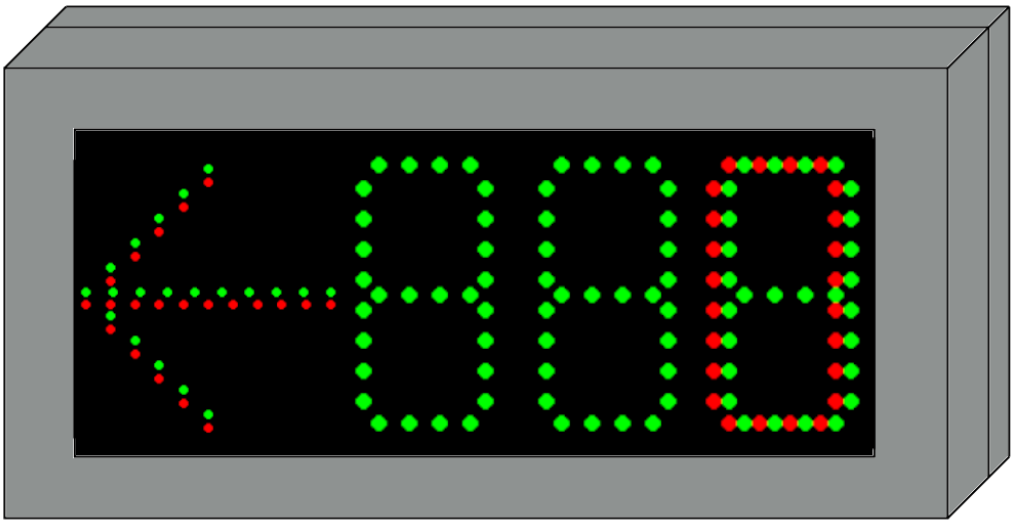
COMPONENTS OF PARKING GUIDANCE SYSTEMS

ZM30A, 3-digit residual space display with red „0“ and arrow



Function

The LED-display informs about the free spaces in a parking garage. After reception of the display data on the RS485 Interface, the sign shows the information of available parking spaces and the direction, where to find them. The integrated brightness control continuously adjusts the display, so that it will not glare in the night, but is on the other hand readable in direct sunlight.

Casing

The casing consists of powder-coated aluminum. Dependent on the mounting, there are two cable glands (for power and data) on the top- or back part of the casing. It can be mounted on walls, pillars or ceilings with on site mounting brackets. The slim dimension of the casing and the low weight allows the mounting on the optimal position.

Connection

The electrical connection of the LED-display is realized by a 3-wire power cable and a 2-wire data cable for communication with the CUR Visual Control Software. The protocol is disclosed, so that other manufactures can control the LED module by their own system.

Technical data

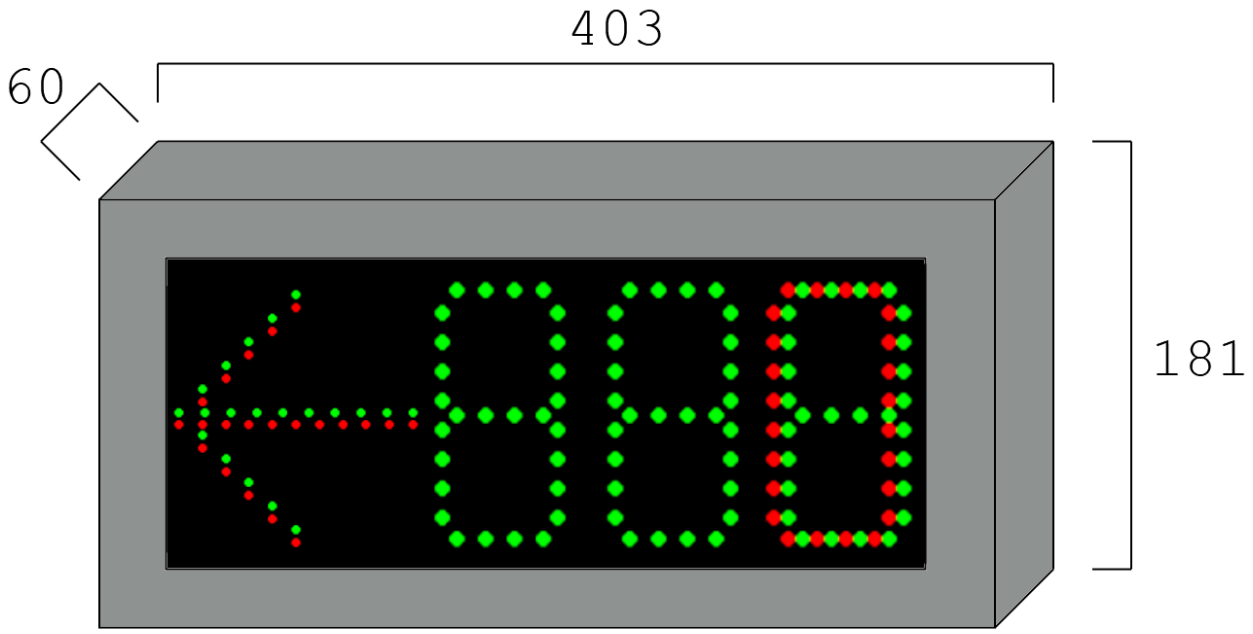
Power supply:	88 - 264 V AC Internal: 12 V DC
Operating temperature:	-20°C - +70°C
LED-color:	Digits: green (522 nm) 0: red (622 nm)
Luminous intensity:	max. 350 Cd
Radiation angle (I/2):	100° horizontal 40° vertikal
Power consumption:	< 10 W
Casing:	Powder-coated aluminum
Case color:	RAL7042
IP-protection class:	IP20 (Module) IP43 (Indoor casing) IP54 (Outdoor casing)

Options:

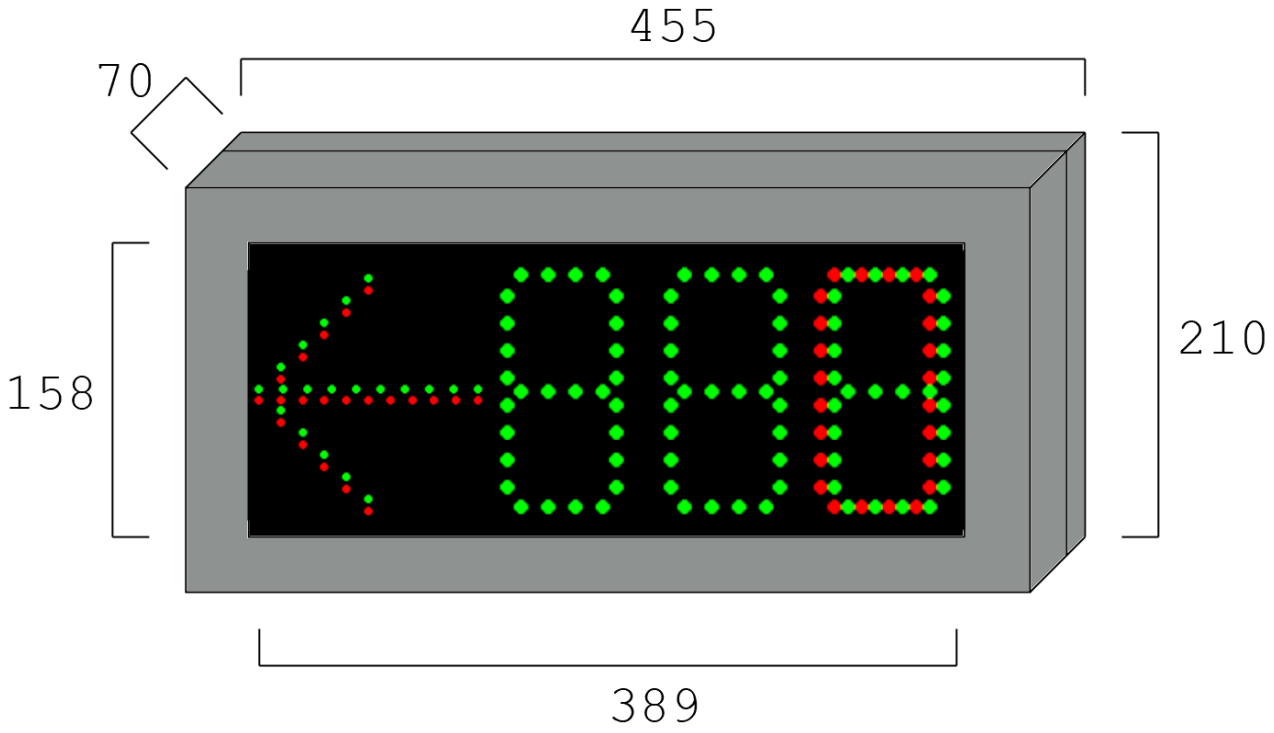
- Arrow direction selectable
- LED color selectable
- Case color selectable (RAL-color)

Country of origin Germany

ZM30A indoor casing



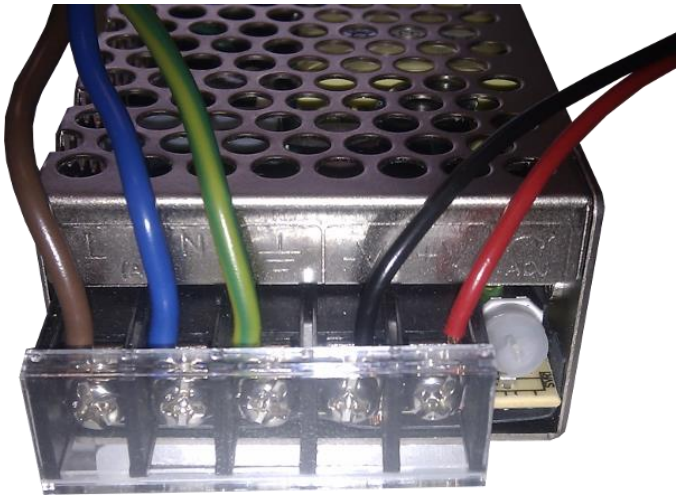
ZM30A outdoor casing backward to open



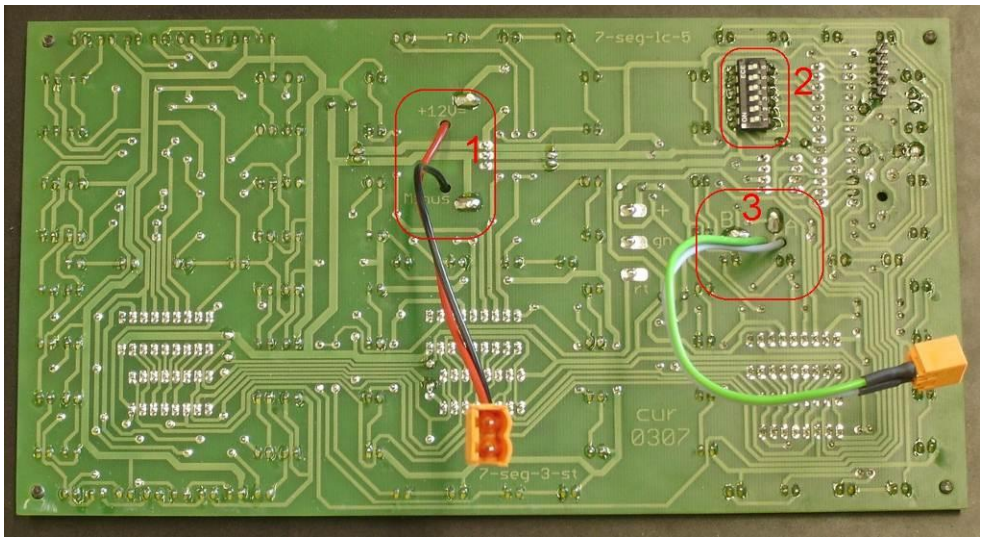
ZM30A outdoor casing forward to open

Connections on the power supply

1 – AC/L
2 – AC/N
3 - Ground
4 – DC GND
5 – DC +12V
6 - Potentiometer to adjust the basic brightness



Connections on the circuit board



1 – Power supply (12V)
2 – Dip-switch for address configuration
3 – RS485
- **grey → A**
- **green → B**

DIP - switch for address configuration

Switches 1 to 5 set the display’s address using binary code (0 to 31). Switch 6 has to be turned off (0 = OFF).
Binary coded addresses

Switch 12345	Address	Switch 12345	Address	Switch 12345	Address	Switch 12345	Address
00000	0	00010	8	00001	16	00011	24
10000	1	10010	9	10001	17	10011	25
01000	2	01010	10	01001	18	01011	26
11000	3	11010	11	11001	19	11011	27
00100	4	00110	12	00101	20	00111	28
10100	5	10110	13	10101	21	10111	29
01100	6	01110	14	01101	22	01111	30
11100	7	11110	15	11101	23	11111	31

When switch 6 is switched on (1 = ON), it activates various tests and can be useful in starting operations and applying maintenance.

Switch 12345	Function
00000	Demobetrieb
10000	Display ambient brightness
01000	Display „888“ with max. brightness
11000	Display red „0“ with max. brightness
00100	Display off

Mounting and Commissioning

- Open casing
- Drill suitable mounting holes in back part of casing
- Mount backside on the wall/pillar/ceiling and connect power supply
- Configure address via DIP-Switch
- Connect data cable and mount display front to the backside of casing.

Cover the power supply while drilling holes in the back part. Steel shavings inside the power supply can lead to short circuits, malfunctions and electrical shocks.
If the display is controlled by RS485, it will shutdown after 20 minutes without any data exchange via RS485.