

migan MPB AD

Large Format Numeric LED Display with A-D Converter

User Manual



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Table of Contents

1	GENERAL	3
2	SYSTEM OVERVIEW	3
3	TECHNICAL DATA	4
3.1	Device Configuration	5
3.2	Notes for the start-up	6
3.3	Device Configuration	6
4	CONNECTOR PIN ASSIGNMENTS	7
5	APPENDIX	8
5.1	Declaration of Conformity	8
5.2	Maintenance and Care	9
5.3	Warranty / Liability	10
5.4	Versions Overview	11

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Large Format Numeric LED Display with A-D Converter

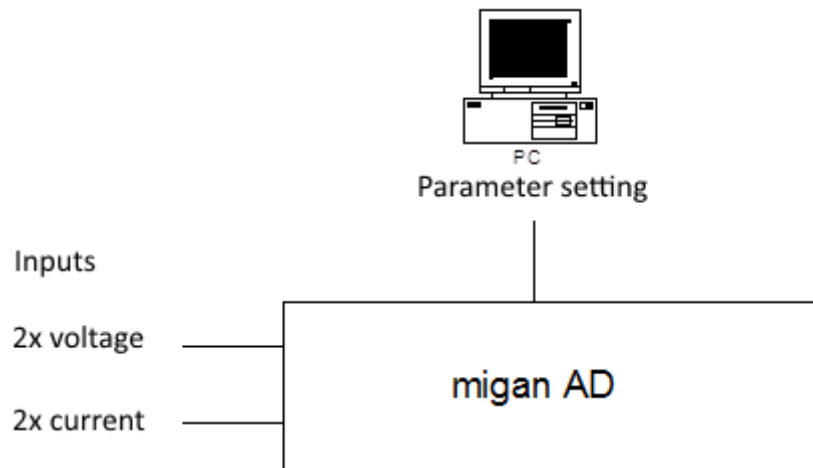
1 General

The large display numeric LED can be used universally for displaying production data, or as an information board.

The modular design allows for cost-effective models of various size, and with different character heights and numbers of digits.

Thus integration into existing equipment or systems is easy and simple.

2 System Overview



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Large Format Numeric LED Display with A-D Converter

3 Technical Data

	migan for indoor use	migan for outdoor use
Display type	7 segment LED	7 segment single LED, pixel size: 5.2 x 3.8 mm (oval)
Angle of radiation	n/a	110°/50° (horizontal/vertical)
Character height	60 / 100 / 150 / 200 / 250 mm	100 / 200 / 300 mm
Digits	1 to 100 digits	
Lines	1 to 4	
Channels	1 to maximum 4	
Input range	-10 to 10 VDC, -20 to 20 mA	
Input impedance	Voltage input: 1 MΩ, current input: 100 Ω	
Display	0 to ±19999 or customer specific	
Display range and decimal point	adjustable via software	
Display colour	standard: red; optional: green	
Light intensity	n/a	red > 3100 cd/m ² , green > 3720 cd/m ²
Brightness control	adjustable via software	automatically
Operating voltage	230 VAC / 50 Hz, 110 VAC / 60 Hz or 24 VDC ±20%	
View	single sided to four sided	
Interface	standard USB for configuration	
Labelling	upon request	
Housing	industrial version, powder coated aluminum	
Housing colour	RAL 7016 (anthracite)	
Mounting	articulated arm, angle bracket, hanging with chain or mounting frame	
Protection	IP54 or IP65	IP65 for outdoor use
Operating temp.	0...+50 °C	standard: -20...+50 °C, optional with heating: -25 to +50 °C
Storage temperature	-25...+70 °C	

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Large Format Numeric LED Display with A-D Converter

3.1 Device Configuration

Itemnumber : _____

Type:

for inside use for outside use

Character height:

60 mm 100 mm 150 mm 200 mm 250 mm 300 mm

Number of lines: _____ **Number of digits per line:** _____

Display colour:

red green yellow white blue

View:

single sided double sided _____ sided

Operating voltage:

230 V / 50 Hz 110 V / 60 Hz 24 V DC

Protection:

IP54 IP65 IP _____

Housing dimensions: _____ x _____ x _____ mm

Housing Material:

Aluminum profile Stainless steel Sheet metal

Display range and dimension:

Line 1: _____ - _____

Line 2: _____ - _____

Line 3: _____ - _____

Line 4: _____ - _____

Input range:

Line 1: 4 to 20 mA 0 to 10 VDC _____

Line 2: 4 to 20 mA 0 to 10 VDC _____

Line 3: 4 to 20 mA 0 to 10 VDC _____

Line 4: 4 to 20 mA 0 to 10 VDC _____

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Large Format Numeric LED Display with A-D Converter

3.2 Notes for the start-up

- When putting on the power supply, the following sequence has to be observed:
 - Connect the power supply cable to the display.
 - Connect the power supply cable to the power supply.
- Directly after connecting the A-D inputs, the display shows the corresponding values.
- When disconnecting the power supply, the following sequence has to be observed:
 - Disconnect the power supply cable from the power supply.
 - Disconnect the power supply cable from the display.

3.3 Device Configuration

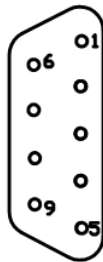
The device is already configured at the time of delivery. However, if you want to do some changes, you can use the tool “MKS”.

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Large Format Numeric LED Display with A-D Converter

4 Connector Pin Assignments

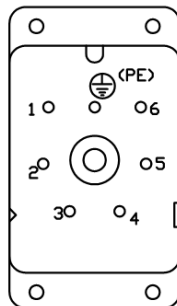
A-D inputs (9-Pole Sub-D Plug Connector)



Pin	Assignment
1	Channel 1 +
2	Channel 2 +
3	Channel 3 +
4	Channel 4 +
5	
6	Channel 1 -
7	Channel 2 -
8	Channel 3 -
9	Channel 4 -

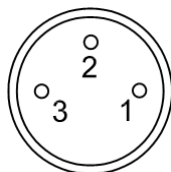
If using only one voltage input, channel 1 is used!
If using only one current input, channel 3 is used!

Power Connector 230 VAC



Pin	Assignment
1	L1
2	N
⊕ (PE)	PE

Power Connector 24 VDC (optional)



Pin	Assignment
1	GND
2	+24 VDC
3	PE

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Large Format Numeric LED Display with A-D Converter

5 Appendix

5.1 Declaration of Conformity

EU-Konformitätserklärung EU Declaration of Conformity

Produktbezeichnung: migan
Product name:

Typenreihe: migan AD
Type code:

Hersteller: microSYST Systemelectronic GmbH
Manufacturer: Am Gewerbepark 11
92670 Windischeschenbach

Das bezeichnete Produkt stimmt mit der folgenden Europäischen Richtlinie überein: <i>We herewith confirm that the above mentioned product meets the requirements of the following standard:</i>		Die Übereinstimmung des bezeichneten Produk- tes mit den Vorschriften der angewandten Richt- linie(n) wird nachgewiesen durch die Einhaltung folgender Normen / Vorschriften: <i>The conformity of the product described above with the provisions of the applied Directive(s) is demon- strated by compliance with the following standards / regulations:</i>	
Richtlinien / Directives		Europäische Norm / Standard	
EMV Richtlinie <i>EMC Directive</i>	2014/30/EU	EN61000-6-2:2005	
		EN61000-6-4:2007 +A1:2011	
Niederspannungs- Richtlinie <i>Low Voltage Directive</i>	2014/35/EU	EN60950-1:2006 +A11:2009 +A1:2010 +A12:2011 +A2:2013	
RoHS Richtlinie <i>RoHS Directive</i>	2011/65/EU	EN50581:2012	

Windischeschenbach, 16.11.2017


 Manuel Raß

Geschäftsführer / General Manager

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Large Format Numeric LED Display with A-D Converter

5.2 Maintenance and Care

Please observe the following instructions:

- Make sure that the housing can be opened for adjustment and maintenance even after the display has been installed. Allow for adequate clearance at the back, front and top of the display unit in order to follow for sufficient ventilation (if vent slots are included).
- Display quality is impaired by direct illumination with bright light sources and/or direct sunlight.
- The display must be switched off before cleaning.
- Protect the display from excessive humidity, extreme vibration, direct sunlight and extreme temperatures. Non-observance may lead to malfunctioning or destruction of the device. Under certain circumstances electrical shock, fire and explosion may occur as well. Information concerning allowable ambient conditions, including recommended temperature ranges, can be found in the chapter entitled „Technical Data“.
- The display may not be placed into service if the device and/or the power cable are known to be damaged.
- Do not attempt to repair the device yourself. The guarantee is rendered null and void if the device is tampered with by unauthorised persons.

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Large Format Numeric LED Display with A-D Converter

5.3 Warranty / Liability

For the product, liability is assumed for defects, which existed at the delivery date according to our General Terms and Conditions.

Technically changes as well as errors are excepted. A claim for delivery of a new product does not exist. The buyer has to check the received product immediately and indicate evident defects at the latest 24 hours after detection. Non-observance of notification requirements is equated with acceptance of the defect. Not immediately visible defects have to be indicated immediately after their perception too.

Generally, defects and their symptoms must be described as accurately as possible in order to allow for reproducibility and elimination. The buyer must provide for access to the relevant device and all required and/or useful information at no charge and must make all of the required data and machine time available free of charge.

The guarantee does not cover defects, which result from non-observance of the prescribed conditions of use, or from improper handling.

If the device has been placed at the disposal of the buyer for test purposes and has been purchased subsequent to such testing, both parties agree that the product is to be considered "used" and that it has been purchased "as is". No guarantee claims may be made in such cases.

The General Terms and Conditions of microSYST Systemelectronic GmbH in current version apply as well.

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Large Format Numeric LED Display with A-D Converter

5.4 Versions Overview

Version	Date	Remark, Description
1.00	2013-05-13	Document created, based on X-M32-BXXX8X-001: new display modules
1.10	2013-10-17	Logo
1.20	2014-02-06	migan 2 -> migan, input resistance
1.30	2015-07-17	Chapter "Device Configuration" changed
1.40	2016-04-27	Declaration of conformity
2.00	16.11.16	migan2 → migan MPB
2.10	13.11.17	Change of address and title MPB

Certified per **DIN EN ISO 9001**.