



TextLine One
LED Marquee Display

1 Contact

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2 Legal note

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This operation manual has been prepared with the utmost care. However, we do not accept any liability for possible errors. We always appreciate your suggestions for improvement, corrections, comments and proposals. Please contact us: editing@siebert-group.com

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3 Safety instructions

Important information

Read these operating instructions before starting the unit. They provide you with important information on the use, safety and maintenance of the units. This helps you to protect yourself and prevent damage to the unit. Indications are highlighted by a warning triangle and have the following meaning:



DANGER!

Disregarding the warning notice **will result in** death or serious bodily injury.



WARNING!

Disregarding the warning notice **can lead to** death or serious bodily injury.



CAUTION!

Disregarding the warning notice **may result in** slight bodily injury or damage to property.

Keep these operating instructions in a safe place.

The manufacturer is not liable if the information in these operating instructions is not complied with.

Do not open the housing

There are no user-serviceable parts in the device.

Any modification to the device will void the warranty.

Immediately disconnect the device from the power supply if water accidentally gets into the device and contact your supplier.



DANGER!

Devices with 230V supply have parts inside that are live. There is a risk of electric shock when opening the device.

Intended use

The devices are intended for indoor use. They may only be operated within the limit values stipulated by the technical data.

When configuring, installing, maintaining and testing the units, the safety and accident-prevention regulations relevant to use in each individual case must be complied with.

Trouble-free, safe operation of the units requires proper transport, storage, installation, mounting and careful operation and maintenance of the units.

Mounting and installation

The attachment options for the units were conceived in such a way as to ensure safe, reliable mounting.

**WARNING!**

The user must ensure that the attachment hardware, the unit carrier and the anchoring at the unit carrier are sufficient to securely support the unit under the given surrounding conditions.

Grounding

Applies only to devices with 230VAC power supply:

All devices are equipped with a metal housing. They comply with safety class I and require a protective earth connection. The connecting cable for the operating voltage must contain a protective earth wire of a sufficient cross section (DIN VDE 0106 part 1, DIN VDE 0411 part 1).

Low voltage

Applies only to devices with 24VDC power supply:

The device is supplied from a plug-in power supply unit with 24VDC that is included in the delivery. The device does not have a switch. It is immediately in operation after applying the operating voltage.

EMC Measures

The devices comply with the current EU Directive (EMC Directive) and provide the required interference immunity. Observe the following when connecting the operating voltage and data cables:

Use shielded data cables.

The data and operating voltage cables must be laid separately. They may not be laid together with heavy-current cables or other interference-producing cables.

The cable thickness must be properly assessed (DIN VDE 0100 Part 540).

Disposal

Units or unit parts which are no longer needed are to be disposed of in accordance with the regulations in effect in your country.

Modern supercapacitors are used as energy storage for the real-time clock integrated in the device and do not have any special disposal requirements.

There are no batteries or accumulators in the device.

4 Assembly instructions

On the right and left side of the display there is an M6 screw connection in the center for mounting the display. The display is screwed to the supplied mounting brackets with these screws.

Suitable mounting parts are supplied with displays for one-sided or two-sided suspended mounting.

Fix the mounting parts at the correct distance to the wall or ceiling and then screw the display with the mounting brackets.

To improve readability, you can rotate the display up to 10 degrees up or down.

All electrical connections are located on the left side of the display.

For displays with 24VDC power supply, a plug-in power supply unit is supplied which is plugged into the corresponding socket.

Displays with Ethernet interface have an RJ45 socket.

Displays with USB interface have a USB Type C socket.



5 Operating software

TextLine One Editor

Basically, the operation and configuration of the digital display is done via the Windows PC software TextLine One Editor.



After starting the 'TextLine One Editor' it automatically starts searching for displays on all USB and Ethernet interfaces. All found displays are listed and you can select the display you want to use for the further process.

System requirements

The PC must meet the following minimum system requirements:

Operating system	Windows 10
Processor	1 GHz or higher
RAM	2 GB or higher
Display resolution	VGA (800 x 600 pixel) or higher
Other	.NET Framework 4 Administrator rights during installation Network access (depending on display type) USB interface (depending on display type)

Installation and de-installation

Start the TLOEditorSetup-x_yy_zzz.exe application to install the software on your PC. The installer will guide you through the installation.

A user input from you is only required if you do not want to install the software in the provided directory. In this case, please change the target directory accordingly.

After successful installation, the software can be started from the Start menu. To do this, click Start > Siebert > TextLine One Editor.

To uninstall the 'TextLine One Editor', open 'Programs and Features' via Windows Settings. Select the 'TextLine One Editor' from the list and click Uninstall.

6 Commissioning of displays with USB interface

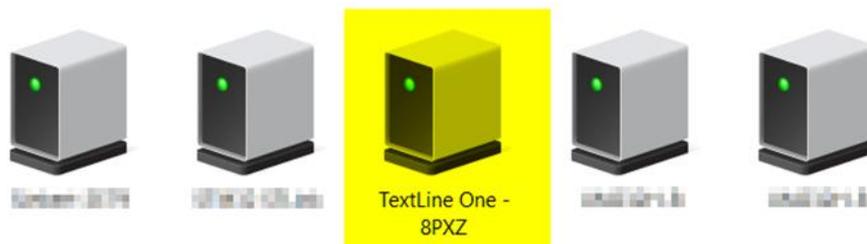
Display is identified by Windows

For displays with USB as the user interface, connect the display to the PC or USB hub using a suitable USB cable. A USB Type C socket is provided on the display.

When first switched on, the display is detected by Windows and shown in the <Devices and Printers> dialog as <TextLine One - xxxx>. Xxxx is a unique identifier consisting of digits and characters.

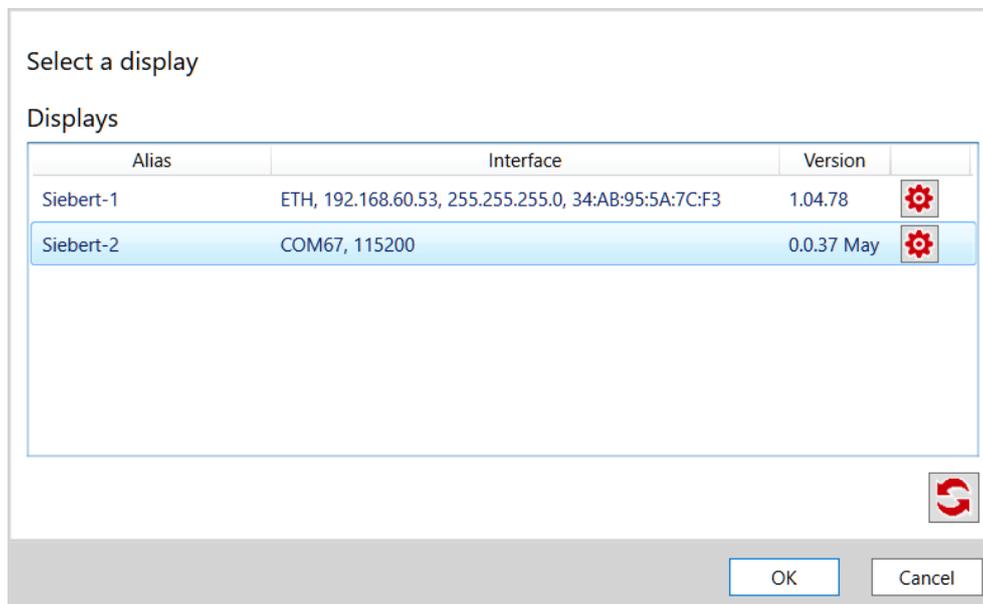
In the section Troubleshooting you will find further notes in case the display is not detected by Windows.

Icon: Control Panel > Hardware > Devices and Printers



Search display via USB

After starting the 'TextLine One Editor' it automatically starts searching and lists all found displays.



Enter alias name

By double-clicking on an entry, you can assign a freely selectable alias name to each display. This name can, for example, refer to the location or the function of the display and should be chosen so that it is immediately apparent which display is meant.

Connect with the display

After selecting a display and confirming with <Ok>, the TextLine One editor connects to the display. If successful, the current text is read back and displayed on the work surface.

7 Commissioning of displays with Ethernet interface

Requirements

To configure the display you need a PC with network card or an already configured network.

If possible, involve someone from your IT department to integrate the display into your network.

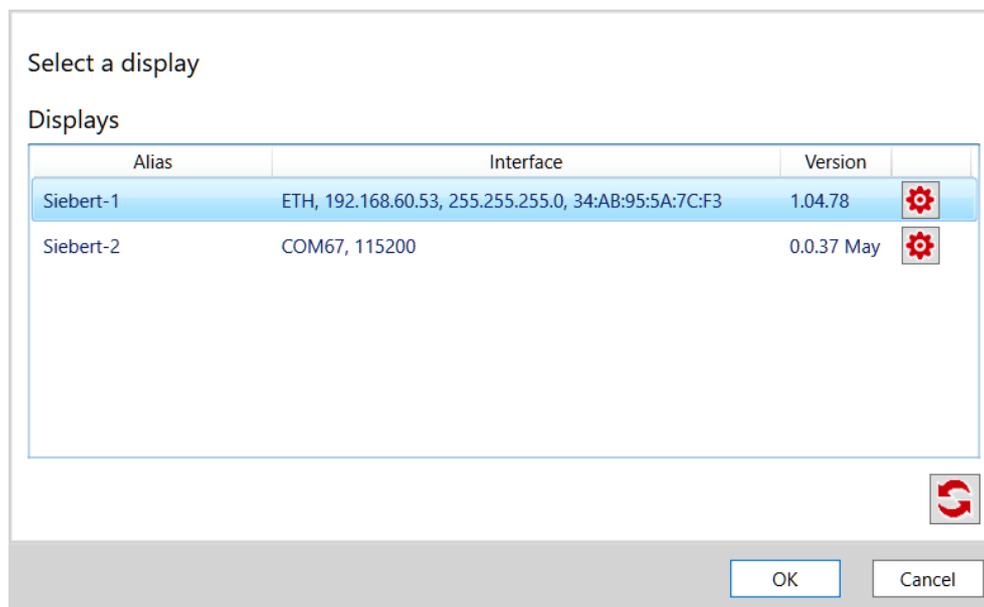
To integrate the display into an existing network, it must be connected to the network. In the delivery state, the device will automatically obtain an IP address via DHCP and can then be reached under this address.

If there is no DHCP server in the network, the display gives itself the IP address 169.254.11.91 with the subnet mask 255.255.0.0.

Attention: If you want to access the display via this service IP address, then only exactly one display may be present in the network.

Search display via Ethernet

After starting the TextLine One Editor, it automatically starts searching and lists all found displays.



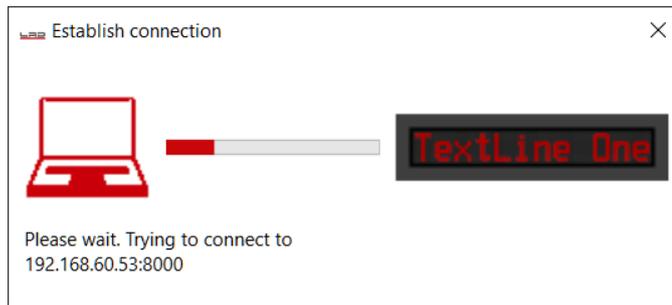
The search process of the TextLine One editor uses UDP broadcasts for searching. This means that displays are also found which are in a different network than the PC. However, searching across router boundaries is not possible due to network technical reasons.

In the section Troubleshooting you will find further notes if the display is not detected by Windows.

Connect with the display

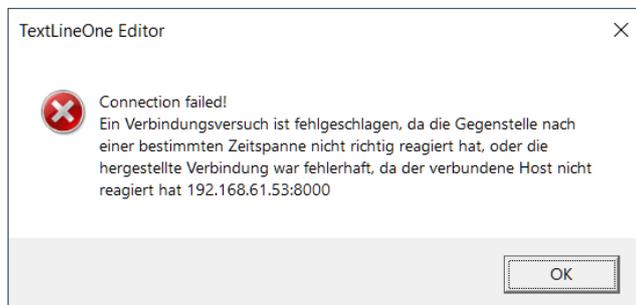
If only one display is found, it is automatically selected. If several displays are found, then select the desired display with a single mouse click.

Then click the <Ok> button to connect to the display.



If the connection is successful, the workspace of the TextLine One editor appears with the control elements. You will find the description in the next chapter.

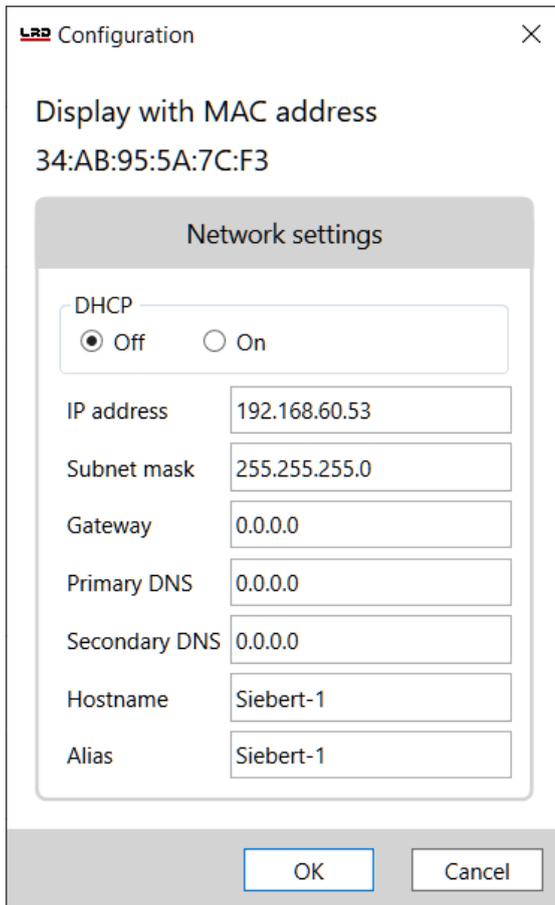
If the following error message appears instead, then the IP addresses of the PC and the display do not match. In this case, follow the instructions in the following section to set the IP address of the display appropriately.



Changing the IP settings and the alias name via UDP

To give the display a fixed IP address, double-click on the display in the search window which settings you want to change. In the following dialogue you can modify the network settings and the alias name.

As alias name you can assign any name, with which in the future the display will then be identified in the search window.



Configuration

Display with MAC address
34:AB:95:5A:7C:F3

Network settings

DHCP
 Off On

IP address 192.168.60.53

Subnet mask 255.255.255.0

Gateway 0.0.0.0

Primary DNS 0.0.0.0

Secondary DNS 0.0.0.0

Hostname Siebert-1

Alias Siebert-1

OK Cancel

By pressing <Ok> the settings are accepted and the display performs a restart. Afterwards it is displayed with the new data in the search dialog of the TextLine One editor.

The new settings are transferred via UDP. This has the great advantage for you that you do not have to change the IP settings of your PC.

8 Operation of the TextLine One Editor

Control elements

The interface is divided into three parts:

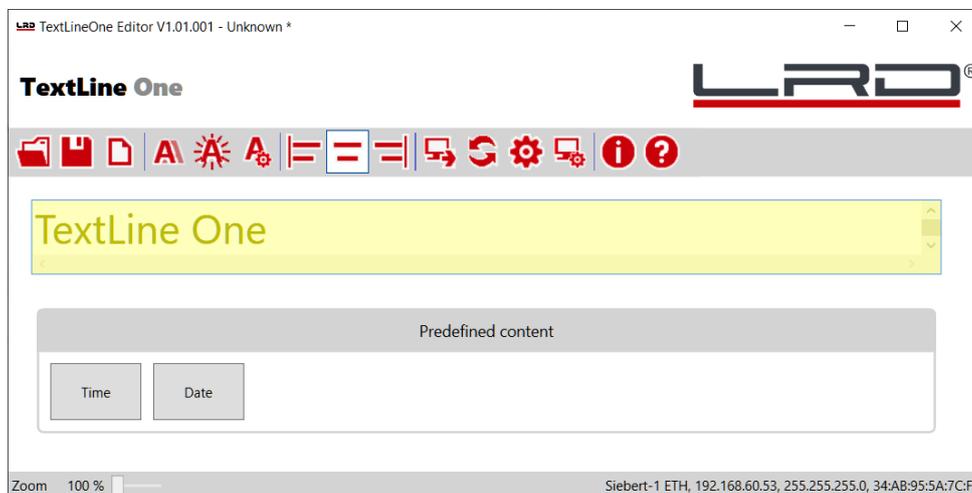
The icons for the most important functions. All icons are provided with tooltips

The input line for the text

The buttons for selecting predefined contents

Edit display text

The data input is done via the input field of the TextLine One editor. Enter the text that is to be displayed later in this field.



Save and load display text

With the buttons <Open>, <Save> and <New> you can create a new text, save this text in a file on the PC and load the file again later.



Format display text

With the buttons <ticker> and <blinking> you can switch the corresponding properties on or off. The button Settings opens a menu for setting the marquee and blinking speed.



With the buttons <left-aligned>, <centered> and <right-aligned> you can define the alignment of the text on the display.

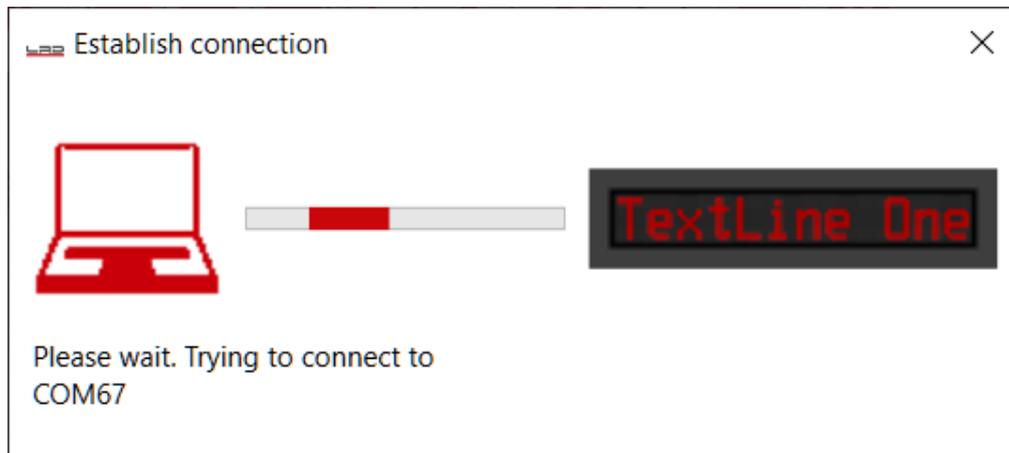


Send display text

With the <Send> button the text and the commanded properties are sent to the display.



The TextLine One editor tries to connect to the display and if successful sends the data to the display. The new data is displayed immediately.



Search display

By clicking the <Search> button a new search for displays will be performed.



Set display interface manually

The search for displays via Ethernet may fail in certain cases although a display is present. A typical example is a display in a network that is connected to the PC's network via a router. The UDP broadcasts used for the search are not forwarded by routers and the search will fail.

If you know the IP address of the display, then you can enter this address here and thus also serve displays that are connected up via routers.

With the <interfaces> button you can make the corresponding entries.



Configure display via TCP

The <Configure> button opens the dialog for the IP settings and the alias name of the connected display.

In contrast to the configuration via the <Display found> window, the configuration here takes place via TCP/IP. It can therefore also be carried out via routers.



Escape sequences

With the exception of backspace (92dec, 0x5C) you can use the characters that are in the ASCII code range between space (32dec, 0x20) and triangle (127dec, 0x7F) directly in the input line.

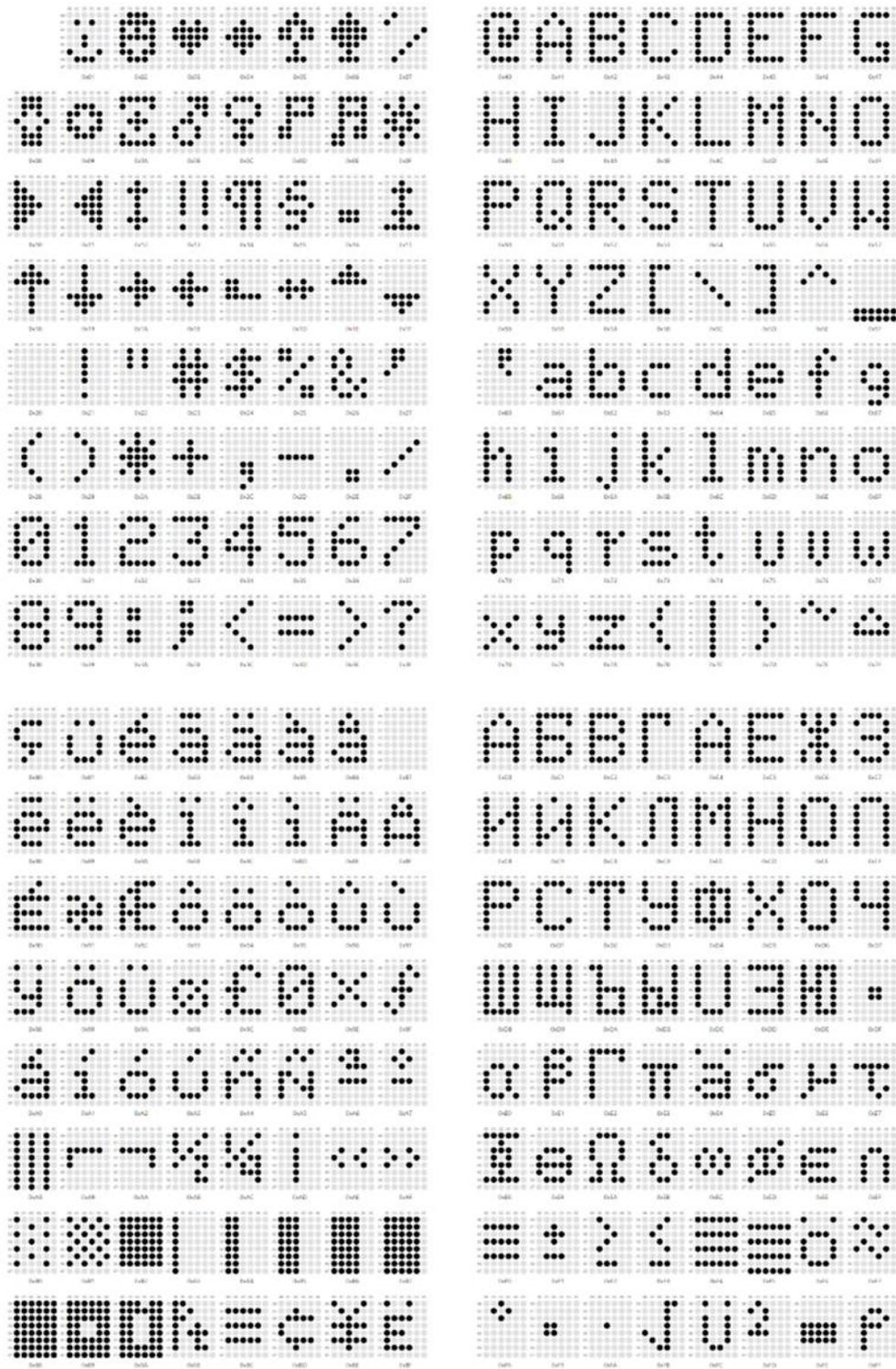
The Backspace character is used as an escape character. The following escape sequences are defined:

Escape sequences	Meaning
\\	A single backslash \ is displayed.
\“	A single quotation mark is displayed.
\x00, \0	Internal use, leads, if entered to an error message.
\xNN	The character with the code NN in hexadecimal coding is displayed. E.g. the letter A has the ASCII code 0x41. The input of \x41 thus leads to that the letter A is displayed

When entering characters in the ASCII code range between 128dec, 0x80 and 255, 0xFF, please note that Windows may use a different character encoding which leads to an incorrect representation of the characters.

The call via the escape sequence \xNN works independently of any character encodings.

Character set



9 Commands for control

It is possible to control the TextLine One series displays directly via their data interface.

For displays with USB interface, the data is sent directly via the virtual comport.

For displays with Ethernet interface, the data is transmitted via a TCP raw socket connection on port 8000.

Command structure

The text and the formatting commands are sent as a string with the following general structure:

```
Line1.xxx = yyy;
```

- xxx is the property that is commanded.
- yyy is the value to be given to this property.
- the command must end with a semicolon. This semicolon marks the end of the command.
- If the value yyy itself contains spaces, then the text must be written in quotation marks (ASCII code 34) e.g. for the text "Hello World".
- The spaces before and after the equal sign (=) are optional.
- Additional line breaks (CR LF) after the semicolon are ignored.
- In the event of an incorrect command, an error message is output.
- In the event of a correct command no message is output.

Defined properties

Line1.Value	The text that is to appear on the display<
Line1.Align	The alignment of the text with the following options: l = left-justified c = centered in the middle r = right-justified t = ticker, marquee
Line1.Divider	The divider for the ticker speed 1 = max. speed 99 = min. speed
Line1.Colors.Fg	Blink pattern and brightness for the foreground color. Permitted values between 0 and 255. In the lower two bits the brightness is coded. 0x00 = black 0x01 = strongly dimmed 0x02 = dimmed 0x03 = max. brightness In the upper two bits different blinking patterns are coded. 0x00 = no blinking 0x40 = slow blinking, starting with the bright phase 0x80 = slow blinking, starting with the dark phase 0xC0 = fast blinking
Line1.Colors.Bg	Values for the background color The bit combinations are identical with the foreground color

Query properties

If the command consists only of the name of the property and the semicolon, then the display will return the current value.

Error messages

In case of a wrong command an error message is returned. E.g. a forgotten equal sign leads to the following message:

```
Line1.Value Welt;
```

```
Failure = {
  Message00 = "Token Welt is not allowed in parser state 04";
  Message01 = "Invalid syntax; fsm=04, symbols=[<input>, <ppath>]";
  Message02 = "Parser error; last token=Welt";
  Char = ';' ; }
```

10 Factory settings, network resources and drivers

Displays with USB interface

The display requires USB driver from the company FTDI.

If this driver is already installed on your PC, then no further steps are necessary.

If the driver is not yet installed on your PC, Windows will try to install it automatically. This requires access to the Internet.

If the automatic installation fails, then you must install the driver manually. This requires administrator rights.

The latest drivers can be downloaded from the homepage of the provider.

<https://ftdichip.com/drivers/>

Windows Driver Installer (VCP & D2XX), File CDM21228_Setup.zip

Displays with Ethernet interface

The displays are delivered with the following settings:

Property	Value	Changeable
IP address	DHCP	Yes
Fallback IP	169.254.11.91/16	No
Display name	TextLineOne	Yes

The displays require the following network protocols and port numbers to function correctly:

Port	TCP/UDP	Protocol	Use
8000	TCP	raw	Data
8100	TCP	raw	Data
9000	TCP	raw	Configuration
20000	UDP	raw	Search
20100	UDP	raw	Search



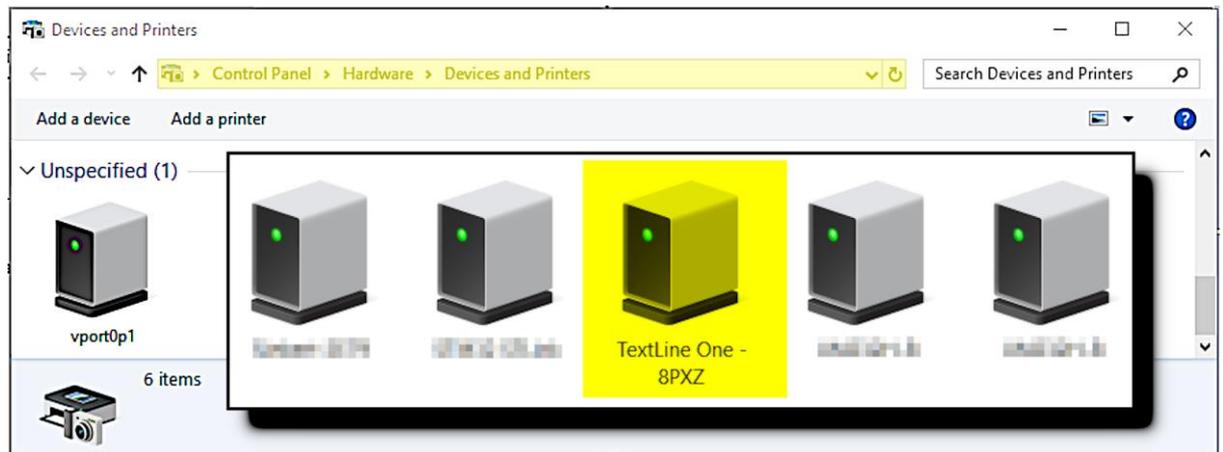
Tip

In case of network problems, first check your firewall and router settings. Consult a colleague from the IT department.

11 Troubleshooting hints

Displays with USB interface

If the display is connected to a Windows PC via USB, then it should be listed on the <Devices and Printers> page under the name <TextLine One - xxxx>. xxxx is a random identifier that makes it possible to distinguish between several displays.



If the display does not appear, then check the following points:

1. Is the display really switched on?
2. Is the USB cable plugged in correctly?
3. Does the PC have Internet access and the necessary rights to download drivers from the Internet?
4. Check in the Windows Device Manager that each COM port has been assigned a unique COM port number by Windows. If this is not the case, then you must manually assign an unused COM port to the display in the device manager. This requires administrator rights.

For displays with Ethernet interface, the USB interface is only used for internal purposes. It can not be used as a data interface.

Displays with Ethernet interface

If the display is not found by the TextLine One editor, check the following points:

1. Is the display really switched on?
2. Is the Ethernet cable plugged in correctly?
3. Does at least one LED lights up at the Ethernet socket of the display?
4. Is the network in which the PC is located isolated by a router from the network in which the display is located?

12 Technical data

Number of characters	6	13	20
Data interface	Ethernet or USB		
Character height	50 mm		
LED color	red		
Character set	ASCII		
Display	Static, blinking, marquee, date, time		
Max. marquee length	255 bytes		
Energy storage for data and real-time clock	Super capacitor		
Power reserve and data retention	At least two weeks after the display has been in operation for 10 minutes		
clock	Real time clock with automatic summer time / winter time changeover		
Text memory	The display remembers the last value and shows it again after switching on		
Power supply	Plug-in power supply 100-240 V AC to 24 V DC		
Power consumption (max.)	20 W	30 W	40 W
Dimensions approx. L x H x D in mm	490 x 159 x 41	794 x 159 x 41	1098 x 159 x 41
Mass in kg	1,8	2,7	3,6
Operating temperature	0...50 °C, non-condensing		