

# LARGE SIZE DIGITAL DISPLAYS

## DL11, DL12, DL13 types



### Communication:

- interface RS-485
- transmission protocol MODBUS

### Reaction against decay and supply recovery:

- preservation of configuration data in the display

### Protection grade ensured by the housing

IP 40

### Dimensions:

DL11	482 × 196 × 41 mm
DL12	482 × 368 × 41 mm
DL13	482 × 540 × 41 mm

### Environmental and rated operating conditions:

- ambient temperature 0...23...50°C
- storage temperature -20... 75°C
- humidity 25... 95%
- supply 85...230... 253 V a.c.
- frequency 45...50...60 Hz
- external magnetic field 0...40...400 A/m.
- working position any

### Standards fulfilled by the panel:

#### Electromagnetic compatibility:

- noise immunity acc. to EN 61000-6-2
- noise emissions acc. to EN 61000-6-4
- resistance to supply decay acc. to EN 61000-6-2

#### Safety requirements:

acc. IEC 61010-1+A1 standard:

- isolation ensured by the housing basic
- isolation between circuits basic
- installation category III
- pollution degree 2
- maximal working voltage in relation to earth for supply circuits 300 V and 50 V for others circuits

## 1. APPLICATION

Large-size digital displays of DL type are destined to display measured values or set values through the communication interface. Taking in consideration the application of 7-segment LED display they are destined to be installed inside buildings.

The 100 mm digit height ensures a good readout from the distance of 40 m.

They find application in office accommodations, production workshops, in production management rooms as information about production parameters, state of machines or devices. The displayed value is transmitted from external devices working in MODBUS standard. The display is working as the network „master”. The basic display version includes three digits and the unit, in two rows or three rows. It is possible to make the display in the configuration required by the customer.

## 2. DIGITAL DATA

### Readout field:

#### Digit height: 100 mm

- DL11** one row of 3 digits + unit field
- DL12** two rows of 3 digits + unit field
- DL13** three rows of 3 digits + unit field

#### Colour of the readout field:

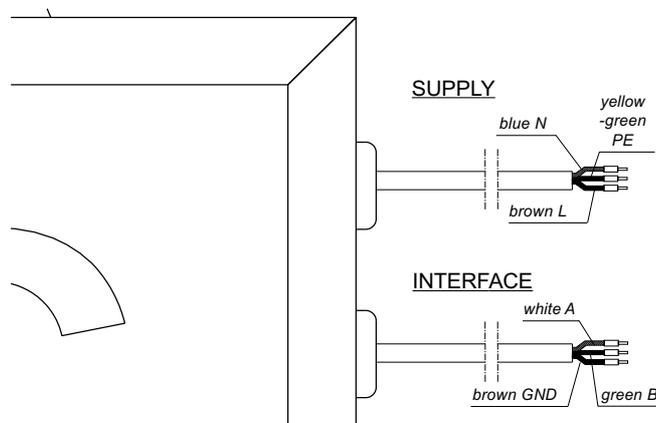
red, green and yellow - possibility of colour combination for DL12 and DL13

### Power consumption:

- DL11 < 12 VA
- DL12 < 24 VA
- DL13 < 36 VA

## 3. ELECTRICAL CONNECTIONS

Wires of 1 m long for the connection of the supply and display control signals are led out from the lateral housing side.



Markings of connectors for DL11, DL12, DL13:

- supply 3 × 0.75 mm<sup>2</sup> [L, N, PE],
- interface 3 × 0.34 mm<sup>2</sup> [A, B, GND].

Fig. 1

#### 4. DESIGN DESCRIPTION AND INSTALLATION

The display housing is made of profiles and aluminium sheets, painted in black colour. The frontal surface is made of polycarbonate as an anti-reflexive glass. The protection degree ensured by the housing is defined as IP40.

The view and overall dimensions of DL11, DL12 and DL13 displays are presented on fig. 1, 2 and 3.

The design enables to fix the display on a wall.

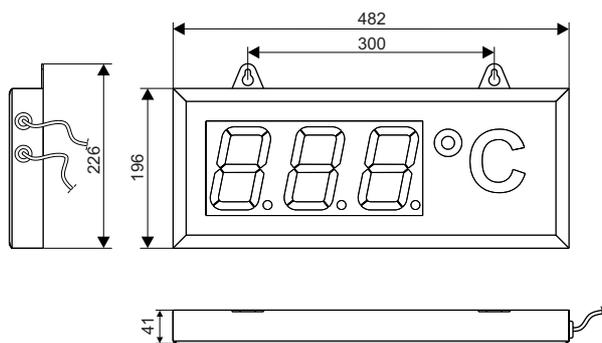


Fig. 2. overall dimensions of the DL11 display.

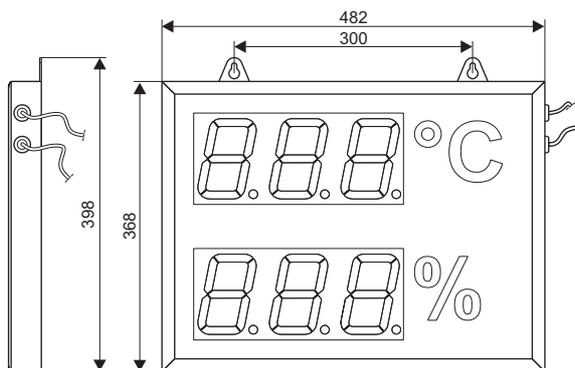


Fig. 3. overall dimensions of the DL12 display.

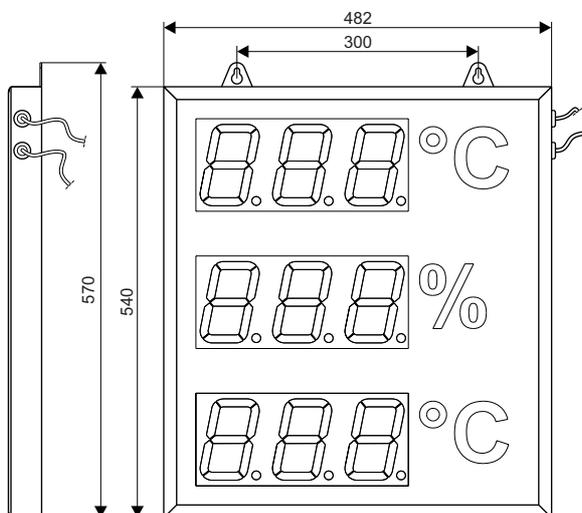


Fig. 4. overall dimensions of the DL13 display.

#### 5. ORDER CODES

Table 1

DIGITAL DISPLAY	DL11 -	X	XX
<b>Colour of display field:</b>			
Red .....		R	
Yellow .....		Y	
Green .....		G	
<b>Kind of versions:</b>			
Standard .....			00
custom-made* .....			XX

Table 2

DIGITAL DISPLAY	DL12 -	X	X	XX
<b>Colour of the I display field:</b>				
Red .....		R		
Yellow .....		Y		
Green .....		G		
<b>Colour of the II display field:</b>				
Red .....		R		
Yellow .....		Y		
Green .....		G		
<b>Kind of versions:</b>				
Standard .....				00
custom-made* .....				XX

Table 3

DIGITAL DISPLAY	DL13 -	X	X	X	XX
<b>Colour of the I display field:</b>					
Red .....		R			
Yellow .....		Y			
Green .....		G			
<b>Colour of the II display field:</b>					
Red .....		R			
Yellow .....		Y			
Green .....		G			
<b>Colour of the III display field:</b>					
Red .....				R	
Yellow .....				Y	
Green .....				G	
<b>Kind of versions:</b>					
Standard .....					00
custom-made* .....					XX

\* The code number is established by the manufacturer

**Caution:** when ordering, one must give communication parameters of the measuring devices

#### Coding Example

The Code: **DL13 - R Y G 00** means:

**DL13** - Digital display consisting of 3 rows

**R** - digits in the upper are red

**Y** - digits in the middle row are yellow

**G** - digits in the lower row are green

**00** - in standard version

Other versions of displays are possible acc. customer's needs after agreeing with the manufacturer.