



5 04

System



Large Format LED Displays



Panel-Mount Displays



Success Stories

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 confi guration software



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

Interfaces



A/D converter



Digital I/O BCD



Ethernet TCP/IP or WLAN



P Pulse input



Fieldbus



Serial RS232 / RS485



Potential-free contact



further data inputs 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 confi gurable data processing

page 4 I microSYST



Output Data

Visualisation



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



- o BMP, PNG or JPEG
- Lines, rectangles, circles
- o 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



Fieldbusses



Ethernet TCP/IP or WLAN



Serial RS232 / RS485



Potential-free contact



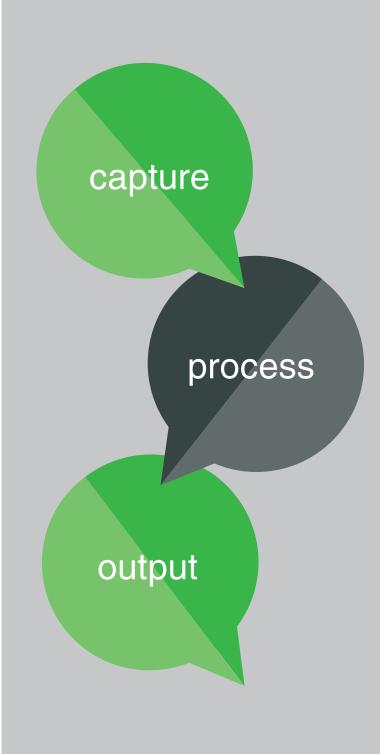
Sound

Exampels:

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



Further data inputs on request



Possible applications



Display of accident-free days



Visualisation of plant states



Work safety displays



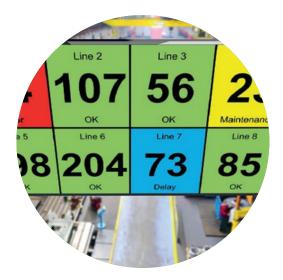
Target-actual displays



Production data displays



Truck call-up systems



Andon Boards



Displays for special protection claims



Multi-page representation e.g. for production machines



Graphical measured value displays

You can find more information on the application areas of display systems on our website at www.microsyst.de/en/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 vibration resistant
- high luminosity and strong contras



Large format dislpays

Technical data







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/m ²	approx 800 to 7.400 cd/m ²
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 16,7 million 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

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

^{*} 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

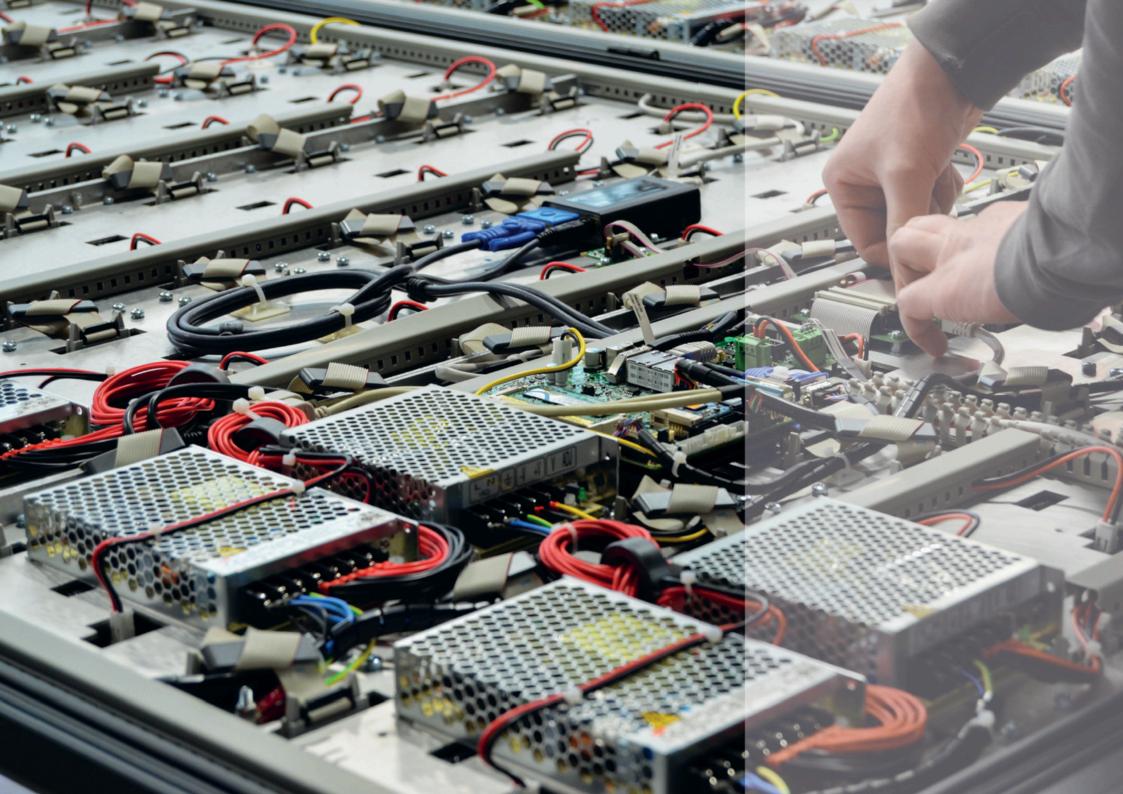
- low energy consumption and low heat generation
- high resolution for short viewing distances
- large information content with small display area
- high colour spectrum for graphics and differntiated presentation of information

Special equipment



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

Please contact us at sales@microsyst.de.



Panel-Mount Displays

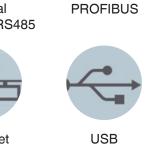
The panel mount displays are specially designed for industrial use. Depending on the model, they can show characters, digits, measured values as well codes in a compact and targeted manner. The screens do have a high-contrast display and ensure a very good readability.



capture data

Interfaces





PROFI



PROFINET



Ethernet



Output/ Visualise Data



Process Data

Control electronics with control and display unit





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

Examples of possible applications



Display of results censuses (total, average)



Display of the system state (malfunction, error code)



Visualisation of measured values



Display of the system state as plain text information



User guidance for control cabinets



Specification of measured values

You can find more information about the panelmount-displays on our website at www.microsyst.com

Technical data





mitex LED

mipan

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 fl uorescent 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

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



miline - Customer-specific requirements

- O 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

- O 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



The success of microSYST for over 40 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 40 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





Quality produced in Germany