



NDT series numerical LED displays are designed for displaying psalm and hymn numbers during religious services. They can be used in other applications as versatile remote-controlled numerical displays.

Features

- Wireless control of display with hand-held infrared (IR) remote control from up to 20 m;
- Wireless control of display with radio module (RF) and/or control display NDT 38/3 R up to 50 m;
- Direct input of a number (3 to 4 digits, according to display format);
- Possibility to display characters (0 - 9, A, b, C, d, E, F, H, P, U, -, space, decimal point);
- Simple increase/decrease of a number with cursor keys (up / down arrows);
- Possibility of alternating hymn and verse numbers;
- Memory for 30 numbers (allows preparation of numbers for the whole service in advance);
- Simple displaying of numbers stored in memory with cursor keys (up / down arrows);
- 2 adjustable brightness levels for day / night mode, switched with a single button (left / right arrow);
- Adjustable period for alternating hymn and verse numbers (in seconds);
- Possibility to interconnect up to 32 devices with a 2-wire cable through a serial interface RS485;
- Unlimited number of displays controlled via radio RF signal (requires installation of RF modules).

The NDT series displays and its accessories are designed with consideration of their usage in simple applications with a single display, or in large-scale systems with several displays. The versatility of the solution allows creating a required final system by gradual extension, not just in terms of the number of connected displays, but also in terms of their control.

Technical specifications

	NDT 38/3	NDT 57/3	NDT 57/4	NDT 100/3	NDT 100/4	NDT 160/3
Height of characters	38 mm	57 mm		100 mm		160 mm
Number of digits	3	3	4	3	4	3
Format	8.8.8.	8.8.8.	8.8.8.8.	8.8.8.	8.8.8.8.	8.8.8.
Readability range	up to 12 m	up to 23 m		up to 40 m		up to 70 m
Type of displaying elements	7-segment superbright LED modules					discreet LEDs
Inputs / Outputs	IR remote control receiver possibility to add module for serial communication RS485 possibility to add module for radio communication (RF kit)					
Power supply	NDT 57/x, 100/x, 160/x – 230 VAC, flexible power cord, length 2 m NDT 38/3 - external adapter 230 VAC/12 VDC, 0,5 A					
Enclosure protection class	IP 30					
Operating temperature	-20 ÷ +40°C					

In the simplest setup, all that is required is a single display and one IR remote control. This setup is suitable for small churches, where the maximum direct distance between display and the operator does not exceed 20 m.

In larger churches and cathedrals, where the distance for controlling display is longer, it is possible to take advantage of wireless RF transmission by using a control mini display NDT 38/3 R RF.

Mini control display is also controlled with a IR remote control, while ensuring a long data transmission via RF (see possible connection diagrams). This solution simplifies and shortens installation of displays.

Displays can be also interconnected with a 2-wire communication line RS485, while any of displays is able to receive control commands from IR remote control. All other displays will show the same information automatically.

Good readability in different light conditions is ensured by ability to adjust display brightness (day/night mode).

The ELEN, s.r.o. company makes strong emphasis on design and workmanship of its products. This is the reason why frames of these displays are made of round aluminum profiles with special surface finish or robust hardwood oak. Aluminum frames are of gold color, but other colors (platinum matt grey, silver, white, black, or other) are also available on special order for extra fee.

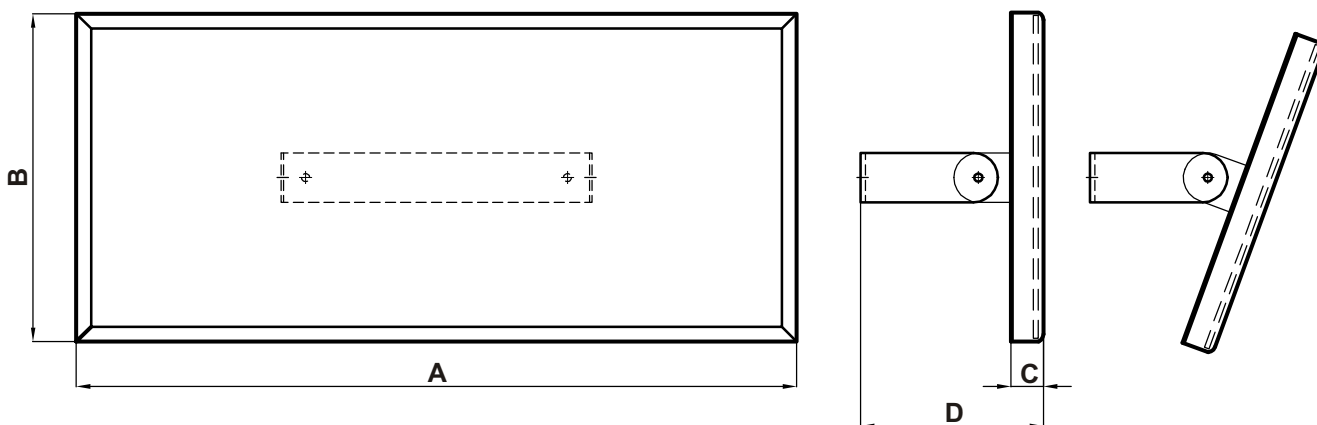
Standard accessories:

- Tilting installation console;
- Mounting kit (screws + fasteners).

Optional accessories:

- Handheld IR remote control (up to 20 m);
- Mini-display with RF and power supply adapter;
- RF module for radio control transmission;
- RS485 module for interconnecting displays with 2-wire communication line RS485.

Dimensions



TYPE	A	B	C	D
NDT 38/3	180 mm	110 mm	39 mm	127 mm
NDT 57/3	245 mm	145 mm	39 mm	131 mm
NDT 57/4	276 mm	154 mm	39 mm	131 mm
NDT 100/3	385 mm	190 mm	39 mm	131 mm
NDT 100/4	414 mm	220 mm	39 mm	131 mm
NDT 160/3	478 mm	273 mm	39 mm	135 mm

Configuration and control possibilities of NDT series displays

A specific method of controlling NDT series displays depends on the location and distance between the user and display.

In case of a shorter distance (up to 20 m) and direct visibility of display from the place of control, a handheld IR remote control is sufficient.

If this distance is longer, or if display is not in direct line of sight from the user (e.g. user is behind the display), it is necessary to use a mini-display repeater with RF module to ensure wireless transmission of data from the handheld IR remote control to display (or to more displays). Receiving displays must be equipped with RF modules.

Individual options of possible setups are shown in the following figures:

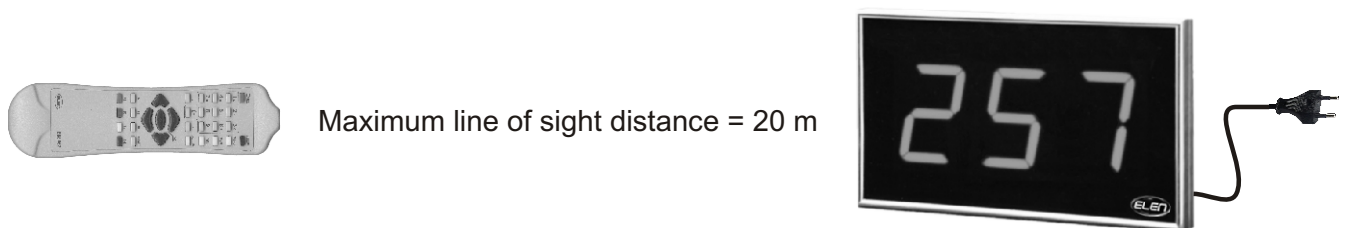


Fig. 1/ The simplest control of a display with an IR remote control from a distance up to 20 m.

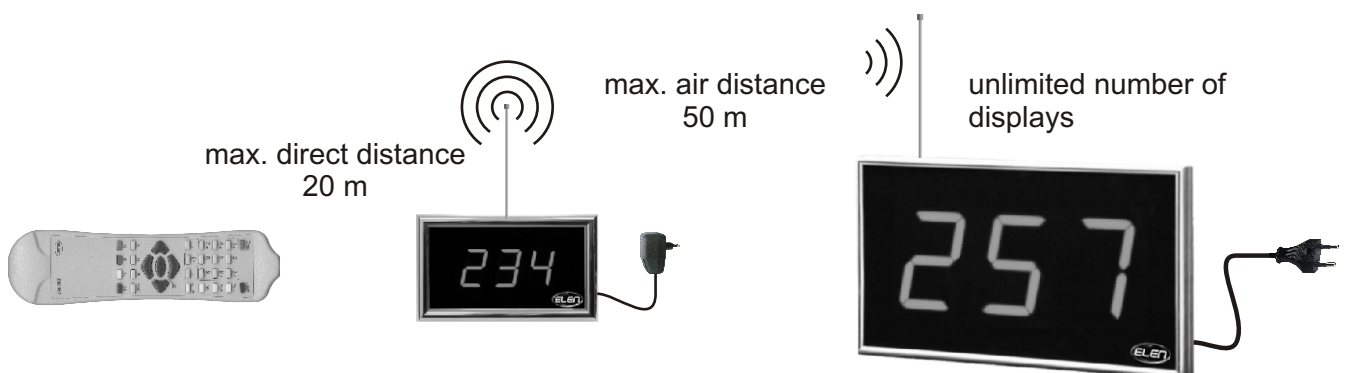


Fig. 2/ Wireless control of displays with handheld IR remote control and mini-display with RF module.

This configuration is used for longer transmission distance or control from location which is out of sight (e.g. user is behind of the display, or transmission has to pass through walls or other obstructions, etc).

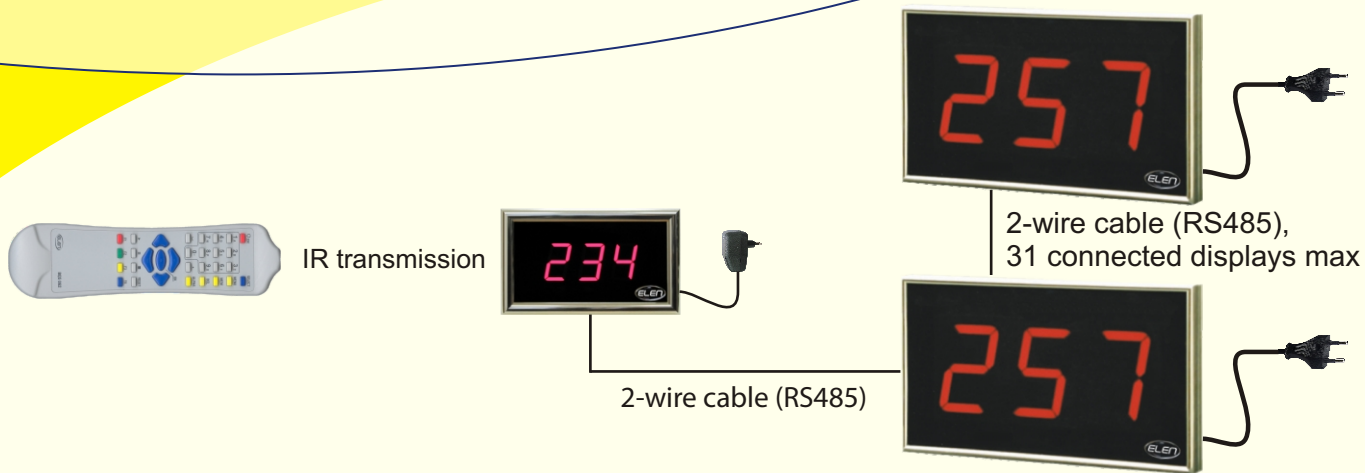


Fig. 3/ Wired configuration with IR remote and mini-display.

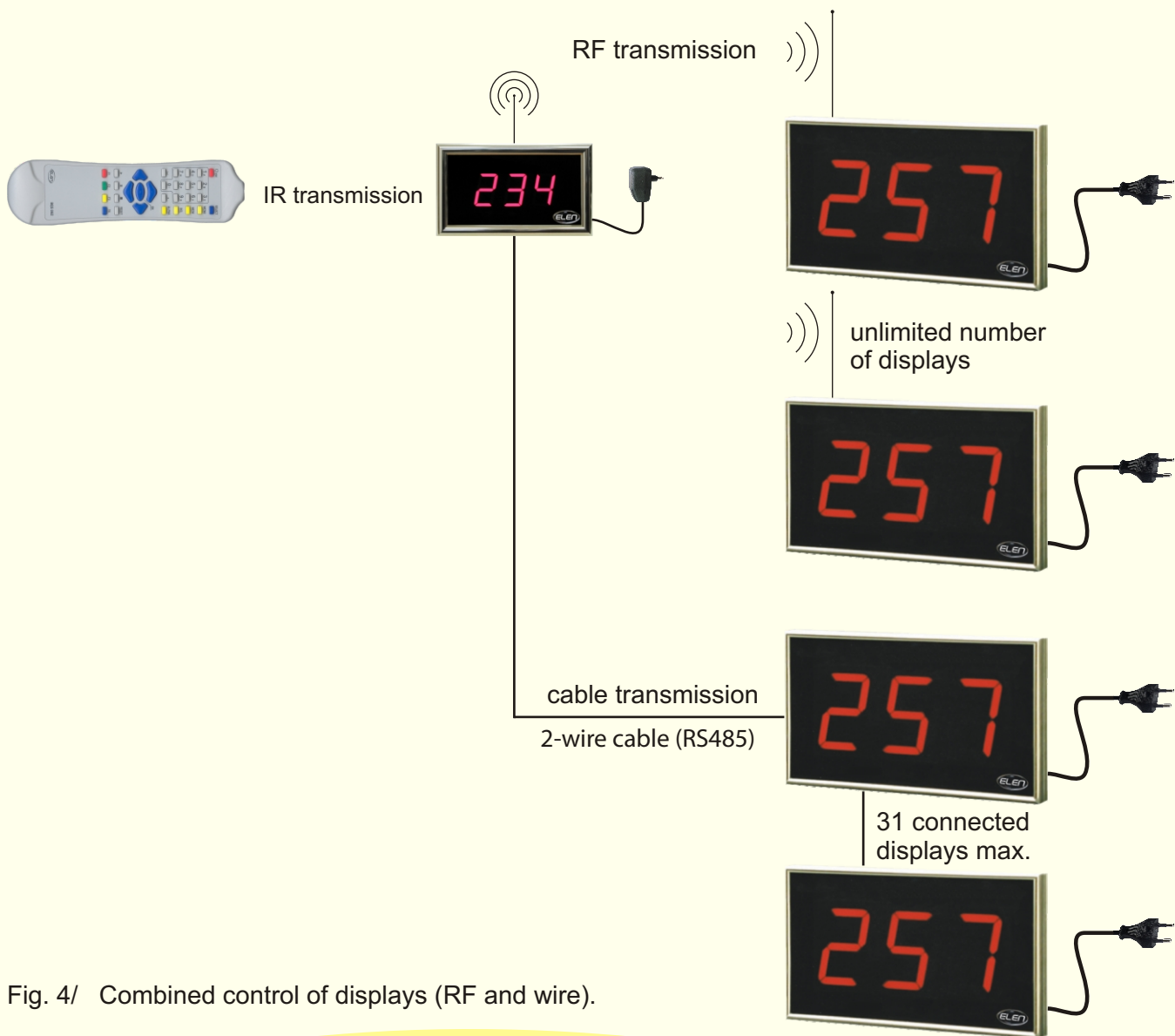


Fig. 4/ Combined control of displays (RF and wire).