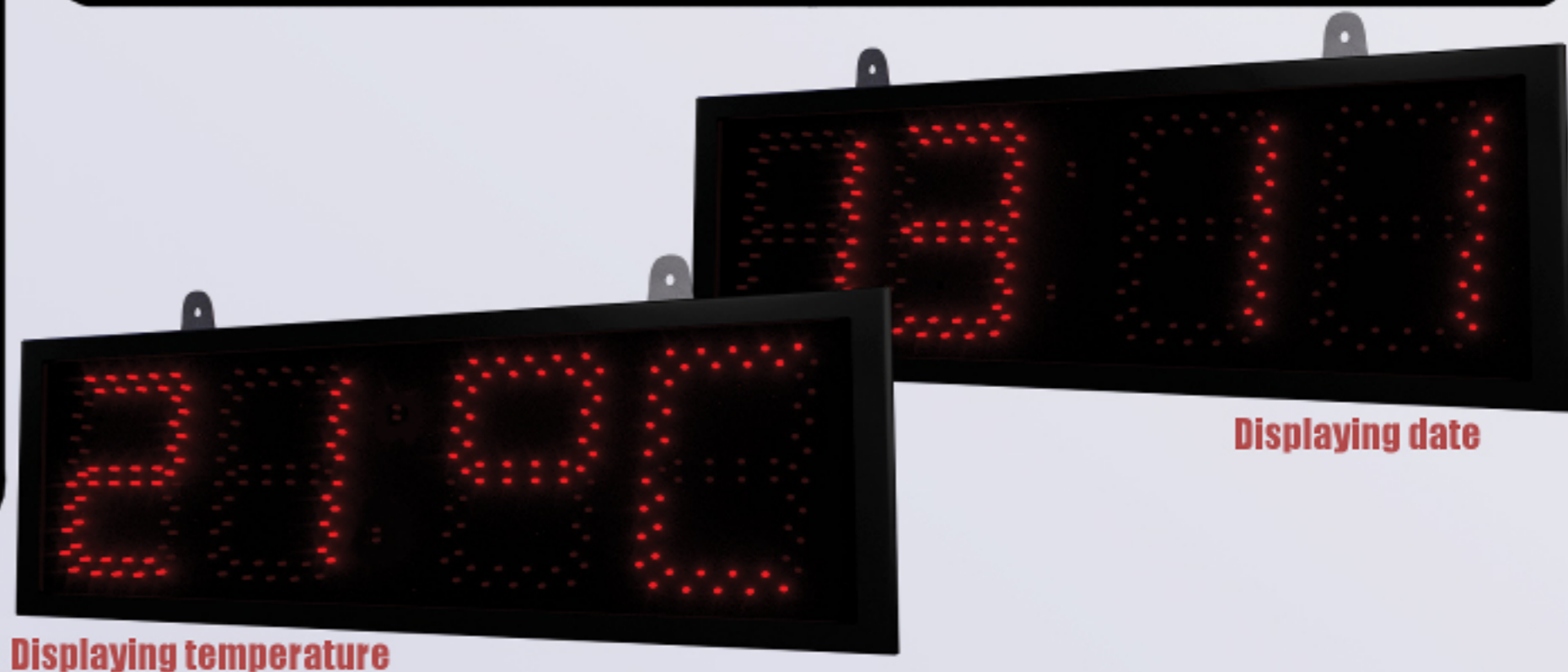
Exact time: based on an independent internal clock, or GPS module
Setting: by infrared remote control
The device can be connected to a RS485 system. The LEDs can be blue, green, yellow or white colored as well.

Setting: first press the P+ button and hold it for at least 5 seconds. On the display the "----" characters will appear. After those disappear, and the display gets dark, press the ON/OFF button which is located in the upper right corner of the remote control. You will get into the menu, where you can set the different parameters of the display. The following chart shows your options.



Parameter	Abbr.	Range	Notes
Year	RO	0 ÷ 99	
Month	ME	1 ÷ 12	
Day	DE	1 ÷ 31	
Hour	HO	0 ÷ 23	
Minute	MI	0 ÷ 59	
Brightness	JA	0 ÷ 9	0 - min; 9 - max
Length of displaying time	CH	2 ÷ 50	in seconds
Length of displaying date	CM	0 ÷ 50	0-date is not displayed
Length of dis. temperat.	CT	0 ÷ 50	0-temperature is not displ.
Automatic brightness	AJ	0 ÷ 1	0- manual, 1- automatic
Settings of thermometer	Oo	-9 ÷ 9	correcting displ. temp.

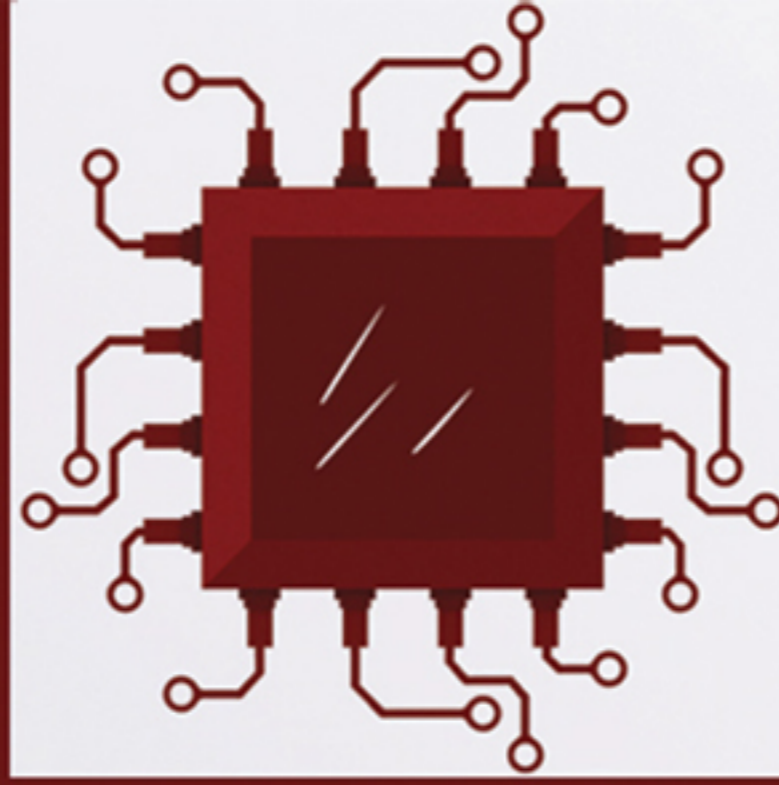
The cable for the thermometer	green
	-V (GND)
	brown
The cable for supply voltage	TEP (data)
	white
	+3,3V
RS485	red: +V
	+13,4V
	black: -V
	GND
	brown
	RS485 - A
	white
	RS485 - B



Displaying temperature

Displaying date

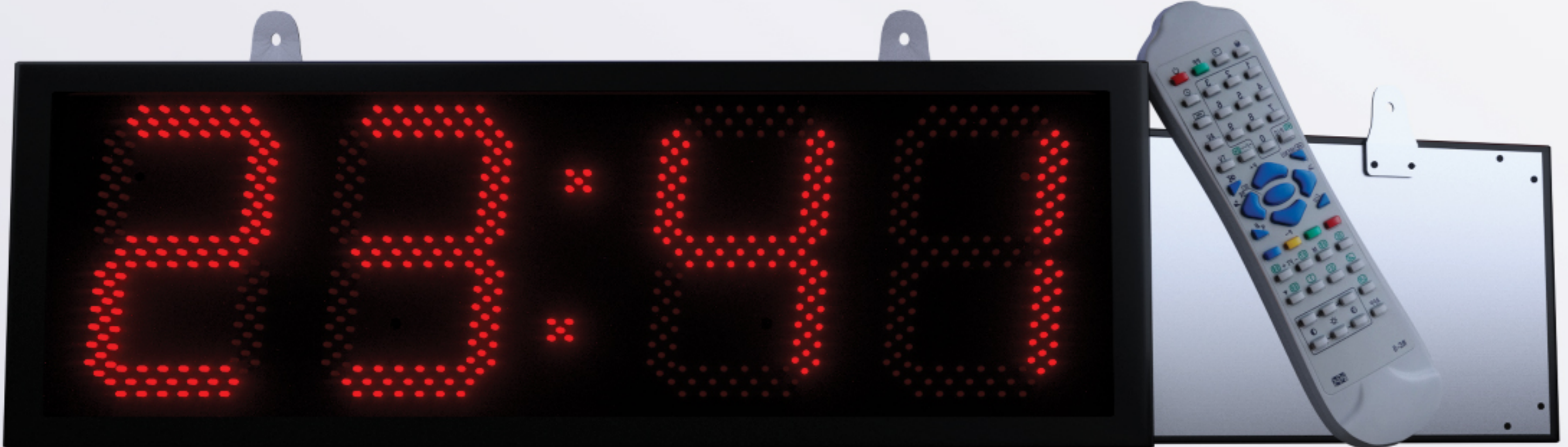
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LED CLOCK 200MM WITH THERMOMETER

02

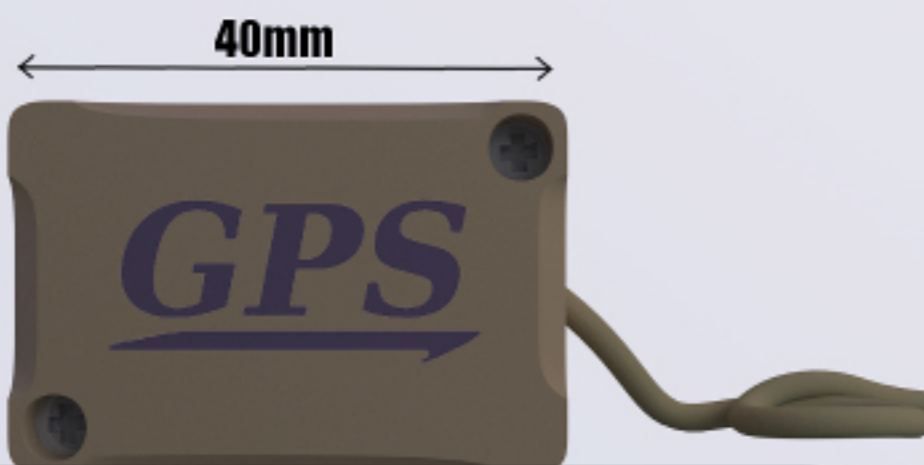
LED CLOCK WITH A BUILT IN THERMOMETER
AND GPS MODULE (OPTIONAL)



Power supply: 230 V / 50 W, or solar set
Operating temperature: from -20°C to +50°C
Mounting: fix it on the wall by two screws, or as requested
Size: 650 mm x 230 mm x 30 mm

Exact time: based on an independent internal clock, or GPS module
Setting: by infrared remote control
The device can be connected to a RS485 system. The LEDs can be blue, green, yellow or white colored as well.

Setting: first press the P+ button and hold it for at least 5 seconds. On the display the "----" characters will appear. After those disappear, and the display gets dark, press the ON/OFF button which is located in the upper right corner of the remote control. You will get into the menu, where you can set the different parameters of the display. The following chart shows your options.



Parameter	Abbr.	Range	Notes
Year	RO	0 ÷ 99	
Month	ME	1 ÷ 12	
Day	DE	1 ÷ 31	
Hour	HO	0 ÷ 23	
Minute	MI	0 ÷ 59	
Brightness	JA	0 ÷ 9	0 - min; 9 - max
Length of displaying time	CH	2 ÷ 50	in seconds
Length of displaying date	CM	0 ÷ 50	0-date is not displayed
Length of dis. temperat.	CT	0 ÷ 50	0-temperature is not displ.
Automatic brightness	AJ	0 ÷ 1	0- manual, 1- automatic
Settings of thermometer	Oo	-9 ÷ 9	correcting displ. temp.

The cable for the thermometer	green
	-V (GND)
	brown
	TEP (data)
The cable for supply voltage	white
	+3,3V
	red: +V
	+13,4V
RS485	black: -V
	GND
	brown
	RS485 - A
	white
	RS485 - B

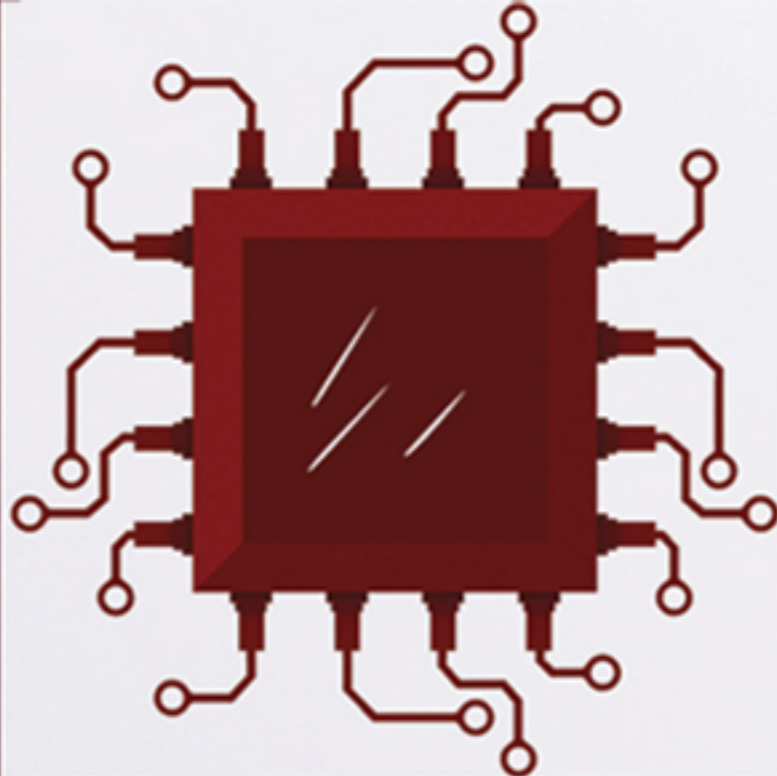


Displaying temperature



Displaying date

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LED CLOCK 400MM WITH THERMOMETER

03

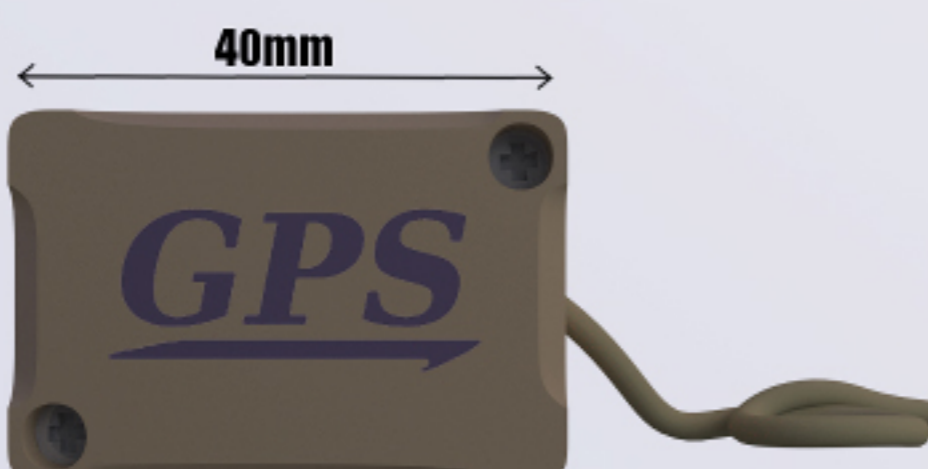
LED CLOCK WITH A BUILT IN THERMOMETER
AND GPS MODULE (OPTIONAL)



Power supply: 230 V / 50 W, or solar set
Operating temperature: from -20°C to +50°C
Mounting: fix it on the wall by two screws, or as requested
Size: 1250 mm x 450 mm x 30 mm

Exact time: based on an independent internal clock, or GPS module
Setting: by infrared remote control
The device can be connected to a RS485 system. The LEDs can be blue, green, yellow or white colored as well.

Setting: first press the P+ button and hold it for at least 5 seconds. On the display the "----" characters will appear. After those disappear, and the display gets dark, press the ON/OFF button which is located in the upper right corner of the remote control. You will get into the menu, where you can set the different parameters of the display. The following chart shows your options.

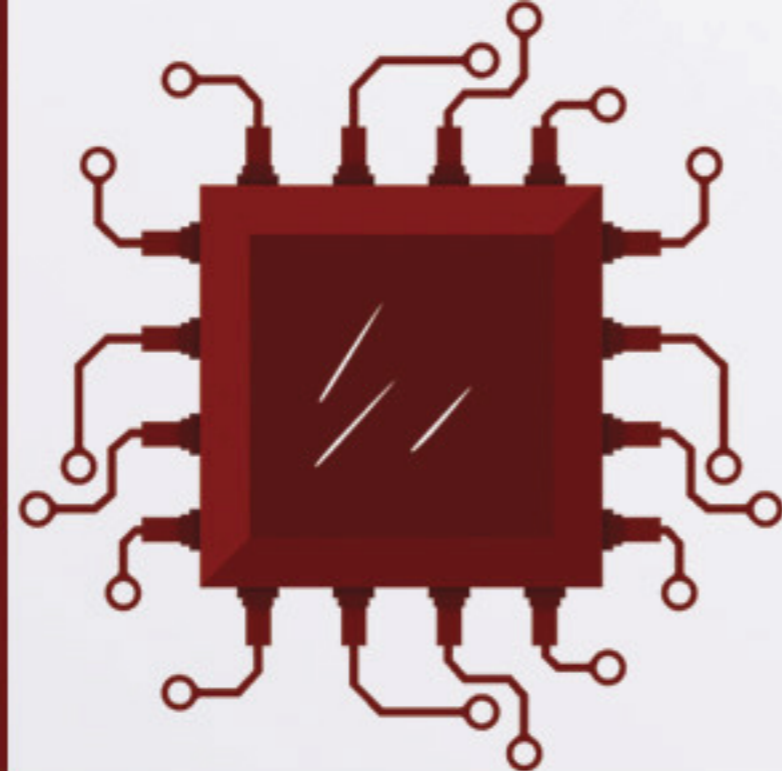


Parameter	Abbr.	Range	Notes
Year	RO	0 ÷ 99	
Month	ME	1 ÷ 12	
Day	DE	1 ÷ 31	
Hour	HO	0 ÷ 23	
Minute	MI	0 ÷ 59	
Brightness	JA	0 ÷ 9	0 - min; 9 - max
Length of displaying time	CH	2 ÷ 50	in seconds
Length of displaying date	CM	0 ÷ 50	0-date is not displayed
Length of dis. temperat.	CT	0 ÷ 50	0-temperature is not displ.
Automatic brightness	AJ	0 ÷ 1	0- manual, 1- automatic
Settings of thermometer	Oo	-9 ÷ 9	correcting displ. temp.

The cable for the thermometer	green
	-V (GND)
	brown
	TEP (data)
The cable for supply voltage	white
	+3,3V
	red: +V
	+13,4V
RS485	black: -V
	GND
	brown
	RS485 - A
	white
	RS485 - B



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INFORMATION DISPLAYS

04
04



**Q1x3 -
320 x 152 x 33 mm**

**Q1x4 -
410 x 152 x 33 mm**

**Displaying numbers:
100 mm, red segments, 7 segmented LED**

**Material:
black mat komatex plastic, frosted plexiglass**

**Connection:
LAN or RS485**

**Casing:
suitable for indoor use only**

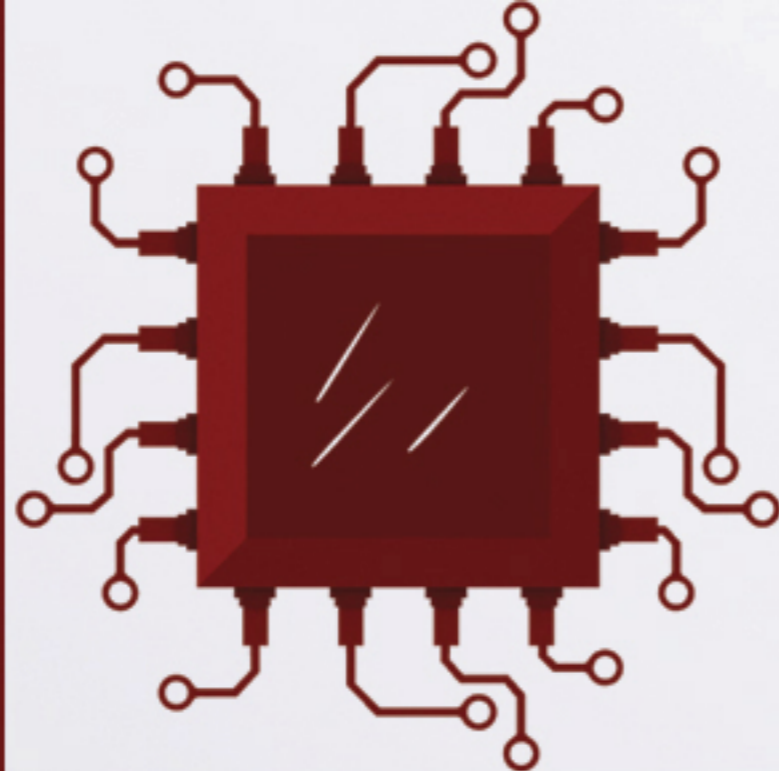
**Sound:
three different melodies, or without sound upon request**

**Power supply:
18-24V DC/10W, POE or RS485**

**Operating temperature:
0 - 50 °C**

**Communication protocol:
ASCII protocol, MODBUS, customized**

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INFORMATION DISPLAYS

05



**Q3x3Z2 -
710 x 408 x 33 mm**



**Q3x4Z2 -
710 x 498 x 33 mm**

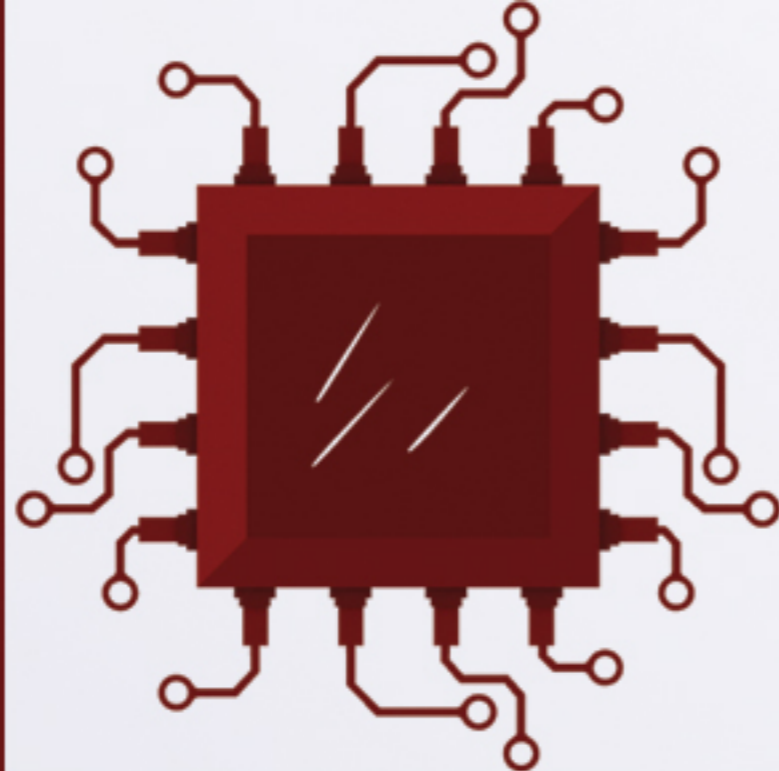


**Q5x4Z2 -
974 x 498 x 33 mm**



**Q5x3Z2 -
974 x 408 x 33 mm**

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WORK SAFETY DISPLAY

06



400

800



550

800



800

1400

Displaying: number of lost time injuries, number of days, exact time

Casing: eloxed aluminium; suitable for interior and exterior use

Supply voltage: 230 V / 20 - 50 W

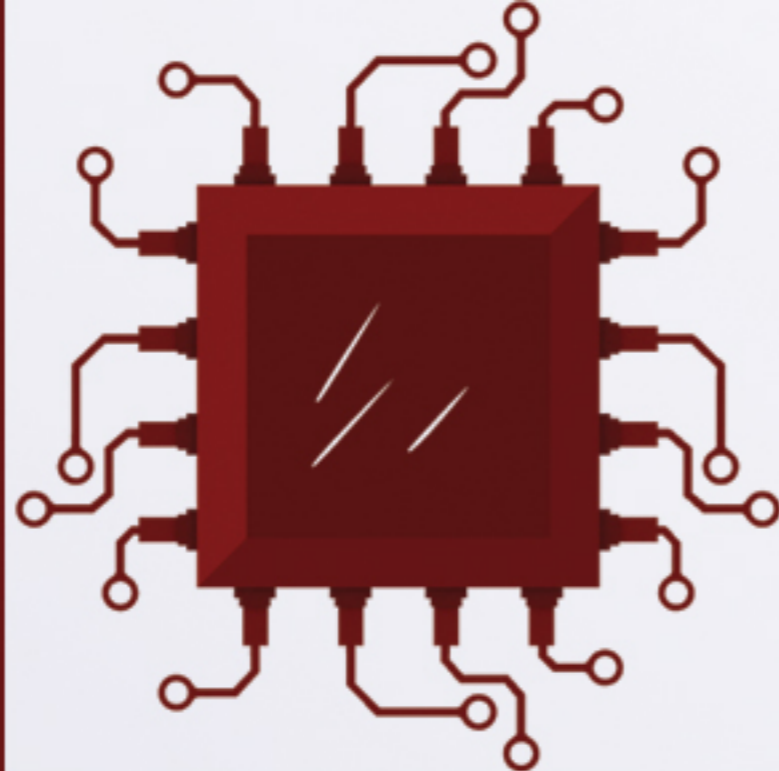
Setting: by a remote control

Size: see above

The name and logo of the company can be printed on the board.

LEDs are standard in red colour, or as requested.

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INFORMATION DISPLAYS

INFORMATION DISPLAY (D_I_8_100)

07



DISPLAY WITH KEYBOARD



Displaying characters: 100mm segments in two rows, red colour LED

Material: eloxed aluminum, plexiglass, stickers with text

Setting: through four binary inputs

-1. input: set the value of 'Output' to zero

-2. input: adds 1 to the value of 'Output'

-3. input: adds 10 to the value of 'Target'

-4. input: subtracts 10 from the value of 'Target'

Size: 800 x 450 x 45 mm

Power supply: 230V AC through adapter

Operating temperature: -20 + 50 [°C]

Mounting: on wall

Displaying characters: 200mm, red colour outdoor LED (110x50)

Material: eloxed aluminium, plexiglass, suitable for indoor/outdoor use

Size: 500 x 230 x 30 mm

Power supply: 230 V AC through adapter

Hőmérsékleti tartomány: -20 + 50 [°C]

Mounting: on wall

Communication: by RS485, displays are addressable

Description: the number typed into the keyboard is shown on the display; it can be set through a relay modul, as well

Displaying characters: 25mm red LED segments

Material: IP20 case, the device fits into a panel

Size: 48 x 48 mm, 70 mm

Power supply: 10 - 35 V

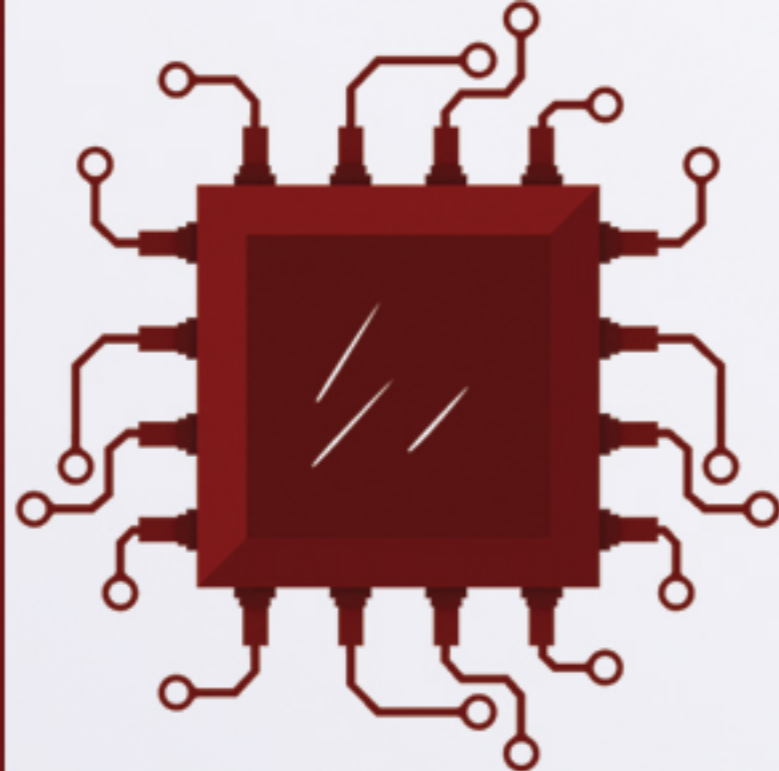
Operating temperature: -5 + 50 [°C]

Description: can be set by code BCD, can be used as replacement in Samsung automats

TWO CHARACTER DISPLAY



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INFORMATION DISPLAYS

**TEN CHARACTER DISPLAY
(D_E_10_200)**



**INFORMATION DISPLAY
(D_E_12_200)**



Displaying characters:
200mm, red LED
Material:
*eloxed aluminium;
suitable for outdoor use*
Setting:
through ethernet
Size:
1500 x 300 x 45 mm
Power supply:
230 V AC through adapter
Operating temperature:
-20 + 50 [°C]

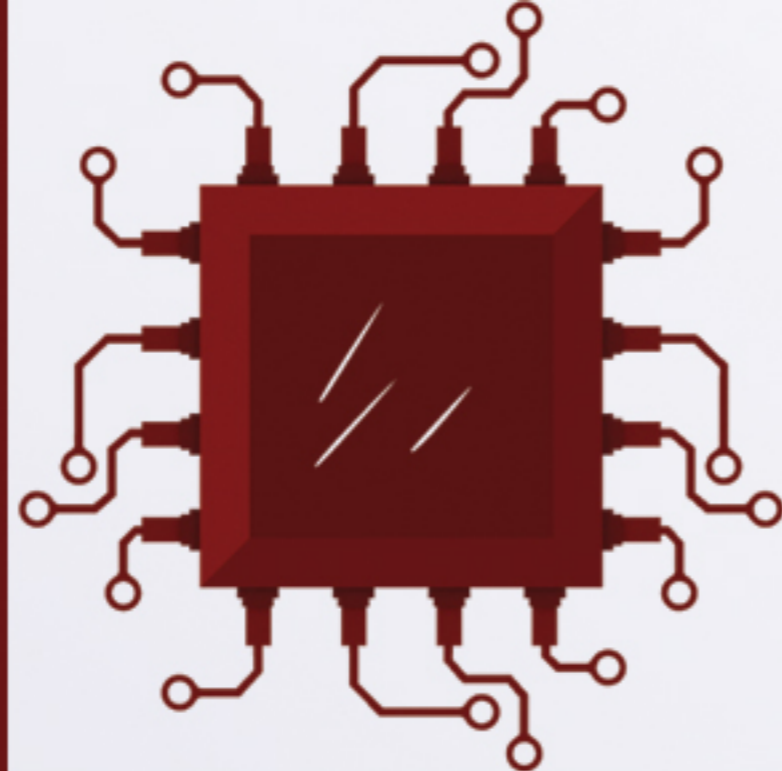
Displaying characters: *two rows, 200mm, red LED*
Material: *eloxed aluminium, plexiglass*
Setting: *ethernet, text protocol*
Size: *1000 x 500 x 45 mm*
Power supply: *230 V AC through adapter*
Operating temperature: *-20 + 50 [°C]*

Displaying characters: *200mm, red LED*
Material: *eloxed aluminium, plexiglass; suitable for indoor/outdoor use*
Setting: *1 binary input, RS485, MODBUS*
Size: *600 x 230 x 45 mm*
Power supply: *12V DC / 30W max.*
Operating temperature: *-20 + 50 [°C]*
Mounting: *on wall, or rod*

**FOUR CHARACTER DISPLAY
(D_E_4_200)**



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INFORMATION DISPLAY JTEP 310

09

The device is designed to measure the temperature of the road and the air. The measured values are shown on the display. It also alerts drivers if the road is slippery, by displaying SLIPPERY and FROSTY. Power is provided by a solar set connected to a battery. Main functions of the device are the following:



1. measuring the temperature and moisture content of the road, and displaying SLIPPERY and FROSTY if necessary. If you see the 'car' icon on the display, the temperature of the road is shown.

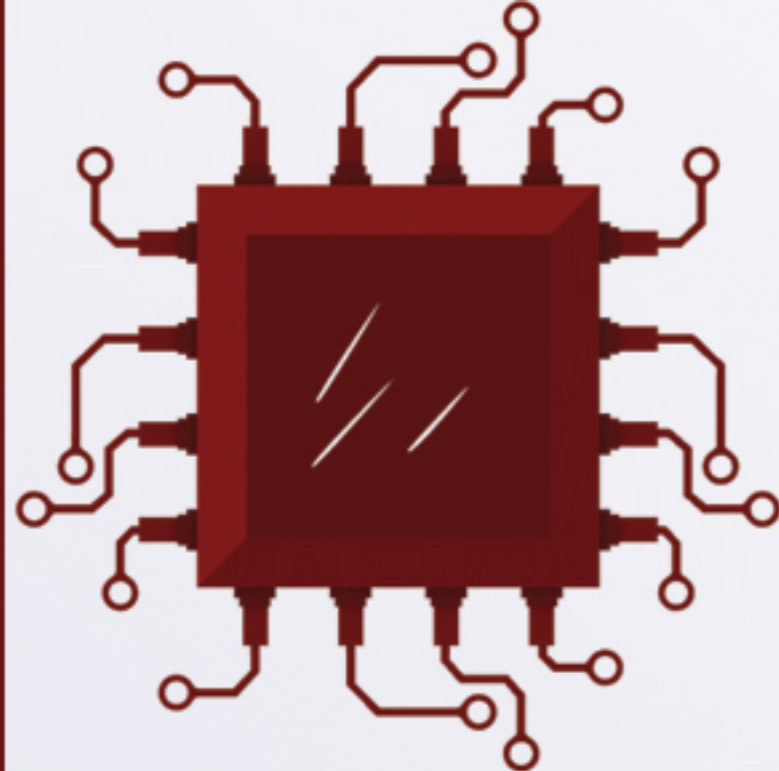
2. measuring the temperature of the air with a thermometer in a simple solar radiation shield. If you see the 'cloud' icon on the display, the temperature of the air is shown.

Parameters of the display

Size: 1340 x 750 x 45 mm
Character height: 310 mm
Size of 'cloud' icon: 340 x 250 mm
Size of 'car' icon: 340 x 250 mm
Device for measuring the temperature of the air: DS18S20 digital thermometer in a simple solarradiation shield, length of the cable 3m
Device for measuring the parametres of the road: Boschung IT-sens
LED type: high-brightness, 30 degrees
Communication: RS485
Power supply: solar set
Mounting: C profil
Operating temperature: -20°C +50°C
Weight: 11,4 kg
Brightness setting: depending on the intensity of ambient lighting, it automatically changes brightness of the LED
Charging battery: controlled by a microprocessor

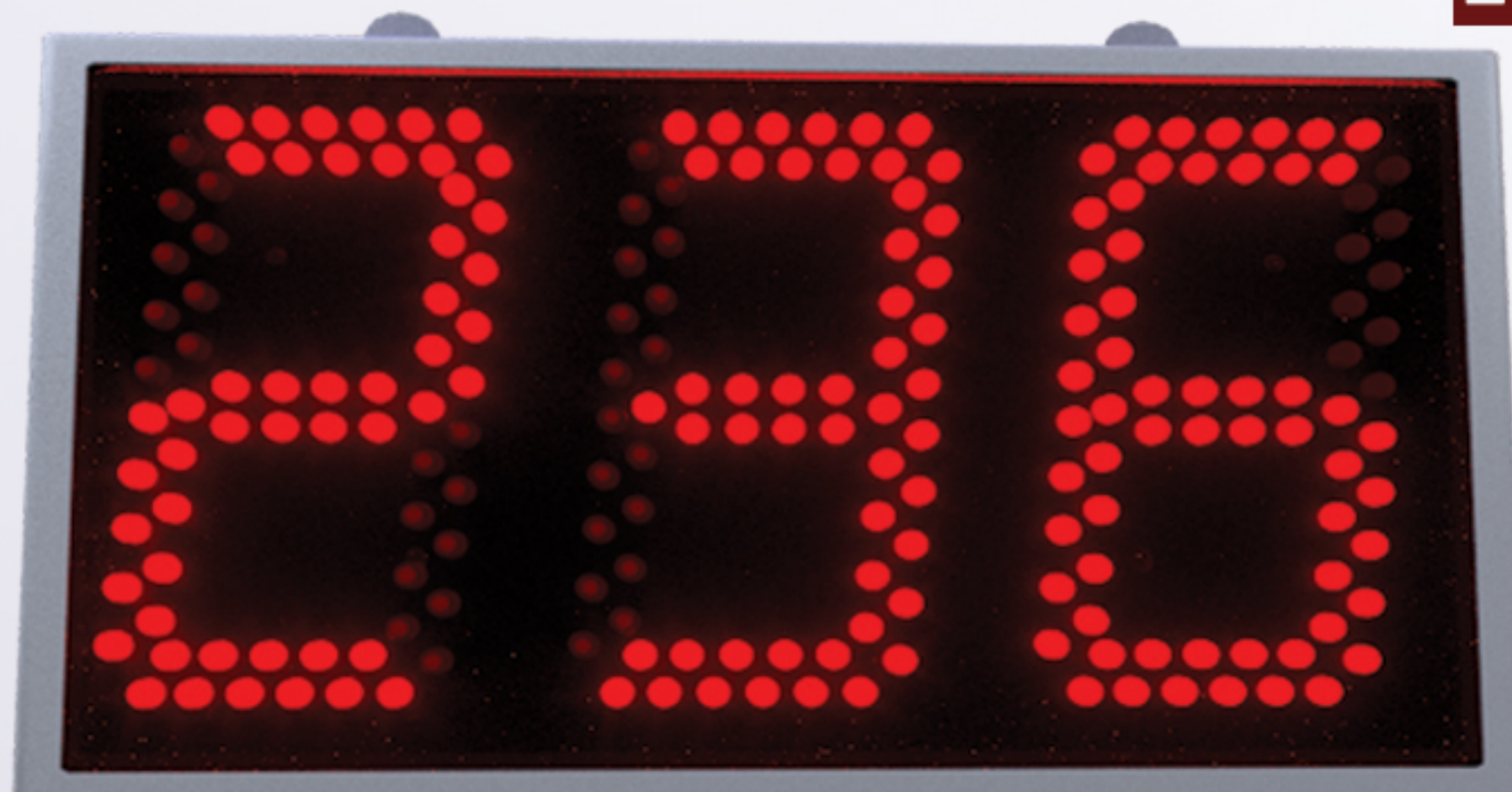


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VPM03 (FREE PARKING PLACES)

10



The system consists of two parts: VPM03-D (display) and VPM03-P12 (operation unit). The display consists of three 100mm segments. LED type is outdoor, 110x40°.

Operation unit:	
Power supply:	12V/200mA
Communication:	galvanically separated RS485/9600BD
Protocol:	ASCII
Buttons:	vandalproof
Input:	optocoupler; it counts in case of a short with GND

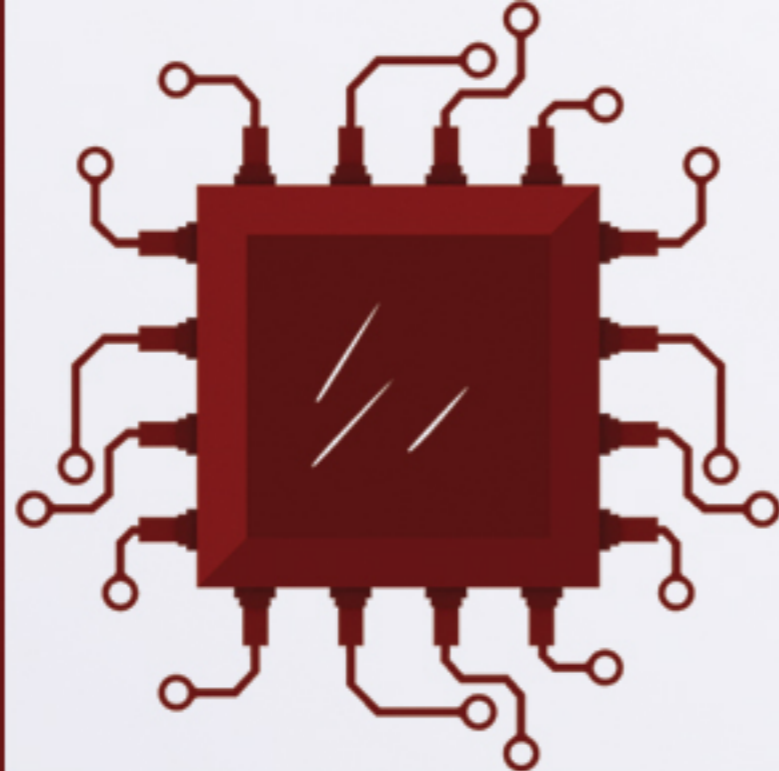
Communication between the units is provided by RS485 connection. The maximum number of parking places (MAX-PARK) and the current number of cars in the parking lot (NOW) can be set through the operation unit. Pressing the ENTER button on the operation unit we get into the menu. With buttons UP and DOWN, we can choose the desired parameter, which we can change with the UP and DOWN buttons. Confirming EXIT, we finish the setting.

The display of the operation unit (LCD 2x16) shows:	FREE=0123 DISP NOW=0099 NO/OK
--	--

FREE - free parking places.
NOW - current number of cars in the parking lot.
If FREE=0, the operation unit makes a beeping noise.
FREE = MAXPARK - NOW.
DISP OK - communication with the display is all right.
DISP NO - no communication with the display.

DISPLAY:
Power supply: 24V/400mA
Communication: galvanically separated RS485/9600BD
Brightness: automatic setting, depending on ambient light

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PRESENCE BOARD

11

Description: The device tells us information about whether the employees are present in the building of the company or not. It's set from a computer through simple commands. When putting into operation, the device is addressable, so if the number of the employees requires, multiple boards can be placed at the same place. The names of the employees are shown on the nametags, which are easily replacable. The LEDs next to the nametags are three coloured (green, red, orange).



Communication protocol:

Command#1: @fOP=xx,y<cr><lf>

- determines the colour of an individual LED

	Meaning	Comment
@	start sign	
F	sign of the sender	PC
0	sign of the board	0,1,2,3
Xx	number of the LED to set	(1,2,...,64)
Y	required colour of the LED	see: Table of Colours
<cr><lf>	end sign	

Table of Colours	
Value	Colour
0	blank
1	green
2	red
3	orange

Command#2: @fOL=abcd xyz <cr><lf>

- determines the colours of all the LEDs:

a - required colour of the 1. LED in the 1. coloumn

b - required colour of the 2. LED in the 1. coloumn

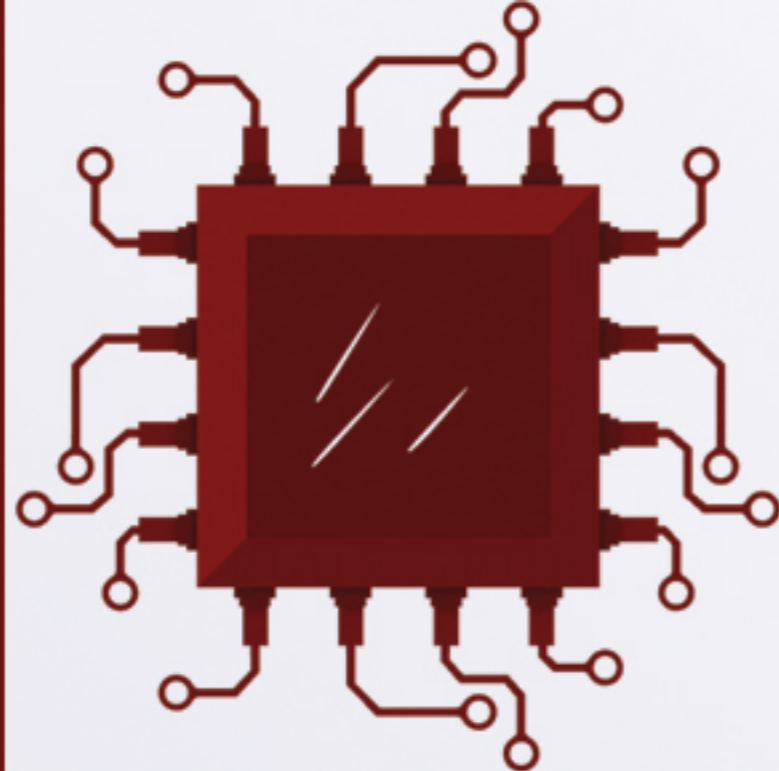
.....

z - required colour of the 16. LED in the 4. coloumn

Size:	320 x 280 x 35 mm
Power supply:	8 - 30 V / 2W
Setting:	RS485 / Ethernet
Operating temperature:	-20 +50 °C
Metarial:	stainless steel, plexiglass
LED:	64 three coloured



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GAS STATION DISPLAY

12



Description:

**numbers – LED display with four segments;
name of the product – 5×7 LED characters;
RS485 communication, automatic brightness**

Size:

**1250×515×35mm;
numbers: 830×300mm;
name of the product: 440×100mm**

LED:

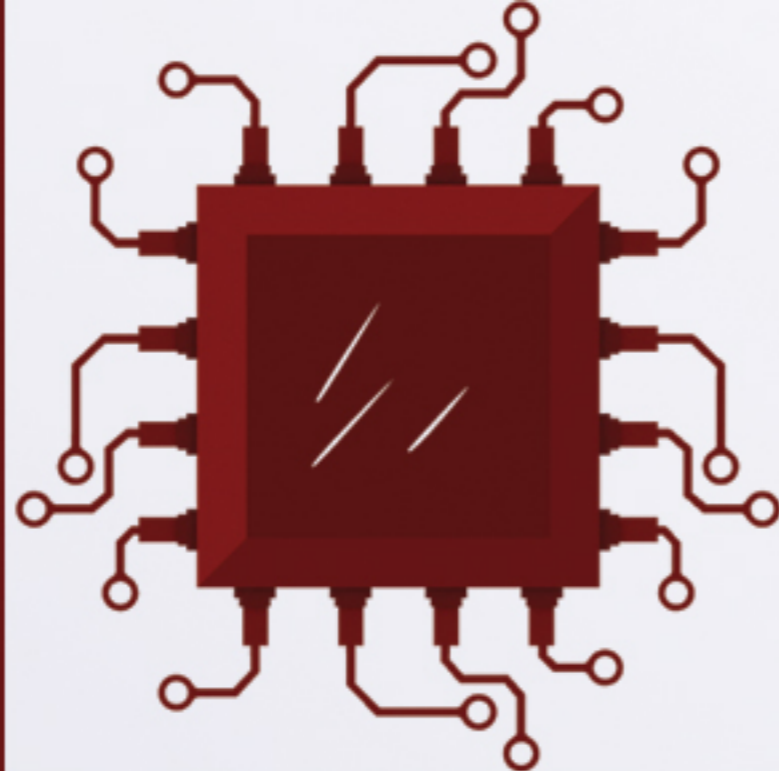
**high brightness oval LED,
standard in red colour, or as requested**

Setting:

by a remote control, or PC software (RS485/ethernet)



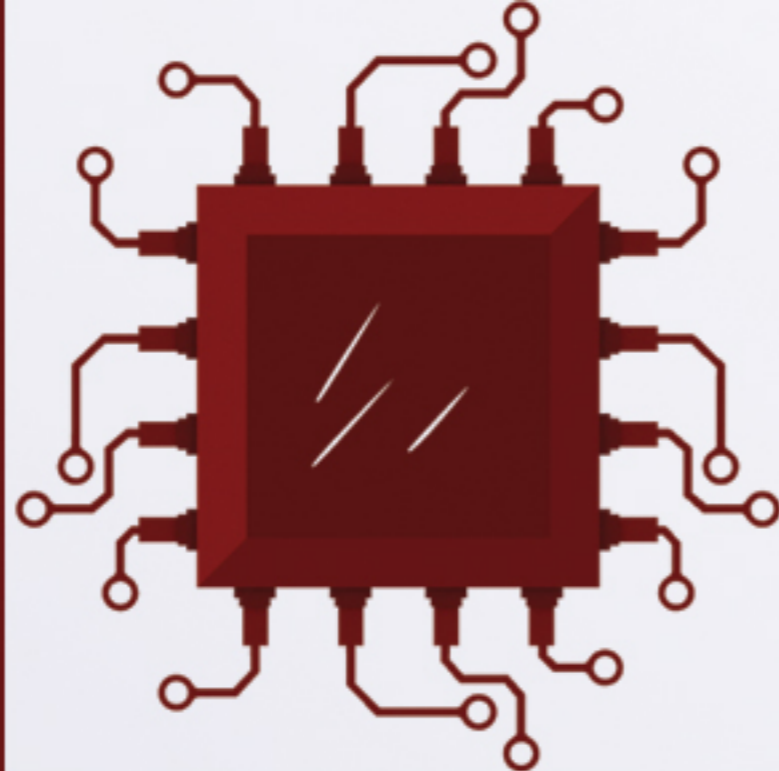
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GAS STATION DISPLAY



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INFORMATION DISPLAY RV5

14

Description: *the display guides the vehicles to different gates. In the left column the number of the gate, while in the right column the licence plate of the vehicle is displayed as rotating text.*



Board size: 1550 x 1550 mm

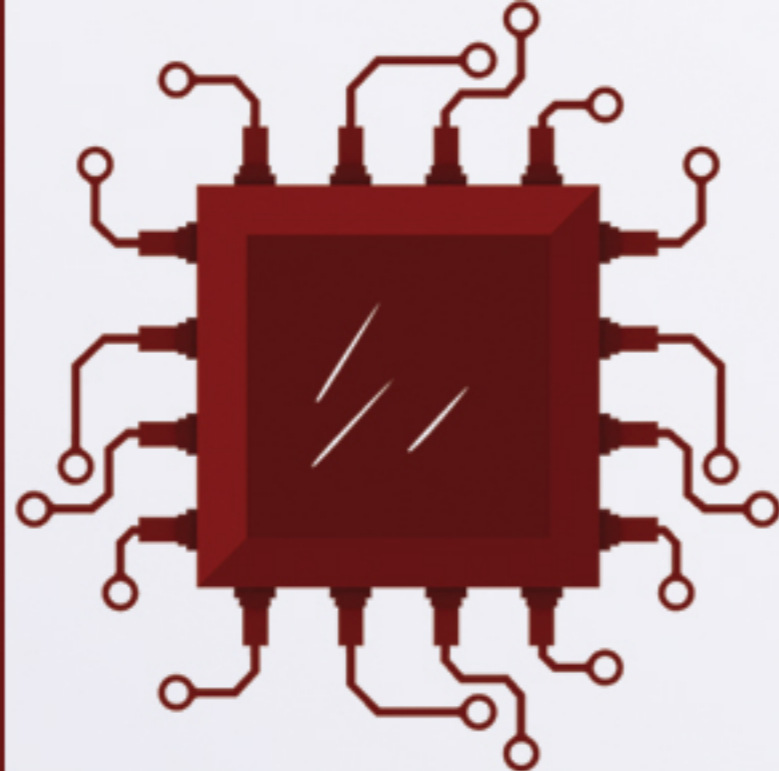
Display size: 200mm characters

Communication: ethernet, RS485, MODBUS, text protocol



LED:
1110x40° exterior high brightness LED, automatic brightness
Power supply:
13,8V / 80W

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INFORMATION DISPLAYS

15

Power supply: 35-50V, IEE 802.3af connection

Communication: RS232: green(2),brown(3), white(2); CAN9 mother connector

RJ45: through it a further display can be connected to the original one

ONE SEGMENT DISPLAY

A	address of the display (using RS232, A=0)
P	command
<cr><lf>	0x0d; 0x0a



↑ **Communication protocol**
@AP<cr><lf>

↓ **Answer**
@AOK<cr><lf>

Command	Answer	Notes
Z=x	OK	Displays the value of x: 0-9 numbers, A-Z letters, hyphen and space.
B=0	OK	0-the dot is off ; 1-the dot lights up



INFORMATION DISPLAY VY3

Displaying: numbers-seven segmented
100 mm LED modules, text-56mm high letters
Mounting: on wall; indoor/outdoor
Size: 600 x 500 x 60 mm
Power supply: 230V AC through adapter
Operating temperature: -10 + 50 °C
Communication: ethernet, RS232, RS485
Accent marks: yes

Displaying: 330 mm high text, red LED

Size: 400 x 400 x 200 mm

Power supply: 230V AC through adapter

Operating temperature: -5 + 40 °C

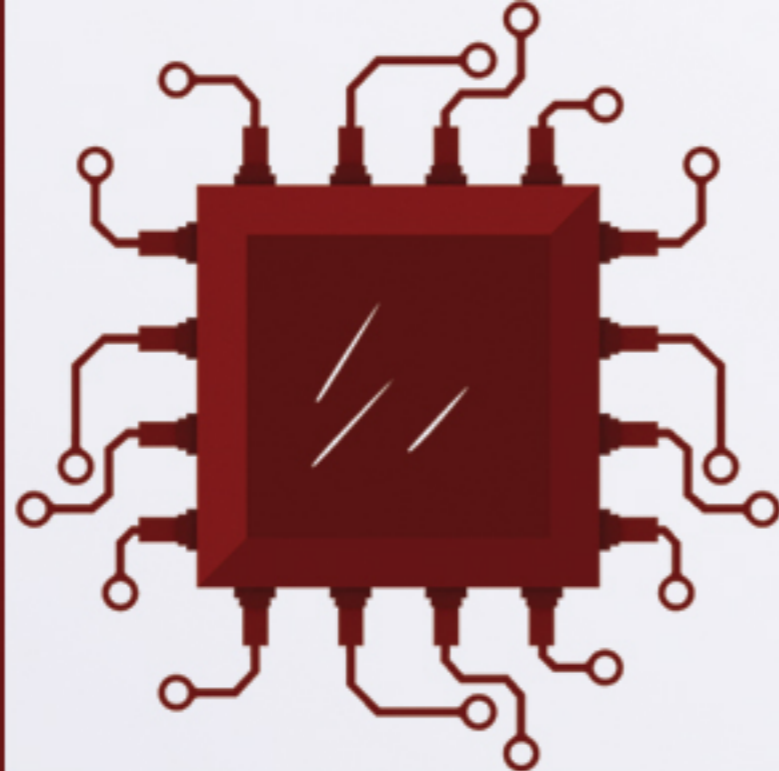
Mounting: on wall; indoor/outdoor

Accent marks: yes



INFORMATION DISPLAY DN2

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INFORMATION SYSTEM T126

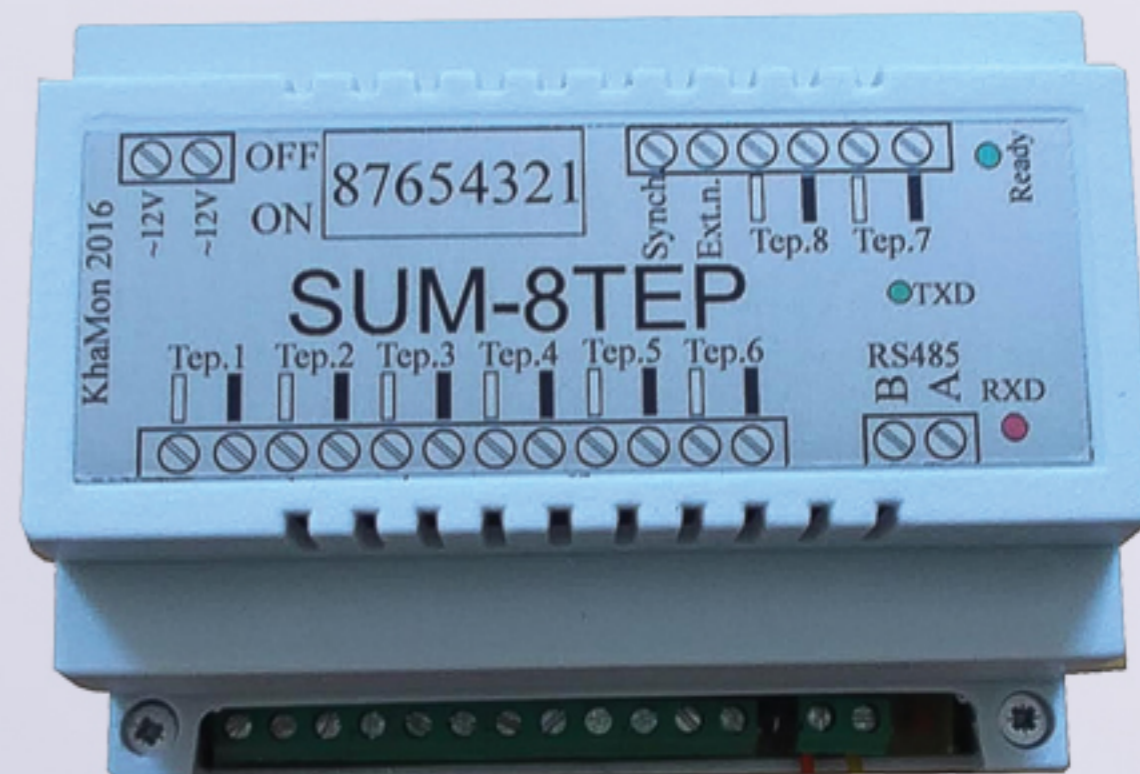
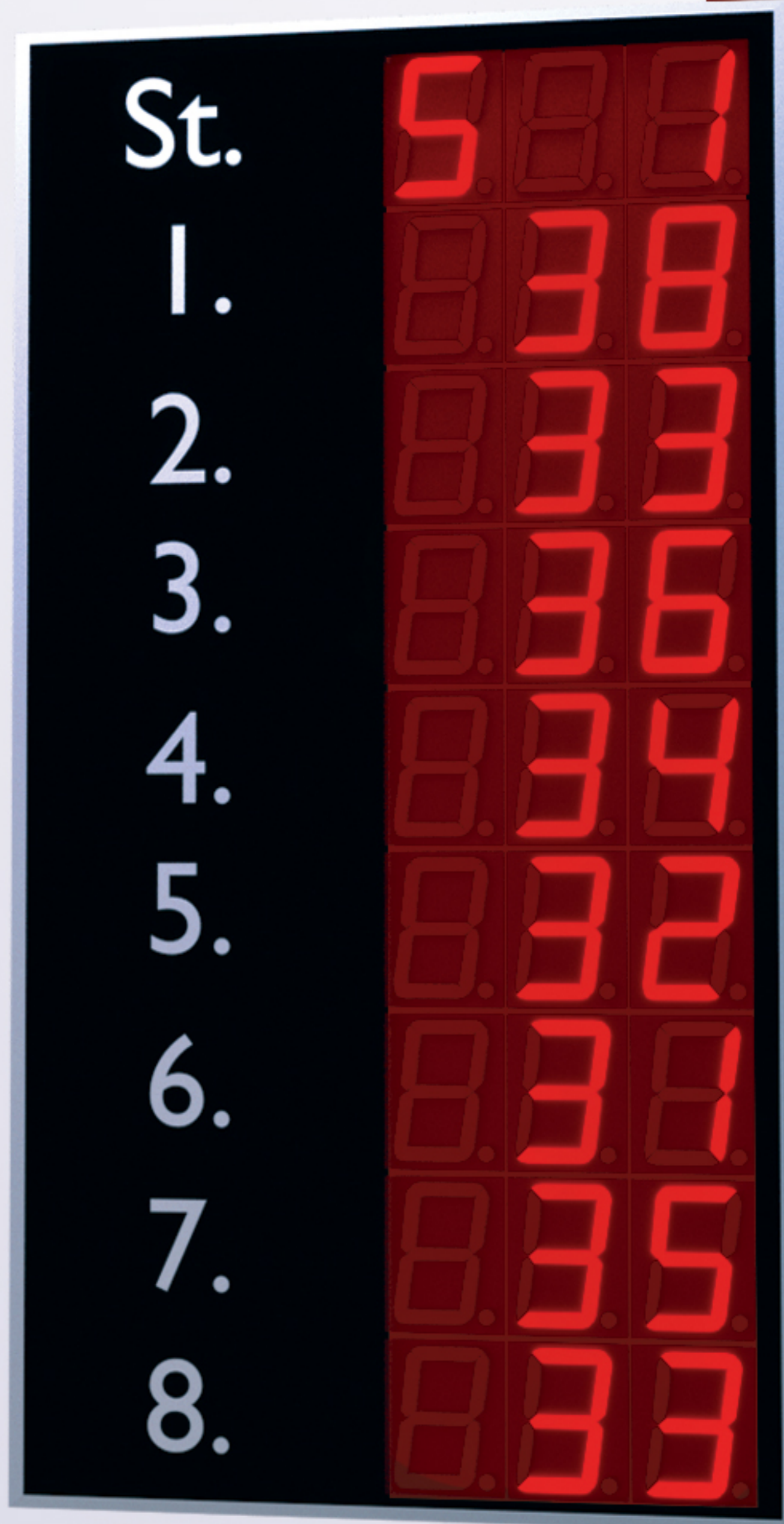
Description:

The system consists of a T9 display, and several SUM8-TEP (max. 16) or SUM4-HUM units, which are connected by RS485. One SUM8-TEP is the main control unit, others are only junctions for the measuring devices. Through a PC software the measured values can be organized, and graphs can be made. The first row on the display gives us information about which values we see in the other eight rows.

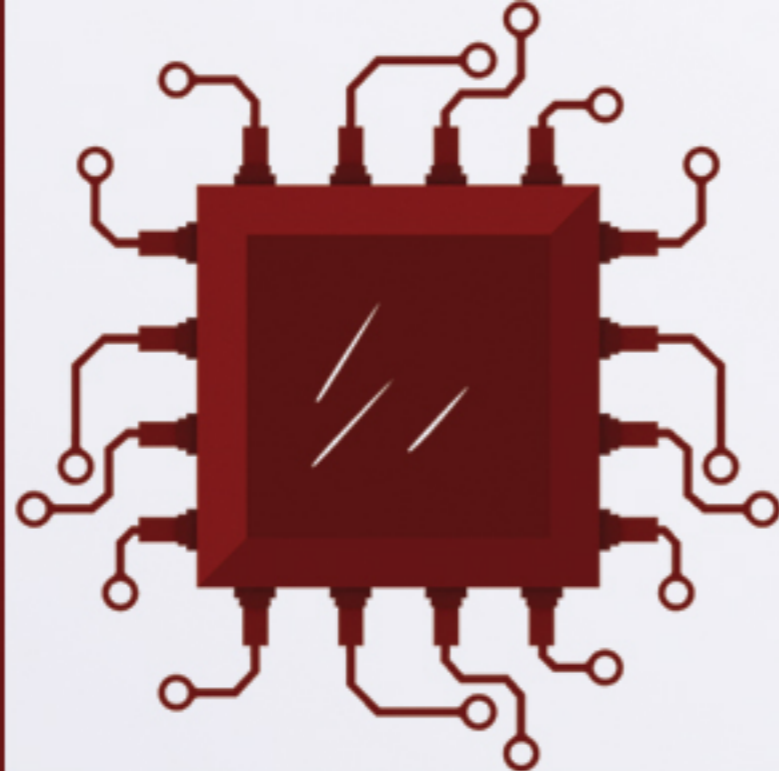
**T9 display size:
250 x 330 x 45 mm**

**SUM8-TEP size:
6M**

**Operation system:
Windows**



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SCOREBOARD WITH CLOCK

FAST AND EFFECTIVE DISPLAYING OF SCORES ON SPORTS EVENTS

17



0.MODE - normal clock; displaying Month-Day, Hour-Minutes and temperature

1.MODE - stopwatch; displaying Minutes - Seconds. After pressing the Start/Stop button, the middle LED lights up, and the stopwatch starts to count upwards from 00-00. By pressing the Start/Stop button again, the counting stops, pressing it one more time and it continues the counting.

2.MODE - stopwatch; displaying Minutes-Seconds. After pressing the Start/Stop button, the stopwatch starts to count downwards from mm-00. The value of mm can be set from the menu.

3.MODE - displaying Seconds/Hundredths- otherwise identical with 1.mode

4.MODE - displaying Seconds/Hundredths- otherwise identical with 2.mode

Reset - by pressing the NUL button (for at least 1,5 seconds) the stopper is set to 00-00 or mm-00.

By buttons Home+ and Home- the score of the home team, by buttons Guest+ and Guest- the score of the guest team can be set. Pressing the button CLOCK, you can choose from the modes. Pressing Menu, the current year is shown on the display. By buttons Guest+ and Guest- we can choose from the parameters in the menu, and by buttons Home+ and Home- we can change their values. Exit the menu by pressing the Menu button for more than 2 seconds.

Displaying characters: 100mm or 200mm, red LED

Material: eloxed aluminium, plexiglass, stickers (indoor/outdoor)

Setting: time and sources can be set by an infrared remote control or from PC

Size: 1100 x 180 x 45 mm (100mm version)

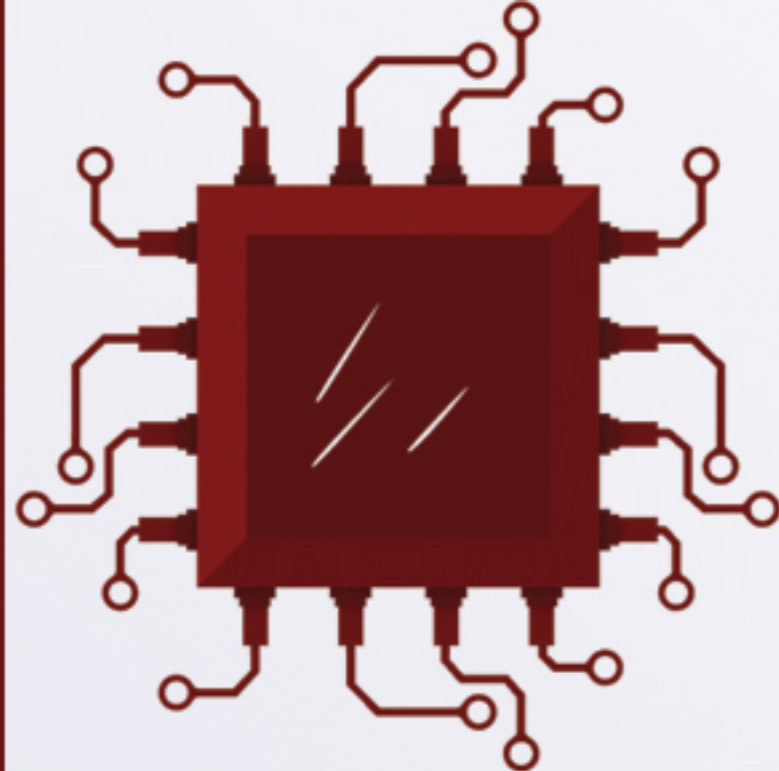
1500 x 270 x 45 mm (200mm version)

Extras: -Display with text can be included

Parameter	Abbr.	Range	Notes
Year	RO	0 ÷ 99	
Month	ME	1 ÷ 12	
Day	DE	1 ÷ 31	
Hour	HO	0 ÷ 23	
Minute	MI	0 ÷ 59	
Brightness	JA	0 ÷ 9	0 - min; 9 - max
Length of displaying time	CH	2 ÷ 50	in seconds
Length of displaying date	CM	0 ÷ 50	0-date is not displayed
Length of dis. temperat.	CT	0 ÷ 50	0-temperature is not displ.
Automatic brightness	AJ	0 ÷ 1	0- manual,1- automatic
Mode of clock	Mo	0 4	
Time	TI	1 99	value of mm
Length of voice signal	IE	0 99	value in tenths of seconds



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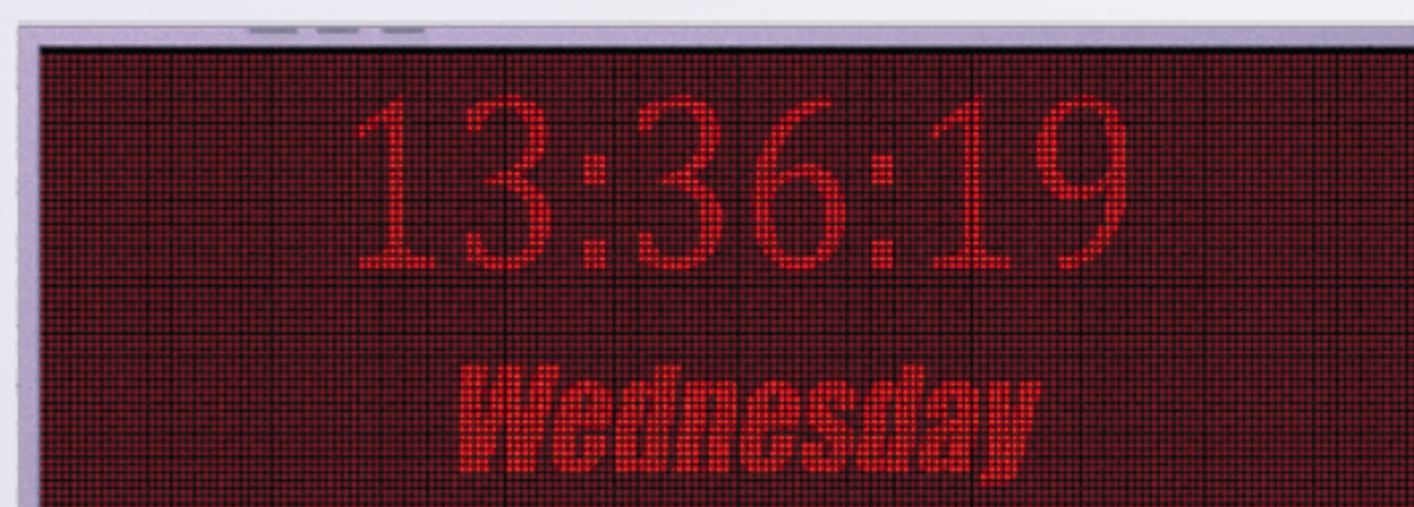
CLOCK DISPLAYING
TEXT AND NAME-DAYS

18



Description:

The display shows time, date, day of the week, current name-day, informational and warning texts. Programming the display is fast and easy.



Power supply: 12-24 V DC/ max 30 W

Size: 640x185x50 mm

Operating system: KP47

Output: Cannon 9 pin connector

Communication: RS485, ethernet

Thermometer: DS1820, accuracy $\pm 0,7^{\circ}\text{C}$

Length of displayable text: 180 characters, scrolling text (from right to left)

Sound: built-in device

Automatic displaying of name-days: yes

Accuracy of the clock: $\pm 20\text{ppm}$, GPS

Winter time/Summer time: automatic

Displaying: red LED

Resolution: 128 x 32 dots

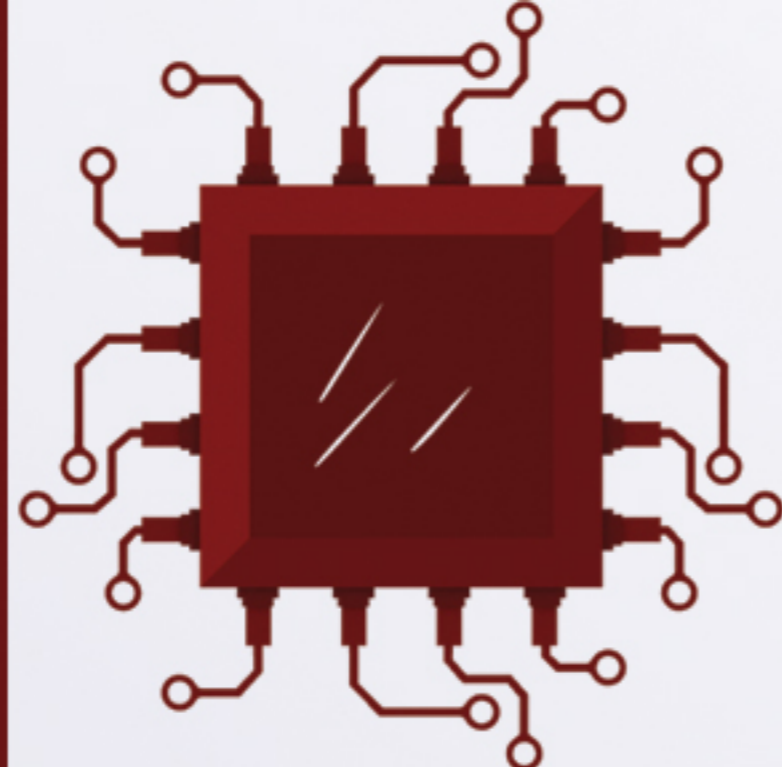
Brightness: automatic/ manual

Mounting: on wall

Material: komatex, plexiglass; indoor/outdoor



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CALENDAR CLOCK

19



Description:

device suitable for displaying month, day, hour, minutes, and day of the week

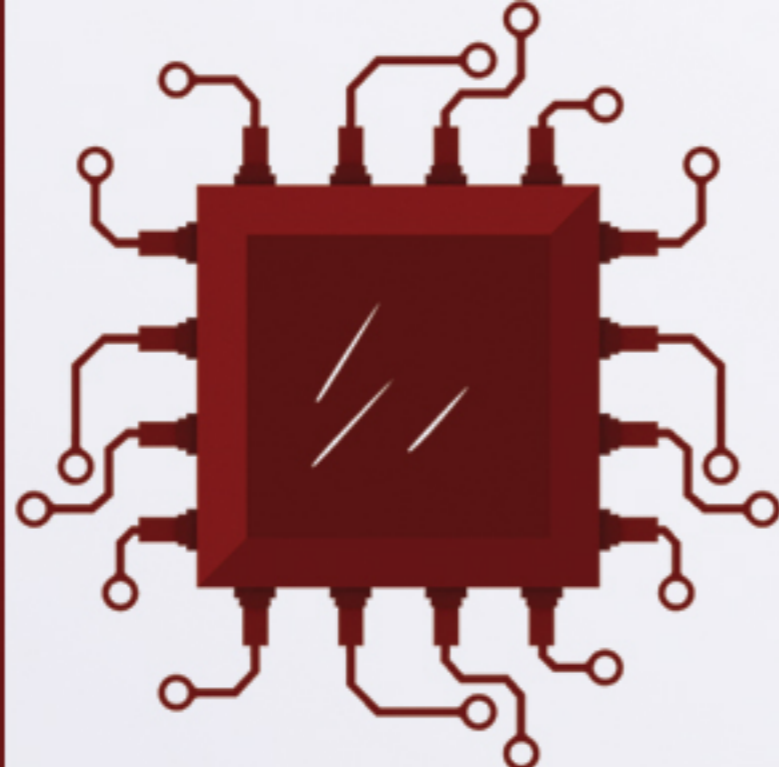
Setting:

first press the P+ button and hold it for at least 5 seconds. On the display the "----" characters will appear. After those disappear, and the display gets dark, press the ON/OFF button, which is located in the upper right corner of the remote control. You will get into the menu, where you can set the different parameters of the display. The following chart shows your options.



Parameter	Abbr.	Range	Notes
Year	RO	0 ÷ 99	
Month	ME	1 ÷ 12	
Day	DE	1 ÷ 31	
Hour	HO	0 ÷ 23	
Minute	MI	0 ÷ 59	
Brightness	JA	0 ÷ 9	0 - min; 9 - max
Length of displaying time	CH	2 ÷ 50	in seconds
Length of displaying date	CM	0 ÷ 50	0-date is not displayed
Length of dis. temperat.	CT	0 ÷ 50	0-temperature is not displ.
Automatic brightness	AJ	0 ÷ 1	0- manual,1- automatic
Settings of thermometer	Oo	-9 ÷ 9	correcting displ. temp.

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**WORLD
CLOCK**

20

Tokyo	New Delhi	Moscow	Bratislava	New York	San Francisco
21:27	17:57	15:27	14:27	08:27	05:27

Description:

displays times from three different time zones (more clocks can be included upon request - see above). The first clock shows the reference time, the other clocks are set based on this one. For example to set the second clock +6 hours forward, you need to set the H1 parameter to 6. To set the third clock -3 hours backwards, you need to set the H2 parameter to -3.

Parameter	Abbr.	Range	Notes
Year	RO	0 ÷ 99	
Month	ME	1 ÷ 12	
Day	DE	1 ÷ 31	
Hour	HO	0 ÷ 23	
Minute	MI	0 ÷ 59	
Brightness	JA	0 ÷ 9	0 - min; 9 - max
1.clock setting	H1	0 ÷ 23	
2.clock setting	H2	0 ÷ 23	

Setting:

first press the P+ button and hold it for at least 5 seconds. On the display the "----" characters will appear. After those disappear, and the display gets dark, press the ON/OFF button which is located in the upper right corner of the remote control. You will get into the menu, where you can set the different parameters of the display. The chart shows your options.

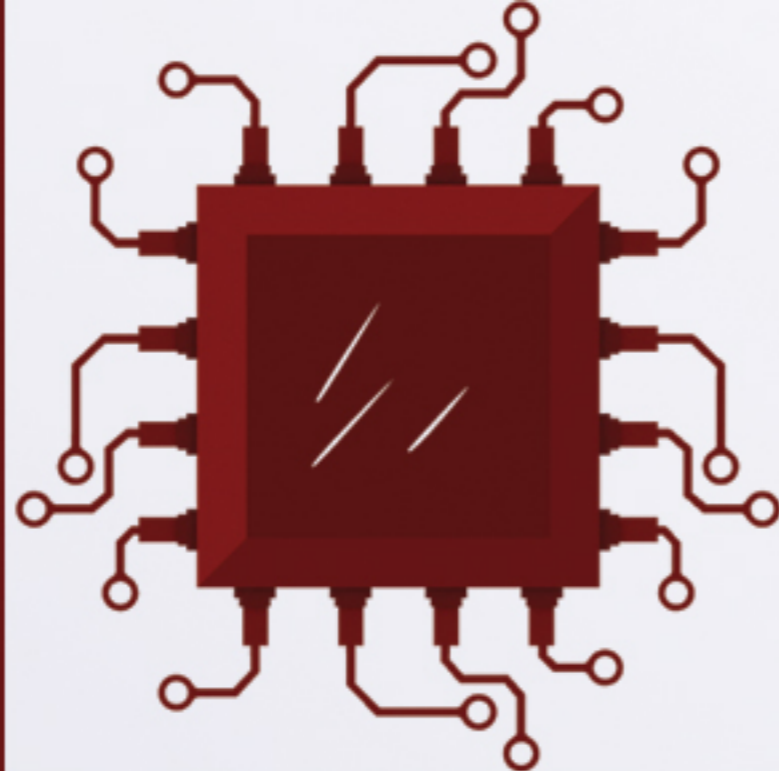
Power supply:
230 V AC / 3A through adapter

Operating temperature:
-20+40 °C

Mounting:
on wall



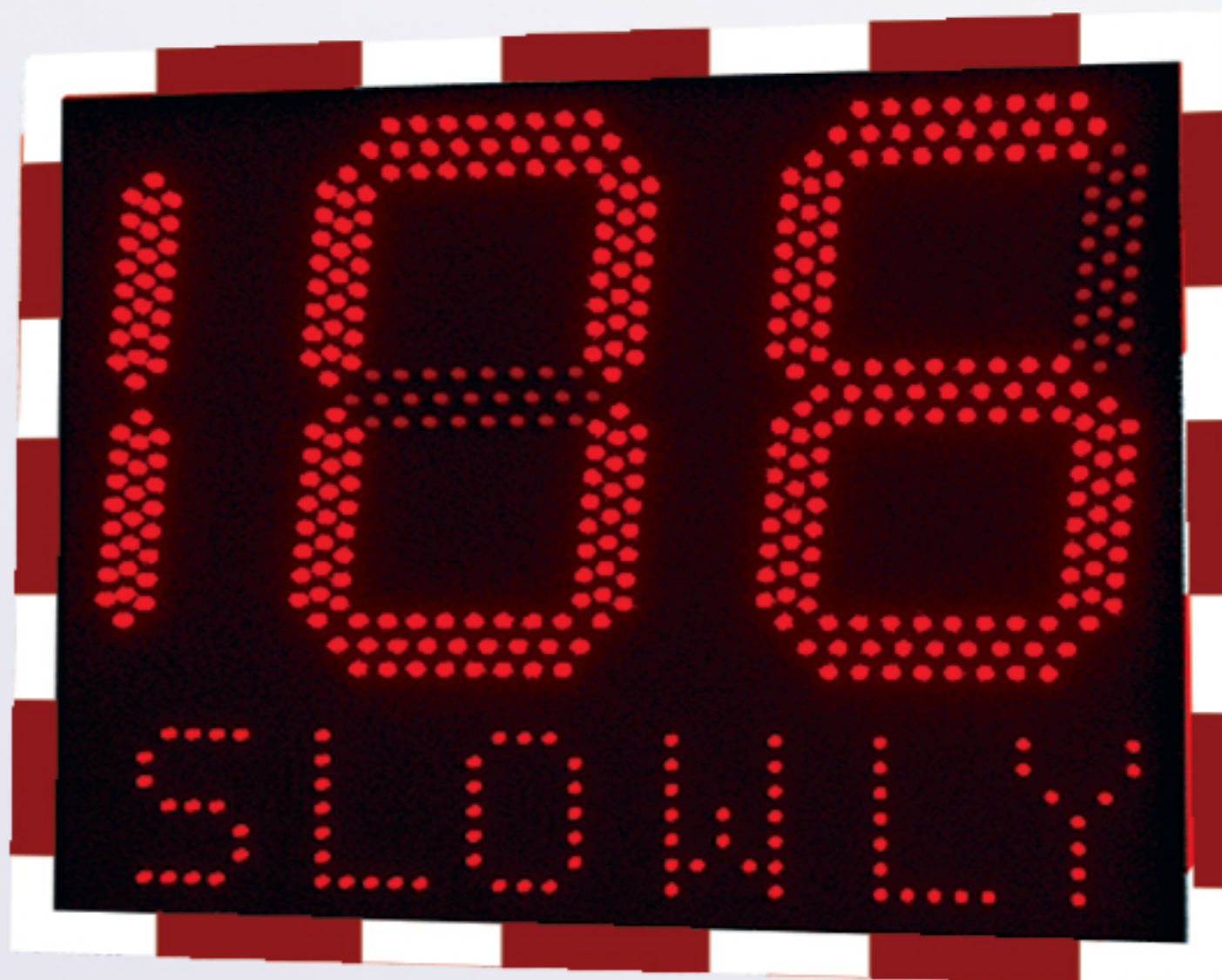
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VELOCITY MEASURING SYSTEM RD300

21

THE GOAL OF THE DEVICE IS TO INFORM THE DRIVER ABOUT THE SPEED OF HIS VEHICLE, AND BY CAUSING A PSYCHICAL PRESSURE, FORCE HIM TO SLOW DOWN.

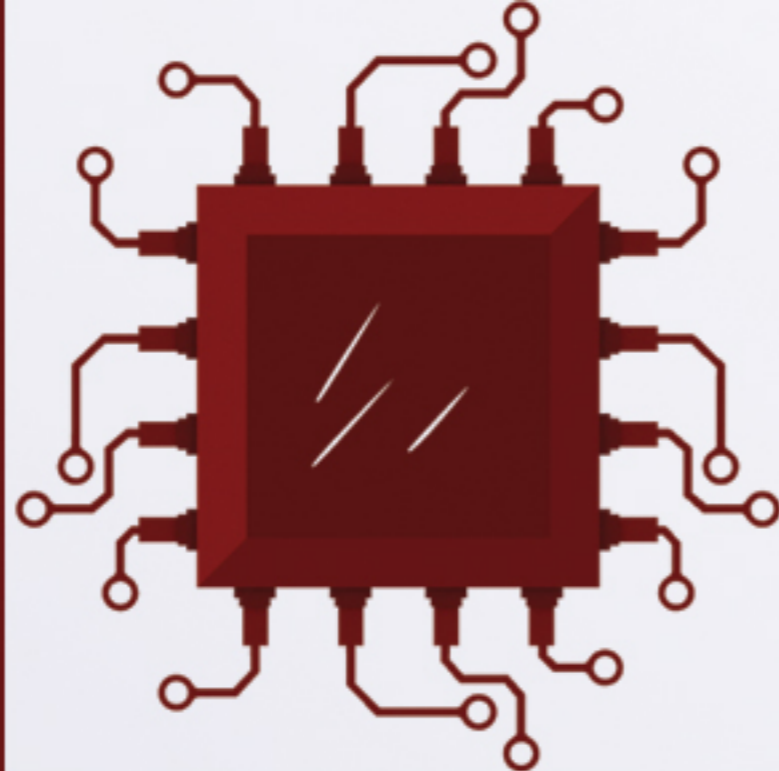


Height of numbers:	300/450 mm
Range:	to 150m
LED:	high brightness, 40x120 degrees
Communication:	Bluetooth
Size:	520x520x30 / 720x720x30mm
Accuracy :	± 2 km/h
Brightness:	automatic, depending on ambient light
Radar:	Doppler, 24.0 GHz, K-Band
Mounting:	C profil
Operating temperature:	-20°+60°C
Internal memory:	2.500 hours (>100 days)
Supply voltage:	230 V AC, solar set
Recorded values:	Greatest speed in every hour Average speed in every hour Number of vehicles recorded per hour Number of vehicles recorded per hour, which did not slow down

The device measures the velocity of vehicles and displays the measured value on a LED display. It is suggested to mount it at places, where the speed limit is often violated. The measured data are saved to the system's internal memory. The data can be acquired via Bluetooth, and can be analyzed on PC. The display shows three numbers and the text SLOWLY.



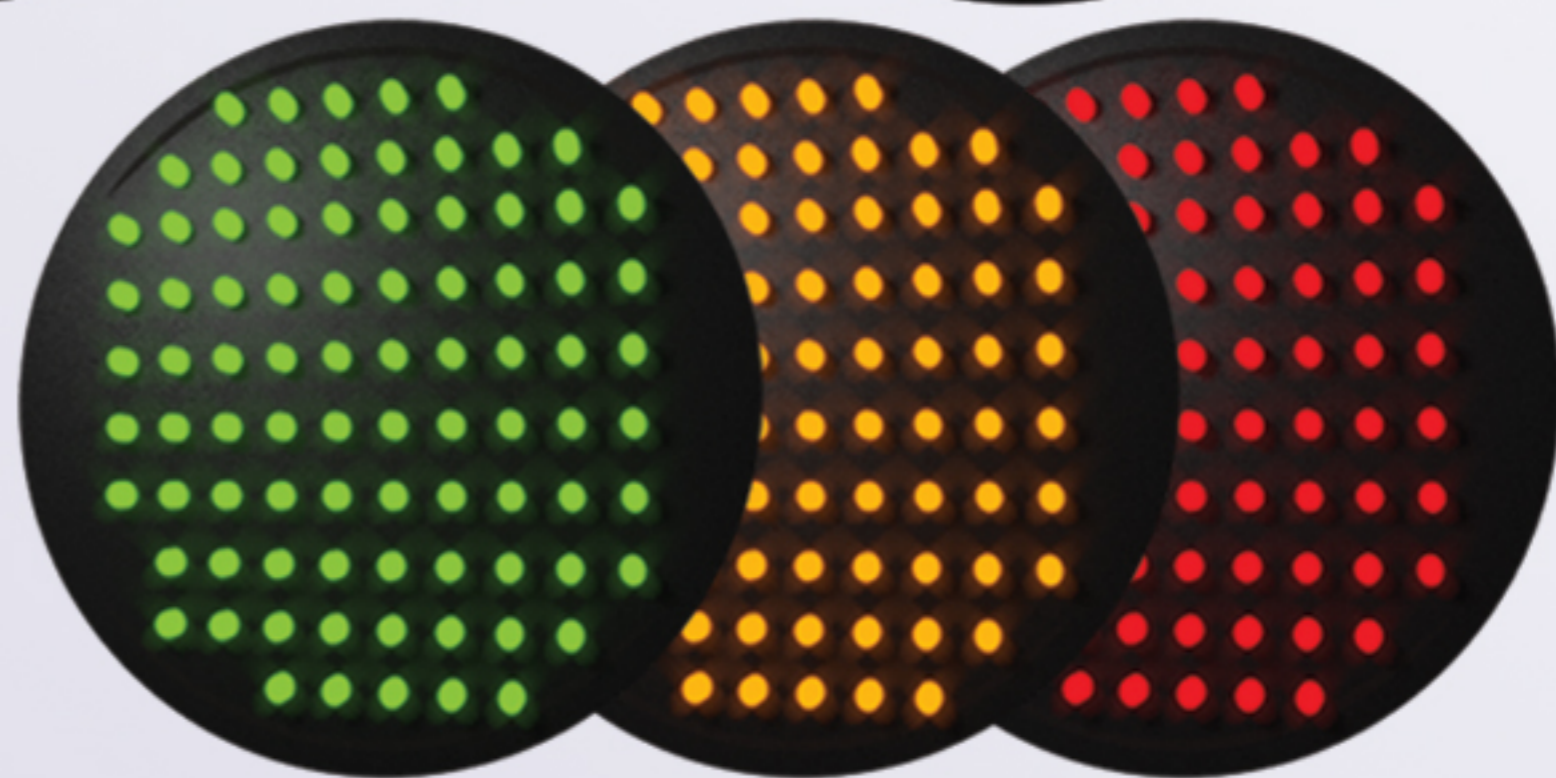
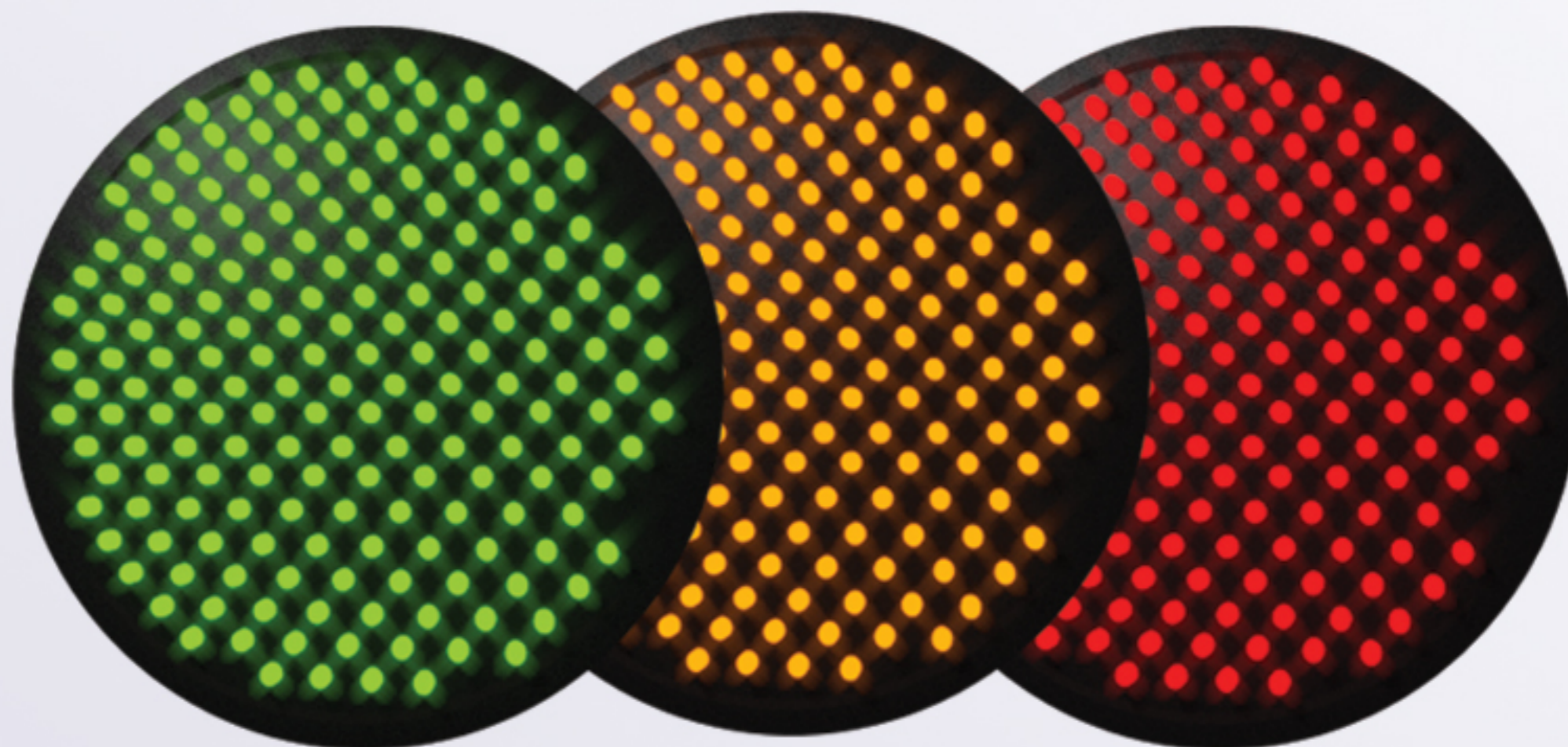
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TRAFFIC LIGHT MODULES

22

Standard traffic light modules



Diameter: 200 mm, 300 mm
Color: red, green, orange
Power supply: 12V - 13.8V
LED: high brightness
Material: lacquered connections;
suitable for outdoor use
Operating temperature: -25 + 60 °C

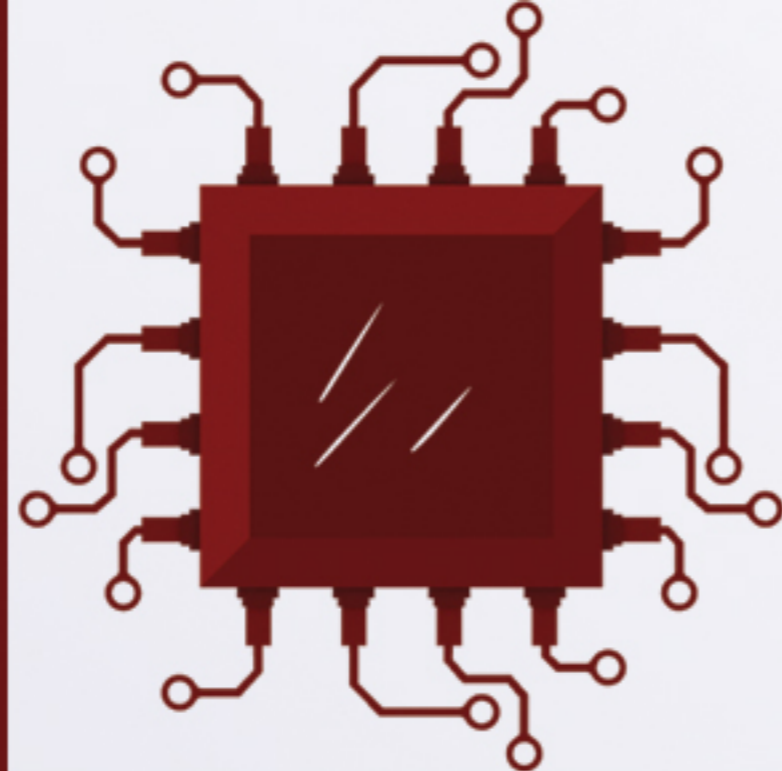
Countdown traffic light module

Description: *Can be used as a substitute for the yellow module in three colored traffic lights. It measures how long the red light is turned on, then in the next cycle it counts down in seconds during that period. If the red is turned on for more than 99 seconds, the countdown is slowed down. On the module all LEDs can be turned on at the same time, in that case it functions as a standard yellow module.*



Material:
lacquered connections; suitable for outdoor use
Power supply:
from the master module
Controlling:
NPN, PNP, +12V
Operating temperature:
-25 + 60 °C
Brightness:
automatic,
depending on ambient light
Diameter:
200 mm

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COUNTDOWN DISPLAY ZC200

23



Description: *the display counts down to a given date, for example to the end of a construction, or a politician's term of office. It displays the remaining days (from 99), hours, minutes and seconds. The date, to which the display counts down, can be set from the menu. After the project is finished, the display can switch to standard clock mode.*

Setting: *First press the P+ button, and hold it for at least 5 seconds. On the display the "----" characters will appear. After those disappear and the display gets dark, press the ON/OFF button which is located in the upper right corner of the remote control. You will get into the menu, where you can set the different parameters of the display.*

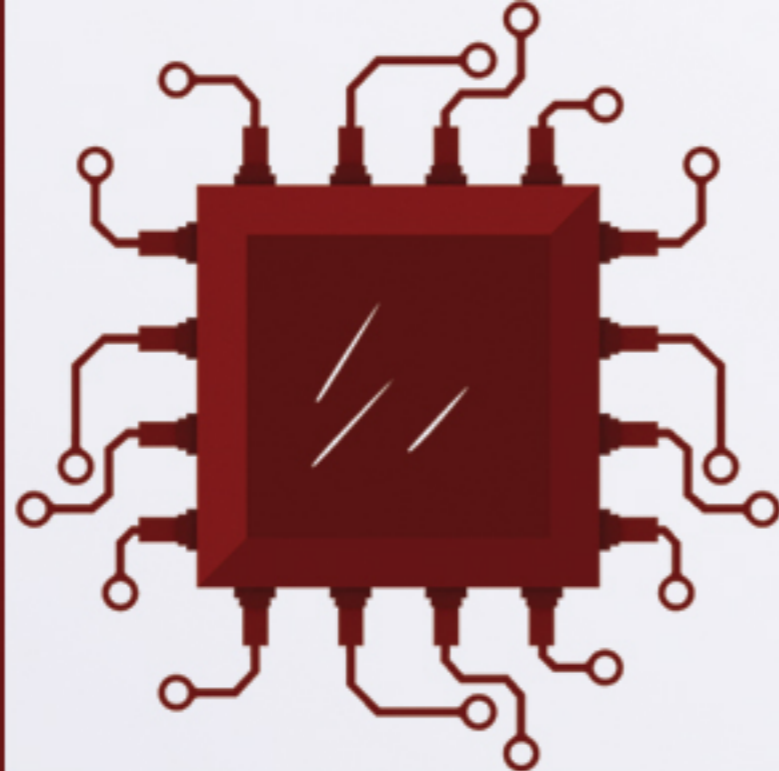
Size: 1300 x 230 x 50 mm

Setting: *by infrared remote control*

Power supply: 12V/50W

Brightness: *automatic setting*

Parameter	Abbr.	Range	Notes
Year	RO	0 ÷ 99	
Month	ME	1 ÷ 12	
Day	DE	1 ÷ 31	
Hour	HO	0 ÷ 23	
Minute	MI	0 ÷ 59	
Brightness	JA	0 ÷ 9	0 - min; 9 - max
Goal month	GM	1 ÷ 12	counts down to this date
Goal day	Gd	1 ÷ 31	counts down to this date
Goal hour	CH	0 ÷ 23	counts down to this date
Mode	rC	0 ÷ 5	0 - countdown, 1 - standard
Automatic brightness	AJ	0 ÷ 1	0 - manual, 1 - automatic

**KHA
MON**

INFORMATION DISPLAY WITH SPEAKER KTS 3X4

24

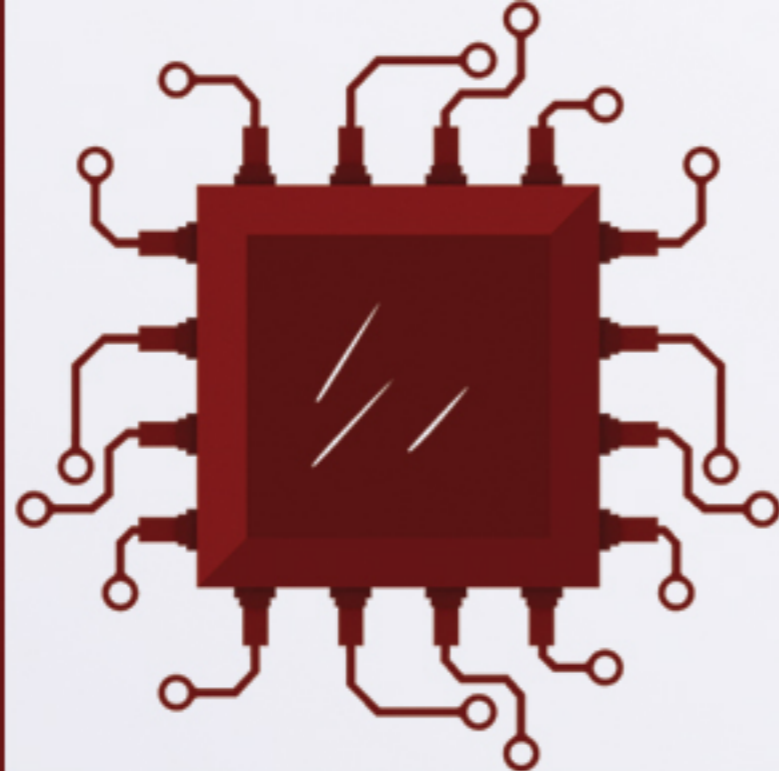
On the production line, it displays the number of finished, and the number of planned products. It can be connected to different control units, through different communication lines. Part of the display is a sound card, to which a 10W speaker can be connected. It can play different melodies, as ordered by the control unit. New melodies can be loaded to the device by a simple PC software. Upon orders from the control unit, given numbers are shown on the display, and given melodies are played.



<u>Size of display:</u>	500 x 650 x 50 mm
<u>Size of speaker:</u>	170 x 150 x 110 mm
<u>Power supply:</u>	12 ÷ 24V / 30W
<u>Format of melodies:</u>	*.wav
<u>LED segments:</u>	red 100 mm
<u>Casing:</u>	for indoor use
<u>Communication line:</u>	Ethernet, RS485, CAN, RS232
<u>Communication protocol:</u>	ASCII, MODBUS ASCII, MODBUS RTU, as requested



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**INFORMATION
DISPLAY OT1**

25

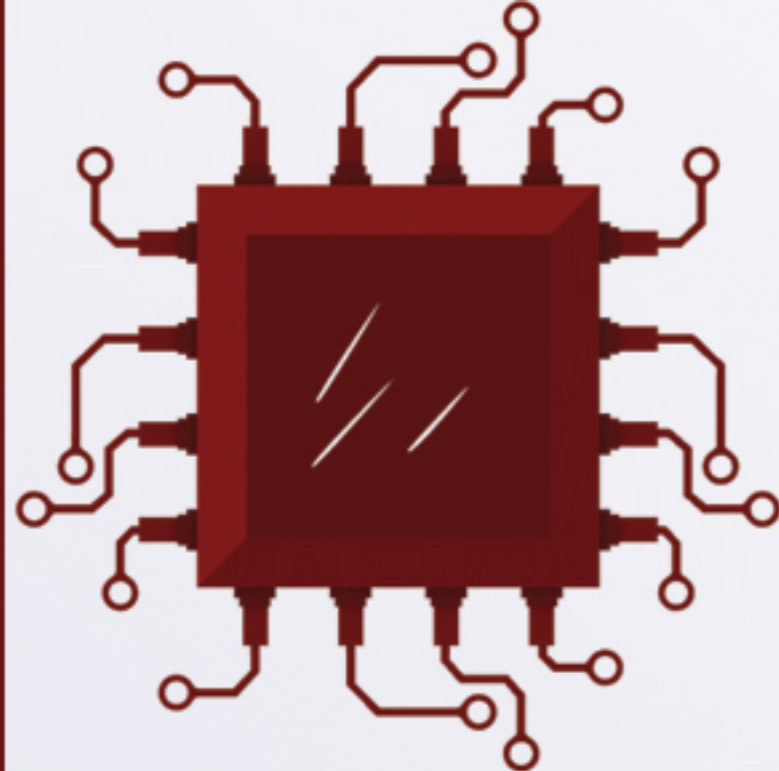


Description: *Displays values measured by different thermometers (DS18B20, PT100) simultaneously showing the number (location) of the thermometer.*

It operates in different modes:

- 1. Independently, displaying values from 8 thermometers, directly connected to the display.**
- 2. Based on extern orders, through galvanically separated binary inputs. The values of temperatures are read by a 4-20 mA input. Befor the device shows the next temperature, it makes 10 measurements in 100 ms, counts the average, and displays it.**
- 3. controled by RS485, Ethernet, CAN (MODBUS ASCII, MODBUS RTU, ASCII protocol)**

Power supply:	230 V/ 24V / max 20W
Casing:	suitable for indoor/outdoor use
Brightness:	automatic setting
Size:	1000 x 300 x 50 mm
Operating temperature:	-20 +50 °C

**KHA
MON****FERRY
DEPARTURE
TIMES OK6****26**

The device was developed for Vodohospodárska výstavba a.s. company. It shows the departure times of the ferry between Vojka - Kyselica on the river Danube, simultaneously displaying the current time, and temperature. 13 displays are placed in the surrounding towns. Most of the displays are powered by a solar set and battery, or are connected to 230 V.

The current time, temperature, and departure times can be actualized from the head office through GSM net.

Mounting: outdoor

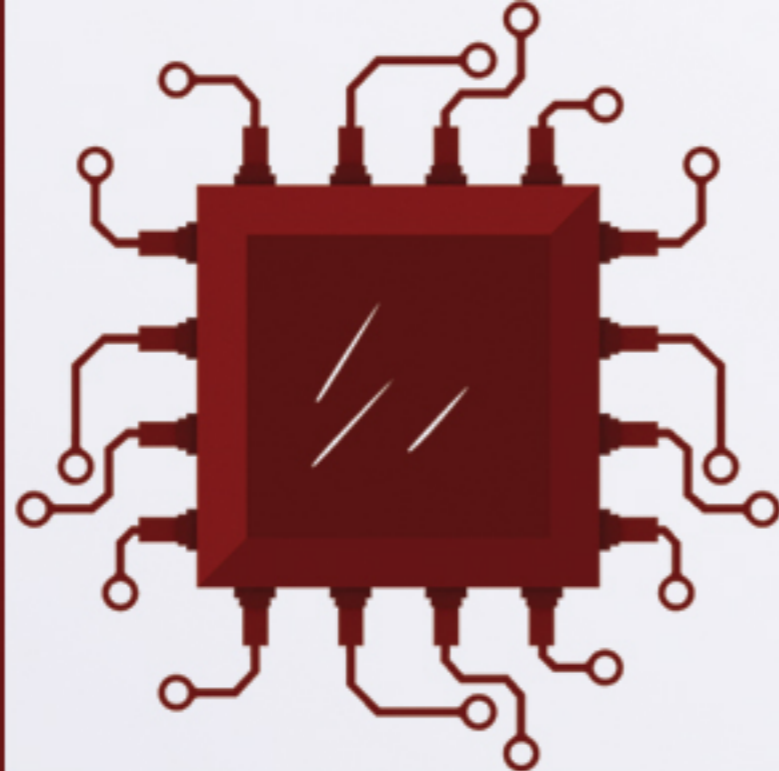
LED: yellow, 130 x 40°

**Power supply: solar set
and battery / 230 V**

Size: 1000x1200x30 mm



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EXCHANGE RATE DISPLAY BOARD

27

Operating temperature:

-10 + 50 [°C]

Size: customized

Communication: RS232 canon9 connector, radio channel, RS485, Ethernet, Modbus

Power supply: 230V AC / 50W

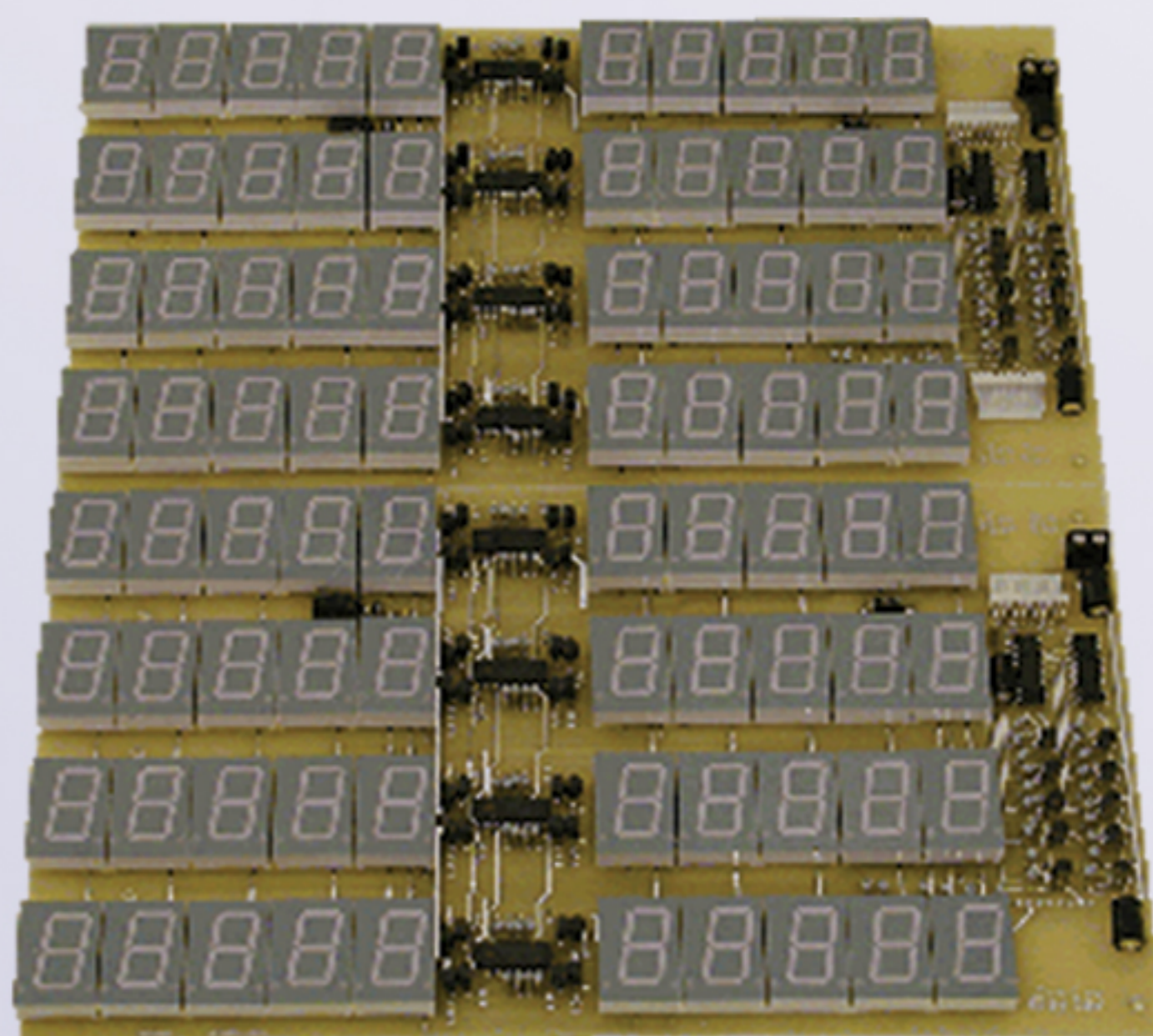
Extras: special software and hardware elements can be connected to the device upon request

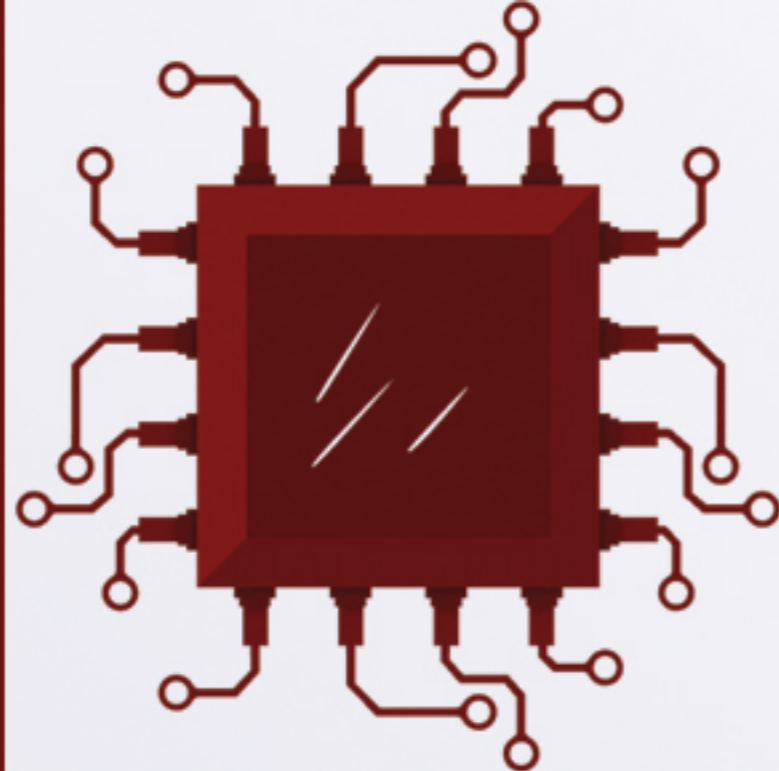
Description: Displays the values of currencies for purchase and sale. It consists of high brightness LED segments. The device is made in different shapes and sizes for individual orders, size of the segments also varies. The electronic element shown on the picture was part of a display board made out of stainless steel. Part of the device is also an operation unit, which can be connected to a PC, and controls all the functions of the display board.

**LUDOVÁ BANKA
VOLKSBANK**

	DEVIZY:		VALUTY:	
	NÁKUP:	PREDAJ:	NÁKUP:	PREDAJ:
AUSTRALIA	148	137	148	137
ČESKO	2702	2308	2702	2308
DÁNSKO	744	686	744	686
JAPÁN	11331	9837	11331	9837
KANADA	145	121	145	121
MADRAKSO	30905	30193	30905	30193
NÓRSKO	925	911	925	911
ŠVAJČIARSKO	109	100	109	100
SVÉDSKO	947	918	947	918
USA	112	104	112	104
UK	085	074	085	074
HORVÁTSKO	745	730	745	730

DÁTUM: 2608 ČAS: 1857





1. Serial number display

Description: suitable for displaying two digit serial numbers

Power supply: 10 ÷ 30 V / 1 W

Communication: RS485 or ETHERNET (ASCII, MODBUS protocol, or as requested)

Material: plastic casing, red plexiglass, IP55

Size: 90 x 75 x 40 mm



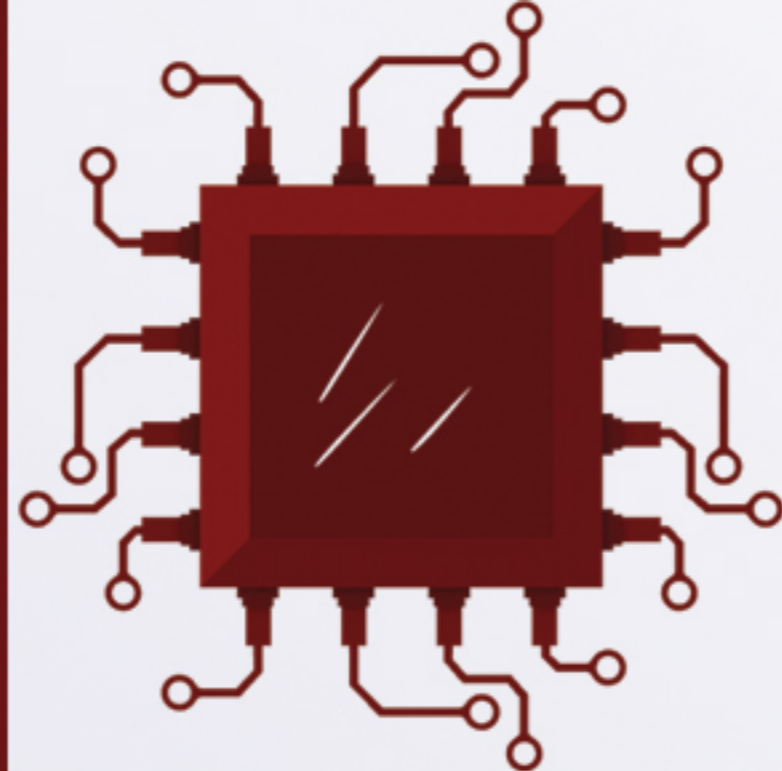
2. Display for measurement units (kg, t, °C, %Rh, pieces, ...)

Description: suitable for industrial use. Displays are made of eloxed aluminum, komatex modified metal, or stainless steel. Suitable for indoor use, LED segments are 100 mm in height. The given measurement unit (kg, t, °C, ...) is either printed out or displayed in digital form. Communication is through RS485, ETHERNET, CAN (ASCII, MODBUS protocol, or as requested).

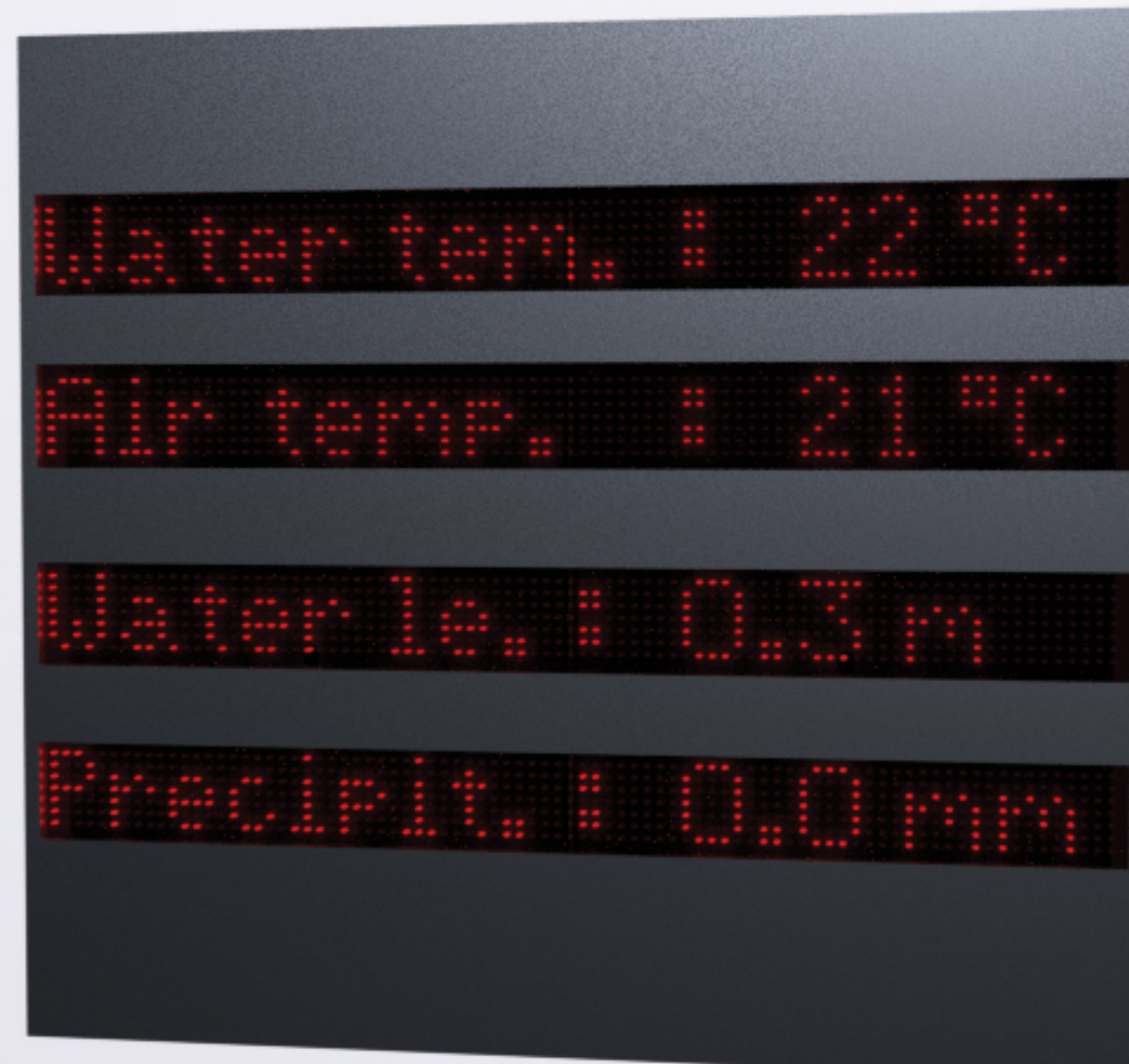
3. Humidity, temperature

Description: suitable for displaying temperature and relative humidity. It can be placed at different institutions like banks, schools or stations. Displays are made of eloxed aluminium, or iron and komatex. The front of the display is covered with plexiglass, or any special glass upon request. Height of the LED segments is 100 mm. Power supply is 230 V or 12 V. The device which measures temperature and humidity is an IC set device from Sensirion company. It can be made out of high brightness LED, if planned to use outdoors.



KHA
MONMETEOROLOGICAL
STATION

29



The display shows the temperature of the water, the temperature of the air, the amount of precipitation, and the water level in the river. There are two displays on each side of the device looking to the opposite direction, as shown in the picture. The characters on the side facing the river are larger, so that they are visible from the opposite shore, while the characters on the other side are smaller. The water level is measured by a tensiometric sensor. The display consists of high brightness red LED segments. The casing is made out of stainless steel. The device has an internal memory, to which all the measured data is saved in every 10 minutes. At the end of the day all the data is forwarded to the central PC through GSM connection.

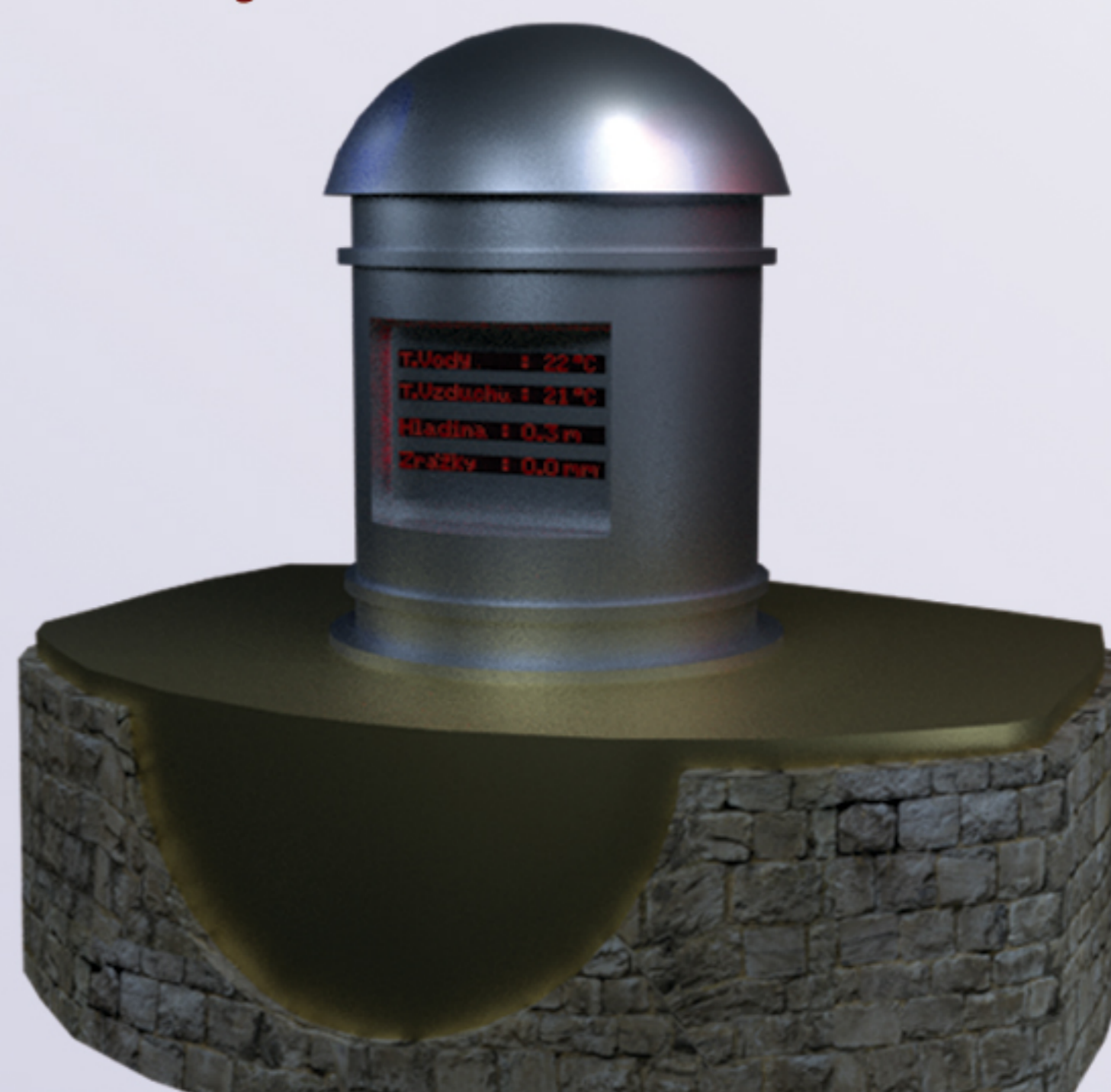
Power supply: 230 V or solar set

Size: diameter 1500 mm, height 2000 mm

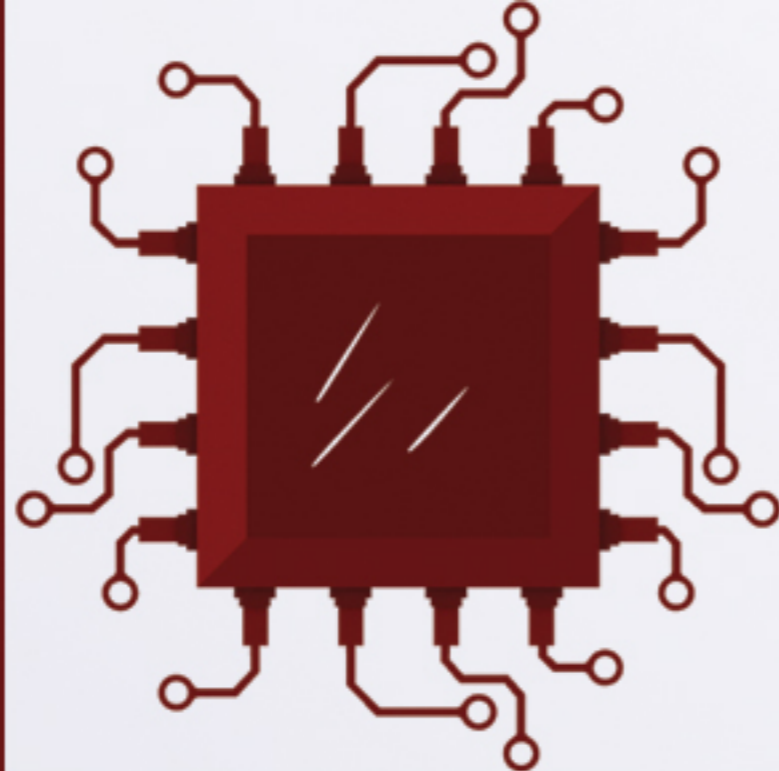
Extras: measuring atmospheric pressure, relative humidity, wind direction and wind speed, intensity of sunlight; displaying exact time, name-days based on date

Design: customized product

Character size: from 100 mm to 200 mm



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VOICE MAP

30

Part of the device is a town map with LED, showing the locations of monuments and interesting places. It can be used for advertisement purposes as well.



Town map: green, red and blue LEDs
Advertisements: paid ads, locations of the companies are also shown by LEDs on the map

Material: aluminium, vandalproof glass, for external use

Operating: vandalproof keyboard

Size: 2500 x 1200 x 2000 mm

Sound: 2x20W, stereo, talks about the places in different languages

Data: saving on USB drive, which can be connected to a PC

Controlling: optional through GSM net

Power supply: 230 V AC or solar set

Operating temperature: -20 + 50 [°C]



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