microSYST
DISPLAYSYSTEMS

Contents

System

Modular, flexible and expandable at any time

The internal bus system enables a modular system structure.Therefore, with regard to the range of features, numerous additional components can be added. To be able to enlarge the features free programming interfaces are available which guarantee a direct adaption to your own requirements.

Capture Data

Tools

microSYST
configuration software

Customer-specific user interface
(e. g. HTML, web interface)

Interfaces

A/D converter

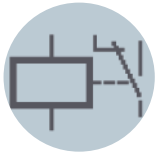
Digital I/O
BCD

Ethernet TCP/IP
or WLAN

Pulse input

Fieldbus

Serial
RS232 / RS485

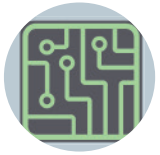


Potential-free
contact

further data in-
puts on request

Process Data

The integrated control board is designed for independent calculations, reportings and the output of data and measured values.



The „logic“ of this display system can be factory-set or is programmable on site. Typical applications are, for example, programmable reactions to states and events with direct output to the display or to an interface.

Flexible adjustment of telegrams and configurable data processing

Output Data

Visualization

- Fixed, scrolling, flashing texts
- Animated / moving presentations
- Text formatting
- Unicode capable

- BMP, PNG or JPEG files
- Lines, rectangles, circles
- Bargraphs
- QR-Code

- Display of different changing images (texts, pictures or graphics)
- Flexible insertion of text layers and image layers

Control and regulation options

Digital I/O
BCD

Ethernet TCP/IP
or WLAN

Potential-free
contact

Fieldbusses

Serial
RS232 / RS485

Sound

Further data
inputs on
request

Exampels:

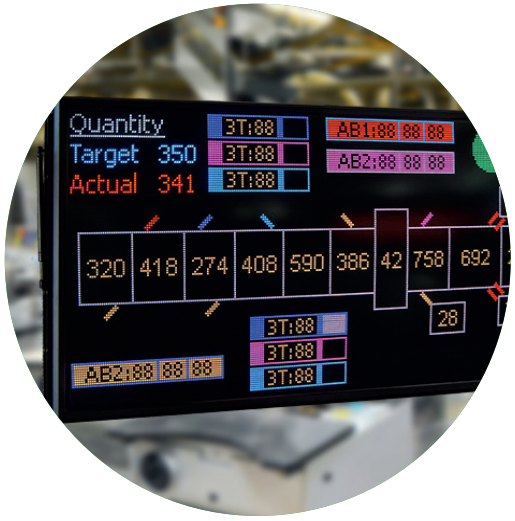
- Connection of signal trans-mitters such as light barriers or ultrasonic sensors
- Control of a filling system
- and much more

Possible applications

Display of accident-free days

Work safety displays

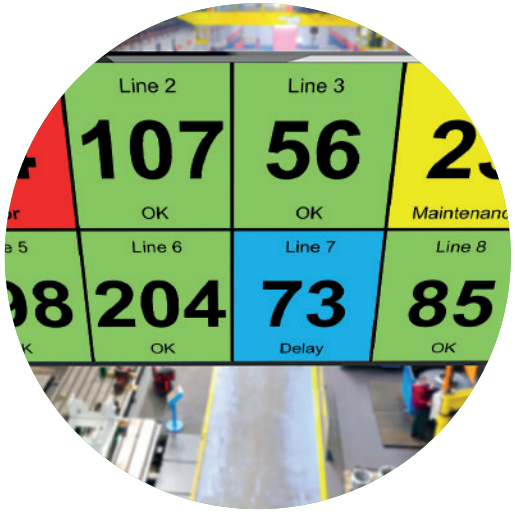
Production data displays



Visualization of plant states

Target-actual displays

Truck call-up systems



Andon Boards

Multi-page representation e.g. for production machines

Displays for special protection claims

Graphical measured value displays

You can find more information on the application areas of display systems on our website at www.microsyst.de/application-areas

What is LED-technology?

LED stands for „light-emitting diode“

The light emitting diodes are small Semiconductor devices that emit light when current flows through them.

microSYST focuses on high quality LEDs for indoor and outdoor use.

The advantages of the LED

- low energy consumption and low heat generation
- long service life of over 50.000 operating hours
- shock and vbibration resistant
- high luminosity and strong contras

Large format dislpays

Technical data

miline

migra

	miline	migra
Display	LED dot matrix display 64 x 16 pixel | 128 x 16 pixel | 128 x 32 pixel other resolutions upon request pixel pitch 4 mm or 8 mm	LED dot matrix display - resolutuion per modul P4 Indoor 64 x 16 pixel - P8 Indoor / Outdoor per modul 32 x 16 pixel - P12 and P16 Outdoor per modul 16 x 16 Pixel - pixel pitch 4 mm, 8 mm, 12 mm or 16 mm
Brightness	approx. 1.000 to 7.400 cd/m²	approx 800 to 7.400 cd/m²
Size	Width from 286 mm modular expandable Height from 160 mm modular expandable	Width from 368 mm modular expandable Height from 202 mm modular expandable
Display view	from 12 m to 100 m and more	from 12 m to 100 m and more
Display colour	up to 7 colours	up to 16,7 million colours
Applications	Indoor, outdoor	Indoor, Outdoor
Protection class	IP40, IP44, IP65	IP54, IP65
Operating temperature	Indoor 0 ... +50 °C Outdoor -20 ... +50 °C Other temperature range on request	Indoor 0 ... +50 °C Outdoor -20 ... +50 °C Other temperature range on request
EMC class *	A, B	A, B

Depending on model

* Class A (Use in industrial environment)
Class B (Use in the immediate vicinity of residential, commercial and industrial areas)

migra TFT

LCD monitor - resolution up to 4K	**Display**
up to 2000 cd/m²	**Brightness**
from 15“ to 75“ diagonal further sizes on request	**Size**
from 1 m to 100 m and more	**Display view**
up to 16,7 million colours	**Display colour**
Indoor, Outdoor	**Applications**
without IP protection, IP54, IP65	**Protection class**
Indoor 0 ... +45 °C Outdoor -20 ... +50 °C Other temperature range on request	**Operating temperature**
A, B	**EMC class ***

* Class A (Use in industrial environment)
Class B (Use in the immediate vicinity of residential, commercial and industrial areas)

What is TFT technology?

TFT stands for „Thin-Film Transistor“

A classic TFT cell consists of a large number of layers that are illuminated by a backlight and display an image.

microSYST focuses on high quality TFT monitors for indoor and outdoor use.

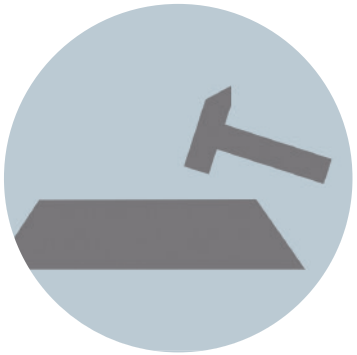
The advantages of the TFT

- low energy consumption and low heat generation
- high resolution for short viewing distances
- large information content with small display area
- high colour spectrum for graphics and differentiated presentation of information

Special equipment

Fixed lettering

Stainless steel houing

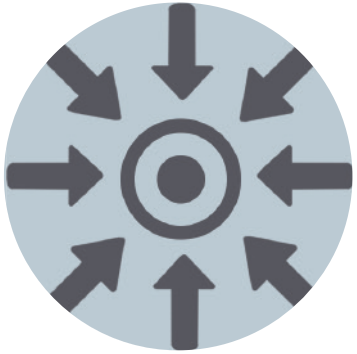


Real glass pane

Vibration protection

Equipment for extreme temperature ranges

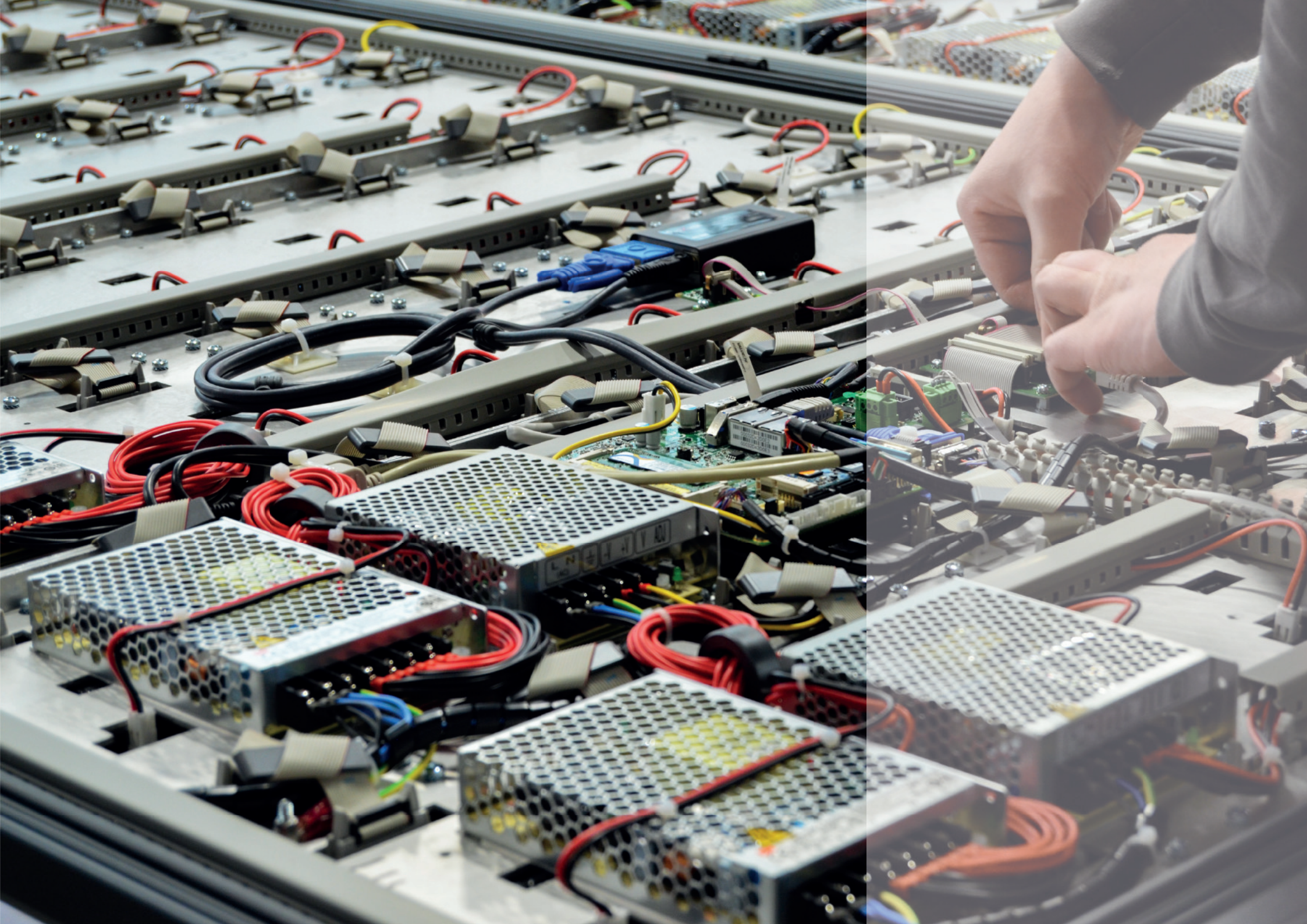
Weather protection roof



Customised displays

We develop and manufacture your display system according to your wishes.

Please contact us at sales@microsyst.de.



Panel-Mount Displays

The panel mount displays are specially designed for industrial use. Depending on the model, they can show characters, digits, measured values as well codes in a compact and targeted manner. The screens do have a high-contrast display and ensure a very good readability.

capture data

Interfaces


A/D converter


Serial
RS232 / RS485

PROFIBUS

PROFINET


Ethernet


USB

Process Data

Control electronics with control and display unit

Output/ Visualize Data

- Numeric or alphanumeric display
- Fixed text, flashing
- brightness adjustment controllable via dialog

Examples of possible applications

96 x 24 mm

Display of
results censuses
(total, average)

96 x 24 mm

Display of the system state
(malfunction, error code)

96 x 24 mm

Visualization of
measured values

216 x 96 mm

Display of the system
state as
plain text information

124,9 x 90,4 mm

User guidance for control
cabinets

168 x 24 mm /
264 x 48 mm

Specification of
measured values

You can find more information about the panel-mount-displays on our website at

www.microsyst.de

Technical data

	mipan	mitex LED
Display	LED 7-segment	LED dot matrix
Sign	3 1/2 and 6 digits character height 13 mm one line	8 digits character height 17 mm, 30 mm one line
Display colour	red	red
Applications	Indoor	Indoor
Protection class	Front panel IP65	Front panel IP65
Housing	96 x 24 x 60 mm	168 x 24 x 62 mm / 264 x 48 x 40 mm

mitex VFC

mitex TFT

VFC dot matrix	TFT panel-mount display
20 digits 10,5 mm two lines	variable character height (e.g. 1.4 mm to 6.4 mm) 5 to 27 lines per character height
green	up to 7 fluorescent colours (blue, green, light blue, red, purple, yellow, white)
Indoor	Indoor
Front panel IP65	Front panel IP65
216 x 96 x 42 mm	124,9 x 90,4 x 38,8 mm

Display systems by microSYST successstories

migra - Customer-specific requirements

- System with 17 machines for the production of injection-moulded parts
- Visualisation of up to 17 fault messages in case of machine breakdowns
- Standard **display of production data**, time / date , general text messages and information in an undisturbed operation
- Reading distance of maximum 20 meters
- User-friendly controlling for an easy input of message texts and an automatic assignment of system faults

migra - Implementation according to customer's requirements

- Project planning, display construction and production as well as programming of the software
- Usage of a large **seven-colour LED display „migra" for the colourful display** of priorities and any other information for employees
- System integration of the data transfer into already existing infrastructures (central PLC of the customer)
- On site **project planning of production- and system-specific data** as well as all relevant fault messages for an easy commissioning and operation by the user

migra - Benefits for the customer

- Higher machine availability due to **reduced downtimes**
- Central and clear display of any production-relevant information
- **Minimisation of downtimes** in downstream production processes
- On schedule deliveries

miline - Customer-specific requirements

- Reinstallation of displays to warn against e.g. radioactivity in an institution for materials research
- Visualisation of variable **warnings in text form** with the help of **graphic symbols with up to seven colours**
- Installation of the displays above test room entrance doors for a good visibility from long distances

miline - Implementation according to customer's requirements

- Planning, development, production, installation and initial operation of the warning displays at the customer's site
- Design and drawing of **symbols according to customer's requirements**
- Large format LED display „miline" with **luminous, seven-colour LEDs** for indoor use
- Display of graphics and text information
- Connection to the already existing network infrastructure of the customer

miline - Benefits for the customer

- Display of different warnings for an **easy differentation of risks**
- Display of the current date with time should there be no warning
- **High comprehensibility** due to pictograms

Success

The success of microSYST for over 30 years is our pioneering spirit and the fact that our eyes are firmly fixed on the future.

Managing Owner Harald Kilian

Real pioneering spirit in the LED technology

“Luminous” know-how for more than 30 years

Convinced of the idea, microSYST is developing, manufacturing and selling high-quality LED display systems since its foundation in 1985. In-house ideas and product developments helped the light-emitting diodes (in short: LED) to become more and more important and built at the same time the basis for the comprehensive technical know-how in the LED technology.

LED stands for an environmentally conscious future

Until today that pioneer and innovation spirit is deeply rooted in the company. With a future-oriented thinking and environmental awareness, microSYST still utilises the clear benefits of LEDs: today, energy efficiency and sustainability are more important than ever and will ensure the future success of the LED technology.

Passion for technology - for the best solutions

Due to the interest in technical details and the flexibility regarding individual requirements combined with convincing technology, design and quality, microSYST is able to supply high-quality LED display and order picking systems for almost all customer-specific requirements.

Certified quality management

Whether customer-specific production or the delivery of standard components – quality is the top priority for microSYST. Resulting from the own quality requirements and for the benefit of satisfied customers.

Due to the high quality standards, the integrated quality management system has been certified according to DIN EN ISO 9001 in 2014. Since then this standard is regularly checked by independent institutions and its effectiveness is confirmed.

In addition, microSYST develops and manufactures according to the applicable guidelines: The CE marking of all microSYST products certifies this. Unwanted electrical or electromagnetic effects prevent electromagnetic compatibility (EMC) of the entire portfolio.

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Certified quality management system according to DIN EN ISO 9001

ISO 9001 CERTIFICATION™ Intertek

Quality produced in Germany