

GRAPHICAL DISPLAY PANEL DAZ1 TYPE



APPLICATIONS

Outdoor graphical displays of DAZ1 type are destined to display optional textual or graphic information outside buildings.

The configuration of displayed contents is carried out on the user's computer taking advantages of the dedicated program.

The communication between the user and the display panel is ensured by the communication interface operating in the RS-485 standard with MODBUS RTU transmission protocol. DAZ1 displays modules enable the connection of additional devices equipped with RS-485 interface and the display of measured values by these devices.

The value read out from the device is placed in the display register and this make possible the further readout by master devices, (e.g. computer, PLC controllers, etc.). The panel is equipped with occasional messages (cyclical) what enables the display of textual or graphic messages in definite days and in definite hours, giving the possibility to build a simple information system.

DAZ1 displays give the possibility to display 1024 characters on one textual page. The increase of the number of textual characters is possible thanks to the work in presentation mode, where successive pages are cyclically displayed.

The exposition time is definite for each page and the switching of the scroll on is possible for the given line (row).

The dimensions and configuration of the display field is definite by the user which must only, after the display mounting, define the way to compose the required display. Thanks to the large range of possibilities, DAZ1 displays find application in all industrial branches and everyday life, serving to transmit textual information and to display values originated from external devices.

TECHNICAL DATA

Display dimensions	1280 × 320 × 170 (see fig. 1)
Readout field	128 × 32 pixels
Display digits led diodes:	
- height	80, 160 or 320 mm depending on the number of lines
- colour	amber
Power consumption	< 400 VA.
Resolution	128 × 32 pixels
Brightness	> 4500 cd/m ²

Communication:

- serial interface	2 × RS-485 galvanically separated
- transmission protocol	MODBUS RTU
- serviced functions	03, 16, 17
- data format	8n1, 8n2, 8e1, 8o1.
- baud rate	2,4; 4,8; 9,6; 14,4; 19,2; 28,8; 38,4; 57,6; 76,8; 115,2 [kb/s]
- maximal time to the answer beginning:	< 100 ms

Reaction against decays and supply recoveries:

preservation of configuration data

Protection class ensured by the housing

IP54 and IP65 from the frontal side

Reference conditions and rated operating conditions:

- working temperature	- 20...23...40°C
- storage temperature	- 25...75°C
- air relative humidity	25... 95%
- voltage supply	100...230...253 V a.c.
- frequency	45...50...60 Hz
- working position	vertical, small deviations are admissible. At large deviations, one must apply a protective penthouse over the panel (to protect the fan inlet)

Standards fulfilled by DAZ1 displays:

Electromagnetic compatibility:

- immunity	EN 61000-6-2
- emission	EN 61000-6-4
- resistance against supply decays	EN 61000-6-2

Safety requirements (acc. to EN 61000-1 standard):

- insulation ensured by the housing: basic
- insulation between circuits: basic
- installation category III
- pollution level 2
- maximal phase-to-earth working voltage:
 - for supply 300 V
 - for interface circuit 50 V

Design description and installation

The housing of the DAZ1 alphanumeric display is made of steel and ensures the IP54 protection class. All applied connectors ensure the IP65 leakproofness protection. The display module ensures the frontal IP65 protection class.

DAZ1 display are destined to be installed on a supporting structure using the screwed steel pins fixed on the rear part of the housing.

display overall dimensions and mounting pin spacing are shown on the fig. 1.

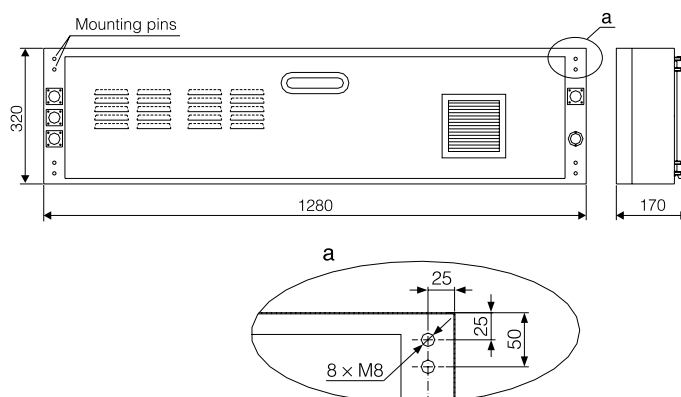


Fig. 1. Display overall dimensions and mounting pin spacing

On the rear side of the display there is a rear opened shield. When mounting the display module, one must ensure a free air circulation and the space to connect signalling and supplying connectors.

The display module is equipped with an electronically controlled ventilation system, which maintains the optimal working temperature inside the display and ensures the protection against overheating of internal systems.

The applied air filter in the ventilation system must be periodically replaced and the necessity to replace this filter must be taken into consideration when installing the display on the site.

The single display module includes the display field composed of LED diodes with a 128 x 32 pixel configuration. All diodes are controlled from individual current sources and the brightness control is based on the change of the diode lighting time coefficient change preserving the fixed current, what in a significant way influences on the LED diode life.

ELECTRICAL CONNECTIONS

All electrical connections are made using separable sockets. The layout of sockets for the version with a controller and without a controller is presented on the fig. 2., however on the fig.3., the description of signals on particular connectors is shown.

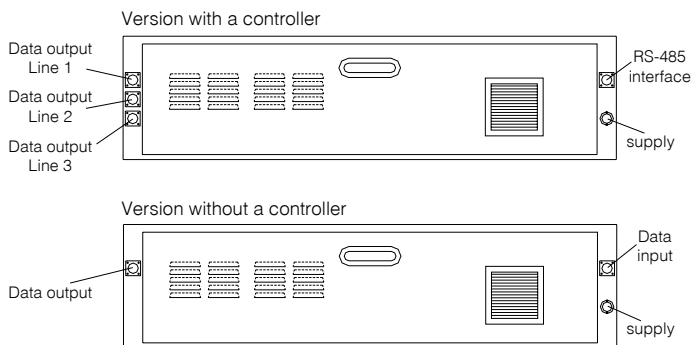


Fig. 2. Lay-out of connection sockets.

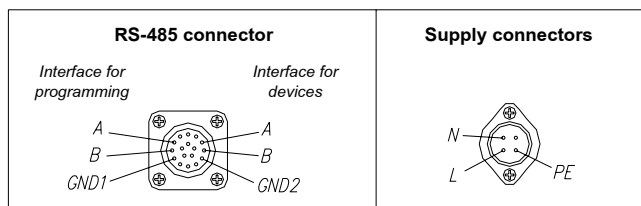


Fig. 3. Leads of signals on connectors.

The display equipped with a controller must be placed in the upper row and on the left side (looking from the panel front). Then, the view of texts on the display in the configuration program will reflect the physical panel view.

Successive display lines are controlled from the display equipped with the controller. In order to ensure the correct transmission, one must connect the beginning of lines with the display equipped with the controller.

The display equipped with the controller can service up to 11 displays without a controller in a configuration composed maximally of 3 lines. An exemplary configuration is presented on the fig. 4.

The connection way of displays between them is presented on the fig.5. Sockets which are not used and data outputs must be protected by means of delivered socket hole plugs.

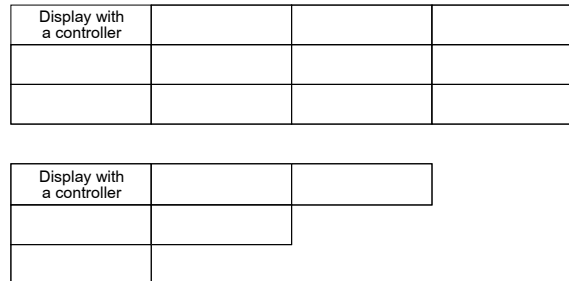


Fig. 4. Exemplary display configuration.

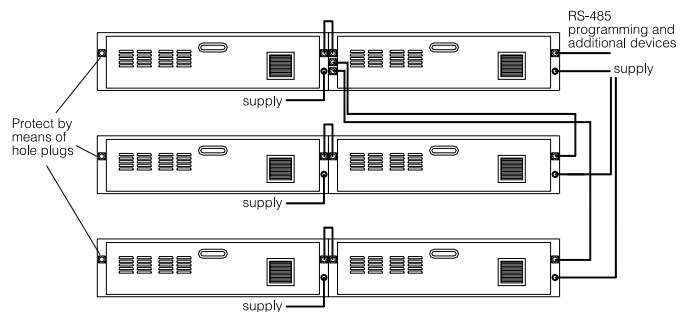


Fig. 5. Example of display connection.

ORDER CODES

GRAPHICAL DISPLAY PANEL	DAZ1 -	X	XX	X
Display type:				
type with a controller - maximal service of 11 displays in version without a controller				1
version without a controller				2
Kind of version:				
standard version acc. to the catalogue				00
custom-made*				XX
Acceptance test:				
without an extra quality inspection certificate				8
with an extra quality inspection certificate				7
acc. to customer's requirement*				X

* the code number will be established by the manufacturer.

Example of order:

Code: **DAZ1 1 00 8** means:
DAZ1 - graphical display panel of DAZ1 type
1 - type with a controller
00 - standard version
8 - without an extra quality inspection certificate

ASSEMBLY ACCESSORIES

The assembly of DAZ1 display panels and connections between panels are possible by means of proposed assembly accessories. Accessible accessories are presented below.

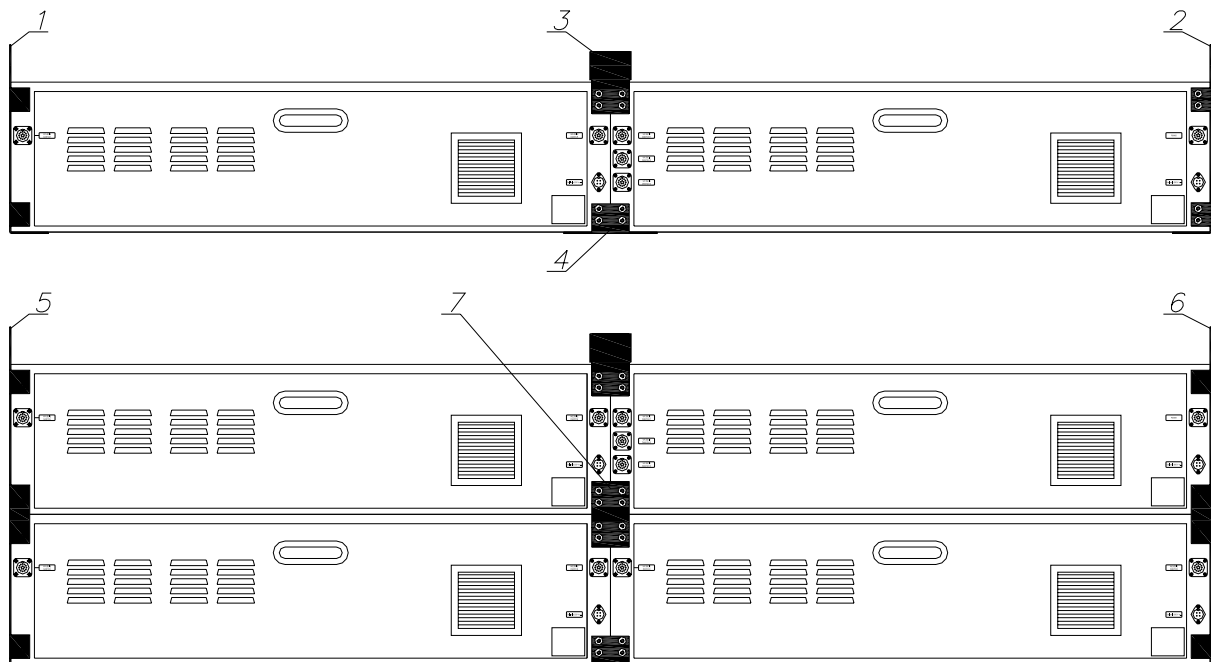


Fig. 6. Assembly accessories.

No	Order code	Description
1	CZ/DAZ1-032/1	Assembly holder to suspend display panels – execution for modules arranged in one row.
2	CZ/DAZ1-032/2	Assembly holder to suspend display panels – execution for modules arranged in one row.
3	CZ/DAZ1-031	Assembly holder to suspend display panels – coupler of panels
4	CZ/DAZ1-033	Assembly holder – lower coupler.
5	CZ/DAZ1-032/3	Assembly holder to suspend display panels
6	CZ/DAZ1-032/4	Assembly holder to suspend display panels – execution for modules arranged in two rows.
7	CZ/DAZ1-030	Assembly coupler – connection of panel corners
8	CZ/DAZ1-040/1	Connection wire – connection of two adjacent modules (ca 0.35 m).
9	CZ/DAZ1-040/2	Connection wire – connection of modules. The long wire to connect, e.g. panel with controller with the second panel row (ca 1.5 m).
10	CZ/DAZ1-041/1	Short interface wire – 1 m. The wire consists of the wire ended by a plug. Meaning of introduced cable conductors: Interface for programming: A – brown colour, B – white colour, GND1 – green colour, Object interface: A – brown grey, B – yellow colour, GND2 – rose colour.
11	CZ/DAZ1-041/2	Long interface wire – 10 m. the wire coloring as above.

Caution: the interface wire is screened. In an environment with a high or unknown noise level, the wire screen must be connected to PE after removing the isolation from the wire in order to ensure a correct screen contact with PE.